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Sadistic Personality Disorder

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Sadistic personality disorder (SDP) is characterized by an individual's pattern of cruel, harsh, aggressive, intimidating, humiliating, and demeaning behavior. The disorder has been the subject of several studies and originally appeared in the DSM-III-R (American Psychiatric Association 1987). The disorder was included because of an effort to distinguish it from antisocial personality disorder (ASPD) or psychopathy since the constellation of traits descriptive of an individual with sadistic behavior patterns was not sufficiently explained by existing disorders (Chabrol et al. 2009). The belief that the different constellations would be useful in diagnosing individuals is what led the diagnosis to appear in the appendix of the DSM-III-R, under a section entitled, "Proposed Diagnostic Categories Requiring Further Study." There was considerable support for including the diagnosis. A survey of forensic psychiatrists had revealed, for example, that 50% of them had, at some time, evaluated in a forensic setting a subject who exhibited behavior that met the criteria for the disorder (Spitzer et al. 1991). It was hoped that the disorder's inclusion would stimulate further research. Eventually, however, concerns about the disorder's validity, usefulness, and lack of supportive research led to its exclusion from other versions of more recent diagnostic manuals.

The DSM-II-R had described Sadistic Personality Disorder as beginning by early adulthood and as exhibiting a pervasive pattern of cruel, demeaning, and aggressive behavior. The manual also had noted that, to be diagnosed as a disorder, at least four repeated occurrences of a list of characteristics. Those characteristics included the use of cruelty or violence

for the purpose of establishing dominance in a relationship; humiliating or demeaning people in the presence of others, unusually harsh treatment or discipline of someone under their control, being amused or taking pleasure in the psychological suffering of others, lying for the purpose of haring or inflicting pain on others, frightening others to get what they want out of them, restricting the autonomy of those with whom they have relationships, and fascination violence, weapons, martial arts, injury, or torture. Unlike antisocial or other disorders relating to violence or illegal behavior, sadistic personality disorder was distinguishable in that their actions were meant primarily to gain pleasure or achieve dominance and control, rather than primarily for profit or due to the need to cope with stressors. Sadists also were differentiated in that their violence occurred not under extreme emotional states or in the context of seeking financial gain but rather for the pursuit of pleasure, control, or satisfaction (see Myers et al. 2006). Although these differentiations may be feasible, they have yet to become officially accepted by the relevant scientific community.

Despite lack of formal acceptance of the diagnosis, research continues to examine the nature and extent of sadistic personality disorders, and that research has included adolescent samples. Results reveal high rates of sadistic personality disorder or traits in adolescent psychiatric inpatients (with rates being as high as 14% for disorders) (Myers et al. 2006) and in juvenile sexual homicide offenders (with 4 out of 14 being diagnosed as having SDP) (Myers and Monaco 2000). In non-clinical, non-forensic youth populations, reported rates of endorsement of sadistic personality disorder traits are presented as quite high. One study, for example, based on a college student sample found rates sadistic personality disorder to be 5.7% (Coolidge et al. 2001). Importantly, although these latter types of studies do not report diagnoses and they are not representative samples, they to highlight how sadistic tendencies may be considerably prevalent.

Cross-References

► Antisocial Personality Disorder

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professional training and development for school personnel, parents, law enforcement officials, and other community members. The Act is particularly known for supporting the creation of “safe zones of passage” for students that involve an increased use of neighborhood and law enforcement patrols to protect students as they travel between their schools and their homes. The Act also has provisions for offering schools direct services to address severe drug and violence problems. The Act is a primary funding mechanism in efforts to address school violence and the numerous factors associated with it.

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Safe and Drug-Free Schools and Communities Act

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The *Safe and Drug-Free Schools and Communities Act* (2004) is a central part of the United States' federal government's effort to encourage the creation of safe, disciplined, and drug-free learning environments. The Act does so by supporting states in their efforts to create and sustain a wide variety of programs. Among those programs are those that aim to prevent violence in and around schools; prevent the illegal use of alcohol, tobacco, and drugs; coordinate with related federal, state, school, and community efforts; and involve communities and parents. The Act supports those programs by offering funding to educational agencies and community-based organizations. In addition to supporting those initiatives, the Act provides

Scapegoating

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Scapegoating is the process by which one suffers or is otherwise punished for the benefit of others who often have problems that should be addressed. Family therapy, for example, has long recognized the process of scapegoating as a way that some families resolve conflict, largely unconsciously, by shifting the focus from the parents to the child. The scapegoat becomes the repository for the emotions that family members fail to see in themselves and the object onto which the family transfers aggression (Yahav and Sharlin 2002). The concept has been extended to peer relations, especially bullying in schools, and has been found to occur in a diverse range of social milieu (Leman and Waiting 2007), although not necessarily in all social groups (see Mahdavi and Smith 2007). The dynamics that produce scapegoating are not well understood as researchers seek to understand why some groups have a greater number of scapegoats than others. Importantly, some persuasively have argued that adolescents, as a group, are scapegoats for society's problems (Males 1996).

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Schema

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A schema is a mental concept or framework that permits individuals to organize representations of interactions, such as past experiences or reactions. Schema determine expectations and help individuals take mental shortcuts when they seek to understand and integrate large amounts of information. This triage of information may be helpful but it also can lead to ignoring important information, such as when stereotypes of oneself or others are used. For example, early maladaptive schemas (dysfunctional patterns of emotions, thoughts, and bodily sensations about oneself and relationships with others developed during youth) have been linked to several psychological disorders and problem behaviors (see Messman-Moore and Coates 2007). Those disorders include depression, anxiety, personality disorders, eating disorders, as well as those leading to aggressive behavior (see Muris 2006; Lumley and Harkness 2007; Tremblay and Dozois 2009).

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Schizophrenia

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Schizophrenia traditionally has been considered to be a disorder of late adolescence and early adulthood. Research, however, increasingly makes evident that schizophrenia's roots lie in early development (Fatemi and Folsom 2009). The past decade has witnessed an important surge in research focusing on early-onset schizophrenia (EOS), which considers the appearance of psychotic symptoms before the age of 18, and also childhood-onset schizophrenia (COS), which considers the appearance of psychotic symptoms before the age of 13 (see Kumra et al. 2010). These are impressive developments, especially in light of the hesitancy to diagnose disorders during childhood given the general belief that personalities only emerge fully past adolescence. These developments reflect the emergence of new technologies and new understandings of brain as well as social development during, and before, the adolescent period.

Research in this area suggests that individuals with early-, adult-, and late-onset schizophrenia manifest similar clinical deficits, with the exception that early-onset schizophrenia appears to represent a more severe form of the illness (Douaud et al. 2009). For example, the extent of cerebral abnormalities in adolescent-onset schizophrenia patients has been shown to be substantially greater than in adult-onset schizophrenic patients. Rather than those differences being due to typical differences between adult and adolescent brain development, the differences appear due to the different developmental trajectories taken by adolescents

with schizophrenia (Douaud et al. 2009). Brain development of adolescents with schizophrenia appears both delayed and marked by widespread abnormal structural abnormalities.

The clinical deficits associated with schizophrenia are now well known. Schizophrenia involves a profound disruption in cognition and emotion that affects language, thought, perception, affect, and sense of self. *The Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association 2000) highlights that no single symptom is necessary or definitive for a diagnosis of schizophrenia. Instead, diagnosis encompasses a pattern of signs (what someone observes) and symptoms (what a person senses or describes), in conjunction with impaired occupational or social functioning, with certain time restrictions (as in during a month period or less if treated). Symptoms can range widely but often include psychotic manifestations, such as delusions (holding fixed false personal beliefs), hallucinations (e.g., hearing internal voices or experiencing other sensations not connected to an obvious source), disorganized speech (e.g., frequent derailment or incoherence), and grossly disorganized or catatonic behavior. These symptoms typically are described as either positive or negative due to their influence on diagnosis and treatment. Positive symptoms reflect an excess or distortion of normal functions, such as delusions and hallucinations; negative symptoms reflect a diminution or loss of normal functions, such as affective flattening (a reduction in the range and intensity of emotional expression), avolition (poverty of speech), or anhedonia (reduction, difficulty, or inability to initiate and persist in goal-directed behavior).

Several subtypes of schizophrenia have been identified. Diagnoses of the paranoid type centers on a preoccupation with one or more delusions or frequent auditory hallucinations. Catatonic types involve, for example, motoric immobility (such as stupor), mutism, peculiar and inappropriate postures, stereotyped movements, prominent mannerism, and prominent grimacing. The disorganized type is diagnosed when there is disorganized speech and behavior, flat or inappropriate affect, and the catatonic type criteria are not met. There are also undifferentiated and residual types.

Considerable progress has been made in the study of schizophrenia's causes. One of the most robust

findings in the study of schizophrenia is that it aggregates in families. Having an affected family member substantially increases the risk of developing schizophrenia, although most cases occur sporadically (Tandon et al. 2008). The risk of experiencing schizophrenia increases as the degree of genetic affinity with the affected family member increases, but despite this genetic link and well-established genetic basis for schizophrenia, the mechanism of inheritance remains obscure and family dynamic and interactional explanations are commonly invoked to explain this familiarity. Reviews of genetic studies of schizophrenia conclude that heritability is high in that genetic factors contribute approximately 80% of the liability for the illness and no genes appear to be necessary or sufficient for the development of schizophrenia (Tandon et al. 2008). Although the contributions of environmental factors are unclear, the likelihood of developing schizophrenia increases with the presence of several risk factors. Prenatal risk factors include prenatal infection or malnutrition, perinatal complications, and a history of winter birth. During the adolescent period, cannabis use has been linked to an increased risk of developing schizophrenia, as has delays in attaining developmental milestones related to language and social adjustment (Id.). Research relating to environmental findings, however, is marked by important limitations and controversies. The state of the art in the understanding of schizophrenia's causes, then, reveals that important progress has been made, that both environmental and genetic factors are important, and that how their exposure to them exactly causes schizophrenia remains unknown.

Treatments for early-onset schizophrenia pose important challenges. The condition is chronic, it lasts throughout life and treatment essentially is the same for all forms of schizophrenia. The use of medications ranks highly, as does psychotherapy, social skills training, as well as hospitalization. Treatment in early onset of schizophrenia, however, mainly has been based on pharmacologic treatment strategies in adults, which, until quite recently, made use of medications that were off-label (not specifically approved for the population or illness but legitimate to use if the doctor believes it will help the child) (see Kumra et al. 2010). Studies that have reported on clinical trials of medications used to treat early-onset schizophrenia reveal that tested antipsychotic treatments typically have

resulted in statistically significant reductions in psychotic symptoms. They also reveal, however, the rarity of true remission and that the course of early-onset schizophrenia likely will be chronic and debilitating. Importantly, the studies also reveal that adolescents experience frequent, but not unique, adverse effects of medications, and that some drugs have been found to have greater adverse effects while others have been associated with greater benefits for youth with treatment resistance (see Kumra et al. 2010). Although research relating to psychosocial interventions for early-onset schizophrenia remains limited, these interventions likely remain of significance even despite the focus on antipsychotic medical treatments due to, for example, the need to ensure medication compliance and need for comprehensive intervention strategies that will assist families and reintegration of youth into their communities and families.

As a severe brain disorder, schizophrenia has long been studied. Although early-onset types of schizophrenia have not been studied as much as adult forms, research now clearly reveals that early-onset and childhood schizophrenia represents a severe variant of the disorder. Compared to adult-onset schizophrenia, early-onset variations are associated with a higher frequency of premorbid impairments, higher genetic loading, higher familial risk, and more severe and unremitting outcomes. Studies identifying differences in the life course of schizophrenia highlight the importance of its study during the adolescent period.

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Schizotypy

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Overview

The main objective of this essay is to offer a general overview of schizotypy in adolescence. Schizotypy is a construct intimately related to schizophrenia-spectrum disorders, which can be assessed using self-reports. Thus, along these pages, the importance of schizotypy assessment is reviewed guiding the reader through all the measurement instruments available for its assessment, analyzing their structure and content with a view to reaching a better conceptual delimitation of the construct. In addition, the influence of gender and age in its phenotypic expression is examined. Finally, some limitations are mentioned and future lines of research are proposed. In general terms, schizotypy in adolescence is a fairly complex construct, and the aim of the self-reports that measure schizotypy is the detection, based on a score profile, of individuals at risk for the development of schizophrenia-spectrum disorders. The results of factorial studies of schizotypy in adolescence indicate that it is a multidimensional construct, made up of three or four factors, similar to those found in adult populations and in patients with schizophrenia. In addition, the analysis of the mean scores on the schizotypy dimensions shows the influence of gender and age on its phenotypic expression. The study of schizotypy is therefore a relatively recent field that is not free of limitations and that still has an interesting road to travel.

Introduction

Since the beginning of the twentieth century, there has been an attempt to relate different personality typologies with schizophrenia and related disorders, with the existence of two main hypotheses that were originally very different, but that currently can be seen as complementary. The first hypothesis holds that personality

traits – or any of their components – could be considered as a specific predisposing factor for schizophrenia and not as a manifestation of it. On the other hand, the second hypothesis holds that personality characteristics could be conceived as precursors or behaviors that precede the onset of schizophrenia. This set of personality characteristics, which attempts to predict the onset of schizophrenia, as well as define and identify the at-risk clinical state for its development, can be included in what is commonly known as schizotypy.

Schizotypy is a complex construct that is intimately related at historical, conceptual, neurocognitive, psychophysiological, and genetic levels to schizophrenia-spectrum disorders, such as schizophrenia, psychotic affective disorders, and schizoid, schizotypal, and paranoid personality disorders (Raine 2006). Arriving at an operative and concise definition of the current meaning of schizotypy is a difficult task given that this construct can be associated to a wide heterogeneity of meanings. In this regard, some authors employ the term schizotypy to make reference to an attenuated form of schizophrenia, thus, representing a premorbid or prodromal phase of the disorder (Raine 2006), whereas other authors define it as a personality organization that represents genetic vulnerability to psychosis (Meehl 1962). On the other hand, from a dimensional point of view, schizotypy can be understood as a set of personality traits of a cognitive, emotional, and behavioral nature, which are expressed along a dynamic continuum of adaptation ranging from psychological well-being to schizophrenia-spectrum personality disorders and full-blown schizophrenia (Claridge 1997). These traits are present in the general population, are not necessarily associated to a mental disorder, and are configured as an indicator of vulnerability toward the development of psychotic disorders in general, and schizophrenia in particular. However, despite the divergence in the conceptual delimitation of schizotypy, all these conceptions explicitly or implicitly assume the following: (1) the necessity of the confluence or interaction of multiple neurodevelopmental (e.g., problems during labor and delivery), genetic (e.g., first-degree relatives of patients with schizophrenia) and/or psychosocial factors (e.g., stressful situations or depression) for the development of a clinical condition of functional psychosis; and (2) the possibility of finding individuals with “intermediate”

phenotypic expressions at some point of the dynamic continuum of adaptation (e.g., “schizophrenia-like” signs) that, although they may never evolve into clinical psychoses, can exhibit emotional, cognitive, affective, neuropsychological, and interpersonal deficits (Kwapil et al. 2008; Raine 2006) which are qualitatively similar, but less severe, than those found in patients with schizophrenia.

The Study of Schizotypy in Adolescence

Adolescence is an interesting period for the study of certain personality characteristics, not only because it is a critical developmental stage for the appearance of the first symptoms of schizophrenia, but also because many disorders that emerge during adulthood seem to develop and originate at earlier stages of development (Poulton et al. 2000; Welham et al. 2009), suggesting the existence of a certain psychopathological continuity. It is well known that during adolescence a wide diversity of maturational, hormonal, cerebral, cognitive, and social changes take place. Said changes could become biopsychosocial stressors that can increase the risk for the development of schizophrenia-spectrum disorders; for example, certain stressful life events during the early years, such as traumatic experiences or sexual abuse, are associated to a greater vulnerability toward the future development of a serious mental disorder (Read et al. 2005). Moreover, the study of schizotypy in adolescence permits the examination of similar symptoms to those found in patients with schizophrenia without the confounding effects frequently present in the study of patients, such as medication, stigmatization, or the deterioration caused by the disorder.

In this regard, the study of schizotypal traits – or any of its respects – in adolescent populations and their relationship with the subsequent risk toward the development of schizophrenia-spectrum disorders has become a topic of great interest and relevance within current research as it, among other aspects, allows to (1) establish the vulnerability or risk markers of schizophrenia prior to their clinical expression, with a view to implementing prevention, detection, and early intervention programs for adolescents at risk; (2) understand the links between the normal personality, personality disorders, and schizophrenia-spectrum disorders; (3) study the underlying mechanisms and

psychological processes involved in the cognitive-developmental pathway of psychotic expression; and (4) find clues regarding the different variables, both of risk and protection, which are implicated in the transition from a normal state of functioning to the development of a clinical profile, passing through an intermediate risk state.

Measurement Instruments for Schizotypy Assessment

The assessment of schizotypy in adolescents by means of interviews and self-reports falls within the studies of “psychometric high-risk” (Lenzenweger 1994). This paradigm aims to identify, through psychometric tests or based on score profiles, individuals who have a higher probability of developing a schizophrenia-spectrum disorder in the future. At present, the assessment of schizotypy using measurement instruments is considered to be a feasible and useful strategy which permits a series of advantages with respect to other assessment methods, as it is a noninvasive method of rapid application and easier administration, scoring, and interpretation (Gooding et al. 2005; Kwapil et al. 2008). In addition, the use of this paradigm in conjunction with the studies of genetic high risk (e.g., the study of the offspring of patients with schizophrenia) can favor the determination and the advancement in the comprehension of the etiological mechanisms of schizophrenia.

Given that one of the main goals of the assessment of schizotypy is the prediction of individuals at a heightened risk for schizophrenia, it follows that these types of instruments must prove their predictive validity in independent longitudinal studies. Several longitudinal studies carried out in adolescents (Poulton et al. 2000; Welham et al. 2009) and young adults (Gooding et al. 2005) indicated that individuals with high scores on these types of self-reports or on some of their items, which assess aspects such as paranoid ideation or hallucinatory experiences, have a higher probability of developing schizophrenia-spectrum disorders in the future in comparison to those who obtain low scores or who do not report said experiences. These results are quite important as they show the predictive validity of the assessment of these experiences and the usefulness of this paradigm. From another point of view, if the measurement of this construct in adolescents with certain guarantees is

desired, it is necessary to have measurement instruments specifically designed for their use in this age group available, as well as an exhaustive and well-founded study of their metric quality in reference to their reliability and different sources of validity evidence (Fonseca-Pedrero et al. 2008b). By way of example, it would not be of much use to employ an instrument for the assessment of schizotypy in adolescents with the aim of identifying participants at risk if, for instance, the psychometric characteristics of the instrument was unknown, as the inferences (e.g., whether an adolescent is at risk or not) and the decisions (e.g., whether a more exhaustive psychological evaluation or a preventive intervention must be performed) extracted from the data would be completely ambiguous and unfounded, and would lead to a significant impact on the participants.

The construction of measurement instruments for the assessment of schizotypy and the analysis of their psychometric quality in adolescent populations has considerably increased in the last few years (Fonseca-Pedrero et al. 2008b). Several self-reports specifically developed for the measurement of this construct in adolescents can be found in the literature, such as the *Junior Schizotypy Scales* (JSS) (Rawlings and MacFarlane 1994), the *Schizotypy Traits Questionnaire* (STA) for children (Cyhlarova and Claridge 2005), or the *Oviedo Schizotypy Assessment Questionnaire* (ESQUIZO-Q) (Fonseca-Pedrero et al. 2010b). In Table 1, some of the most characteristic items included in these self-reports can be seen. The JSS (Rawlings and MacFarlane 1994) was the first self-report specifically constructed for its use in adolescent populations, although the low levels of consistency found as well as its unstable factorial solution led to the construction of a reduced version (JSS-Reduced). The JSS-R presented better psychometric properties than its previous long version showing adequate levels of internal consistency which ranged from 0.62 to 0.81, along with a more stable and interpretable factorial solution (DiDuca and Joseph 1999; Fonseca-Pedrero et al. 2010a). On its part, the STA for children (Cyhlarova and Claridge 2005) was validated in a study of 317 English adolescents, where its reliability and internal structure was examined. The levels of internal consistency found for the subscales and the total score ranged from 0.63 to 0.82 and the study of its internal structure revealed the presence of a three-factor

Schizotypy. Table 1 Examples of items used in the measures for the assessment of schizotypy in adolescents

Measurement instrument	Dimension	Item
JSS	Positive	Is it true that you could never learn to read another person's mind?
	Positive	Do you often dream about things before they happen?
	Negative (social)	Do you feel very close to your friends?
	Negative (Physical)	Do you find it pretty boring to stand on a high place and look out over the view?
	Impulsive Non-conformity	Do you sometimes do dangerous things just for fun?
	Impulsive Non-conformity	Do you break rules just for the fun of it?
STA for children	Positive	Are your thoughts sometimes so strong that you can almost hear them?
	Positive	Have you ever felt when you looked in a mirror that your face looked different?
	Paranoid ideation/Social anxiety	Do you often feel that other people have it in for you?
	Paranoid ideation/Social anxiety	Do you sometimes feel that people are talking about you behind your back?
	Magical thinking	Have you ever felt that you could tell what another person was thinking?
	Magical thinking	Do you ever feel sure that something is about to happen even though there doesn't seem to be any reason for your thinking that?
ESQUIZO-Q	Positive	I believe someone is plotting something against me.
	Positive	I believe there are people who can read the minds of others.
	Negative	I like to meet friends again who I haven't seen for a long time.
	Negative	I like to receive the visit of my friends at home.
	Social disorganization	I get nervous when I am going to have a serious conversation with another person.
	Social disorganization	When I am doing an activity or task, my mind usually goes blank.

JSS Junior Schizotypy Scales; STA for children Schizotypy Traits Questionnaire for children; ESQUIZO-Q Oviedo Schizotypy Assessment Questionnaire

solution. The ESQUIZO-Q (Fonseca-Pedrero et al. 2010b) is a self-report of recent construction based on the new advances in psychological measurement (e.g., analysis of the differential item functioning –DIF–) that was validated in a sample of 1,683 randomly selected Spanish adolescents. The levels of internal consistency for the subscales ranged from 0.62 to 0.90, and the different evidences of its validity support the use of the ESQUIZO-Q in this age group. From another point of view, it should be mentioned that the different measurement instruments originally developed for

their use in adult populations have been also used in adolescent populations (Fonseca-Pedrero et al. 2009; Fossati et al. 2003; Venables and Bailes 1994). It is well known that this practice implies limitations, although it is equally true that the psychometric behavior of these self-reports in adolescents is quite acceptable (Fonseca-Pedrero et al. 2009; Fossati et al. 2003), thus, the validation of self-reports which have not been specifically designed for the assessment of schizotypy in this age group may also be an interesting practice wherever it is supported by the data. As can be

observed, the number of available self-reports for the assessment of schizotypy in adolescents is quite limited and their psychometric quality have been barely examined; therefore, it is necessary to continue advancing in their rigorous and exhaustive analysis as well as obtain data supporting their predictive validity in representative and random samples of adolescents.

Structure and Content of Schizotypy

The understanding of the structure and content of schizotypy in adolescent populations has considerably advanced in the last decade. When the dimensional structure underlying the measurement instruments which assess schizotypy in this age group is analyzed, it can be observed that the construct is of a multidimensional nature, phenotypically similar to that found in the general adult population and in patients with schizophrenia (Fonseca-Pedrero et al. 2007). The number, structure, and content of the dimensions found depends greatly on the measurement instrument used, the sample analyzed, and the statistical analyses conducted, therefore, it must be kept in mind that the strict comparison among studies is a complex task which is often hindered by these variables; nevertheless, and although there is no unanimous agreement on the number of dimensions, the results of the different studies taken as a whole allow one to assert that schizotypy in adolescent populations is composed of three or four factors or dimensions, namely, *Positive* (Cognitive-Perceptual, Distortion of Reality, or Unusual Perceptual Experiences), *Negative* (Anhedonia or Interpersonal), *Disorganized* (Cognitive Disorganization), and *Impulsive Non-conformity*. The Positive factor makes reference to an excessive or distorted functioning of a normal process and includes facets of the type of hallucinatory experiences, paranoid ideation, ideas of reference, and magical thinking. The Negative dimension refers to the reduction or deficit in the normal behavior, and includes facets regarding difficulties to experience pleasure at a physical (physical anhedonia) and social level (social anhedonia), blunted affect, lack of close friends, and difficulties in personal relationships. The Disorganized dimension describes thought problems, and odd speech and behavior. The Impulsive Non-conformity dimension includes aspects related to rebelliousness, impulsiveness, and extravagance.

Table 2 shows in a schematic manner, the main factorial studies conducted in adolescent populations. The exhaustive analysis of the factorial structure of schizotypy in adolescents permits a better conceptual delimitation of the construct improving its comprehension. As can be seen, the number and content of the schizotypy dimensions ranges from three to five factors. The Positive and Negative dimensions have been widely replicated and have been consistently found across the different studies, therefore, the current debate seems to be more centered on the content of the third or even the fourth dimension. The three-factor model, also known as the Disorganized model, composed by the Positive, Interpersonal, and Disorganized dimensions, is possibly one of the most replicable and consistent models. It has been found in nonclinical and outpatient adolescents from different cultures, across differing statistical techniques (Axelrod et al. 2001; Chen et al. 1997; Fonseca-Pedrero et al. 2009; Fossati et al. 2003) and these dimensions have been shown to be invariant across gender and age (Fossati et al. 2003). Other dimensional models of schizotypy are equally plausible. For example, in some studies, the third dimension of Disorganization could be substituted by a dimension of Impulsive Non-conformity (Fonseca-Pedrero et al. 2010a; Rawlings and MacFarlane 1994) or by a more general dimension of Social Disorganization (Fonseca-Pedrero et al. 2010b). However, other studies posit a different three-factor model composed by the Positive, Paranoid Ideation/Social Anxiety, and Magical Thinking dimensions (Cyhlarova and Claridge 2005) or by the factors of Magical Ideation/Perceptual Experiences, Ideas of Reference/Social Anxiety, and Suspiciousness (Wolfradt and Straube 1998). As is observed, the comparison among studies is complicated mainly due to the relative lack of comparability between self-reports, and thus, an interesting research study would be to examine in conjunction the dimensionality underlying the different self-reports that assess schizotypy in adolescent populations. With this aim, Fonseca-Pedrero et al. (2010a) examined the internal structure which underlies the subscales of the JSS-R and the *Thinking and Perceptual Style Questionnaire* (TPSQ) in a sample of 991 adolescents, and found a four-factor solution composed of the following factors: Positive, Social Disorganization, Negative and Impulsive Non-conformity. These results converge with the four-factor models

Schizotypy. Table 2 Main factorial studies of schizotypy in adolescent samples regarding the influence of gender and age

Reference	No. and type of factorial analysis	Structure and content	Scale	Sample N; Mean (SD)	Influence of gender and age
Venables and Bailles (1994)	4E	Unusual perceptual experiences paranoid and magical ideation (positive)	SAE	437; 16.7 years (0.9)	Females higher scores in positive dimension
		Social anxiety/disorganization			
		Physical anhedonia			
Rawlings and MacFarlane (1994)	3E	Social anhedonia	JSS	136; 12.5 years (0.4)	No information available
		Positive (split Paranoid/magical ideation)			
		Negative			
Chen et al. (1997)	3C	Impulsive non-conformity	SPQ	115; 14 years (0.8)	Females higher scores in all factors and total score
		Cognitive-perceptual deficits			
		Interpersonal deficits			
Wolfradt and Straube (1998)	3E	Disorganization	STA	1362; 15.6 years (1.1)	Females higher score in STA total score, magical ideation/unusual perceptual experiences and ideas of reference /social anxiety
		Magical ideation/Unusual perceptual			
		Experiences			
DiDuca and Joseph (1999)	5E	Ideas of reference/Social anxiety	JSS-R	492; 15.5 years (1.8)	No relationship with age
		Suspiciousness			
		Cognitive			
Axelrod et al. (2001)	3E	Perceptual	SPQ-B	237; 15.8 years (1.4)	No information available
		Social			
		Impulsive non-conformity			
		Physical anhedonia		Psychiatric adolescent outpatients	
		Cognitive-perceptual			
		Interpersonal			
		Disorganization			

Fossati et al. (2003)	3E	Cognitive-perceptual	SPQ	929; 16.4 years (1.4)	Males higher scores in no close friends, constricted affect and odd behavior	
					Interpersonal	Italian adolescent students ^c
					Disorganized	Females higher scores in Ideas of reference and social anxiety (cognitive-perceptual dimension) Age: adolescents score higher than university student in three variables
Cylharova and Claridge (2005)	3E	Unusual perceptual experiences	STA children	317; 13.3 years (1.2)	Females score higher in Paranoid ideation/social anxiety, magical ideation and total score	
		Paranoid ideation/social anxiety		English adolescent students	Age: -0.12 Unusual perceptual experiences	
		Magical thinking				
Fonseca-Pedreiro et al. (2009)	3C	Positive	SPQ-B	1683; 15.9 years (1.2)	No differences due to gender	
		Negative/interpersonal			Age: the score in interpersonal dimension increases with age	
		Disorganized		Spanish adolescent students		
Fonseca-Pedreiro et al. (2010a)	3E	Positive	JSS-R	991; 14.7 years (1.8)	No information available	
		Negative				
		Impulsive non-conformity		Spanish adolescent students		
Fonseca-Pedreiro et al. (2010a)	3E	Social disorganization	TPSQ	991; 14.7 years (1.8)	No information available	
		Aberrant processing				
		Anhedonia		Spanish adolescent students		

E exploratory factor analysis; C confirmatory factor analysis; SAE Survey of Attitudes and Experiences; JSS Junior Schizotypy Scales; STA Schizotypal Traits Questionnaire; SPQ-(B) Schizotypal Personality Questionnaire-(Brief); JSS-R Junior Schizotypy Scales-Reduced; TPSQ Thinking and Perceptual Style Questionnaire

^a333 English adults participated

^b345 Chinese adults participated

^c803 Italian University students participated

found in adult populations (Fonseca-Pedrero et al. 2007) and are important with a view to integrating the factorial structures obtained from several self-reports and increasing the comprehension of the factorial structure of schizotypy in this age group.

The Influence of Gender and Age in the Expression of Schizotypy

Gender and age are two sociodemographic variables that seem to play an important role in the phenotypic expression of schizotypy in adolescents. The aforementioned studies showed in Table 2 have examined the expression of schizotypy as a function of gender and age in this age group. Firstly, when the relationship between schizotypy and gender is analyzed, it is found that adolescent females obtain higher scores than males in the Positive, Paranoid Ideation, Magical Ideation, Ideas of Reference, and Social Anxiety dimensions; however, males tend to score higher than females in the Negative (Physical and Social Anhedonia), Disorganized (Odd Behavior, Blunted Affect, No Close Friends), and Impulsive Non-conformity dimensions (Cyhlarova and Claridge 2005; Chen et al. 1997; Fonseca-Pedrero et al. 2008a; Fossati et al. 2003; Venables and Bailes 1994; Wolfradt and Straube 1998). These results found in adolescents are fairly parallel and convergent to those found in adult populations and in patients with schizophrenia.

With reference to specific results, in a pioneer study in the subject matter, Venables and Bailes (1994) found that females scored higher than males in the Positive factor, whereas males scored higher in the Physical and Social Anhedonia factors. On their part, Wolfradt and Straube (1998), in a sample of 1,362 German adolescents, found that women presented higher scores than men in the total score of the questionnaire and in the Unusual Perceptual Experiences/Magical Ideation, and Ideas of Reference/Social Anxiety dimensions. On the other hand, Fossati et al. (2003) using a sample of 929 Italian students, found that males showed higher scores than females in the Odd Behavior, Blunted Affect, and No Close Friends subscales (Disorganized dimension) and that females scored higher than males in the Ideas of Reference and Social Anxiety subscales. In another study, Cyhlarova and Claridge (2005), using the STA for children in a sample of 317 adolescents, found that females scored higher than males in the Paranoid Ideation/Social Anxiety and Magical Ideation subscales,

whereas in the Unusual Perceptual Experiences subscale no significant differences were found. More recently, Fonseca-Pedrero et al. (2008a), in a sample of 321 Spanish adolescents, found that females obtained higher scores than males in the Positive dimension and in the Social Paranoia and Negative Evaluation subscales, whereas males obtained higher scores in the Anhedonia, Aberrant Beliefs, and Impulsive Non-conformity dimensions. However there are other studies in the literature that have not found such an association (Fonseca-Pedrero et al. 2009), or that have not informed of this relationship with regard to gender (DiDuca and Joseph 1999; Fonseca-Pedrero et al. 2010a); partially contradictory results have even been reported where females obtained higher scores than males in every dimension of schizotypy (Chen et al. 1997).

Similar to what occurs with gender, age is a variable that also seems to play some role in the phenotypic expression of the dimensions of schizotypy in adolescents, although its analysis is more problematic. It must be taken into account that adolescence is an evolutionary period where developmental processes may be playing an important role in the expression of schizotypy (number and content of contained factors), making it possible that some of these dimensions may not be differentiated at these ages. Specifically, when the role played by age in the expression of schizotypy is analyzed, three complementary lines can be drawn. First, when groups of adolescents are compared with adults (university students or general population samples), the younger participants tend to score higher than the older ones in most of the dimensions of schizotypy (Chen et al. 1997; Fossati et al. 2003; Venables and Bailes 1994). For example, Venables and Bailes (1994) found that the adolescent sample obtained higher scores than the adult sample in the Unusual Perceptual Experiences (Positive dimension), Disorganization/Excessive Social Anxiety, and Physical Anhedonia dimensions. On their part, Fossati et al. (2003) found a negative association between the total score in the *Schizotypal Personality Questionnaire* (SPQ) and age: the adolescents scored higher than the university students in Cognitive, Interpersonal, and Disorganized dimensions, as well as in the SPQ total score.

Second, when groups of adolescents are compared exclusively, the role of age is not so clearly outlined. In

this regard, some studies have not found an association between age and schizotypy (Venables and Bailes 1994; Wolfradt and Straube 1998), while others have found insignificant levels of association (Cyhlarova and Claridge 2005; Fonseca-Pedrero et al. 2009), or even a positive correlation between both variables (Fonseca-Pedrero et al. 2008a). For example, Cyhlarova and Claridge (2005) only found a statistically significant correlation of -0.12 between age and the Unusual Perceptual Experiences dimension. However, Venables and Bailes (1994) only found a statistically significant correlation between the Physical Anhedonia (-0.18) and the Social Anhedonia (-0.19) dimensions. On their part, Fonseca-Pedrero et al. (2008a) found completely different results: the younger adolescents obtained lower scores in the Positive, Impulsive Non-conformity, Hallucination, Negative Evaluation, Social Paranoia, Ideas of Reference, Thought Disorder, and Perceptual Illusion subscales as compared to the older adolescents. More recently, Fonseca-Pedrero et al. (2009), using the brief version of the SPQ, found that the older adolescents scored slightly higher in the Interpersonal dimension compared to the younger adolescents.

Third, several factorial studies conducted using adolescent samples found a factorial solution slightly different to that found in adults, where the dimensions of Paranoid Ideation or Magical Thinking seem to play an important role (Rawlings and MacFarlane 1994; Venables and Bailes 1994), although it is possible that these results are more an artifact due to the measurement instrument or to the sample characteristics than to the influence of age itself. Finally, as has been observed and according to Fonseca-Pedrero et al. (2008a), there are still few studies showing the relation between the schizotypy dimensions and gender and age of adolescents, finding inconsistent and contradictory results so that it is considered to be relevant to continue advancing in the comprehension of the role these variables may be playing in the expression of this construct during adolescence.

Gaps in knowledge

The study of schizotypy is a relatively recent field that needs to be the object of more exhaustive and systematic research. A wide variety of issues still remains to be resolved, not only regarding its study in general adult populations, but also in adolescent populations. With

regard to the use of measurement instruments in this age group, their psychometric quality in representative samples of the general population still needs to be explored in greater depth, being particularly relevant to obtain evidences of their validity in independent longitudinal studies. On the other hand, it must be tested whether the schizotypy dimensions hold invariant across gender, age, and culture, as well as observe its evolution along the life span. Finally, the study of its interaction with other psychological variables (e.g., depressive symptomatology or coping strategies) with a view to understanding which factors determine the transition of high-risk participants to a psychotic state, as well as the incorporation of schizotypy into the new paradigms that integrate developmental psychology and the dimensional models of personality, are other significant issues for the future of this field of research.

Conclusion

In this essay, a general view of the concept of schizotypy in adolescence through the analysis of the measurement instruments available for its assessment, the factorial studies carried out and of the influence of gender and age in its phenotypic expression has been offered. Schizotypy is a complex construct closely related to schizophrenia that can be measured in adolescents through different measurement instruments. The aim of the assessment of schizotypy is the early detection of individuals at risk for schizophrenia-spectrum disorders, the establishment of risk markers with a view to intervening promptly and effectively, and the comprehension of the links that are established between normal and maladaptive personality traits and psychotic disorders. Factorial studies indicate that schizotypy is a non-monolithic construct, composed basically of three or four dimensions that vary as a function of the measurement instrument and the sample used. On the other hand, the analyses of the mean scores in the schizotypy dimensions indicate that these vary as a function of the gender and age of participants. These data highlight the phenotypic parallelism with the data found in adult and clinical samples of patients with schizophrenia, and support the dimensional models of psychopathology and the existence of a developmental continuity of these characteristics throughout the life span. Nevertheless, there is no doubt that in the study of schizotypy in adolescents and adults there are still many pieces of the puzzle to be solved, making it an

extremely interesting field in expansion that yet has a fascinating future in store.

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School Belonging

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Overview

Adolescent sense of school belonging has become accepted as a relevant factor in contemporary efforts to understand classroom motivation and achievement. Moreover, there is evidence that belonging mediates (accounts for, or explains) the relationship between motivation and achievement or learning, suggesting that it serves as an essential underlying experience for engaged, achievement-related behavior. During the first decade of focus on factors and models of belonging, social and identification/participatory experiences

emerged as the primary sources. More recently, research has drawn insights from the emerging realization of the situated, contextual, cultural, person-centered nature of motivation, engagement, participation, and development, to suggest the empowering nature of students' culture, identity, and valuing of learning experiences with regard to their sense of belonging.

Introduction

Teachers of students of all ages find themselves confronted daily with the desire to inspire motivation in their students, that is, to instill self-energized choice, effort, and persistence regarding school-related tasks. Research suggests that both intrapersonal cognitive processes (for review, see Eccles and Wigfield 2002) and interpersonal features of students' school lives (Carnegie Council on Adolescent Development, 1989) undergird such student engagement. Unfortunately, despite educators' best efforts, many dimensions of student motivation decline steadily from the moment students enter formal education; this decline appears especially pronounced during adolescence (Eccles et al. 1996; Jacobs et al. 2002). In Weiner's 1990 *Journal of Educational Psychology* report on the state of motivational research, he anticipated a critical move in the understanding of motivation when he concluded that, "we have to consider frameworks larger than the self; other motivational constructs, such as 'belongingness,' must be brought into play when examining school motivation. . . In sum, school motivation cannot be divorced from the [contextual] fabric in which it is embedded" (Weiner 1990). Over the decades since Weiner's forecast, adolescent sense of school belonging has claimed an increasingly central role in contemporary efforts to find clues to motivational variables and processes within the context in which they occur (Anderman and Freeman 2004; Juvonen 2006). Theory and research have indicated that positive school affect such as belonging supports students' motivation, engagement, and achievement (Connell and Wellborn 1991; Eccles et al. 1996; Faircloth and Hamm 2005; Juvonen and Wentzel 1996). Although a profile of variables that shape belonging has emerged, as well as models of how belonging functions in relation to student motivation and engagement (Anderman and Freeman 2004; Juvonen 2006) important complex processes and issues that may impact adolescents' ability to

craft a connection to school learning continue to be explored.

Theoretical Foundation of Belonging

Theoretical support for the importance of belonging has emerged from a variety of sources. Pivotal among them is belief in the motivating force of human needs. According to many psychological theories, human behavior and motivation are enhanced when basic needs are met (Eccles et al. 1996; Eccles and Midgley 1989; Maslow 1999). In their influential treatise on belonging, Baumeister and Leary (1995) made the case that the need for belonging (defined as the need to form at least a minimum quantity of affectively positive connections within one's context) is so prevalent and far-reaching, that it dominates an individual's emotion, cognition, behavior, and health. Explained in terms of Maslow's (1999) hierarchy of psychology needs, the need for belonging must be met before experiences such as motivated engagement can become the norm. In a classic review of his participation-identification theory, Finn (1989) also singled out the value of students' sense of belonging as a pivotal determinant of whether students withdrew (both affectively & literally) from school (see also Leithwood and Aitken 1995). According to the theory of self-determination (Connell and Wellborn 1991), the need for relatedness (a concept congruent with belonging) affects an individual's self-concept and their expectations regarding interactions within their context. Under conditions in which the need for relatedness is met, students exhibit higher levels of engagement and motivation (Connell and Wellborn 1991). Similarly, working from a social capital model, Boekaerts (1994) explained that personally supportive academic settings may be perceived by students as extensions of their personal resources, supporting their comfort, engagement, and success in those settings. Each of these perspectives underscores the pivotal role of belonging in human motivation, engagement, and achievement.

Research Foundation of Belonging

Belonging has also been investigated in a substantial body of empirical studies. Given their theoretical roots, most have focused primarily on the social or interpersonal underpinnings of belonging. Guided by this perspective and the premise that students have difficulty

sustaining academic engagement without a sense of belonging, Goodenow (1993) developed an 18-item student questionnaire to assess what she referred to as “psychological sense of school membership (PSSM).” She defined this sense of connection within a classroom as “students’ sense of being accepted, valued, included, and encouraged by others (teacher & peers) in the academic classroom setting and of feeling oneself to be an important part of the life and activity of the class” (p. 25), focusing on three factors: general belonging, teacher bonding, and peer support. She went on to develop a parallel scale (the Classroom Belonging and Support Scale: CBSS) to assess students’ sense of belonging within specific classes, rather than within the school as a whole. Findings from initial investigations with these scales have provided support for their reliability and validity (Goodenow 1993).

Hagborg (1994) suggested that factor analysis of the PSSM/CBSS demonstrated alternative factors of belonging: general belonging, rejection, and acceptance. He claimed that 11 of Goodenow’s 18 items formed a general belonging factor that accounted for 35% of variance in belonging. Based on these statistical considerations, Hagborg incorporated those 11 items into a shorter measure of school belonging: the PSSM-Brief that also demonstrated a high degree of reliability ($\alpha = 0.90$) and several satisfactory evidences of validity (Hagborg 1998). The PSSM/CBSS and the PSSM-Brief serve as the standard measures of the belonging in this field.

Osterman’s (2000), Anderman and Freeman’s (2004), and Juvonen’s (2006) in-depth reviews of belonging highlight important factors, results, and mechanisms of belonging. Research has consistently demonstrated a positive relationship between the factors represented by the classic measures of belonging and positive school affect, motivation, engagement, and achievement: students’ perceptions of teacher support, respect, and care were significant predictors of belonging (see also Roeser et al. 1996; Ryan and Patrick 2001), as were school-based peer relationships, an influence that appears to peak in early adolescence (see also Brown 1990; Buhrmester and Furman 1986; Ryan 2001). Goodenow (1993) found that students’ sense of classroom belonging consistently explained significant portions of the variance in their motivation, which in turn predicted academic effort and achievement. Working with the same construct, Anderman

(1999) found that psychological sense of school membership attenuated declines in motivation and achievement across the transition to middle school.

The Role of Bonding with Teachers

The quality of students’ relationships with teachers (student perception of teacher support, respect, and care) has consistently been linked with students’ positive perceptions of the classroom, and their engagement and achievement (Skinner and Belmont 1993). Among various potential factors of students’ sense of belonging, Wentzel (1997b, 1998) reported that perceived teacher support made the strongest contribution and was the only source of support contributing significantly to students’ interest and engagement in class. Similarly, Ryan et al. (1994) reported a strong association between student engagement and seeing teachers as sources of support (see also Connell and Wellborn 1991; Freese 1999).

There is evidence of this positive relationship among ethnically diverse (Roeser et al. 1996; Ryan and Patrick 2001) and predominantly minority samples (Finn and Voelkl 1993). However, some researchers, (e.g., Gillock and Reyes 1996, 1999; Reyes et al. 2000) report contradictory findings concerning the importance of teacher relations within ethnically diverse samples (mixed results regarding the relationship between teacher support and student belonging within predominantly Latino and African American samples). Experiences of disrespect for their ethnicity experienced by certain minority families may contribute to this variance (Way 2001); a cultural emphasis on familial- or neighborhood-based relationships found in some minority homes (Triandis 1990) may also lead members of minority populations to look to adult relationships from home or community, rather than school, as a source of support.

Peer Relationships

Adolescents frequently assert that a key determinant of their sense of connection and affect regarding school is the ability to “hang out,” or interact, with their peers (Hamm and Faircloth 2005b; Steinberg 1988; Wentzel 1989, 1998). Research supports their claim; school-based peer relationships have proven to be significant predictors of sense of belonging (Osterman 2000), an influence that appears to peak in early adolescence. Through such interaction and association with peers,

early adolescents are theorized to experience validation, acceptance, and affirmation at school (Cairns and Cairns 1991). For example, Hamm and Faircloth (2005a) reported that students who perceived greater peer support and less emotionally risky peer environments in their classroom reported a greater sense of belonging at the end of the school year; these peer relationships played a greater role in belonging than did the sense of belonging students reported at the beginning of the school year.

Peer group affiliations have also been demonstrated to be associated with other experiences related to sense of belonging. For instance, group membership during early adolescence is associated with heightened interest and enjoyment in school, and greater academic engagement (Wentzel and Caldwell 1997). In contrast, early adolescents who lack membership in the larger social structure may feel disaffection for the schooling environment (Hymel et al. 1996).

Recent conceptualizations of sense of belonging underscore the need to explore more fully the complexity of the link between peer groups and sense of belonging. Arguing for the significance of social connectedness as a buffer to threats to engagement among youth, Juvonen (2006) cautioned that while peer group membership was potentially valuable to a sense of school belonging, the relationship may not be straightforward; peer group socialization effects could support or undermine a sense of belonging, depending on the stance of the group (see also, Hamm and Faircloth 2005a). Moreover, Bukowski et al. (1993) noted that different peer experiences (i.e., peer acceptance, friendship, peer network membership, etc.) address different dimensions of adjustment. It is also important to explore adolescent peer relationships in ways that accurately represent their complex nature in the lives of adolescents. For example, research on peer groups in relation to school adjustment has typically focused on groups that are stable over time despite the fact that adolescent peer relationships are typically characterized by dynamic features such as changing and/or multiple peer group memberships. Cairns et al. (1998) proposed that such dynamic aspects of peer group membership are beneficial (that adolescents use affiliations for their own developmental gain) and should be explored for their role in adjustment (see also: Brown 1990; Brown et al. 1994; Harter 1990; Kindermann 1993; Newman and Newman 1976).

Multiple group affiliations, for example, have the potential to be developmentally facilitative for several reasons. Membership in multiple peer groups may afford students more anchors in the diverse social ecology of the classroom, greater access to peer acceptance, and greater participation in the classroom setting compared to students who maintain a single peer group affiliation, which may promote their sense of belonging. Simultaneous membership in more than one peer network is also increasingly common across adolescence (Shrum and Cheek 1987) as through an adaptive developmental process referred to as “degrouing” (p. 218), peer network structures move from a system of tightly knit networks to a more diffuse system of multiple peer networks with more permeable boundaries. By exploring this complex nature of peer networks with regard to belonging (Faircloth and Hamm, under review), the relevance of multiple network memberships to belonging has emerged. For African American and seventh grade students, membership in multiple groups is associated to the highest level of belonging. Among White and sixth grade students, multiple group membership is associated with significantly lower belonging, compared to consistent group membership. Such information in the hands of teachers attempting to support student belonging provides valuable insight regarding structuring and supporting student interactions.

A small body of research suggests that a student’s ethnic background may make a difference in the role played by friendship in belonging. Way and Chen (2000) reported that only one-third of Latino, Asian-descent, or African American participants’ most supportive friends attended their same school. In other research, African American students were almost twice as likely as their European American counterparts to locate their best friends outside of the school context and to report lower levels of support from their school-based friendships (Clark and Ayers 1991; DuBois and Hirsch 1990). It may be that members of minority groups who experience lack of understanding of their ethnicity in the school setting form fewer intimate school-based friendships (Way 2001). Family socialization practices may also place more emphasis on familial, rather than school-based relationships (see Marin and Marin 1991 for Latino families; Gaines 1997; Triandis 1990, for African American, Asian-descent, and Latino families). These differing perspectives

regarding peer relationships may color the degree to which school-based friendship nominations reflect an experience of belonging for adolescents representing these minority groups, again underscoring the need to consider this component of belonging distinctly for different groups.

Extracurricular Involvement

To a lesser degree than the focus on bonding with teachers and peers, student extracurricular involvement has been demonstrated to relate positively to school attachment and achievement (Eccles and Barber 1999; Gerber 1996; Mahoney and Cairns 1997). In his participation–identification theory, Finn (1989) demonstrated that time spent in social, athletic, or other non-compulsory activities provides a primary source of school belonging. In a review of the research on extracurricular involvement, Lamborn et al. (1992) concluded that academic effort and achievement tended to improve as hours spent on extracurricular activities increased (see also Holland and Andre 1987; Larson 2000; Marsh 1992).

Several investigations of the associations between extracurricular involvement, school affect, engagement, and achievement for ethnic minority students have suggested that these relationships vary across ethnic groups in ways meaningful for sense of belonging. Although a positive association between participation in school activities and identification with school has been documented for African American and European American students (Voelkl 1997) and for African American and Latino students (Finn 1989), Gerber (1996) found a significantly stronger association between the number of extracurricular activities engaged in, and academic achievement, for European American students than for African American students. These findings suggest that extracurricular activities may play different roles with regard to belonging for different ethnic groups. Previous studies suggest that many factors converge to create this complicated role in belonging for extracurricular involvement (Brown and Evans 2002).

The Essential Nature of Belonging

One important facet of belonging that has emerged from research relates to its indispensable nature. Rather than merely offering an independent, ancillary benefit to students, sense of belonging appears to be required

groundwork for motivation and achievement. For example, simultaneously exploring the intersection between various dimensions of belonging, traditional motivational variables, and student achievement among a large, diverse sample of high school students, Faircloth and Hamm (2005) found that belonging completely accounted for (mediated) the relationship between traditional motivational variables and academic success for African American and Latino students, and partially explained this relationship for European American students and students of Asian descent. Studies exploring single components of belonging independently have revealed similar patterns. For example, Roeser et al. (1996) found that while positive teacher–student relationships predicted positive school-related affect, a significant portion of that result was explained by the feelings of belonging that resulted from the positive relationship. Goodenow (1993) found that student belonging explained (mediated) significant portions of the students' motivational experiences, which in turn predicted effort and achievement. Anderman (1999) found belonging effective in attenuating the chronic declines in motivation typically reported across the transition to middle school. Children who do not enjoy a positive sense of belonging are distinctly more likely to be disaffected or disengaged at school (Osborne 1997; Voelkl 1997). Fine (1991) and Wehlage (1989) each reported that students who perceived themselves as socially isolated or outside the social mainstream at school were more at risk for dropping out. In a study of students who had already dropped out, Hymel, Comfort, Schonert-Reichl, and McDougald (1996) found that many specifically reported a lack of belonging at school (see also, Altenbaugh et al. 1995). These results suggest that rather than being a supplemental motivational asset to students, belonging may undergird key motivational experiences in essential ways. That is, within the secure base of positive perceptions of belonging, other motivational experiences develop and support academic success most effectively.

The Future of Belonging

Important developments in the study of belonging have been informed by the emerging realization, in many fields, of the situated, contextual, cultural, person-centered nature of motivation, engagement, participation, and development (e.g., Bronfenbrenner

and Morris 1998; Holland et al. 1998; Lave and Wenger 1991; Magnussen 2003). Three approaches are highlighted here as examples: the contributions of a sociocultural perspective; the integration of contemporary models of identity development and belonging; and the critical impact of “scaffolding students’ appreciation” of learning (their valuing of learning) to their sense of connection or belonging at school. Each of these approaches aligns consideration of belonging with complex, contextualized, person-centered (instead of variable centered) insights into human functioning.

Emerging Sociocultural Perspectives

In their review of school belonging, Anderman and Freeman (2004) highlighted potential insights provided by sociocultural theory rooted in the work of Lev Vygotsky (1978). Lave and Wenger (1991) explain that individuals do not automatically become an active member of a community, but rather can negotiate their way from peripheral to more central participation if given the opportunity for meaningful/legitimate participation. Hickey (2003) suggests that the type of engaged participation that would lead to a sense of school belonging is actually relatively rare; school practices that encourage nonparticipation (compliance and docility) being far more common. Although it has not yet been pursued vigorously relative to belonging, attention to the cultural, social, and situated nature of learning (or participation in any community) raises important issues that may undergird belonging. As an example, because typical American classrooms are characterized by practices reflecting the dominant culture, scholars have suggested that school belonging may be critical to students who find themselves outside of the cultural mainstream (Gaines 1997; Hatt 2007; Marin and Marin 1991; Meece and Kurtz-Costes 2001; Michael et al. 2007; Rubin 2007; Triandis 1990). Phelen et al. (1994) demonstrated that the cultural contrasts that many minority students experience (e.g., between home and school) can erect barriers that the student must navigate at school. Lack of congruence at school with other important dimensions of students’ culture could be similarly challenging.

Harnessing Adolescent Identity Development

Given its theoretical roots, research on belonging has focused primarily on the social or interpersonal

underpinnings of belonging (Anderman and Freeman 2004; Juvonen 2006) leaving unexplored other developmental and contextual processes that may impact adolescents’ ability to craft connections to school. More recent research has demonstrated an important source of belonging provided by adolescents’ opportunities to find connections between school experiences and their developing sense of their own identity (the interests and issues that matter to them; their culture and background; and being allowed to express their own “voice,” Faircloth 2008). Closer examinations of theories that have been used to defend the traditional, social underpinnings of belonging support these broader applications. For example, the concept of belonging employed in Maslow’s hierarchy of needs – which has been applied most specifically to social experiences – in fact, explicitly goes beyond love and social acceptance to include the feeling that one fits in and has a place in the world (Maslow 1999). Additionally, in his widely cited participation–identification theory, Finn specifically defines belonging beyond social integration to include a student’s perception that, “they are discernibly part of the school environment and that school constitutes an important part of their own experience (p. 123).” These theoretical lenses suggest a look beyond traditional interpersonal models of belonging, to explore the congruence, or fit, between a student’s identity, interests, etc., and their learning experiences/environment.

For example, the work of developing a well-integrated identity has traditionally been proposed as a premier developmental task for adolescents (and emerging adults, see Arnett 2006), often preoccupying energy and attention (Erikson 1968). Contemporary conceptions of identity influenced by sociocultural perspectives (e.g., Holland et al. 1998; Lave and Wenger 1991) suggest that sense of identity is “constructed” in an attempt to negotiate a sense of self that allows them to feel like they belong; they “want to be part of the story.” (McCarthy and Moje 2002, p. 232) Bakhtin (1978) uses the term “self-authoring” to refer to this process in which identities are co-constructed between the individual and the context, allowing students to negotiate a meaningful connection with learning. Critical theorists have long urged educators to construct teaching and learning environments in which students have opportunities for authentic and meaningful experiences (Fine 1991; Freire 1970; Greene 1995). Yet, as

Hargreaves (1996) points out, students are not often asked to engage in school projects on topics that directly relate to their lives or significant contemporary issues; the failure to draw upon students' life experiences and interests has silenced student voices and alienated students from educational experiences instead of using their cultural or lived experiences, knowledge, and interests or identity in the service of school belonging (Moll 1990). Students have described discordance between their identities and school activities in ways that suggest that such lack of congruence generates frustration and a barrier to their engagement, connection, and belonging (Hatt 2007; Hemmings 1996; Phelan et al. 1994; Wortham 2004). From this perspective, an individual's evolving understanding of their identity may be powerfully positioned to support adolescents' location of a meaningful connection to school (e.g., a sense of belonging). Viewing identity development and belonging through this lens, a student's ability to craft a sense of belonging (as opposed to experiencing frustration or disaffection) may be inextricably linked to whether the student experiences a sense of congruence between their own sense of self and their school experiences.

Recent research has begun to explore the sense of belonging provided by connections between adolescents' school experiences and their developing sense of their own identity. Drawing from contemporary models connecting with students' culture, identity, and voice (i.e., cultural modeling [Lee 2007] and third space/hybrid identities [Gutierrez 2008; Gutierrez and Larson 2007; Moje et al. 2004]), Faircloth (2008) explored adolescents' perspective regarding whether congruence between their identity and their learning activities related to their sense of belonging in their ninth grade English class. Students participated in weekly activities relating their work in English to their own lives (things considered important, interesting, and relevant to them). When studying *The Odyssey*, students discussed/wrote about goals they would be willing to devote a lifetime to – as Odysseus had – and the relationship (or non-relationship) between their schoolwork and those personally relevant goals. They worked with the teacher and researcher to identify ways that stronger connections between learning and their interests and goals could be achieved. When they studied *To Kill a Mockingbird*, they discussed issues of racism in their lives and how they might be the

Atticus Finch of their school or community. At the end of the semester, the students completed the Classroom Belonging and Support Scale (Goodenow 1993) as well as a qualitative survey of their experience in their English class, including items such as, “This year, in your English class, what activities were most motivating (interesting, engaging)?” and “Why are some activities in your English class more motivating than others? (What were the most motivating activities like?)”

Three issues dominated students' comments concerning their experience in this class and their sense of belonging: Nearly every student reported the value of relating class activities to their interests or sense of self. “It makes class more interesting if you get to ‘draw on your life’ or ‘have something to do with your own family.’” Class members also specifically described feeling more connected to class when they participated in activities that allowed them to express their feelings and beliefs: “I get to feel like my voice is bigger,” and when they were able to, “bring our personal culture into our work.”

It is important to explore competing models of belonging in order to more skillfully support adolescent motivation, engagement, and learning through the mediating experience of belonging. It was therefore the goal of an additional study by Faircloth (2010) to compare the fit of Goodenow's traditional three-factor model of belonging (general belonging, teacher bonding, and peer support; 1993), Hagborg's one-factor model (general belonging; 1994), and the contrasting three-factor model of belonging proposed by Faircloth (general belonging, connections with student identity, engagement of student voice, 2008). Exploratory factor analysis of the CBSS items for this sample of students yielded a three factor of belonging for this group of students: (1) Classroom connections with my life// what matters to me; (2) Affective comfort and safety (3) Self-expression//sharing who I am. These results closely reflect issues raised by contemporary research exploring the connection between belonging and student identity. Structural equation modeling with the CBSS data compared these three models (Goodenow, Hagborg, and Faircloth) clearly demonstrates that the Faircloth model (involving connections with students' interests, their culture, and their voice) “fit” the data best (consistently smaller chi square, Root Mean Square Error of Approximations, and Akaike Information Criteria values, as well as larger Comparative

Fit Indices for this model). These results provide important direction for understanding, supporting, and investigating adolescent students belonging.

Scaffolding Students Appreciation for Learning

Recent work by the late Jere Brophy (2008) suggests an addition avenue for establishing student belonging. Brophy (1999, 2004, 2008) claimed that among the three primary domains of motivational research that might inform this effort (expectancy, valuing, and the context), valuing is the least understood. In a recent review of research (2008), he identified potential “pathways to appreciation of school content and activities” that might support students’ connection to learning (and hence their belonging). He suggested the importance of framing students’ initial exposure to, and scaffold their subsequent engagement with, school content and activities in ways that reveal connections to experiences that are interesting or valuable to them. Such experiences, in which students find learning experiences meaningful and worthwhile can provide students with what Brophy has labeled “purposefully engagement” in learning. Bergin (1999) suggests that individuals develop schemata associated with their identity and are likely to be more interested in, or value, topics and experiences that resonate with that schema. Flum and Kaplan (2006) explain the engaging nature of connections with the self, suggesting that students who intentionally examine the relevance, meaning, or value of school content and learning with respect to their sense of who they are (or want to become), develop an exploratory orientation toward learning, which involves actively seeking/processing/valuing information to create self-relevant meaning. They argue that teachers can support this process of valuing of school by dialoguing with students about the meaning and value of school learning, scaffolding their skill at relating material to self-knowledge, and encouraging their sense of self as related to school content and experiences. The engagement and meaning suggested by each of these perspectives support the sorts of connections that are central to belonging.

In an empirical investigation of the results of scaffolding student appreciation of learning as a support for belonging (as suggested above), Faircloth (1999) explored the experience of ninth grade English students’ as they researched a self-selected topic that they

claimed had value for them (e.g., depression, abuse, gangs, and guns). Following the Fairbanks model and attempting to align learning with “Kids” Business (2000), students wrote an extended research paper on their topic of choice and presented their results in a form of their choosing (producing a play and designing a pamphlet) in an effort to give “voice” to students’ interests and perspectives. At the end of the year, students participated in individual interviews and written surveys addressing questions such as “What activities in your English class have allowed you to relate what you were studying to your interests, your background, or things that mattered to you? How did this kind of activity (one that related to things that mattered to you) affect your schoolwork or how you felt about school?”

The results of this integration of students’ values with learning – both to their experience of self and to their belonging – was captured in student statement such as *I started to like English class. In fact, I started to like coming to school; It made me work harder; Making personal connections with readings makes me feel important; and, Compared to this class, in most school work I am wearing a mask instead of feeling connected.* Given the important function of belonging in students’ lives, this evidence of significant, authentic, empowering connections with school generated by “scaffolding students’ appreciation” of learning has important implications for belonging that deserve closer attention.

Conclusion

Supporting and maintaining the academic motivation and engagement of adolescent students continues to be a major national concern, attracting the interest of educators, parents, and policy makers alike. Student sense of school belonging has proven to be a pivotal, albeit insufficiently understood, component of this quest. Substantial evidence exists that sense of belonging wields a powerful, possibly essential, influence on motivation, engagement, and achievement (Connell and Wellborn 1991; Faircloth and Hamm 2005; Goodenow 1993; Juvonen 2006; Wentzel 1998). Interpersonal connections within one’s setting continue to be accepted as key underpinnings of belonging. By integrating current understanding of students’ sense of belonging with the crucial role of culture, contemporary insights into the negotiation of identity within various contexts, and the need to scaffold students’ appreciation

of learning, insights into how students may craft a sense of school belonging continue to be illuminated. Given the critical role of belonging, the preoccupying nature of identity, culture, and student values (especially among adolescent students), and the urgent need to support this population of students, gaining this insight can position schools to help students negotiate a sense of belonging that provides a powerful avenue for their motivation and achievement.

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School Climate

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Overview

Many view school climate as beliefs, values, and attitudes that shape interactions among students and with teachers, and is influenced by educational and social values (Emmons et al. 1996; Koth et al. 2008; Kuperminc et al. 1997). School climate is a broad construct, and has been of interest to educational

researchers and policymakers for many years. It has its origins in organizational research and has been recognized as an important component of successful and effective schools (Brand et al. 2003; Miller and Fredericks 1990). It is a product of social interactions among students and teachers, is influenced by educational and social values, and has been shown to be related to social situations within classrooms and to the school as a whole. These interactions and experiences impact students' academic success and psychological well-being. Students' perceptions of various dimensions of school climate have been related to academic achievement and performance (Battistich et al. 1995; Brand et al. 2003; Griffith 1999; Jia et al. 2009; Roeser and Eccles 1998), student behavior problems (Gottfredson et al. 2005; Koth et al. 2008; Kuperminc et al. 1997; Loukas and Murphy 2007; Loukas and Robinson 2004), adjustment problems (Kuperminc et al. 2001), and psychological indicators such as depressive symptoms and self-esteem (Jia et al. 2009; Loukas and Murphy 2007; Loukas and Robinson 2004; Roeser and Eccles 1998; Way et al. 2007).

Importance of School Climate

The study of school climate examines factors that influence students' success.

The idea that schools can possess a climate that fosters or hinders learning is intuitively appealing to both educators and researchers (Miller and Frederick 1990). School reform is in the forefront of a national effort to improve experiences and academic outcomes for all students (Glennan 1998; Stingfield et al. 1996). While recognizing the importance of student background and motivational factors on student success, policymakers and educators are also examining the school context. This includes interactions among and between students and teachers. The quality and consistency of these interpersonal interactions within schools influence adolescents' cognitive, social, and psychological development (Haynes et al. 1997).

From a social cognitive perspective (Bandura 2001; Rogers 1951), people tend to react to experiences based upon subjective perceptions, not necessarily to how the experiences are objectively; therefore, perceptions rather than the objective reality are key to understanding how one adapts to the social environment (Bronfenbrenner 1979). In addition, social control theory (Hirschi 1969) suggests that schools with positive

climates increase students' attachment to healthy norms of behavior. It is therefore likely that students' perceptions of the school environment have a significant impact on their behavior at school, and will influence their attitudes toward education and their sense of self.

Schools play an important role in the development of adolescents, and provide a context for them to learn about themselves and their relationships with peers and adults. Developmental theory states that the initiation into adolescence centrally involves defining self or identity and forming intimate relationships outside the family with both adults and peers (Blatt and Bass 1995; Santrock 1987). Erickson (1968) theorized that during this period, adolescents begin to search for who they are and what they are about. Adolescents spend much time in school as members of multiple social groups. These experiences and perceptions within the school environment will likely affect identity development, belief in one's competence, social relations toward peers and adults, and standards of fairness both within the school context and social systems beyond (Santrock 1987).

History of School Climate Research

Based on organizational theory and the assumption that schools are formal organizations, early school effectiveness studies defined school climate in terms of objective and easily measurable structural attributes of the school. Variables external to the participants, such as size, building characteristics, and finances or resources, demonstrated few and inconsistent relationships to student outcomes. Early researchers were led to conclude that schools have little effect on students (Anderson 1982; Coleman et al. 1966; Purkey and Smith 1983). Subsequent research, however, found a relationship between student achievement and the level of resource utilization rather than amount of resources present. In addition, poorly funded and maintained schools relying on outdated materials may erode the morale and commitment of both students and teachers, which may in turn affect student outcomes (Rutter 1983). School climate research began changing its focus from concrete school characteristics to organizational behaviors of teachers and principals, and the degree of shared values among students and staff (Anderson 1982; Halprin and Croft 1963; Purkey and Smith 1983). Although recognizing that

process-oriented factors are key elements to school climate, these conceptualizations drew more from intuition than theory (Anderson 1982).

As researchers took a more nuanced approach, the focus shifted to teachers' and students' perception of the school environment. With this emphasis on perceptions of the social climate in schools, stronger associations with student outcomes began to emerge (Brookover et al. 1979; Stringfield et al. 1985). In the late 1990s, another development in the research on school climate occurred with the utilization of more sophisticated methodologies and statistical techniques. Techniques such as multilevel modeling using hierarchical linear regression (HLM) and structural educational modeling (SEM) are now widely used and are able to handle the complexities of school climate data.

Measuring School Climate

School climate is viewed as multidimensional encompassing interpersonal, organizational, and instructional dimensions, and has been examined from different theoretical and methodological perspectives. Although experts have not agreed upon one definition, climate is often defined as shared beliefs, values, and attitudes that shape interactions among students and with teachers, and is influenced by educational and social values (Emmons et al. 1996; Koth et al. 2008; Kuperminc et al. 1997). Research includes both teachers' and students' perceptions of school climate. Although teacher perception of the school environment has been associated with student outcomes and the organizational health of the school, the remainder of this paper will focus on students' perceptions of school climate. Climate is a multifaceted construct with numerous and diverse aspects, and researchers operationally define and measure school climate in various ways. Specific domains that comprise school climate include *discipline, order, and school safety* (Brand et al. 2003; Gottfredson et al. 2005; Juvonen et al. 2006; Koth et al. 2008; Kuperminc et al. 1997; Loukas and Murphy 2007; Loukas and Robinson 2004); *consistency in rules* (Brand et al. 2003; Gottfredson et al. 2005; Way et al. 2007); *academic motivation or values* (Brand et al. 2003; Battistich et al. 1995; Jia et al. 2009; Koth et al. 2008; Kuperminc et al. 1997; Roeser and Eccles 1998); *student-teacher relations* (Brand et al. 2003; Kuperminc et al. 1997; LaRusso et al. 2008; Way et al. 2007);

relations (Battistich et al. 1995; Brand et al. 2003; Jia et al. 2009; Kuperminc et al. 1997; Loukas and Murphy 2007; Loukas and Robinson 2004; Way et al. 2007); *school attachment and bonding* (Gottfredson et al. 2005; LaRusso et al. 2008; Loukas and Murphy 2007; Loukas and Robinson 2004; Stewart 2003; Vieno et al. 2005); and *student autonomy* (Battistich et al. 1995; Jia et al. 2009; Roeser and Eccles 1998; Vieno et al. 2005; Way et al. 2007).

Since school climate is multidimensional in nature, an important issue is determining the appropriate unit of analysis: individual students versus groups of students. Earlier research has conceptualized climate as a property of the school and analyzed the data at the school level. Typically, an indicator of climate was assessed and correlated with indicators of students' average performance, school characteristics, or student body composition. However, aggregating individual rating to form a single group-level indicator assumes similar variation in the perception of different groups within the school and prevents investigation of diversity in perceptions of climate.

Not all researchers view climate as an organizational indicator. Several recent studies have emerged documenting significant variation both within schools (likely attributable to individual-level factors) and between schools (likely attributable to school-level variables) thereby illustrating the importance of a multilevel approach (Brand et al. 2003; Battistich et al. 1995; Griffith 1999; Koth et al. 2008; Kuperminc et al. 2001, 1997; Loukas and Murphy 2007; Loukas and Robinson 2004; Roeser and Eccles 1998; Stewart 2003; Vieno et al. 2005). Multilevel modeling techniques are ideal for examining school data since the data are inherently clustered. Students are nested within classrooms, which are nested within schools. Single-level models are inappropriate for such data because they assume that regression coefficients apply equally to all contexts (Luke 2004; Raudenbush and Bryk 2002). In addition, because individuals from the same school context will likely have correlated errors, a basic assumption of multivariate regression is violated (Luke 2004). Multilevel modeling procedures account for nonindependence of observations (students within schools) and allow for correlated error structures. More advanced statistical software used in SEM also has the capacity to cluster students and account for the nonindependence of observations.

A related yet slightly different construct to school climate is classroom climate. Some research has utilized three-level modeling to include student-level, classroom-level, and school-level factors. The amount of variance attributable to classroom level factors ranged from 8% to 11% (Koth et al. 2008; Vieno et al. 2005). It is likely that the climate of specific classrooms varies within a single school and that classroom management, class composition, and teacher characteristics may influence students' experiences. At the elementary level, classroom-level factors may be more appropriate to assess; however, most middle and high school students move from class to class encountering several and different classroom compositions. Throughout the day, students are in contact with a larger and more diverse array of students and teachers for shorter periods of time; therefore, it is appropriate to utilize assessments that capture students' experiences across the entire school day (Brand et al. 2003).

Factors Influencing School Climate

Individual-level factors. Although early research into gender and ethnic differences in students' perceptions of school climate have been inconclusive, more recent research using more sophisticated methodology and sampling more diverse populations have yielded more consistent findings. For each school climate domain, multilevel models can determine the amount of variance attributable between schools (school-level factors) and within schools (individual-level factors). Unconditional models (without covariates) calculate the amount of variance for each level. Research indicates that the majority of variance is accounted for by individual-level factors (65–85%), and a smaller, yet not insignificant, percentage (4–27%) is attributable at the school level (Battistich et al. 1995; Brand et al. 2003; Griffith 1999; Koth et al. 2008). This suggests that individual-level differences (differences between students) account for more variation in students' perceptions of school climate than differences between schools.

Studies suggest that different subgroups of students perceive the climate at the school differently. Boys tend to perceive school climate more negatively than girls, specifically in the domains of safety, order, and clarity of rules (Griffith 1999; Koth et al. 2008; Kuperminc et al. 1997). Boys tend to display more disruptive behaviors and are at increased risk for school violence

(Lahey et al. 2000); therefore, they may perceive the environment as less safe. In addition, girls tend to perceive higher levels of teacher and peer support (Kuperminc et al. 1997; Way et al. 2007), and have a more positive perception of academic attitudes and school satisfaction (Battistich et al. 1995; Griffith 1999; Koth et al. 2008). In addition, African American and Hispanic students perceive school climate less favorably than Caucasian students. Minority students perceive the environment as less safe and have poorer perceptions regarding academic attitudes (Griffith 1999; Koth et al. 2008). Juvonen et al. (2006) investigated ethnic diversity and found that African American and Hispanic students felt safer in schools, were less harassed, and felt less lonely as the ethnic diversity within the school increased.

Although not a true individual-level variable, "time" has been investigated using longitudinal data to assess change in students' perceptions of school climate. Using growth curve modeling, trajectories of change in students' perception of school climate were examined. Findings suggest a decline in school climate over the 3 years of middle school (Roeser and Eccles 1998; Way et al. 2007). Although girls initially perceive school climate more positively than boys, over time girls report a sharper decline in comparison to boys (Way et al. 2007).

School-level factors. School-level factors are variables that are aggregated and applied equally to all students within a school. In multilevel analyses, school averages are used to make comparisons between schools. Socioeconomic status (SES) has been examined in relation to various domains of school climate. Schools with higher percentages of low SES students tend to have lower perceptions of peer support and a lower rating of clarity and consistency of rules; however, they tend to have a higher rating of teacher support (Way et al. 2007). Battistich et al. (1995) examined interactions between schools' sense of community and poverty. Their findings indicate that some of the strongest effects occurred among schools with the most disadvantaged students, suggesting that some of the negative effects of poverty can be influenced by schools successfully creating a caring community.

Other school-level variables have been explored. Students from larger schools tend to perceive school climate more negatively (Koth et al. 2008; Stewart 2003). The rate of faculty turnover has demonstrated

mixed findings. Findings suggest that higher teacher turnover is related to lower student perception of school order and discipline, but not related to the perception of academic attitudes. In addition, no association was found between student mobility and student perception of order and discipline and academic motivation (Koth et al. 2008).

School Climate and Student Outcomes

Academic performance. Various domains of school climate have been related to student's academic performance. Increased performance on achievement tests is positively associated with perceptions of teacher regard and academic motivation (Brand et al. 2003; Roeser and Eccles 1998). Battistich et al. (1995) found academic attitudes are related to students' perception of school community; however, there is no association with school community and academic performance. Student grades and GPA have been found to be positively associated with perceptions of academic motivation, teacher support, peer support, and clarity of rules (Brand et al. 2003; Jia et al. 2009). Students' self-reported academic performance and academic values are related to perception of teacher support (Griffith 1999; Roeser and Eccles 1998).

Student behavior problems. Findings suggest students' perception of school climate is associated with behavioral problems in schools. Students who perceive school climate as fair and consistent have fewer reported behavior problems and less-frequent victimization (Brand et al. 2003; Koth et al. 2008; Gottfredson et al. 2005). In addition, fewer disciplinary referrals and less externalizing symptoms are associated with boys' positive overall perception of school climate (Kuperminc et al. 1997).

Interaction effects have also been investigated. Kuperminc et al. (1997) found that African American boys had fewer teacher-reported behavior problems when their overall school climate perceptions were positive. The authors suggest that school climate may play a protective role in culturally linked risk for boys' externalizing problems. Interactions between temperament domains relating to emotional modulation, known as *effortful control*, and girls' externalizing problems also have been explored. Findings indicate that girls who perceive peer relationships more positively and are low on effortful control report fewer conduct

problems (Loukas and Murphy, 2007; Loukas and Robinson 2004).

Psychological indicators and adjustment problems. Positive perception of various domains of school climate, specifically teacher support, academic attitudes, and peer support, is significantly related to lower reports of depressive symptoms and an increase in self-esteem (Brand et al. 2003; Jia et al. 2009; Roeser and Eccles 1998). Findings show that perceived school climate moderated the relationship between domains of effortful control and boys' internalizing problems. Boys with low effortful control and high perceptions of peer relationships reported fewer depressive symptoms (Loukas and Murphy, 2007; Loukas and Robinson 2004). Positive perceptions of school climate moderated the negative effects of self-criticism. Youth with high levels of self-criticism did not show expected increases in internal and external problems when they perceived a positive overall school climate (Kuperminc et al. 2001).

Conclusion

Research suggests that students' perceptions of various domains of school climate are associated with a range of positive effects for students; therefore, students' perceptions of the school environment impact their behavior at school, and influence their attitudes toward education and their sense of self. Research suggests that a positive perception of school climate promotes academic success, and improves student attitudes and psychological well-being. In other words, students are more likely to succeed in school if they feel safe and supported. As student enrollment becomes increasingly diverse, it is the role of educators to create an environment for all students to feel safe, valued, and supported, thus increasing the likelihood of success in school.

Cross-References

► [Academic Achievement: Contextual Influences](#)

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School Connectedness

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Overview

Over the past 20 years, numerous studies have been conducted on school connectedness. Although there is no commonly accepted definition of school connectedness and the elements that comprise this construct are still debated, school connectedness generally reflects the degree to which students feel like they are part of the school and are cared for by others at the school (Resnick et al. 1997; Wilson 2004). Existing evidence indicates that school connectedness is associated with better academic outcomes and fewer behavioral and emotional problems (Resnick et al. 1997; Shochet et al. 2006). The relevance of school connectedness to students' lives is highlighted in studies showing that school connectedness makes a unique contribution to student outcomes even after considering family and peer connectedness (Kaminski et al. 2010) and that it also offsets the impact of poor family relations on students' behavioral problems (Loukas et al. 2010). To advance the understanding of school connectedness effects, researchers will need to improve conceptual consistency and further elaborate the transactional processes through which connectedness develops over time.

Defining School Connectedness

Connectedness has been referred to as a basic human need. Individuals have a need to belong and a desire to experience lasting interpersonal relationships (Baumeister and Leary 1995). Connectedness may describe interpersonal relationships between individuals, such as between parents and their children or between peers, but may also describe individuals' interactions with and feelings toward the contexts in which they live (Lee and Robbins 1995). The school is an example of a context to which children and adolescents develop connectedness (Resnick et al. 1997). Given that children spend more time in the school context than in any other, and that experiences in this context will affect student outcomes for years to come

(see Catalano et al. 2004), school connectedness is a particularly important topic for examination.

Educators have long recognized the relevance of school connectedness to students' lives. Generally referring to the interpersonal or affective aspect of the school's environment, most researchers agree that school connectedness reflects the degree to which students feel like they are part of the school and are cared for by others at the school (Resnick et al. 1997; Wilson 2004). Among the scholars who do research in this area, however, there is as much variation as there is commonality in definitions of school connectedness and a similar level of variability exists in the elements comprising this construct. Whereas some researchers assess school liking, sense of belonging, school safety, and quality of interpersonal relationships with peers and teachers, others include academic engagement, student engagement in decision-making, and participation in extracurricular activities (see Libbey 2004 for review). Variability also exists in the term used to capture this aspect of the school environment. The terms most commonly used include school connectedness, school bonding, and school attachment; although, it is not uncommon to also see the terms school involvement and school engagement. In some instances, these terms are treated interchangeably whereas in others, the same term is conceptualized differently by various researchers. The lack of consistent use of definitions, conceptualizations, and measures makes comparing results and drawing conclusions difficult. Still, it is generally accepted that school connectedness is associated with better academic outcomes and fewer behavioral and emotional problems (Resnick et al. 1997; Shochet et al. 2006) and for this reason continues to be of interest to child and adolescent researchers.

Theories of School Connectedness

Various theories guide understanding of the development of school connectedness and its role in student outcomes. Hirschi's Control Theory (1969) conceptualizes school connectedness, referred to as bonding, as involvement in school activities, attachment to individuals at the school, acceptance of the school's beliefs, and commitment to the values of the school. Hirschi argued that students who feel a connection to their schools have internalized the goals and values of the school and are, therefore, less likely to engage in deviant behaviors that contradict the schools' values.

Hirschi's later work with Gottfredson (Gottfredson and Hirschi 1990) on a General Theory of Crime added the notion of student self-control as a key factor in the development of school connectedness because it facilitates successful social interactions at school, which leads to reinforcement for students' efforts.

Social Development Theory (SDT) (Catalano et al. 1996) is similar to Control Theory in that it conceptualizes connectedness as attachment and commitment to a socializing unit, such as the school. Unlike Control Theory, however, SDT proposes involvement in the socializing unit as a necessary precondition that leads to attachment and commitment. From this perspective, involvement is a core element in the socialization process leading to connectedness. Social Development Theory describes connectedness as the result of a process that begins with the student's perception of opportunities for involvement with others and their social environment. If the child has sufficient skill to interact successfully in the school and if meaningful rewards are gained for interaction, then a bond or connection to the school develops. It is important to note that a strong connection to the school is more likely to develop if behavioral reinforcement for appropriate interaction is consistent. Once established, a strong connection promotes conformity to the norms, values, and beliefs of the school and in this way inhibits engagement in behaviors that are inconsistent with the socializing unit.

Social Development Theory is particularly useful because it explains the development of both prosocial behaviors, such as academic achievement, and antisocial behaviors, such as conduct problems and substance use. That is, an individual may be socialized into prosocial or antisocial behavior, depending upon the norms, values, and beliefs of the socializing unit to which the bonding or connection occurs. Social Development Theory is also capable of accounting for the influences of peers (deviant or not), family, and other socializing units in the community such as scouting, youth sports organizations, and arts programs.

Two other perspectives provide additional insight into the nature of the process through which school connectedness occurs. Stage-Environment Fit Theory (Eccles et al. 1993) argues that a mismatch between students' developmental needs and school demands could easily lead to motivational problems for youth and, in turn, poor school connectedness. On the other

hand, when schools meet developmental needs, students are likely to continue to pursue goals set out by the school using behaviors positively sanctioned by their schools. Because of this emphasis on the fit between the student and their environment, Stage-Environment Fit Theory lends itself well to analysis of the developmental appropriateness of school processes for the students who are engaged in them.

Like Stage-Environment Fit Theory, transactional models of development (Sameroff and MacKenzie 2003) focus on the interactive relationships between the individual and the social contexts in which they are embedded. These models are unique in that they acknowledge the bi-directionality of influence between the student and their school – schools impact students, but students also impact schools. In the process, a dynamic interaction evolves that shapes students' developmental trajectories. From this perspective, a child who lacks self-control and acts out may cause others in the schooling environment to become negatively reactive. Evidence indicates, for example, that the presence of antisocial behavior in kindergarten predicts increased levels of conflict and decreased levels of closeness with teachers 1 year later (Birch and Ladd 1998). The resulting lack of positive reward from the teacher may preclude the formation of connections between the child and the school.

Despite the different emphases and conceptualizations of school connectedness laid out by these four theories, there is considerable convergence. All four theories recognize that school environments and student characteristics both influence students' connectedness. All four theories also recognize that children's and adolescents' developmental trajectories are influenced to at least some extent by the degree to which they are connected to their schools. Still, these theories vary to the extent to which they elaborate on the relevance of development to the connectedness process.

Research on School Connectedness

Just as theoretical differences do not preclude areas of convergence, the variability in definitions and terminology employed by researchers does not prevent agreement on several points regarding school connectedness: First, school connectedness contributes to positive outcomes and protects adolescents from experiencing negative outcomes; second, school environmental factors and student characteristics

contribute to the development of school connectedness; third, school connectedness declines over the course of the school career; and fourth, the development of connectedness and the benefits that accrue to it may not be the same for all students.

Positive and Protective Effects of School Connectedness

Theory predicts that students who are well connected to their schools will show more positive outcomes, such as better academic achievement and performance, and be protected from negative outcomes such as school dropout, delinquency, substance use, and depressive symptoms. Research tends to support these predictions.

School outcomes. Both school connectedness and constituent concepts such as student–teacher relations and school engagement are associated with positive schooling outcomes. Higher levels of school connectedness and bonding are associated with better academic performance (Eisenberg et al. 2003) and lower likelihood of grade retention, school suspension/expulsion, and school dropout (Hawkins et al. 2001). Engagement in school is also positively associated with academic achievement (Hawkins et al.) as is quality of student–teacher relationships (Hamre and Pianta 2001; Hughes et al. 2008). Drawing on literatures derived from studies of student–teacher relationships, bonding, and achievement, Bergin and Bergin (2009) propose that secure attachments to teachers, impacts academic achievement independently and also indirectly through school bonding.

Antisocial behaviors. Numerous empirical studies indicate that school connectedness protects students from concurrent and subsequent negative outcomes (Resnick et al. 1997). For example, levels of school connectedness assessed in the sixth and seventh grades have been found to be negatively associated with conduct problems 1 year later in seventh and eighth grades (Loukas et al. 2006, 2009). Results from the Seattle Social Development Project (see Catalano et al. 2004 for review) show that school bonding in the seventh grade is associated with a greater likelihood of ceasing delinquent behaviors between seventh and ninth grades. Findings from this project also show that school bonding in the fifth grade protects students from engaging in violent behaviors and substance use as far out as age 21 (Catalano et al.).

Internalizing problems. Although most of the research on the protective effects of school connectedness has focused on its relation to antisocial behaviors, evidence indicates that it is also associated with fewer internalizing problems such as emotional distress and depressive symptoms (Ozer 2005; Resnick et al. 1997; Shochet et al. 2006). As an example, Shochet and his colleagues reported that school connectedness, assessed when students were in the eighth grade, was associated with fewer anxiety symptoms for girls and fewer depressive symptoms for all students 1 year later. It is likely that students who are connected to their schools form supportive relationships with teachers (Whitlock 2006) and prosocial peers (Battistich et al. 2004) and for this reason are less likely to experience internalizing problems.

Development of School Connectedness: Environmental and Individual Contributions

As outlined by transactional models (Sameroff and Mackenzie 2003), school connectedness is driven by the dynamic interaction between students and their school environments, with students impacting their schools and vice versa. Research on school connectedness tends to not capture the dynamic interplay between student and school. At best, it provides a series of snapshots drawn from longitudinal surveys. At least as often, however, it provides single snapshots with no evidence of causal direction among a set of correlated variables. Nonetheless, several conclusions can be drawn about how school environments and student characteristics engender student connection to school.

How schools encourage connectedness. School climate is the construct that has been most commonly used to describe the aspects of the school that impact the development of school connectedness. It has been defined as the attitudes, beliefs, values, and norms that shape instructional practice, academic achievement, and the process through which the school is administered (see McEvoy and Welker 2000). According to Stage-Environment Fit Theory (Eccles et al. 1993), schools whose instructional practices, definitions of academic achievement, and administrative processes enable students to meet their developmental, social, and academic needs should encourage more students to feel connected. Evidence supports this hypothesis,

indicating that school climate is positively associated with connectedness (Catalano et al. 2004; Loukas et al. 2006; Wilson 2004).

In their examination of school climate, McNeely et al. (2002) found that school connectedness was higher among students attending schools characterized by smaller school size, positive classroom management approaches, discipline policies that are not harsh, and a homogeneous racial/ethnic student body. Other studies have found that interactive teaching and communal organization both promote school bonding (Catalano et al. 2004; Payne 2008). Interactive teaching requires students to master learning objectives before proceeding and teachers to monitor the process of mastery (Hawkins et al. 1988). Communal organization emphasizes informal relations among students and teachers, common classroom norms and experiences, and collaboration by teachers, administrators, parents, and students (Payne 2008). School environments that are supportive of children developing positive and/or intimate relationships with adults and that focus on child learning rather than merely “covering material” appear to be the most encouraging of the development of school connectedness in students.

How students contribute to their own school connectedness. Social Development Theory posits that involvement is a precursor to the formation of school connectedness (Catalano et al. 1996). Students must engage in school activities if they are to experience meaningful reinforcement from them. Involvement alone, however, is not sufficient for a student to develop a connection to the school. Students must have the skills, particularly self-control (Arneklev et al. 1993), to enable them to engage successfully in social interactions. Students who skillfully engage in school activities should experience higher levels of connectedness than their peers who fall short in this regard (Catalano et al. 1996).

One individual characteristic that is particularly likely to prevent students from engaging in school is antisocial behavior. Because children with elevated levels of antisocial behaviors experience more negative interactions with teachers and peers than do their counterparts (Birch and Ladd 1998; Ladd and Burgess 1999), their level of connectedness to the school is likely to be compromised. Consistent with this line of thinking, Loukas and associates (2009) found that elevated levels of conduct problems among sixth and seventh

grade students were associated with lower levels of school connectedness 1 year later, even after accounting for baseline levels of school connectedness. To test a hypothesis of the interplay between students and their schools, Loukas et al. also assessed if lower levels of school connectedness would be associated with more conduct problems 1 year later, after accounting for prior levels of conduct problems. It was found to be true. Hence, lower levels of school connectedness predicted more conduct problems 1 year later and vice versa. These findings lend support to transactional models of development and underscore the importance of examining student characteristics in the development of school connectedness.

A Decline in School Connectedness

Students at all developmental and grade levels can benefit from feeling connected to their school. Even so, school bonding and connectedness decline across time (Hawkins et al. 2001; Whitlock 2006). The middle school years tend to be the time when the decline begins. Why does this developmental decline in school connectedness occur? From the perspective of Stage-Environment Fit Theory (Eccles et al. 1993), the decline is due to the failure of middle schools to meet the new developmental needs of their early adolescent students. For example, as early adolescents strive for autonomy and independence from parents, needs for interpersonal affiliation and intimacy with nonparental adults and with peers intensify. Yet, in comparison to elementary schools, middle school classrooms are larger, more formal, and more impersonal (Eccles and Midgley 1989). Such classrooms fail to meet students' needs by inhibiting the development of close, caring student-student, and student-teacher relationships. Similarly, the need for autonomy is unmet when middle school students, who strive for more control over their lives, are provided with fewer opportunities than elementary school students for decision-making in the classroom (Feldlaufer et al. 1988). These developmental mismatches contribute to disengagement and disconnectness from the school.

Do Some Students Gain More Benefits from School Connectedness?

Schools provide only one of several contexts in which children and adolescents can connect and/or bond to

others to advance their socialization process. Students with high levels of connectedness to their families and/or peers may experience positive outcomes even if they are not highly connected to their schools. For students lacking strong, prosocial influences, schools may offer a unique opportunity to engage in, be rewarded for, and become committed to positively sanctioned behaviors.

The relevance of the school to students' lives is highlighted in studies showing that the positive influence of school connectedness on student outcomes remains, even after taking into consideration family and peer connectedness (Kaminski et al. 2010). Results from such studies indicate that the influence of school connectedness is unique and independent of connectedness to two other proximal developmental contexts. Moreover, school connectedness may compensate for low levels of connectedness to other contexts and in this way is particularly beneficial for students at elevated risk for negative outcomes. In a recent prospective study of sixth and seventh graders, it was found that school connectedness offset the impact of poor quality family relations on students' conduct problems 1 year later (Loukas et al. 2010). Students reporting poor quality family relations were protected from experiencing elevated levels of conduct problems because they felt connected to their middle schools.

School connectedness may also be particularly beneficial for females, regardless of their level of connectedness to other key developmental contexts or risk for negative outcomes. Girls tend to report more intimacy in relationships with peers (Maccoby 1998) and to invest more energy in their interpersonal relationships than males (see Leadbeater et al. 1995) and for these reasons may be more strongly impacted by their feelings of connectedness to the school. In fact, research indicates that interpersonal relationship quality is more strongly associated with girls' than boys' adjustment problems (Leadbeater et al. 1999). Unfortunately, evidence of gender differences in school connectedness is inconsistent across studies, with some studies indicating that girls report more connectedness than boys (Kaminski et al. 2010; Ma 2003) and others indicating that boys report more than girls (Bonny et al. 2000). Findings regarding the moderating role of gender in the association between school connectedness and student adjustment are also mixed. Whereas some studies find no gender differences in the association between school connectedness and adolescent adjustment

(Brookmeyer et al. 2006; Loukas et al. 2009), others find that school connectedness is associated with girls' but not boys' outcomes. Ayers et al. (1999) showed that girls, but not boys, with a higher level of school connectedness during seventh grade were less likely to initiate delinquent behavior between seventh and ninth grades. Although Shochet and his colleagues found that school connectedness was predictive only of girls' anxiety symptoms 1 year later, these researchers also found no gender differences in the connectedness-depressive symptoms association. Still other studies indicate that school connectedness is predictive of boys' but not girls' outcomes. Thus, Blum et al. (2003) reported that while school connectedness was associated with lower levels of violent involvement for boys, the same was not true for girls. Taken collectively these findings suggest that there is insufficient data to generalize regarding the extent to which the protective nature of school connectedness varies for males and females. Additional research is needed to identify the circumstances under which gender differences might occur and the factors that could explain these potential differences.

Gaps in Knowledge and Future Research

Considerable progress has been made over the last 20 years in understanding the nature, development, and consequences of school connectedness. Researchers wishing to move the field forward from this point will need to pay attention to improvements in conceptual consistency, careful elaboration of the transactional process through which connectedness develops and in turn impacts student outcomes, and the thoughtful application of methodological approaches that capture the dynamics of these processes.

Conceptual Consistency

Conceptual consistency would be best achieved by having all researchers adopt the same label, definition, and dimensions for school connectedness. It goes almost without saying that such a high degree of convergence is unlikely given the number of research traditions involved in school connectedness work and the interesting findings that have come out of this work. An argument can be made, however, for the widespread

use of multidimensional models of school connectedness, such as that proposed by Catalano et al. (2004) containing the four dimensions of involvement, attachment, commitment to, and acceptance of schools' values. The use of multidimensional models could offer the following advantages:

1. The matching of specific dimensions of school connectedness with specific antecedents to and consequence of connectedness. In the case of the four dimensions of the Catalano et al. model, it may be that the dimension of involvement is more strongly associated with academic outcomes while the dimensions of attachment and commitment are more closely associated with student emotional and behavioral outcomes. Research that differentiates among the dimensions of connectedness could well provide more elaborated findings that would be especially useful for developers of school interventions.
2. Closely associated with the former point, a multidimensional approach would allow examination of the role of each dimension of school connectedness in offsetting specific risk factors. Attachment to school personnel, for example, may offset or buffer the impact of peer delinquency on students' antisocial behaviors. Thus, students whose friends engage in delinquent behaviors may nonetheless report low levels of delinquency because they formed an attachment to their teachers (e.g., Crosnoe et al. 2002). Alternatively, a strong belief in school values and commitment to academic activities may offset the impact of learning difficulties, such that children with learning difficulties may achieve better academic success because of their belief in the schools' values and commitment to its activities.
3. Pathways to connectedness might be more clearly delineated if multiple dimensions were examined. These pathways may be defined by the order in which the dimensions of connectedness impact student experience. According to SDT, involvement in school precedes attachment and commitment. However, it is entirely possible to conceive other sequences leading to connectedness. For example, attachment to teachers might precede involvement and commitment for students who lack attachment to other developmental contexts. Furthermore, it is likely that this developmental sequence

would vary across groups of students defined by a myriad of factors, such as gender, age, race/ethnicity, and attachment to other contexts. Understanding the unfolding of school connectedness for various subgroups of students could lead to intervention programs that more effectively target students' needs.

Reflecting on a similar conceptual and methodological muddle of approaches in resilience research, Luthar et al. (2000) note that variation in research approaches that results in the same findings offers a higher level of validation for the findings when they converge. The same could be said of school connectedness research. Perhaps the testing of multidimensional models that vary somewhat in content will serve to validate and differentiate the effectiveness of the various approaches. If researchers can at least converge on the use of multidimensional measures of school connectedness, there is considerable potential for answering new, or at least more finely pointed questions in this field.

Elaboration of the Transactional Process

The mechanism by which school connectedness develops is perhaps most articulately expressed in terms of the transactional process through which schools and students adapt to each other. The study of this process as it unfolds is the logical focus of research on the development of school connectedness. While the general analysis of dynamics described above could facilitate this process, more information is needed about external factors that impact the interplay among the dimensions of connectedness. On one hand, the process must be understood in terms of developmental stages that could impact the interplay of child and school factors. On the other, differences among various student populations (e.g., students with behavior or learning problems) must be more clearly elaborated as well. While an understanding of the general process will inform the general structure and content of school interventions, the subgroup differences will provide for more nuanced approaches that fit specific school settings. Qualitative studies could provide considerable guidance as to the structure of dynamic models of school connectedness and should be employed as a source of cross validation for large-scale quantitative research.

Application of Methodological Approaches to Capture Dynamics in Process

Qualitative and quantitative methods both have a part to play in gaining a clear understanding of the processes by which connectedness develops and confers its benefits to students. Qualitative research conducted systematically across grade levels can document the processes of the development of connectedness and its effects over time. Statistical models, such as structural equation modeling (Kline 2005), that assess change in multiple factors in relation to each other can assess potential instances of mutual causality identified in qualitative research. Event history models (Singer and Willett 1993) can provide for further testing of initial conclusions about the rates and timing of change in school connectedness with respect to critical events such as transitions between schools. Multilevel models (Raudenbush and Bryk 2002) are capable of differentiating between individual- and school-level (nesting) effects, a key distinction to make in educational research. While used by some researchers, each of these approaches could be used with greater regularity to ask important questions of data that often go unaddressed with other techniques.

Intervention research has demonstrated that levels of school connectedness can be increased through effective programming (Catalano et al. 1996). To the extent that research in school connectedness has more to offer to those developing intervention programs, it will come from studies grounded in the lived experiences of students, their parents, teachers, and peers. Further guidance for effective intervention efforts will come from studies employing data sets that provide multiple data points that precede and follow school transitions and that facilitate more sophisticated modeling of change. The application of the most powerful analytical tools to carefully developed data could yield a clearer and more differentiated understanding of the process by which students become connected to their schools and realize the benefits that flow from that connection.

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School Discipline

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Overview

Schools are places for learning as well as critical social environments that substantially impact the development of children and adolescents. School disciplinary policies and practices are a key part of school structures and cultures within schools. While these are a necessary part of managing students' behaviors, traditional school disciplinary practices have been shown to be prone to ineffectiveness and misuse and can iatrogenically

impact students' academic, personal, and social functioning (see Cameron 2006), and perhaps their development. These findings challenge long-standing attitudes and beliefs about school discipline and the nature and causes of students' problematic behaviors in schools. However, the findings have been considered controversial and have not as yet achieved fundamental changes in how schools discipline their students. While further research in this area is necessary, extant findings suggest that experiences with school discipline may have the potential to negatively alter adolescents' life trajectories and shape their roles and relationships with others in society.

The impact of school experiences on the lives and development of children and adolescents is great and pervasive, influencing not only academic achievement but also their psychological and social development. Relationships and interactions with peers, teachers, coaches, counselors, and others in school can help to supplement the work of the family to foster adolescents' engagement in the totality of life challenges that most directly precede their launch into the adult world. Supportive school experiences may also balance difficulties produced by problematic family situations and provide havens for those living in daunting neighborhood conditions. Schoolmates may become surrogate family members providing life-enriching support, and teachers and other school personnel may guide, mentor, and inspire young people in ways that can help to shape their lives and destinies. Unfortunately, it is also true that schools and the relationships and interactions their students have in them can be disappointing, disillusioning, and in the extreme, destructive. School disciplinary practices – the ways in which school teachers, administrators, and other adults in schools act to create and maintain safe, learning-oriented, and developmentally appropriate environments for students – exemplify this dichotomy. However, the extent of the negative consequences of the use of these methods, especially among the most vulnerable adolescents, may not yet be realized.

This essay will discuss research and theory related to school disciplinary practices and their impact on adolescent functioning and development, focusing on what is known about the potential for ineffectiveness and iatrogenic affects for adolescents exposed to school discipline. I will also consider theories regarding why

schools may have historically used and continue to use these practices, and how school discipline may serve as an important part of schools' socializing function in American society.

The History and Study of School Discipline

School disciplinary policies and practices include security measures, codes of conduct, punitive measures such as suspension, detention, and corporal punishment, and the micromanagement by adults of students' behaviors in classrooms, hallways, recreational spaces, on school buses, and elsewhere at school. Each of these disciplinary methods can be traced back to the earliest practices of US public schools to create order, deter disruptive behaviors, and socialize students into roles of productive citizenship (see Rothstein 1984). While it is clear that school discipline is a crucial part of making school environments safe for both students and teachers, there is a growing interest in the methods that have historically been used to achieve this.

Studies of school discipline have provided rich data but have only recently begun to establish strong empirical support for outcomes produced by school discipline. Studies have tended to focus on middle school and high school students and have often included boys, girls, and youths from minority backgrounds, social class factors, and urban, suburban, and rural settings. Data are typically derived from both quantitative and qualitative studies, although there is a stronger tradition of qualitative, observational, and interview-based studies in this area. Methods of data collection in the study of school discipline have also included examination of school disciplinary records, student grades, behavioral observations, behavioral checklists, and other statistics from school reports and law enforcement agencies. Studies of school discipline using quantitative approaches have tended to employ relatively simple statistical data analytic methods identifying correlations between disciplinary practices and student outcomes, while only rarely identifying causal links more substantially demonstrating the contributions of discipline to negative student outcomes. However, there is great consensus among findings regarding these negative outcomes. Some of the major theorists and researchers working in this area include Irwin Hyman, Stanley W. Rothstein, and Russell Skiba.

The Ineffectiveness and Iatrogenic Impacts of School Discipline

Studies of school discipline have established correlations between standard school disciplinary practices and several negative outcomes for adolescents' biopsychosocial functioning and attendance at and performance in school.

Biopsychosocial Functioning

Unchanged and Worsened Problematic Behaviors

Harsh school policies and practices such as zero tolerance policies and strict codes of conduct have been shown to fail to deter unwanted student behaviors and in some cases increase these behaviors, inflating school suspension rates as well as truancy (Cantor and Wright 2001; Colvin et al. 1993; Noguerra 1995). Students who are suspended are often suspended repeatedly, indicating no change or a worsening in proscribed behaviors (Atkins et al. 2002; Dupper 1994; Safer 1986). These strict practices have been found to be more related to increased suspension rates than are student behaviors in junior high and high schools (Wu et al. 1982). This paradoxical effect in which school discipline is associated with worsening student behaviors may not be well understood by school administrators or teachers.

Physical Sequelae

Students may suffer physical harm when exposed to corporal punishment, which is used legally in 20 states in the USA (Center for Effective Discipline n.d.). Corporal punishment includes paddling and striking students with objects, extreme exercise, and forcing students to maintain uncomfortable or painful positions for long periods of time. Students subjected to these forms of corporal punishment may develop medical conditions including bruises, welts, and blisters, while a small number of students have died from disciplinary exercise (Hyman 1995).

Psychological Sequelae

Some students experience intensely negative reactions to their exposure to school discipline that may overwhelm their capacities for coping. It has been estimated that as many as 2% of students who receive corporal

punishment in school may develop symptoms associated with trauma exposure (Hyman 1990; Maurer 1990; Spencer 1999). Trauma symptoms may include sleep disturbances and nightmares, anxiety, psychological numbing of thoughts and emotions, flashbacks, and avoidance of people, places, and situations associated with traumatic events. In one study, students subjected to harsh physical and verbal treatment by their teacher developed trauma symptoms which improved when the teacher was replaced (Krugman and Krugman 1984). Symptoms of depression and diminished self-esteem have been identified among disciplined schoolchildren, including decreased self-confidence, hypersensitivity to criticism, and diminished self-efficacy (Hyman 1997; Krugman and Krugman 1984). These symptoms mimic those found in some children who are subjected to severe corporal punishment at home, and may have more serious consequences among youths subjected to disciplinary practices at school (Spencer 1999).

Aggression and Violence

School discipline can paradoxically increase student aggression and violence both in and outside of school (Hyman and Perone 1998; Maurer 1990; Strauss 1989). Schools' use of strip searches of students have been associated with student anger and revenge fantasies (Hyman 1990; Hyman and Perone 1998). Shootings in schools take place more often in states that allow corporal punishment in school (Arcus 2002). Students corporally punished in school have also been found to be more aggressive at home following their discipline (Hyman and Perone 1998). An association has been found between the use of corporal punishment in schools and states' homicide rates (Strauss 1989) and the number of youths convicted of crimes who were on death row (Hyman 1990). Witnessing corporal punishment may also lead to increased aggression among witnesses (Hyman 1990).

School Attendance and Academic Achievement

Disciplined students are at risk for a host of problems that threaten their good standing in school as well as their academic achievement. Exposure to school discipline is correlated with tardiness, absenteeism, and school dropout (Costenbader and Markson 1998;

Ekstrom et al. 1986; Fine 1991; Hyman 1990; Krugman and Krugman 1984; Spencer 1999). Disciplined students have reported increased difficulties with concentrating in school and diminished interest in their schoolwork following their incidents of discipline (Hyman 1990; Hyman and Perone 1998). Studies of school suspension have identified an association between suspension and academic failure (Fine 1991; Gersch and Nolan 1994; Safer 1986). This association is especially strong among African-American students (Davis and Jordan 1994; Fremon and Hamilton 1997).

Damaged Relationships with Peers and Teachers

Students disciplined at school may subsequently modify the ways in which they relate to both adults and peers at school. Disciplined students may distance themselves from teachers after being disciplined (Schwartz 1989). Students who have been disciplined by teachers in verbally hostile ways may show greater tendencies toward displaying hostility in their interactions with peers (Hyman 1995). Students have been found to become involved with peers with behavior problems following incidents of discipline at school (Williams 1979). For some students, overall social functioning may be diminished following their exposure to school discipline (Hyman 1990; Krugman and Krugman 1984; Spencer 1999).

Understanding of Self, Others, and Relatedness to Society

Considered together, these findings suggest that adolescents' developmental pathways may be iatrogenically altered by their experiences with school discipline (see American Psychological Association Zero Tolerance Task Force 2008). Most concretely, the diminished biopsychosocial functioning and poor academic performance that may be both exacerbated and engendered by school discipline can limit students' attainment of intellectual, psychological, and interpersonal capacities required for success in all areas of living, including higher education, employment, and in relationships. Additionally, however, school discipline appears capable of altering students' images of themselves, others, and their relationships with them, promoting in some students a sense of the world

as an arbitrarily harsh place (Kupchik and Ellis 2007). As a response to their experiences of school discipline, adolescents may develop a disconnection and defensiveness in roles and relationships with others, including a diminished capacity for aspiration and goal-orientation, and an ambivalent attitude toward authority. Ultimately, this kind of discouragement, distancing, and mistrust can act to disinhibit both self-destructive and antisocial processes (see Merton 1968).

Theories of the Impacts of School Discipline

Theories regarding the mechanisms at work in regard to the ineffectiveness and iatrogenic nature of school discipline focus on five domains: developmental immaturity, psychological reactivity, ineffectiveness and unintended effects of disciplinary punishment, disempowerment of students, and alienation of students from adults and peers at school (see Cameron and Sheppard 2006).

Developmental Immaturity

Recent studies suggest that adolescents' brain structures continue to develop well into adolescence. This developmental immaturity impacts adolescents' capacities to manage impulses, resist peer pressure, judge risk, and hold a future orientation (American Psychological Association Zero Tolerance Task Force 2008). When student misbehaviors are products of this kind of immaturity, there may be greater chances for ineffectiveness and iatrogenic reactions by students to discipline that overestimates students' control over their behaviors. Psychological immaturity may create greater vulnerability among adolescents for the development of all the sequelae described in this essay.

Psychological Reactivity

Students' psychological reactions to discipline include suppressed negative emotions, stigmatization and negative self-image, and trauma. Suppressed negative emotions, including anger, humiliation, shame, and anxiety might be expressed as a kind of edgy, defensive, overreaction or inappropriate reaction to peers and teachers' words and actions, and can escalate into aggression and violence (Brantlinger 1991). Stigmatization and negative self-image can be produced in

students who respond to indirect messages in teachers' disciplinary actions that express expectations about students that are perceived by students as negative. Students may also react in the same way to the indirect and direct rejecting messages of peers that may be based on judgments about them formed by knowledge of their being subject to discipline (see Eden 2003). Trauma symptoms might be most likely to be triggered when discipline involves public ridicule or humiliation (Rothstein 1984).

Ineffectiveness and Unintended Consequences of Punishment

Discipline can fail as a behavioral intervention even though it may halt behaviors in the immediate moment if it does not also teach more appropriate behaviors that students may use instead (Bear 1995). Behaviors may also not be modified due to an overreliance on punishment or its use in ways that are of the wrong intensity, are not timely, or are not experienced by students as adequately aversive (Bongiovanni 1979). For some students, unwanted behaviors may be reinforced inadvertently when suspensions and other actions that take them out of school help them to escape from the unhappiness of the school environment (Atkins et al. 2002; Costenbader and Markson 1998). Additionally, when teachers and other school personnel use gratuitously aggressive and hostile methods, they *model* these for students, some of whom will internalize and use these methods in their relationships and interactions with others (Butchart 1998; Hyman 1990).

Disempowerment

Students who are disciplined in coercive and oppressive ways may experience this as rejecting and devaluing, and as a denial of their need to have and use power (Glasser 1969; Henry and Abowitz 1998). The effect of this can be resentment and oppositional reactivity to authority, and a refusal to participate, expressing protest over this perceived assault (see Beyer 1998; McEwan 1998). When schools interact with students in ways that communicate messages of mistrust of them and suggesting that they are not competent or capable of acting responsibly, this may erode students' emerging capacities for autonomous, self-directed activity and promote an apathetic disinvestment

from their own activities and important pursuits (Beyer 1998).

Alienation

Related to this, when students experience adults' disciplinary actions as messages indicating a lack of interest in and concern for them, the bonds between students with adults and peers at school can be damaged. Students who feel neglected and rejected may become estranged from others, and this alienation from others may disinhibit disciplined students, who may act out their hurt and anger through withdrawal, disruptive behaviors, and violence (see Brantlinger 1991; Noguerra 1995). Students' alienation may be exacerbated when there are cultural differences between teachers and students (Noguerra).

Draconian Use of School Discipline

Supporting theories of disempowerment and alienation are the findings that school discipline is routinely administered in draconian ways. This means that teachers and other school personnel tend to eschew positive, instruction-based interactions with students in which they work with students to develop and use more socially appropriate behaviors in school, believing the more negative approaches to be effective and appropriate; they also may tend to use discipline that is excessive in relation to the behavior it is intended to address (Brophy 1996; Brophy and McCaslin 1992; Furlong et al. 1994, in Shafii and Shafii 2001; also see Ringer et al. 1993). For example, school personnel often state that suspension is only used as a last resort for dealing with extreme student misbehaviors, but it is the most commonly used form of school discipline, and is used most often for minor, nonviolent incidents such as insubordination, tardiness, truancy, and dress code violations (Brooks et al. 1999; Dupper 1994; Skiba et al. 1997). Most students in US schools report witnessing or been the object of some type of punitive verbal intervention by a teacher (Hyman 1988), and as many as 60% of students are the object of hostile verbal interactions with a teacher (Hyman 1995).

Bias in School Discipline

Perhaps most alarming, however, are findings regarding the prejudicial use of school discipline. Teachers

disproportionately refer African-American and other students of color to school administrators for disciplinary actions (McFadden et al. 1992; Shaw and Braden 1990; Skiba et al. 1997). African-American students are also referred for corporal punishment for less severe infractions compared with white students (Shaw and Braden 1990). African-American students and other students of color are disproportionately suspended compared with white students (Raffaele-Mendez and Knoff 2003; Raffaele-Mendez et al. 2002; Skiba 2001; Wu et al. 1982). Additionally, students in special education, males, and those of low socioeconomic status are also disproportionately disciplined, controlling for severity and frequency of rule infractions. (Christie et al. 2004; Costenbader and Markson 1998; Gregory 1996; Shaw and Braden 1990; Wu et al. 1982). Findings regarding the discriminatory use of school discipline are among the most robust in this area of study, and have established that students who may already be especially at risk for multiple psychosocial challenges may be systematically targeted for treatment at school, communicating a view of them as subordinate and undeserving of fair treatment and respect.

Why Schools Use Traditional Disciplinary Practices

In spite of harms done to schoolchildren by traditional school discipline, these methods continue to be commonly used. Theorists have suggested that the continued use of traditional practices includes factors at the levels of culture, institution, organization, and individual teachers and school administrators. At the broadest level, attitudes in the USA about children have been informed in part by religious traditions that view children as particularly susceptible to or even naturally born with sinfulness. This has supported parenting practices that emphasize punishment over use of positive supports or teaching (Hyman 1990). These attitudes and practices were part of the approach to managing behaviors of students in the earliest public schools, which adopted socialization as a primary institutional purpose (Katz 1975; Noguerra 1995; Rothstein 1984). Legal rulings have often supported the use of harsh discipline in schools (Shaw and Braden 1990). Theorists focusing on schools as bureaucracies have posited that traditional disciplinary practices are consistent with formal, standardized, and authoritarian

structures and processes of bureaucracies (Beyer 1998; Wu et al. 1982). Schools may also use discipline as a surreptitious way of encouraging dropout among disruptive students (Fine 1991; Medina and Lewin 2003; Raffaele-Mendez et al. 2002). Punitive disciplinary methods may also act to displace onto students frustrations and stresses of working in what can be overwhelming and inadequately supportive environments (Cameron and Sheppard 2005; Epp 1997; Sizer 1984).

Teacher characteristics have been found to contribute to the use of punitive discipline. Perhaps understandably, teachers may tend to discipline students out of emotional reactivity (Neil 1976; Noguerra 1995), which contaminates and may nullify the teaching element of the intervention (Bongiovanni 1979). Teachers may also use a pathological or moralistic lens for understanding adolescents' behaviors, which may support the reactive use of punitive discipline (Wu et al. 1982; Cameron and Sheppard 2005). Studies suggest that gender may be a factor in determining choice of disciplinary actions, as male teachers have been found more likely to use punitive discipline (Clarke et al. 1982; Shaw and Braden 1990). Teachers who use punitive discipline are more likely to view it positively and to have been raised by parents who used tended to use punishments in their childrearing (Hyman 1990). Teachers may also be underprepared by their training programs for understanding and dealing effectively with students' problematic behaviors, and may not understand the limitations and possible negative consequences of punitive discipline (Cameron and Sheppard 2005; Costenbader and Markson 1998; Hall and Wahrman 1988; McEwan 1998).

Perhaps most troubling is what has been termed "reproduction theory," asserting that school discipline is used surreptitiously and unconsciously to perpetuate class and status inequalities in American society (Kupchik and Ellis 2007). Schools may insidiously reward and punish student behaviors in ways that favor white, middle-class children, and disfavor others. Studies of the draconian and discriminatory use of school discipline are consistent with this thesis. Teachers who discipline reactively, without understanding of the consequences of their actions, and (perhaps unintentionally) with bias, may act as the unwitting instruments for the perpetuation of oppression in the USA.

Conclusion

Scholarship in school discipline presents a troubling and controversial picture. There appears to be only modest awareness among teachers, administrators, and the public about the potential harms school discipline can produce for adolescents and their development. Recently developed alternative disciplinary methods focusing on modifying school cultures and promoting positive supports and changing school cultures have considerable scientific support and are being instituted in US middle and high schools (American Psychological Association Zero Tolerance Task Force 2008; Cameron and Sheppard 2006). Greater understanding and continued development and implementation of humane and effective discipline in schools may benefit adolescents and their development in ways that ultimately may return benefits to those with whom they relate, work, and interact throughout their lives.

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School Refusal Behavior and Absenteeism

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Overview

School absenteeism has grown nationally and internationally as a serious issue that affects the long-term functioning of adolescents. Researchers have grappled with the problem of school absenteeism for decades and, while much knowledge has been gained, a great disparity exists across professional fields. School absenteeism and school refusal behavior are associated with myriad behavior problems and contextual variables, though some researchers have developed effective clinical and systemic intervention strategies. A summary of key findings and issues in this area is presented in this essay.

Understanding Key Concepts and Definitions

Problematic absenteeism refers to unexcused absences from school leading to detrimental effects for a youth. Problematic school absenteeism has no consensual definition, but a recently proposed one involves school-aged youths who (1) have missed at least 25% of total school time for at least 2 weeks, (2) experience severe difficulty attending classes for at least 2 weeks with significant interference in a child's or family's daily routine, and/or (3) are absent for at least 10 days of school during any 15-week period while school is in session, with any daily absence defined as 25% or more of school time missed. Problematic school absenteeism may be an adolescent's primary behavior problem but may also be embedded within larger problems such as anxiety, mood, or disruptive behavior disorders as well as family, school, and community exigencies.

Problematic school absenteeism has been historically studied by researchers in psychology, education, criminal justice, social work, medicine, and other disciplines. As such, various terms have been used to describe youths with problematic absenteeism. A common term utilized by clinical child psychologists is

school refusal behavior, which refers to a child-motivated refusal to attend school and/or difficulties remaining in classes for an entire day. This includes youths who miss days or weeks of school, display partial absenteeism such as skipped classes, express morning misbehaviors in an attempt to miss school, demonstrate chronic tardiness, or show great duress when attending school. School withdrawal refers to parents who deliberately keep a youth home from school, but the focus of this essay will be on child-motivated school refusal behavior.

Populations Generally Studied

Clinical child psychologists generally focus on school refusal, or anxiety-based absenteeism, whereas criminal justice and social work experts often focus on truancy, or delinquency-based absenteeism. A distinction between school refusal and truancy is common among mental health professionals, but substantial overlap in symptomatology exists across the two groups. Both groups, for example, display frequent and problematic absenteeism, a mixture of internalizing and externalizing behavior problems, academic and social difficulties at school, and short- and long-term negative consequences of absenteeism. Common internalizing symptoms in this population include general and social anxiety, depression, fear, somatic complaints, worry, fatigue, and self-consciousness. Common externalizing symptoms in this population include running away from home or school, tantrums, noncompliance, defiance, and verbal and physical aggression.

The prevalence of problematic school absenteeism is substantial. A comprehensive community survey of youths with anxiety-based school refusal and truancy revealed a prevalence rate of 8.2%. This figure did not include youths who skipped certain classes, were chronically tardy to school, displayed morning misbehaviors in an attempt to refuse school, and had substantial distress while attending school that precipitated pleas for future nonattendance. Such youths are commonly seen by clinicians, meaning the overall rate of problematic school absenteeism may be as high as 28%. Recent figures indicate as well that graduation rates for several large American cities are exceedingly poor. Examples include graduation rates for Los Angeles (45.3%), New York (45.2%), Baltimore

(34.6%), Cleveland (34.1%), and Detroit (24.9%). Other countries also experience significant rates of school absenteeism, including those in Europe as well as South Africa, Australia, Saudi Arabia, and India. Sharply increased rates of problematic school absenteeism have occurred recently in Japan.

Key concomitants of problematic school absenteeism include dangerous or debilitating behaviors such as substance abuse, violence, suicide attempt, risky sexual behavior, teenage pregnancy, delinquency-related behaviors, injury, illness, and school dropout. Common short-term consequences of absenteeism include academic decline, social alienation, family conflict, and legal ramifications. Longitudinal studies reveal severe consequences of problematic school absenteeism into adulthood, including economic deprivation and social, occupational, marital, and psychiatric problems.

Measures and Measurement Issues

The evaluation of adolescents with problematic school absenteeism or school refusal behavior typically involves a behavioral assessment approach. This approach often includes structured diagnostic interviews, behavioral observation, review of academic and attendance records, formal testing, and child, parent, and teacher questionnaires regarding internalizing and externalizing behavior problems. Measures cover various forms and functions of school refusal behavior. School absenteeism is a fluid problem that involves frequent changes in attendance and symptom patterns. As such, daily monitoring of attendance and associated behavioral problems is a key aspect of the assessment process.

Several measurement issues are evident for this population. First, no standard protocol exists for assessing this population and little comparability across publications is evident. Part of this is due to use of varying terminology to define absenteeism and part is due to a lack of multidisciplinary work regarding this population. Psychologists, for example, commonly study anxiety-based school refusal idiographically, but criminal justice experts commonly study delinquent-based truancy nomothetically. Such disparity has led to considerable difficulty for researchers trying to compare findings and for clinicians trying to design an appropriate assessment and treatment plan for a particular adolescent.

Another key measurement issue is that many contextual risk factors impact problematic school absenteeism, among these parent, family, peer, school, and community factors. Cases of school refusal behavior commonly involve complex clinical pictures such as child psychopathology with extensive family dysfunction and school-related and other problems. As mentioned, problematic school absenteeism may be a primary problem or one embedded within other exigencies. Furthermore, the etiology of many of these cases is not typically understood. Researchers are thus faced with the challenge of sorting through a myriad of contextual factors to develop conceptual models or taxonomies for this population, and clinicians are faced with the challenge of determining type and quantity of resources to devote to a particular case.

Intervention

Intervention for problematic school absenteeism and school refusal behavior involves clinical and systemic strategies. Clinical strategies are typically cognitive-behavioral in nature and focus on adolescent-based anxiety management, gradual re-exposure to the school setting, cognitive restructuring to modify irrational thoughts, and problem-solving techniques to address obstacles to attendance. Parent-based contingency management techniques are also commonly employed to provide incentives and disincentives for attendance and nonattendance, respectively, as well as to provide effective commands, establish set morning routines, and extinguish inappropriate behavior. Adolescents with school refusal behavior often require a family-based approach, particularly one involving contingency contracting to provide tangible rewards for attendance and increase parental and school personnel supervision. Clinicians also recommend escorting an adolescent to class if necessary, helping an adolescent refuse offers from others to miss school, and using journals that require daily signatures from teachers to verify attendance.

Systemic strategies have also been designed to decrease school absenteeism in adolescents on a larger scale. Key examples include restructuring the role of the homeroom teacher to identify and help address youths at-risk for extended absenteeism, utilizing peers as monitoring and reinforcing agents to enhance attendance, maintaining a student's peer group across

classes to increase motivation to attend school, and providing quick feedback to parents about absences. Other examples include establishing school-based rewards for attendance, developing self-contained educational units to increase supervision of high-risk youth, implementing summer bridge and other academic programs to ease the transition between schools, customizing curriculum and instruction programs so they are tailored to a student's individual academic needs, conducting police sweeps to return truant students to school, and providing court referral and health-based services within the school building. Clinical and systemic interventions have been found effective for reducing absenteeism among adolescents, though many adolescents and their parents lack access to such services.

Gaps in Knowledge

Research regarding adolescents with school refusal behavior has burgeoned in the past 20 years but many issues remain. A key issue is a wide disparity among researchers in different fields regarding the definition, conceptualization, assessment, and treatment of adolescents with problematic absenteeism. Little consensus has thus emerged about the best methods of addressing individual youths with school refusal behavior. Another key issue is that assessment and treatment protocols fail to address the many contextual factors associated with problematic absenteeism, including school- and community-related variables.

Finally, little work has been done regarding large-scale prevention of absenteeism on a systemic scale. Future work must focus on a triage system of care for this population that arranges services based on the severity and complexity of cases. Such a triage model would also allow for distribution of therapeutic resources given the scope of a particular case, and may involve the degree to which teams of professionals are needed across psychology, education, criminal justice, and social work.

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School Size

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Introduction

School size has been an issue of interest to scholars, educators, and policymakers alike for decades, although the perceived costs and benefits have changed over time. On the one hand, larger schools have often been viewed favorably due to the benefits of economies of scale that come from large size, including enhanced diversity of course offerings, lower per-pupil costs with respect to staffing, and greater variety of extracurricular and social opportunities for students (Robertson 2007). On the other hand, the benefits of small schools primarily have been viewed as relating to the closer connection that students form with their teachers, school administrators, and peers. Various studies have offered evidence to support both sets of findings, leading to a complex assessment of whether and how school size “matters” for student outcomes. Taken together, the body of research on school size has not yielded clear, definitive conclusions about the effects of size. Rather, the estimated effects vary – at times substantially – by the outcomes examined, the school setting under study, the particular size of the schooling unit, and the research design itself. This essay examines these issues, and concludes by highlighting that research supporting the emerging belief that smaller schools are more effective is not robust and rests on thin evidence. It also concludes that the adoption of policies based on studies of school size can be problematic given the wide variety of factors that contribute to studies’ outcomes.

Leading Initiatives and Studies

The current research focus on school size, to a great extent, stems from research on the academic and social shortcomings of large, comprehensive, “shopping mall” high schools (Powell et al. 1985). The last 2 decades of school reform in the USA have seen the

emergence of a number of initiatives advocating for the restructuring of secondary schools into smaller educational units, such as the creation of schools-within-schools, in order to foster engagement, and thereby better academic outcomes, among students and between teachers and students (e.g., Fine 1991). Examples of these efforts include the Coalition of Essential Schools and the Carnegie Foundation’s initiative, which focused on more personalized teaching and learning (Breaking ranks: Changing an American institution 1996; Sizer 1992); the Annenberg Foundation’s emphasis on reducing students’ alienation in schools (Smart schools/Smart kids: A proposal to the Annenberg Foundation to create the Chicago school reform collaboratives 1994); the Child Development Project’s focus on restructuring schools to promote caring communities (Bryk and Schneider 2002; The child development project: Summary of the project and findings from three evaluation studies 1998); and most recently the U.S. Department of Education’s Smaller Learning Communities Grants program (Education 2006). Perhaps the most prominent among these recent initiatives is that of the Bill and Melinda Gates Foundation, which, as of 2005, had invested more than \$800 million to create 2,000 small high schools, particularly ones that focus on underserved children of color (Targeted literature review of major constructs and their components: Evaluating the national school district and network grants program 2002).

In general, school size has been studied at the macro and micro level. However, there has been little exploration of populations larger than singular districts or smaller than a nationally representative sample. The majority of research on school size has been conducted on middle and junior high schools and high schools. The studies that focus on elementary schools predominantly examine classroom size as opposed to school size. Due to these foci of exploration, most school-size examinations are done on larger populations using quantitative datasets and statistical analyses.

Much of the existing theoretical understanding of school size has been generated from data from the 1980s such as the 1979 National Longitudinal Survey of Youth, a nationally representative sample of 12,686 adolescents who were 14–22 years old in the base year of the survey, and were interviewed annually through 1994 and biannually through the present, by the Bureau of Labor Statistics. Some of the most relevant

research on the topic of school size (e.g., Lee and Smith 1997) uses the National Educational Longitudinal Study of 1988 (NELS:88), conducted by the National Center for Education Statistics (NCES). NELS:88 was initiated in 1988 with a nationally representative cohort of eighth graders from public and private schools and followed up with the students in their tenth grade and senior years of high school as well as sophomore year of college and at age 24 approximately (1990, 1992, 1994, and 2000). Students completed questionnaires on a range of topics and were administered achievement tests for the first three waves of data collection (while they were still in school).

Two more recent nationally representative longitudinal studies have also been very important in school size research: The Early Childhood Longitudinal Study, Kindergarten Class of 1998–1999 (ECLS-K) and the Educational Longitudinal Study of 2002 (ELS:02), both conducted by the NCES. The ECLS-K is used primarily in research on elementary schools (e.g., Ready and Lee 2006), and followed kindergarteners (1998–1999) from public and private schools through eighth grade, following up with them in 1999–2000, 2002, 2004, and 2007. The study collected information from parents, teachers, and schools in addition to the students. ELS:02 is a nationally representative sample of over 16,000 students in 750 high schools and provides detailed information about the nation's high schools and students, following these students from the time they were high school sophomores through their high school careers and beyond. Follow-ups were conducted in 2004 and 2006, and the third follow-up is scheduled for 2012. Weiss et al. (2009) used this publicly available data to test the relationship among high school size, school engagement, and achievement finding similar relationships for school size to those found in Lee and Smith's groundbreaking work (1997) using NELS.

In addition to these national surveys, there have been a few localized studies that have contributed to the literature on school size. One of these studies, the Consortium on Chicago School Research has collected data biannually since 1991, surveying a sample of students, and all teachers and principals in the school system. Lee and Loeb (2000) used the Consortium's data on sixth and eighth graders and their schools, finding that small schools (fewer than 400 students) have a direct and indirect positive influence on student

achievement, as teachers in small schools have a more positive attitude about their responsibility in students' education.

Factors Related to School Size

Research on school size encompasses a great variety of studies, with variation in findings based on level of schooling studied. Generally speaking, research on elementary school size has focused on size of classroom (Finn and Achilles 1999), while research on secondary school size has focused on the size of the aggregate unit (either total school or school-within-school subunit) (Cotton 2002). Below, research focusing on different units of aggregation is summarized.

Class Size

Class size refers to the number of students in an individual classroom, usually with one teacher. Studies that focus on size at a class level are predominantly studies of elementary schools (kindergarten to fifth or sixth grade), due to the difficulty of measuring the impact of class size in secondary schools, where students switch classes multiple times a day. In the last decade, several school districts and even states have adopted small class-size policies as a means to enhance achievement at the elementary level. Many of these initiatives trace their roots to the findings of one of the most prominent randomized control trials in education research: the Tennessee Student/Teacher Achievement Ratio (STAR) class-size experiment. Project STAR was a four-year class-size study that randomly assigned over 7,000 kindergarteners in 79 schools to one of three differently sized classes in 1985, and directly collected student and school level data including descriptive characteristics for grades K-3. Additionally, they collected follow-up data including achievement test scores from grades 4 to 8, high school course enrollment, SAT/ACT participation and scores, and graduation/dropout information (Hanushek 1999a, b). One of the few truly randomized, and widely publicized, experiments in education literature, Project STAR found that classes of approximately 20 students or less were significantly more effective on reading and math outcomes than classes of larger sizes (Hanushek 2002). Results were found to be most important for young students in kindergarten and were less substantial as students aged through the fourth year of the experiment. Many local and state policies have translated

these findings into smaller class-size policies for all grades within elementary schools, although the effect of smaller class-size for later grades was not explored.

The quick acceptance of the findings on class size and the reflecting policy adoptions has proven to be problematic. For example, the state of California spent several billion dollars adopting small class-size policies but failed to recognize the strict conditions within which the experiment's positive results were valid. California failed to take into consideration the lack of comparability between California and Tennessee school students, staff, union regulations, school-financing procedures, etc. As a result, the state-initiated reform resulted in unintended consequences such as a dramatic rise in demand for teachers that could not be met, resulting in an increasing number of uncredentialed teachers in classrooms (Ready and Lee 2006). These consequences suggest caution in the adoption of policies based on studies of class size, and similarly school size, as all findings have limitations.

Cohort Size

Cohort size in this context is equivalent to the number of students in a student's particular grade, and is therefore directly related to total school size, and may even provide a more accurate look at the size of a student's school community. It provides a measure of community size at a level between class size and school size, which can be particularly significant for secondary school students. Weiss et al. (2009) focus on this unique construct for two reasons. Primarily, classroom size is a measure used with children, not adolescents, to measure engagement. There is little exploration into school size as it relates to young children, as scholars assume that what is important to children who spend all day in one group is the size of that group (or class). However, the group secondary school students spend their day with is much broader than the students of one classroom, and therefore a different measure of community must be used. Also, to move too quickly from classroom size to school size overlooks a potential confounding factor of cohort size. Specific sizes of cohorts, as compared to or in conjunction with total school population, may have a unique impact on student engagement and achievement.

Much of a student's experience is conditioned by course sequencing and its organization by grade-level cohorts (Stevenson et al. 1994). As noted above, much

research supports the theory that grade-level groups are also significant with regard to academic relationships (as compared to class-level groups). For example, Hallinan and Sorenson (1985) find that though ability groups are significant in student friendship networks, over time these groups overlap into larger grade-level formations. Consequently, as groups of adolescents proceed through similar course experiences bounded by grade level, this mechanism serves as the primary vehicle through which peer relations develop and endure (Monk and Haller 1993). Therefore, for those in nonclassroom, grade-based schooling this measure should more closely reflect actual school experience.

School Type

Within the literature on school size, one of the most prominent concepts discussed is the variation in grade configuration or school type (e.g., K-8 school and Middle School), because it is so often related to school size. The literature on school size and school type generally has focused on assessing particular configurations of grades, particularly in examining the middle grades, or in the transitions to middle and high school. For the former, there is research questioning the ability of traditional middle schools to meet early adolescent needs (Eccles and Midgley 1989; Gootman 2007). In response, many districts are eliminating their middle schools in favor of K-8 schools, which contain kindergarten through eighth grade in one school. However, the benefits of K-8 schools, relative to middle schools, have not been consistently demonstrated (Weiss and Kipnes 2006).

In response to criticism about some of these varieties of school type and class size, other types of schools have developed. One particular type, the schools-within-schools movement (Huebner 2005), is designed to address concerns about student and faculty engagement in large schools, and is modeled after the belief that smaller school communities encourage greater engagement. Schools-within-schools are smaller educational units with separate programs, budget, staff, and students within a larger school building. They are often charter schools, which are publicly funded schools that operate without some of the same restrictions as traditional public schools (Fine 1994). These schools-within-schools also may function as magnet schools using a particular curricular focus to guide the coursework across all subjects. There has been

minimal research on schools-within-schools thus far, but the existing research shows that given the opportunity to select their own subunit based on academic interest, students tend to sort themselves into groups of similar racial and socioeconomic characteristics, as well as by academic ability (Lee and Ready 2007; Ready and Lee 2004; Ready and Lee 2006; Ready and Lee 2008). Such sorting highlights important unintended consequences of small schools or schools-within-schools, which may replicate the sorting and tracking mechanisms of larger schools.

Demographic Variation

Another way in which schools commonly vary with regard to size is their geographic location. Much literature of late has begun to specifically take “urbanicity” into account as a control which absorbs some of the significant variation of school environments, including school size, resulting from the significant diversity of districts and schools across the country. More specifically, it is generally accepted that urban schools most often operate as large schools while rural schools often operate not only as small schools, but also as small districts (Iatarola et al. 2008; Tyack 1995); larger districts often have more bureaucratic processes accompanied by institutional capacity to support reform, while smaller districts may see less support for innovation and reforms such as schools-within-schools (Elmore 2006; Lee et al. 2001). Suburbs of large metropolitan areas often fall somewhere in-between these two extremes with regard to size and are the average, or comparison category, with regard to other school-environment characteristics such as teacher quality, percent free and reduced lunch, aggregate parental education, etc. Urban schools generally fare poorly on school-environment assessments, while rural schools vary based on funding and community characteristics (Iatarola et al. 2008). Overall, there is a concern of endogeneity where many of the characteristics that impact a student’s success in school (such as poverty, race, and geographic location) may also be related to a school’s size.

Student Academic and Engagement Outcomes

Estimations of the impact of school size have varied significantly based upon the *outcomes* being examined.

Most studies of school size have focused on educational attainment or scores on standardized assessments as the primary outcome, as is the case in most recent educational research. A number of studies have examined the relationship between size of schooling unit and students’ academic performance. For the most part, these studies have found that students in smaller schools have higher performance, although the relationship is neither consistent nor linear (Leithwood and Jantzi 2009). This finding has held across numerous types and variations of schools: elementary (Archibald 2006; Kuziemko 2006; Lee and Loeb 2000) as well as secondary (Andrews et al. 2002; Schreiber 2002).

The most stable assessments of “achievement” with regard to school size are found using easily quantifiable scores, such as math scores on standardized tests. Measurements of school-size impacts on standardized outcomes such as math achievement have been found to be different on different groups of students (Weiss et al. 2009). Although the use of these scores provide a more reliable estimate of achievement across studies and overall, they also do not allow for understanding how school size may impact students along other outcomes academically, socially, and emotionally. Additional quantitative and qualitative work on various populations is needed to better understand the origins of these differences as they relate to school size.

Research on the effects of school size has not been limited to academic outcomes, however. Other dimensions of students’ well-being and connectedness in school have been examined, such as participation in extracurricular activities (McNeal 1995). Another commonly examined outcome is whether a student left school before completing his/her high school degree. Most studies of this relationship have found that students in larger schools are more likely to drop out prior to graduation, as compared with students in smaller schools (Lee and Burkam 2003; Rumberger 1995); however, other research has found that students in larger schools are *less* likely to drop out (Rumberger and Thomas 2000).

It is likely that the lack of consensus reflects the fact that school size may also hold differential impacts for different students (Weiss et al. 2009). For example, several studies show that larger school size has a greater negative impact on students of low socioeconomic status (SES) (Leithwood and Jantzi 2009).

Additionally, Weiss et al. (2009) find that the impact of SES on mathematics scores also varies by cohort size, with the greatest impact occurring in moderately small, though not the smallest, sized cohorts. However, consistent with previous research on small schools, the authors find that moderately large cohorts still appear to provide the greatest advantage for all students. The central findings, using the 2002 Educational Longitudinal Study, show that very small student groups tend to exacerbate already extant disadvantages among adolescents, particularly with regard to race. The authors support the general literature pointing to beneficial school sizes of approximately 600 students and additionally show that student-grade *cohorts* begin to exhibit negative effects when they grow beyond 400 students (or a school size of approximately 1,600).

Previous research has established a strong link between school engagement and student outcomes (Finn and Rock 1997; Fredricks et al. 2004; Jessor et al. 1998). Students who are better connected with aspects of their schooling perform better academically and have lower levels of problem behaviors (e.g., Bryk and Thum 1989; Gutman and Midgley 2000; Newman 1992). Engagement is dependent on feeling connected with academic subjects, school staff, and student peers, and all of these factors are impacted by the size and structure of the school (Bryk and Schneider 2002; Fine 1991). More recently, a publication by the National Research Council and Institute of Medicine (Medicine 2004) draws attention to how engagement with school can improve academic achievement as well as reduce student disaffection and dropout rates. There have been a small, but influential number of studies that examine the relationship between school size and student engagement, within which a few merit mention. For example, one study found that smaller high schools were more likely than larger ones to have the conditions that promote student engagement for students at risk of dropping out (Wehlage and Rutter 1987). Similarly, in their groundbreaking study on school size, Lee and Smith (1997) found that students in smaller, more communally organized schools had higher levels of engagement. Additionally, recent confirmations of previous controversies with regard to school size have been aided largely with the retesting of hypotheses using various datasets that allow generalization to a larger population.

Optimum School Size: Conclusions and Controversies

Although there is significant disagreement on the optimum school size among existing research, in their review of 57 post-1990 empirical studies on school size, Leithwood and Jantzi (2009) concluded that smaller- to medium-sized schools are generally beneficial to the majority of students in both elementary and secondary schools. They analyzed a small number of studies showing a positive relationship between school size and school achievement in secondary schools, but determined that these results were most likely skewed by their omission of factoring in dropout rates which they found to be higher at large secondary schools, especially those greater than 2,000 students.

Similarly, Garbino (1980), echoing Barker and Gump (1964), described the advantages for high schools with more than 500 students, while Goodlad (1984) advocated for schools between 500 and 600 students (see Lee 2000 for a review of this literature). In a slight contrast, Lee and Smith (1997) concluded that, in high schools, learning was greatest in medium-sized schools (i.e., 600–900 students) compared with larger or smaller schools. They also found that learning was more equitably distributed in smaller schools, that school size has important effects on learning across sizes, that many high schools should be smaller than they currently are, and that high schools can also be too small. These findings generally highlight that particularly large schools are the least beneficial for students and that students who are already at risk are often those most impacted by variations in size.

Although relations generally were more positive and intimate in the smaller schools studied by Lee and colleagues (2000), this situation did not always benefit all students, particularly those who preferred the anonymity of large schools due to the fact that their reputations or those of their families followed them at school. Additionally, small schools can be so small that they do not support a diversity of interests and experiences for faculty and students, while large schools often provide large numbers of options which result in a depersonalized bureaucratic system in which students lose direction. Even more importantly, large schools with large numbers of curricular options, or tracks, often promulgate social stratification through tracking (Lee and Ready 2007; Oakes 1985; Oakes and Guiton

1995). One of the dominant theories in support of larger schools is that they provide increased access to a variety of classes including electives and advanced academic classes, but (Monk and Haller 1993) concluded through their analysis of course offerings in secondary schools in New York State that schools as small as 400 students were able to offer a curriculum as varied and specialized as a large school. Additionally, they determined that large schools did not necessarily guarantee an expanded curriculum. Moreover, recent evidence suggests that constrained curricula with clear emphases on core academics promote greater academic achievement for all students (Angus 1999; V. Lee and Smith 1997; Murphy and Alexander 2002).

Schools-within-schools have been a particularly popular policy reaction to concerns about the size of a student's academic peer group. This school type is particularly important as it confounds the understanding of school, class, and cohort size. Particularly notable in this policy arena has been the Gates Foundation and its support for the transformation of traditional public schools into schools-within-schools; schools within schools are a primary focus of the Foundation's agenda and it has supported over 2,000 transformations in 41 states (Lee and Ready 2007). The model used is designed to allow schools to establish their own conversions and curricular changes, capitalizing on the importance of school-driven change, but also resulting in few schools-within-schools that are comparable for comparison. Because of the complicated organizational structure of schools-within-schools, few scholars have explored these unique school types with empirical or in-depth evidence, though one such study provides a set of case studies by scholars who have founded the majority of the literature on the schools-within-schools field.

Lee and Ready (2007) find several things of note in their exploration of schools within schools. First, in previous work, Lee et al. (2001) discovered that the largest schools are not the schools most likely to adopt schools-within-schools programmatic change. Similarly, evidence of real differences between small and large schools with regard to curricular approaches is thin. Although schools within schools provide more directed curricular attention and thematic focus, they often do not significantly change the variation in course offerings or strongly support curricular focus. In other words, though the schools divide into separate

units, the quality and quantity of course offerings in the subunit themes usually does not substantially change; students continue to take courses out of their subunit; and teachers generally do not receive additional training in their subject area or professional development for developing new and more directed courses. With these changes left undone, the transformation from one school to many is often simply a matter of enhancing the already existing stratification of subjects and courses. For schools-within-schools, a student's existing demographic and social characteristics heavily influence curricular decisions, thereby impacting his or her academic choices and success. These findings illuminate the danger found in schools large enough to offer multiple "tracks" where curricular selection may not be a reflection of student capacity or academic interest but of other influences such as peers, institutional practices, and social background (Lee and Ready 2007).

Conclusion

One of the underlying rationales for school-size reforms, whether creating small schools from scratch or through subdividing a large comprehensive school, is that the learning settings of smaller schools facilitate greater student engagement, which is associated with increases in achievement, rates of graduation, and likelihood of postsecondary attendance (National Research Council and Institute of Medicine 2004). However, there is concern that initiatives to improve students' achievement through engagement are based more on theory and anecdotal evidence (e.g., Theroux 2007), and actual empirical research evidence linking size to better outcomes is thin, with the majority included in this essay.

In sum, while some have offered specific recommendations for size, others (e.g., Meier 1998; Raywid and Osiyama 2000) have used qualitative criteria, such as sense of community, to define a "small school." Such authors prefer instead to describe size in relation to a school's ability to provide collaborative opportunity for faculty and possibility for personalization and safety for other actors within the school. As school size is only important insofar as it impacts the nature of learning, it is possible that a combination of quantitative and qualitative criteria should be used to assess the significance of school size with regard to student outcomes.

Cross-References

► Class Size

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School Transitions and Risks

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Overview

This essay reviews the literature on changes in behavioral risks across the transition from high school to college. Whereas some of these behaviors increase dramatically (e.g., substance use, risky sexual activities) others do not change or even decrease (e.g., property crime). Models of the transition to college must also account for variation beyond these mean-level changes, and a theoretical integration of selection and socialization influences has demonstrated great utility in explaining trajectories of binge drinking. As detailed in this essay, however, less is known about the factors underlying change in other behavioral risks. Whereas some follow similar trajectories to that of binge drinking, others do not. Areas for future research are discussed. Importantly, the influence of alcohol intoxication as a proximal contributor to behavioral risks should be considered. The transition to college represents a major step in the progress from adolescence to

adulthood, and an understanding of how and why behavioral risks change during this period is vital to enabling students to transition successfully.

School Transitions

The transition from high school to college is a major turning point in adolescent development. For the 85% of US adolescents who do so, graduating from high school results in dramatic changes in peer, familial, and residential systems (Bachman et al. 1997). Further, the roughly 60% of adolescents who matriculate to college experience an additional set of social environmental transitions (Arnett 2000; Johnston et al. 2009). Attending college often involves departing the parental home, and for many adolescents, it coincides with decreased – though not extinguished – influence from parents (Turrisi et al. 2001; Wetherill and Fromme 2007; Wood et al. 2004). Following matriculation, college students find themselves with increased responsibility and increased freedoms (Arnett 2000). Simultaneously, they enter a novel social environment, with unique behavioral norms and powerful peer influences. By entering college, students take a major step toward a variety of positive life outcomes. They can meet lifelong friends, increase their leadership skills and earning potential, and open a wide range of career opportunities. College graduation is increasingly recognized as the key to middle-class social and economic success.

As they enter college, however, students also experience changes in their drinking and other behavioral risks. Because of developmental increases in the propensity to take risks, in addition to increased susceptibility to peer influence, adolescence is the life period in which behavioral risks are most prevalent (Steinberg 2008). Moreover, upon entering college, adolescents have fewer restrictions on their behaviors but greater access to the antecedents of risky behaviors. Alcohol in particular is more readily available in the college environment than it is in most high schools, and 1,825 college students died in 2005 as a consequence of alcohol-related accidents (Hingson et al. 2009). Other behavioral risks, including notably risky sexual behavior, increase during the college transition as well. This essay reviews the literature on changes in alcohol use and a selection of other behavioral risks (i.e., illicit substance use, risky sex, aggression, and property crime) during the transition to college. The first section

of this essay summarizes descriptive studies of the college transition. It includes a review of both the methods used to explore changing behavioral risks and the findings they have generated. Because collegiate drinking is the most studied and well-understood of the behavioral risks, the second section reviews the individual and social variables that contribute to changes in alcohol use in the transition to college and presents a theoretical integration of these factors. Finally, the third section details the ways in which the other behavioral risks might follow or differ from this model and describes areas in which further theoretical and empirical work is needed.

Changes in Behavioral Risks Across the Transition to College

A common methodology for examining changes in the prevalence of behavioral risks across the transition to college is the prospective, longitudinal survey design. One major panel study, Monitoring the Future, has followed national samples of graduating high school seniors from the 1976–2008 graduating classes with continuing biannual survey assessments of alcohol and other substance use (Bachman et al. 1997; Johnston et al. 2009). Data from Monitoring the Future demonstrate clear changes in substance use across the transition to college. Perhaps the most alarming results concern binge drinking. While still in high school, college-attending high school students drink less than do their peers who will not attend college. This trend reverses, however, following graduation. The prevalence of binge drinking increases by more than 25% in both male and female college students, with more than 50% of male students and 40% of female students reporting having binge drunk in the past 2 weeks.

Monitoring the Future reveals effects of the college transition on other substance use as well. Although college-bound high school students are less likely to use marijuana than their noncollege-bound peers, students catch up once in college. Roughly 40% of men and 30% of women report past-month marijuana use during the early college years. Moreover, monthly cocaine usage among college students doubles following matriculation, with approximately 5% of male students and 3% of female students reporting cocaine use in the first 2 years of college. Finally, whereas 14% of adolescents have already begun smoking during high school, approximately 12% begin smoking following

high school graduation. These increases are common to those who attend college and those who do not, although smoking is more prevalent among noncollege-attending adolescents. In sum, use of alcohol, marijuana, cocaine, and tobacco becomes more prevalent in the transition to college, and increases in alcohol and marijuana use are greater among college students than among those not attending college.

A major advantage of Monitoring the Future's panel design is its ability to identify trends in collegiate substance use across time (Johnston et al. 2009). Recent evidence suggests that binge drinking, along with some illicit substance use, has remained relatively constant among college students across the past decade. In contrast, reflecting similar decreases in high school students' cigarette use, college students' monthly smoking prevalence has decreased to 18% since peaking at 31% in 1999.

There are changes in other behavioral risks across the transition to college as well. One recent effort to describe these changes is the UT Experience! project, a longitudinal study of over 2,000 students in the incoming class of 2004 at The University of Texas at Austin (e.g., Fromme et al. 2008). Beyond demonstrating increases in the prevalence of binge drinking and marijuana use that parallel those found in Monitoring the Future (i.e., a 25% increase in binge drinking and a 20% increase in marijuana use), results from the UT Experience! show that some other behavioral risks, such as risky sexual activity, increase across the transition to college. The prevalence of having multiple sexual partners increased from 7% to 11% between the final semester of high school and the first semester of college. Interestingly, however, not all behavioral risks show the same increase. The prevalence of driving after drinking decreased from 26% to 17%, aggressive behavior decreased from 88% to 62%, and property crimes decreased from 14% to 11% across the same time period. In sum, whereas binge drinking, illicit substance use, and risky sex increase in the transition to college, other behavioral risks may actually become less prevalent once adolescents enter the college environment.

Beyond the mean-level patterns detailed above, there is a great deal of variability in trajectories of behavioral risks across the college transition. Indeed, as Baer and colleagues (Baer et al. 2001) demonstrated, only one third of incoming college students increase their alcohol use. The remaining students either

continue drinking at the same rate or even decrease their drinking. An important research question, then, has been to identify the distinct trajectories of behavioral risks across the college transition. Growth mixture modeling, an application of latent growth curve modeling, has been used to distinguish among the trajectories of binge drinkers in adolescence and young adulthood. Although these models have typically included both college students and their peers who do not attend college, they nevertheless provide insight into trajectory variability.

Schulenberg and colleagues' (Schulenberg et al. 1996) analysis of Monitoring the Future data identified six distinct trajectories of binge drinking. Of these trajectories, only two increased following high school graduation: approximately 10% of adolescents increased their drinking steadily through age 24, and an additional 10% increased their drinking for a brief period before decreasing again. Another two trajectories both included participants who already binge drank 1–2 times per week but were distinct in that 7% continued to binge drink frequently whereas 12% decreased until age 24. Importantly, the final two trajectories, comprising a total of 53% of participants, either never or rarely binge drank. Another attempt at identifying trajectories of binge drinking across adolescence and young adulthood identified four distinct patterns (Chassin et al. 2002). Of these participants, 21% began binge drinking in early adolescence, 30% increased their binge drinking as they transitioned out of high school, and 10% binge drank infrequently. The remaining 40% of young adults did not binge drink.

Although these and other trajectory analyzes have produced differing numbers of patterns, a few trends have emerged (Sher and Gotham 1999). Notably, among adolescents who binge drink, there appears to be a distinction between those who experience an early onset and continue to increase their drinking through adolescence and those who begin drinking heavily as they transition out of high school and – for some – into college. This second pattern is developmentally limited. That is, following the college years, these adolescents typically do not continue to drink heavily. In sum, results from trajectory analyzes indicate that there are two distinct cohorts of problem drinkers in the transition to college: one that has already begun drinking heavily in high school and one that increases during the transition.

Personal and Social Predictors of Increased Alcohol Use in the Transition to College

Of the behavioral risks reviewed in this essay, the most readily identifiable and most commonly studied is heavy alcohol use. Because relatively few studies have tested specific predictors of changes in other behavioral risks across the transition to college, this section reviews the individual and social factors that contribute to increases in drinking specifically. As reviewed by Borsari and colleagues (Borsari et al. 2007), a key distinction should be made between moderators and mediators of increased drinking in the transition to college. Moderator variables distinguish which students are more likely to increase their alcohol use, whereas mediators explain why those increases occur. Both personal and social moderators have been identified. The personality traits grouped under the term behavioral undercontrol are most often linked to heavy drinking. Individuals higher in sensation seeking, for example, increase their alcohol use in the transition from high school to college (White et al. 2006). Gender also moderates the effect of the transition to college on drinking, with men experiencing larger increases than women (Ham and Hope 2003). Finally, precollege alcohol use also predicts change in drinking. Drinking is relatively stable for some individuals, but those who drink more during senior year of high school are more likely to subsequently increase their drinking (Fromme et al. 2008; Weitzman et al. 2003).

Of the potential social moderators of alcohol use in the transition to college, parenting has recently received the most attention. Greater monitoring and perceived awareness and caring from parents during high school are associated with smaller increases in drinking in the college transition (Wetherill and Fromme 2007; White et al. 2006). Moreover, protective parental influences following high school graduation are also associated with lower levels of drinking (Wood et al. 2004), and parenting interventions limit the effect of the college transition on students' drinking (Turrisi et al. 2001). Whereas peers become more salient to adolescents, particularly as they transition into college, parenting continues to influence drinking behaviors.

Once adolescents enter the collegiate environment, they encounter strong social influences that help account for increases in drinking among some students (Borsari et al. 2007). Social drinking norms, or beliefs

about how much fellow students drink (i.e., descriptive drinking norms) and how much they approve of drinking (i.e., injunctive drinking norms), are among the strongest social environmental influences on collegiate drinking. College students overestimate both how much their fellow students drink and how much they approve of drinking (Borsari and Carey 2003). These normative misperceptions are associated with heavier collegiate drinking, and, moreover, misperceptions held prior to matriculation predict greater increases in drinking across the transition to college (Baer et al. 1991; Read et al. 2005; Stappenbeck et al. 2010). Whereas much of the literature on social norms has focused on norms at the campus level (i.e., beliefs about the behaviors and attitudes of typical students), recent evidence suggests that misperceptions of drinking among more proximal groups, such as friends or same-gendered peers, may be even stronger predictors of alcohol use (Read et al. 2005). Thus, peers with whom students associate or identify may influence their drinking behavior more strongly. In sum, perceived drinking norms appear to help explain why alcohol use increases in the transition to college.

Theoretical Models of Change in Heavy Drinking in the Transition to College

Given ample evidence that increased drinking across the college transition is a function of both precollege individual factors and social influences in the college environment, adequate theoretical models must take into account both these selection and socialization processes. Recent models have relied upon Social Learning Theory (Bandura 1969), articulating how individuals engage in transactional relationships with their environments. In the case of drinking in the college transition, students select into collegiate social groups and organizations on the basis of individual differences and subsequently become socialized to the attitudes and behaviors of those groups. Several studies have found support for this reciprocal pattern of influence (e.g., Read et al. 2005). For example, precollege heavy drinkers select into collegiate social groups they perceive as drinking more heavily. In turn, students further increase their drinking. A more complete account of these processes, however, requires the inclusion of the other individual differences, including traits related to behavioral undercontrol. One such attempt

explored the selection and socialization influences specific to Greek organizations (Park et al. 2009). Students who reported greater impulsivity drank more prior to college matriculation. Because of their drinking, more impulsive students joined Greek organizations, in which they experienced easier access to alcohol and greater perceived norms. Reciprocally, these environmental factors associated with Greek membership predicted greater drinking during college. Thus, those students who are at risk upon entering college increase their drinking in large part because they become socialized to the peer groups into which they select.

Applying the Social Learning framework to alcohol use in the transition to college generates the prediction that, as a function of selection on precollege characteristics, those who drink more in high school should experience the greatest increases. A challenge for this prediction, however, is the distinction between early- and college-age-onset trajectories of heavy drinking reviewed above. That is, it is difficult to reconcile the developmentally limited drinking trajectory, in which lighter drinking adolescents experience steep increases in drinking during the transition to college, with the notion that the heaviest drinkers prior to college will select into heavier drinking social groups. The resolution to this apparent conflict may come from incorporating further transactions between individuals and their environments. Whereas adolescents high in facets of behavioral undercontrol tend to drink more, this relation may be diminished among those with protective environmental influences, such as supportive and attentive parents. In the transition to college, as they depart the parental home and enter a more permissive environment, however, this subset of students experiences the greatest increases in drinking (Quinn and Fromme 2010). In sum, it is vital to include interactions between personal and environmental factors in an account of the transactional nature of increases in drinking during the transition to college.

Models of Change in Other Behavioral Risks

Given the relatively limited research on patterns of change in behavioral risks beyond alcohol, an important goal for future research will be to develop models of these behaviors across the transition to college. One approach to model development would involve a test of

the possibility that other behavioral risks result from similar processes to those underlying heavy drinking. Evidence from growth mixture modeling demonstrates that adolescent and young adult trajectories of smoking and illicit drug use are highly concordant with binge drinking trajectories (Jackson et al. 2008), suggesting that increases in substance use in the transition to college may all follow similar patterns. Two questions remain. First, do these patterns also generalize to other behaviors, such as risky sex, delinquency, or aggression? Second, do these behavioral risks follow similar trajectories because similar factors underlie them? Cooper and colleagues (2003) showed that in adolescence and young adulthood, a highly stable general factor accounts for more than half the variance in several problem behaviors, including substance use, delinquency, risky sexual behavior, and poor academic performance. Moreover, trait-level impulsivity and avoidance coping are general risk factors for all four categories of behavior. Thus, it is possible that some behavioral risks result from the same risk factors identified in the literature on alcohol use in the transition to college.

It is crucial to acknowledge, however, the fundamentally important role of alcohol use in the etiology of other behavioral risks. Even beyond typical drinking, greater alcohol intoxication is linked at the event level to college students' greater likelihood of aggression, vandalism, unsafe sex, and sexual coercion both as a victim and a perpetrator (Neal and Fromme 2007). Moreover, increased alcohol use across the college transition is associated with increased physical and sexual victimization among women (Parks et al. 2008). As proposed by Alcohol Myopia or Attention Allocation Theory, alcohol intoxication reduces an individual's controlled processing capacity, increasing the influence of salient cues over behavior (Steele and Josephs 1990). In situations in which strong cues to engage in behavioral risks are present, alcohol intoxication may reduce perceptions of negative consequences and increase the likelihood of engaging in behaviors such as risky sexual activity (Cooper 2006; Fromme et al. 1997). The increase in alcohol use that occurs in the transition to college is therefore etiologically relevant to changes in other behavioral risks. Among those adolescents who drink and binge drink more often, intoxication itself may contribute to increases in behavioral risks.

Conclusions

The transition to college can represent a major step in adolescents' journey toward adulthood. Increases in life choices and autonomy, however, can also coincide with dramatic changes in social environments. College students actively seek out new social groups that match their own personal characteristics, and among heavy drinkers, these new groups socialize students into even heavier drinking. Although less research has tested models explaining changes in other behavioral risks, there is reason to believe that other substance use may follow similar trajectories to those of heavy drinking. Additionally, alcohol intoxication can lead adolescents to negative consequences, notably including risky sexual behaviors, so increases in drinking rates may contribute to increases in at least some other behavioral risks. These two conceptual approaches can serve as the basis for further research on increases in behavioral risks across the transition to college. Importantly, however, not all problem behaviors correspond to changes in drinking. Driving after drinking and property crime, for example, become less prevalent during the initial college transition. Future research would do well to examine the social and maturational underpinnings of these trends.

Finally, the transition to college is only one in a series of potential developmental turning points. When students reach the minimum legal drinking age, for example, they may begin going to bars and clubs rather than on-campus parties, and may therefore be more likely to drive after drinking (Fromme and Wetherill 2010). As this essay has demonstrated, college matriculation is an important transition in adolescents' maturation and their trajectories of behavioral risks, but it is far from the final step toward adulthood.

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adolescents (Meyers and Swerdlik 2003). Physical and mental health needs are primary barriers to school learning for adolescents (Adelman 1998; Gall et al. 2000). School-based health centers (SBHCs) emerged in the late 1960s as a response to meeting the health care needs of underserved adolescents who could not access the traditional health care system. SBHCs provide basic primary health care services such as health screenings and assessments, acute care, and treatment for common chronic diseases such as asthma and diabetes (Brown and Bolen 2003). School-based health centers are quickly becoming a part of the mainstream health care system and are an important resource for primary care services for children and adolescents (Weinstein 2006).

School-Based Health Centers and Adolescent Care

Epidemiological research estimates that 14–20% of American children meet the criteria of a diagnosable mental disorder (United States Public Health Service 1999). Furthermore, almost 18% of school-age children have one or more chronic health conditions and 7% of those have significant functional limitations as a result (Farmer et al. 2003). Low-income and minority children are especially vulnerable, are at significantly greater risk of poor health, and less likely to have a regular source of health care. Children of color, in particular, stand to benefit from enhanced access to health care (Clauss-Ehlers 2003).

School-based health centers (SBHCs) emerged in the late 1960s as a response to meeting the health care needs of children and adolescents. SBHCs initially focused on the delivery of primary health care services and the prevention of teen pregnancy (Dryfoos 1998). Established as a service targeting inner-city high schools, the centers have expanded to serve schools in rural, urban, and suburban locations. Slightly over half of SBHCs are housed in high schools, about one-third serve elementary grades, and slightly less than one-third include middle grades (National Assembly for School-Based Health Care 2000). The total number of SBHCs in the USA has increased 147% since 1994, with 1,500 such centers established in 43 states and the District of Columbia (The Center for Health and Health Care in Schools 2002).

SBHCs provide basic primary health care services such as health screenings and assessments, acute care,

School-Based Health Centers

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Overview

The school serves as the most accessible point of entry for delivering health and preventive care services to

and treatment for common chronic diseases such as asthma and diabetes (Brown and Bolen 2003). Most provide at least mental health assessment and referral and offer reproductive health services that include treatment of sexually transmitted diseases. Health promotion and preventive services are emphasized by some but all centers. Staffing may include some combination of a nurse practitioner or physician's assistant, physician, registered nurse, dietician, a mental health provider, social worker, and health educator, depending on the Center's mission and financial resources. A few SBHCs serve as clinical internship training sites for medical, nursing, psychology, and social work students (Davis et al. 2005).

SBHC Services and Their Impact on Adolescents

Gustafson (2005) provides a cogent argument for why the use of SBHCs by adolescents is important. She notes that adolescents are the least likely group to seek care at a health provider's office, and that access to a health care provider frequently does not impact their adverse health behaviors. Many adolescents need a comprehensive range of services (such as mental health education or treatment) that are not generally available in traditional health care settings. Adolescents also may engage in a variety of potentially risky behaviors (violence, unprotected sex, and substance use) that they may not feel comfortable talking about with a health care provider.

SBHCs have an established history of providing continuity of physical and mental health services and many are expanding services to include areas such as management of chronic disease (e.g., asthma), multidisciplinary interventions for overweight adolescents, and medication oversight (Brown and Bolen 2003; Mears et al. 2006; Weinstein 2006). Primary health care services such as routine health screening, immunizations, acute care for common conditions, behavioral risk assessments, and health education are now commonly provided (Perkins and Montford 2005). The SBHC is often the primary health care resource for students and their families who are uninsured or lack access to other health professionals that provide health care services. The provision of well-child and acute care services results in a positive effect on health care utilization and access for adolescents who use these services. There is a growing body of

research that supports the effectiveness of SBHCs that provide well-child and acute health care services for children and adolescents.

Access to Care

School-based health centers provide a unique setting in which to deliver risk-reduction and resilience-building services to adolescents (Davis 2005). School-based health centers address many of the obstacles that prevent children and adolescents from accessing health care. Most SBHCs (76%) are open full-time and therefore can provide services with care available on a daily basis for adolescents who attend schools with SBHC coverage (The Center for Health and Health Care in Schools 2002; Santelli et al. 2003). The convenience and accessibility of services through SBHCs allow for students to access timely medical and mental health services; this is particularly an important factor for high-risk adolescents (Jepson et al. 1998). Parents are not required to take time off from work to take their children to a health care provider that can avoid an economic hardship resulting from missed work. SBHCs can address significant physical, mental, and perhaps dental health issues of the adolescent during the school day, allowing them to remain in school (Gustafson 2005).

Preventive Services

SBHCs meet a critical need for preventive care (such as well-child care) for underserved and underinsured children and provide general health and health education, psychosocial health, and reproductive health (Brown and Bolen 2008; Crespo and Shaler 2000; Summers et al. 2003). Most centers have a primary care orientation and include physical examinations, acute care treatment for illnesses and minor injuries, and screening for sexually transmitted diseases (Allensworth et al. 1997). Because of easy accessibility SBHCs are well-suited to provide screening and treatment for adolescents with sexually transmitted infections (Pastore et al. 2001). Indeed, reproductive health services are commonly offered by centers in middle and high schools and are likely to include treatment for sexually transmitted diseases, HIV/AIDS counseling, and diagnostic services (National Assembly for School-Based Health Care 2000).

School-based dental services are increasingly seen as a critical service and about half of the centers now provide preventive dental services (Albert et al. 2005;

Allensworth et al. 1997). Although SBHCs seek to provide a broad range of prevention and health promotion services that complement their physical and mental health intervention services, more than one-half of the centers do not participate in classroom-based health education or health promotion and risk-reduction activities (Brindis et al. 2003). This is primarily due to financial limitations.

Mental Health Services

School-based health centers generally provide some form of mental health services to students (National Assembly for School-Based Health Care 2000). The reported percentage of visits for emotional or mental health reasons range from 25% to more than 50% of all visits to the centers (Adelman 1998; Davis et al. 2005; Santor et al. 2006). Personal or family substance abuse problems are also frequent complaints of students seeking treatment in SBHCs (Jepson et al. 1998; Mason and Wood 2000). Routine psychosocial screening is often offered as a part of primary care services (Gall et al. 2000) along with crisis intervention, case management, evaluation and treatment, and substance abuse treatment services. School-based health centers may also provide peer support groups, grief counseling, assistance with classroom behavior modification, and substance abuse prevention programs.

Reproductive Health

Teen pregnancy is a risk factor for both the teen mother and her baby. Reproductive health services are commonly offered by centers in middle and high schools and frequently include treatment for sexually transmitted diseases, HIV/AIDS counseling, and diagnostic services (National Assembly for School-Based Health Care 2000). Fifteen percent of adolescents visiting school-based health centers received sexuality-related care (Pastore et al. 1998). School-based health centers are recognized as particularly well-suited to treat adolescents with sexually transmitted infections (Pastore et al. 2001) because of ease of accessibility and confidentiality of services.

Family planning services provided by SBHCs most often consist of birth control counseling and follow-up. Fothergill and Feijoo (2000) found that almost two-thirds of SBHCs had restrictions on the provision of contraceptive services, with school district policy the

most common source of this restriction. Only about one-quarter of the centers provided birth control on-site; condoms were the most commonly dispensed contraceptive.

Barnet et al. (2003) examined access to care, comprehensiveness of care, and birth outcomes for teenagers receiving prenatal care in a comprehensive adolescent pregnancy programs in school-based and hospital-based settings. School-based prenatal care was associated with higher birth weight compared to hospital-based prenatal care. Teens receiving care in the school based setting were significantly younger and more likely to be in school than those receiving services through the hospital-based setting. The use of prenatal care in SBHCs was also associated with reduced absenteeism and dropout rates for low-income African American mothers in an alternative school (Barnet et al. 2004).

Violence Prevention

SBHCs that have adopted violence prevention programming have made significant inroads in reducing school violence (Brown and Bolen 2008). Fiester et al. (1996) examined three different SBHCs specially funded to establish health and violence prevention services that provided an array of preventive, referral health care services to students. SBHC staff assisted school staff in developing disciplinary strategies that allowed students to remain in school as long as they are involved in mental health counseling. They also taught citizenship skills, assisted in resolving crises, and helped at risk students to deal with stress that interferes with learning. These centers reported improved students attitude and behavior, fewer suicide attempts, fewer fights on-campus, and increased student visits to SBHCs for mental health services.

The Positive Behavioral Support program, a nationally validated program with an emphasis on changing the school environment, was successfully implemented in a SBHC in Baton Rouge, LA (Witt et al. 1999). PBS teaches students and others in the school environment to behave in ways that help get the students' needs met appropriately and without resort to violence or aggression. Skill training is also aimed at helping adults in the adolescents' environment learn and practice the steps necessary to successfully manage these types of problems in the future.

Adaptive/prosocial behaviors are reinforced while inappropriate behaviors result in consistent negative consequences. The program resulted in a substantial decrease in aggressive behaviors over a 2-year evaluation period.

Substance Abuse Prevention

Substance abuse prevention services are aimed at reducing students' use of alcohol, tobacco, and other drugs. One large study of SBHCs serving low-income, inner-city African American adolescents found that prevention programming had a positive effect on substance use behaviors of (Robinson et al. 2003). A survey of 2,114 9th- and 11th-grade students from seven inner-city public high schools (three with SBHCs and four without SBHCs) identified 598 SBHC students and 598 non-SBHC students who were matched using ethnicity, grade, gender, and propensity scores. Tobacco and marijuana use, but not alcohol use, decreased in schools with SBHCs while the same behaviors increased in schools without these centers.

Consumer Satisfaction and Acceptability of Services

Acceptability of services is critically important to assuring adolescents' utilization of SBHC services. The results of several studies indicate that adolescents are satisfied with the services that they receive from SBHCs. Santelli et al. (1996) found that 86% of students enrolled in a school-based health center rated the quality of care as satisfactory to excellent and 79% rated privacy in the SBHC as satisfactory to excellent. Pastore et al. (1998) found that 92% of students using the SBHC were satisfied with the services received there, 79% were comfortable being seen in the center, and 74% believed visits were kept confidential.

Adolescents may experience some initial reticence in utilizing the services of a SBHC, particularly if they already have a satisfactory primary care provider (Rickert et al. 1997). Some adolescents may not understand the comprehensive nature of SBHC services and therefore not use the SBHC when appropriate services exist. Students, however, tend to support school-based health centers and students with the greatest exposure to SBHCs (attending or enrolling in a school with a center or using services at the health center) had the

most favorable attitudes toward the school-based health center (Santelli et al. 1996).

Impact on Academic Performance, Graduation, and Dropout Rates

Although there have not been a large number of studies of the academic benefits of SBHCs, there is some evidence that the use of SBHC services is associated with improvements in academic performance and graduation rates and a reduction in dropout rates. Because academic performance has multiple influences, it is not easy to directly relate SBHC services to improvements in academic performance. Center services may, however, address intermediate outcomes, such as improving emotional and health status or reducing smoking or other drug use, that will improve learning (Geierstanger et al. 2004).

A number of studies demonstrated a positive effect of SBHCs on academic progression. One study found that students' involvement in SBHC services had a positive effect on the number of credits completed and the students' academic aspirations (Warren and Fancsali 2000). Students in a large urban school district who received school-based mental health services had a 95% decrease in disciplinary referrals and a 31% decrease in failing course grades (Jennings et al. 2000). Students who received services through a SBHC dropout prevention program had a decrease in disciplinary referrals (Witt et al. 1999). Alternative school students who used the services of a SBHC were twice as likely to stay in school and graduate as were students who did not use the center (McCord et al. 1993).

The Challenge of Funding

Funding from two major philanthropic organizations had a tremendous impact on the initial growth and development of SBHCs (Weist and Schlitt 1998). The Robert Wood Johnson Foundation has provided a significant amount of financial support to establish SBHCs and to develop a model standard of care for school-based health care practice. The Foundation provided support for the Making the Grade project to assist states nationwide to establish SBHCs. The W. K. Kellogg Foundation also funded school-based health care projects throughout the country. This foundation provided an infrastructure grant to the National

Assembly for School-Based Health Care to build the organization's membership and enable the development of technical assistance capabilities for local SBHCs.

Although SBHCs often relied on grant funding for start-up, ongoing funding for most SBHCs typically consists of resources from a combination of sources (Balassone et al. 1991; Brindis et al. 2003). State funding, in-kind resources from schools or community agencies, and, later, third party revenues became the primary means of funding services. Federal government support has come from a number of agencies including Bureau of Primary Health Care and the Bureau of Maternal and Child Health of the Health Resources and Services Administration and the Centers for Disease Control. Many states provide funding to help establish and operate the SBHCs, typically through funneling block grant funds or through allocation of general revenue funds. Some states also provide technical assistance or staffing through the resources of another state-funded agency (such as the Public Health Department).

Support from private institutions figures prominently in funding the centers. Hospitals are one of the most common cosponsors of SBHCs providing both funding and staffing resources for their operation (Classroom Care Catches On 1998). SBHCs routinely seek reimbursement for services from third party payers, including both Medicaid and private insurers (Koppelman and Lear 1998). Some managed care providers have recognized SBHCs as a cost-effective way to provide primary care and have allotted a portion of the primary care capitation to support them (Gadomski et al. 1998). Third party revenues, however, have been much lower than has been projected due to a variety of factors (Brindis et al. 2003).

The Future of SBHCs for Adolescent Health Care

The provision of adequate health care for all Americans is one of the most controversial issues facing the nation. School-based health centers are quickly becoming a part of the mainstream health care system and are an important resource for primary care services for children and adolescents (Weinstein 2006). SBHCs are well positioned to provide physical and mental health services that ensure adequate access to care for

adolescents in a timely and cost-effective manner. For adolescents the strategic location of SBHCs in schools provides the unique opportunity to meet their physical and mental health needs in a convenient setting.

Despite the widespread acceptability of services provided by SBHCs, only about 2% of all school-age children and adolescents are in schools that offer school-based health care (Brindis et al. 2003). Funding is often a problem for both establishing and continuing SBHC services and current funding models and resource allocations vary widely across SBHCs. The challenge in the future is to develop a consistent and reliable funding base that consists of private and public resources as well as expanding third party health coverage programs. It is hoped that SBHCs will be included in the discussion surrounding health care reform in the USA.

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Searches and Seizures in Schools

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One of the most important protections retained by citizens is the right to protection against arbitrary invasions by government officials through the legal system's recognition of the right to reasonable expectations of privacy (Levesque 2006). For example, in the United States, the Fourth Amendment to the Constitution protects individuals from unreasonable searches and seizures, a protection enforceable against the states through the due process clause of the Fourteenth Amendment. Given that the Constitution was meant to protect individuals from their governments, the framers of the Constitution intended that the Amendment apply only to searches conducted by agents of the government and not to acts by private individuals. Although the focus on protecting individuals from the government is no longer controversial, exactly what that protection means has been the subject of a considerable number of commentaries and Supreme Court cases. This essay focuses on searches in schools, the context in which adolescents likely encounter the most searches by individuals who are deemed "state actors." The analysis necessarily starts with a brief synopsis of the Constitution's mandates and turns to a leading case that has laid the foundation for "administrative searches" (searches conducted outside of the law enforcement context).

Regardless of the contexts in which searches and seizures occur, they are controlled by the Fourth Amendment when the searches and seizures are conducted by state officials. The Amendment contains two clauses. The first is the "reasonable clause" mandate stating that the right of the people to be secure in their persons and effects, against unreasonable searches and seizures, shall not be violated. The second is the "warrant clause," which provides that no warrants shall issue but upon probable cause. Much controversy has resulted from efforts to determine the relationships between these two clauses, and the resulting jurisprudence in this area is often viewed as strikingly complicated, especially given that it has so many exceptions.

Among the most important exceptions is the "special needs doctrine." The doctrine permits a departure from the constitutional requirement of probable cause when exceptional circumstances in which special needs, beyond the normal need for law enforcement, make the probable-cause requirement impracticable. In these instances, a court balances the interests of the government against the individual's privacy interests to determine the reasonableness of a search. If the search is deemed reasonable, then the evidence found against an individual can be used against them. That doctrine came to be applied to adolescents in schools in the case of *New Jersey v. T.L.O.* (1985).

In the *New Jersey v. T.L.O.* case, a New Jersey high school teacher discovered a 14-year-old freshman smoking in a lavatory, which was in violation of a school rule, and brought her to the principal's office. When questioned by an assistant vice principal, the student denied that she had been smoking and claimed that she did not smoke at all. The assistant vice principal then demanded to see her purse, opened it, found a pack of cigarettes, and, upon removing the cigarettes, noticed a pack of cigarette rolling papers, which he associated with the use of marijuana. The assistant vice principal proceeded to search the purse thoroughly and found a small amount of marijuana, a pipe, a number of empty plastic bags, a substantial quantity of money in one-dollar bills, an index card containing a list of those students who owed the student money, and two letters that implicated the student in marijuana dealing. The evidence was turned over to law enforcement. A New Jersey juvenile court admitted the evidence discovered in delinquency proceedings against the student, holding that a school official may properly conduct a search of a student's person if the official has a reasonable suspicion that a crime has been or is in the process of being committed, or reasonable cause to believe that the search is necessary to maintain school discipline or enforce school policy, and that the search in this case was a reasonable one under this standard. The court found the student to be a delinquent and sentenced her to a year's probation. An appellate court affirmed the trial court's finding that there had been no Fourth Amendment violation, but vacated the adjudication of delinquency on other grounds and remanded for a determination whether the student had willingly and voluntarily waived her Fifth Amendment Rights before confessing. Addressing

the Fourth Amendment Claim, the Supreme Court of New Jersey reversed the judgment of the appeals court and ordered the suppression of the evidence found in the purse, holding that the search of the purse was not reasonable.

The United States Supreme Court reversed. The Court held that the Fourth Amendment's prohibition on unreasonable searches and seizures applies to searches conducted by public school officials. The Court continued and found, however, that school officials need not obtain a warrant before searching a student who is under their authority. It further held that school officials need not strictly adhere to the requirement that searches be based on probable cause to believe that the subject of the search has violated or is violating the law, and that the legality of their search of a student should depend simply on the reasonableness, under all the circumstances, of the search. In adopting the reasonable grounds standard, the Court reasoned that the standard will spare teachers and school officials the necessity of schooling themselves in the niceties of probable cause and permit them to regulate their conduct according to the dictates of reason and common sense. It concluded that the search in this case was not unreasonable under the Fourth Amendment.

Two important concurrences elaborated on the Court's position. The first expressed the opinion that greater emphasis should be placed on the special characteristics of elementary and secondary schools that make it unnecessary to afford students the same constitutional protections granted adults and juveniles in a nonschool setting. The second expressed the view that the special need for an immediate response to behavior that threatens either the safety of schoolchildren and teachers or the educational process itself justifies the court in excepting school searches from the warrant and probable-cause requirements, and in applying a standard determined by balancing the relevant interests.

Two dissenting opinions would have held that the search in question had violated the student's Fourth Amendment rights. The first dissent expressed the view that teachers, like all other government officials, must conform their conduct to the Fourth Amendment's protections of personal privacy and personal security, that the Fourth Amendment's language compels that school searches like that conducted in this case are valid only if supported by probable cause, and that the search

in this case failed to meet the probable-cause standard. The second dissent expressed the view that the court has misapplied the standard of reasonableness embodied in the Fourth Amendment; that a standard better attuned to the concern for violence and unlawful behavior in the schools would permit teachers and school administrators to search a student when they have reason to believe that the search will uncover evidence that the student is violating the law or engaging in conduct that is seriously disruptive of school order, or the educational process; and that the search in this case failed to meet this standard.

New Jersey v. T.L.O. is of significance in that it marked the first time that the Supreme Court attempted to reconcile the privacy rights of students against the government's interest in maintaining an environment conducive to learning. Although the Court held that the Fourth Amendment's prohibition on unreasonable searches and seizures applied to searches conducted by public school officials, it held that the legality of searches by school officials should be assessed against a standard lower than that of probable cause because schools have a "special need," for example, to maintain control in the classroom. The reasonable suspicion replaced probable cause as the level of evidence necessary to pass constitutional muster, and this would open the door to permitting a considerable amount of searches in schools.

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Segregation and Desegregation

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Segregation can have several meanings, but in law it refers to formalized or institutionalized discrimination on the basis of a legally impermissible characteristic, such as race, gender, or disability, that separates individuals from each other. The separation may take many

forms. Most notably, segregation involves geographical distancing and receives support from services that are provided through separate institutions and through similar legal and social structures. For example, segregation can take the form of placing students into schools predominantly separated by the race of the student and supported by the same school system. Although this area of law has involved many types of disputes (e.g., in the selection of juries and in other aspects of criminal prosecutions, see Levesque 2006), it arguably is in the area of education that it has garnered the most legislative, judicial, and even public attention. Given that it also is that area of law that has the most direct influence on the adolescent experience, this essay first highlights the nature of segregation as it relates to legal systems and then focuses on how it relates to public education.

Segregation can result from official laws or policies (*de jure* segregation) or private citizen choices (*de facto* segregation). These distinctions are of significance. *De facto* segregation involves an imbalance in the relevant category (e.g., race or gender) but that imbalance is not supported or was not brought about by discriminatory actions by state officials. Given the lack of governmental actions, the imbalance typically is deemed permissible. That is, if segregation is determined to be *de facto*, the government had no role in it, and the legal system cannot require the segregated system to desegregate. On the other hand, *de jure* segregation is segregation according to a law or policy, it involves a governmental policy or law that deliberately operates to segregate based on an impermissible factor such as race. Since the state is directly involved, this form of segregation is deemed unconstitutional under the Equal Protection Clause of the Fourteenth Amendment of the U.S. Constitution (see *Parents Involved in Community Schools v. Seattle School Dist. No. 1*, 2007). The governmental policy or law will be found unconstitutional if courts find an intent to segregate. If the intent is found, then a court can order a desegregation plan, such as has been the practice involving public schools that were deemed segregated due to governmental actions. When dealing with the legal system's role in segregation and desegregation, then, much depends on the legal system's role in the creation and support of segregation.

Although there have been numerous cases involving segregation, the most important in US law likely is *Brown v. Board of Education* (1954). *Brown* made

unconstitutional public school segregation based solely on race. By doing so, *Brown* forcefully rejected government-sponsored, racially segregated, separate-but-equal facilities in elementary and secondary schools. The way it did so was by declaring that government-sponsored racial discrimination had no place in public schools. *Brown*, finding *de jure* segregation, laid the foundation for desegregation to follow, which is the government-sponsored removal of segregation. Importantly, eliminating the vestiges of segregation in a *de jure* system not only permits but also essentially requires the government to use race-based policies; it requires governments to take an affirmative duty to use race-based policies to end segregation. As the Court also later would find, the converse also is true: If there is no *de jure* segregation, then states cannot use race-based policies to end segregation; and that was the ultimate ruling in *Parents Involved in Community Schools v. Seattle School Dist. No. 1* (2007). That is, because segregation that is unintentional or *de facto* does not violate the Constitution, courts cannot require a *de facto* system to implement a desegregation plan. Equally importantly, if a community wishes to address *de facto* systems that segregate based on a protected category such as race, the Court in *Parents Involved* unambiguously established strict scrutiny as the relevant constitutional test for evaluating policies that used race in remedial plans. These legal developments translate into the notion that the Equal Protection Clause can be used to force a school system to use race-based policies to undo the effects of *de jure* segregation, but once the school system no longer is under court order to do so (no longer under a mandatory plan), the same Equal Protection Clause forbids school systems from using the same race-based policies to address the effects of *de facto* segregation. In *Parents Involved*, all of the justices agreed that the Constitution does not impose a duty to desegregate schools if the districts have not practiced racial discrimination; but all dissenters (unlike the ruling opinion) argued that the Constitution nevertheless still permitted it.

Recent developments in this area can be viewed as reflecting a significant turning point. The Supreme Court reveals a movement toward approaching desegregation efforts, such as those seeking to address problems of educational inequality that differentially relate to race, by creating a system of legal responses that is colorblind.

As *Parents Involved* reveals in the context of public schools (but not professional or graduate education), unless the state was under a court mandate to desegregate, efforts to desegregate may not be based on race. Remedial policies aimed to address *de facto* segregation cannot seek to remedy segregation by racial balancing; but they can be based on other factors, such as socioeconomic status or simply increasing funding for certain programs. This approach adopts as its core value a principle of nondiscrimination and suggests a fundamental change in approaches to eliminating inequality, particularly as it appears to limit what would qualify as *de jure* segregation that warrants intervention. In a real sense, the latest case in this area permits what *Brown* had moved against. *Brown* had been part of a movement against the “separate but equal” doctrine that had allowed separation by race on the condition that the quality of each group’s public services was to remain equal. The Court’s recent interpretation likely permits more instances in which people are segregated.

Rather than viewing the current direction as a turning point, it could be argued that it simply reflects a clarification and further establishment of well-accepted principles relating to the place of the state in segregation. This view would suggest that the recent movement simply clarifies what the doctrine stood for; as long as the state is not formally involved (as it would be in *de jure* segregation), the segregation is permissible and the legal system cannot use racial categories to address it. This view puts considerable emphasis on *Brown’s* (1954, p. 495) language noting that segregation “solely on the basis of race” was what had denied minority youth the equal protection of the laws guaranteed by the Fourteenth Amendment, even though the physical facilities and other tangible factors might have been equal. *Brown* saw the use of race, by itself, as an impermissible factor in the creation of separate opportunities. As the leading opinion in *Parents Involved* (2007, pp. 747–748) forcefully held, “The way to stop discrimination on the basis of race is to stop discriminating on the basis of race.” *Parents Involved* would seek to not use race at all and permits its use only as a remedy for past abuses and in a very narrow set of cases.

This area of law seeks to ensure equal treatment. The most recent interpretations of Constitutional mandates seek to ensure equal treatment to the extent that the law should not consider in desegregation efforts the factors

that were used to segregate. Before these cases, there was a sense that the impermissible factors used for segregation (e.g., race) could be considered in remedying segregation. That still may be the case, but the legal system now considerably limits the use of the impermissible factors even to desegregate. In addition, and like before, recent cases continue to leave alone people’s private decisions to segregate or otherwise treat people differently based on factors that the law could not itself use in its legislative and judicial mandates. Discrimination law likely will continue to have more twists and turns, and those are likely to have a profound effect on the lives of adolescents, their opportunities, and the very nature of the society in which they live.

Cross-References

- ▶ [Discrimination](#)
- ▶ [Fundamental Rights](#)

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Self-actualization

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Self-actualization typically involves both a process that a person goes through to reach their self-defined fullest potential or the actual outcome or realization of that potential. The study of adolescence has tended to focus on the types of conditions that should be in place for adolescents to concern themselves with self-actualization. Despite an increasing focus on positive youth development and thriving during adolescence, the actual state of being self-actualized tends to be assumed to occur during adulthood. This assumption has meant, with some notable exceptions, that research on self-actualization has tended to ignore adolescents (see Lerner 2004).

Theory and research relating to self-actualization has many important roots. The most notable ones come from humanistic psychology, especially from the work of Abraham Maslow (1943, 1970). Maslow described self-actualization as a need for self-fulfillment. People who are self-actualized are deemed to be basically satisfied people, that is, individuals who have had their other more basic needs met and who do not feel discontent or restlessness given that they feel that they are doing what they are fitted for. Maslow had postulated the existence of a hierarchy of needs, with actualization being the highest. According to Maslow, self-actualization could be met best once other needs had been met, such as physiological needs (shelter and warmth), safety (freedom from fear), belonging (feeling loved by families and friends) and self-esteem (respect for oneself and from others). Although he proposed a hierarchy of needs, the hierarchy was not intended to be rigid. However, he did argue that self-actualization would require individuals to address their other needs otherwise they would not have a sense that they have accomplished their potentials and become what they feel like they were supposed to be.

Although this concept has tended to not gain much attention from those who study the adolescent period, it is not difficult to discern its significance. Being content and fulfilled certainly remains an important goal, and the ground work for those goals may well be set during adolescence as well as earlier in life. Still, it is yet to examine closely enough, for example, how self-actualization goals are set, how they influence social and psychological development, how they may vary across different individuals (especially in terms of gender and ethnicity), and how society can be structured to enhance the chances of reaching self-actualization. The positive youth development movement has begun to address some of these issues, and, in some ways, educational research always has considered some of these matters, at least tangentially by focusing on adolescents' aspirations and their sources (see Garg et al. 2007). But these efforts, especially those of the positive youth development movement, still tend to adopt a narrow view of actualization (such as life satisfaction, often equated with happiness) and often tend to not even use the term actualization (see Gilman et al. 2009). The positive youth development movement, like most fields that center on the adolescent period, generally assumes that the adolescent period is one of transition

toward potential actualization rather than one that can involve the experience of actualization itself.

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Self-Concept

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Introduction

Adolescence is a time of significant physical and emotional change and one of the key themes of research into adolescence is how self-identity and social relationships change during this period and how parents, peers, and significant others influence the identity, actions, behaviors, and outcomes for adolescents (Carroll et al. 2009; Graziano et al. 2009; Lightfoot et al. 2009; Monie and Hay 2008; Rubin et al. 2004). With the onset of puberty comes sexual maturity that can produce emotional tensions and uncertainties. These are reflected in all aspects of the young person's life including relationships with parents, authority figures, and same- and opposite-sex peers. All of these factors can create and nurture doubts about one's self and how one is perceived by others. While the self-concept has its origins in the earlier years of life, it becomes increasingly differentiated across the transitional years between childhood and adulthood (Cole et al. 2001).

The identification of the factors that influence the development of adolescent males' and females' sense of self-concept should enable educators and psychologists to assist young people through the tumultuous period of adolescence. This is a time when there is an increased risk of emotional instability that can lead to depression, anxiety, and suicide attempts that can persist into adulthood (Riesch et al. 2008; Walsh and Eggert 2008). This essay focuses on adolescents' self-concept and its development within a theoretical framework that argues that a positive self-identify during adolescence is an important protective and emotional resilience factor that can help moderate risk factors in adolescents' homes and communities.

The Construct and Relevance of Self-Concept

It is now generally accepted that self-concept is a multidimensional construct (Crain 1996; Hattie 2009), with Marsh (Marsh 1990; Marsh and O'Mara 2009) suggesting that it has three main developing components: the cognitive self, the social self, and the physical self. From this perspective, from childhood through to late adolescence an individual's cognitive component is influenced by factors such as school and academic performance; the social component is influenced by relationships and popularity with peers and friends; and the person's physical component is affected by factors such as appearance, physical, and athletic prowess. Harter (1996, 1999) included a fourth dimension related to general feelings of self-worth. She also suggested that the cognitive, social, and physical self-dimensions contributed to an individual's sense of self-worth, although Marsh (Marsh 1990, 1998; Marsh and O'Mara 2009) provided contrary evidence suggesting that general self-worth can be considered as a separate dimension.

Individual difference in self-concept is thought to be an important construct in education because of the interactions between the students' affective development and their cognitive development. There is evidence of a reciprocal relationship between students' academic self-concepts and academic achievement (Hay et al. 1997; Marsh and Craven 2006; Marsh and O'Mara 2009). Self-concept is thought to influence achievement through students' motivation and self-regulatory processes (Markus and Wurf 1987; Marsh et al. 2005; Schunk 1991). Furthermore, individuals

with low self-concept have been shown to have less positive characteristics in the domains of cooperation, persistence, leadership, anxiety, expectations for future education, and peer interactions when compared to peers with high self-concept (Hay et al. 1998a). Low self-concepts, low educational aspirations, external locus of control, and negative attitudes toward school are considered to be interrelated (Hay et al. 2000b; Marsh et al. 2005) such that students with a positive academic self-concepts demonstrate a reduction in test anxiety, long-term educational attainments, and school retention (Marsh and O'Mara 2009).

An adolescent's ability to communicate effectively with parents, other adults, and with peers and to seek help and support is linked to one's perception of self. Flook et al. (2005) argued that there is a reciprocal relationship between internalizing symptoms (such as low self-concept) and low coping skills, and lack of social support. The ability of early adolescents to cope with stressful situations is significantly correlated with social friendship patterns. Several writers have emphasized the importance of friends and friendship networks for adolescents as they act as a protective factor in situations that prove to be stressful in and outside of the family home (Black 2000; Rubin et al. 2004), with a positive self-image and support from family and friends facilitating adolescents to make a positive transition from school into the adult world of work or study (Winn and Hay 2009).

Parents and Peers

There is a broad concord that parents, peers, and significant others (e.g., teachers) provide information, feedback, and reactions that shape the formation of adolescents' self-concept and life satisfaction (Harter 1999; Hay et al. 1997; Lee et al. 2006). In particular, Lee et al. found that different parenting practices and styles were associated with different self-concept profiles. For example, they found that an authoritative parenting style typically was associated with children's positive self-concepts when compared to authoritarian or indifferent parenting styles. In addition, parents who were less engaged with their children or who were inconsistent in their parenting practices were associated with children with a less positive self-concept profile. This self-concept profile appears to derive from the parents' lack of engagement in their children's decision-making and lack of structure and monitoring of their children's

behavior. Adolescents with high levels of perceived support from both parents had low levels of depressive feelings and high levels of social and academic self-efficacy (Graziano et al. 2009). Adolescents who have a strong attachment to their parents also reported high life satisfaction (Ma and Huebner 2008), high self-concepts scores (O’Koon 1997), and high levels of self-worth and self-confidence (Hay et al. 1998b). Positive adolescent–parent relationships have also been shown to exert a positive influence on individuals’ self-concept formation well into adulthood (Roberts and Bengston 1996).

Research on the development of children’s self-concept from a cross-cultural perspective has produced mixed results. On the one hand, Tashakkori (1993) found no differences between African American and Caucasian American youth on global measures of self-esteem, while on the other hand, Osborne (1995) found that Caucasian American youth scored higher than African Americans on social and academic self-concept measures. There is, however, some evidence that students from lower socioeconomic status (SES) communities have a greater prevalence of lower academic self-concept (Hattie 1992). This association is believed to be an indirect affect, because students in these communities have more on going academic and literacy difficulties (Beitchman et al. 2001; Boetsch et al. 1996; Hay et al. 2007; Hay and Fielding-Barnsley 2009), such that low SES is a risk factor in terms of students’ initial and on going schooling and academic and social development (Cashmore 2001; Hawkins and Catalano 1992; Snow and Powell 2008). Parents’ educational expectations of their children are also considered to have an indirect influence on students’ academic achievement and academic self-concept (Neuenschwander et al. 2007; Williams et al. 2008).

There are also differing views about the roles that parents and peers play in adolescents’ socialization. One opinion emphasizes the dominance of youth culture with its own values, norms, and expectations that is distinct from, and at times in competition with, the parental culture (Ashman and Merrotsoy 2009; Gecas and Seff 1990), with Kaplan (1996) maintaining that during adolescence, peers become the dominant influence on individuals’ self-concept development. The second opinion holds that parents and peers can be partners in the adolescents’ socialization process. From this latter perspective, adolescents increasingly transfer

their emotional attachment from parents to peers in a process called individuation (Hay and Ashman 2003). In this process, adolescents typically remain emotionally connected to their parents but progressively use peers to support their independence and autonomy and engage in adventurous behavior away from their parents. During this individuation stage, parents remain a source of advice and economic and emotional support, where adolescents perceive their parents as significant reference points to validate their behaviors and self-concept. Consequently, there appears to be some support for the view that parent relationships play a more ongoing and important role than peer relationships in the development of adolescents’ self-concept (Dekovic and Meeus 1997; Ma and Huebner 2008).

Sex Differences

While researchers might seek differences between the sexes (i.e., the biological distinction between the male and female of a species), psychosocial researchers are more likely to be interested in the social formation of roles that a particular society or culture may impose on males and females (i.e., gender) (Ashman, and Merrotsoy 2009). A person’s sex is thus considered a pervasive social and cognitive construct that can affect the development of an individual’s self-concept across the life span (Cole et al. 2001; King et al. 1999; Zand and Thomson 2005).

Reviews of the research outcomes on self-concept test scores and the differences between males and females report equivocal results (Crain 1996; Byrne 1990; Gentile et al. 2009). At times, sex differences have appeared in cognitive and physical aspects of self-concept and at other times there is a lack of differences within the same domains (Crocker et al. 2000). A recent trend in the investigation of sex difference and self-concept has been the generation of large-scale meta-analyses research studies. Using this approach, Cole et al. (2001) reported that boys achieved higher scores than girls in the domains of physical appearance and sports, slightly higher scores for academic and social domains, but similar scores to girls for behavior conduct self-concept. In a meta-analysis of the sex and self-concept dimensions, Gentile et al. (2009) focused more on adult studies than Cole et al. Gentile et al. found that males scored highly in the self-concept domains of physical appearance, athletic, personal

self, and self-satisfaction, while women had higher scores than men in domains associated with behavioral conducted and moral-ethical dimensions. While such meta-analyses are helpful and bring together a wide range of sex and self-concept test results that have been generated over time, the limitation is the tabulation of data from a range of self-concept instruments, some of which have been criticized for their design and theoretical rigor as well as their psychometric and developmental quality (see Byrne 1996, for review).

Much of the contemporary school self-concept research has concentrated on the differences between males' and females' academic achievement and their self-concept scores (Byrne 1990; Hay et al. 1998c; Marsh et al. 1985). For example, Hay et al. reported that preadolescent girls had high academic abilities in reading, spelling, and mathematics but they only achieved high reading self-concept scores. The indications are that sex difference in reading self-concept and achievement is also influenced by sex differences in students' goal orientation with Hyde and Durik (2005) maintaining that in the domain of reading and English, girls used a mastery goal orientation, wanting to comprehend the detail, while boys were outcome and performance orientated, wanting to finish the reading and the activity.

What has been of particular interest to the research conducted by the authors of this essay (i.e., Hay et al. 1998c) is the lack of conversion of girls' higher mathematics abilities into higher mathematical self-concept scores, and the underlying factors that influence the formation of males' and females' general self, the domain that Hattie (1992) identified as being highly related to students' confidence in self and emotional well-being. It is thought that girls' general self-attributes are satisfied at the expense of their academic achievement, particularly by girls who reach late adolescents and who do not perceive school variables as relevant in the formation of their self-identity (Baran 1987; Hay et al. 1998c; Hollinger and Fleming 1988; Poole 1983). Gender stereotyping is, thus, thought to decrease adolescent girls' achievement motivation and to encourage them to set low school aspirations (Eccles et al. 1993; Poole 1983; Scheye and Gilroy 1994; Watt 2004).

Even when sex differences are identified in the self-concept data, such findings do not address the question as to which factors have the greatest influence on the

individuals' psychological adjustment in relation to gender, or the relative influence that parents and peers have on adolescents' psychological adjustment. In terms of the formation of an individual's psychological adjustment, there is a substantial literature on the role and impact of self-concept on internalizing problem behaviors that lead to pessimism, self-blame, and depression and/or externalizing problem behaviors leading to displays of aggression and delinquency (Carroll et al. 2009; Donellan et al. 2005; Marsh et al. 2001; Youngstrom et al. 2003).

Some differences have been reported between boys' and girls' internalizing and externalizing problems, with girls showing a greater tendency toward internalizing problems and boys toward externalizing problems (Räty et al. 2005; Ybrandt 2008). Ybrandt maintained that self-autonomy and self-control were strongly related to externalizing problems for boys. She also emphasized the importance of a positive self-concept for both sexes but more so for adolescent girls' mental health than boys. She argued that because girls are more interpersonally oriented than boys, they are more vulnerable to negative parental and family influences. Following this line of argument, Margolin et al. (1988) reported that males' self-concepts were more affected by authoritarian parental control dimensions, while females' self-concepts were more positively affected by intimacy with fathers. It has been argued that parents and others give different messages and feedback to males than to females (Blickenstaff 2005). For example, parents are reported to have higher expectations of their son's academic progress and achievement than their daughter's (Butler-Por 1987), and that girls become more self-critical of their abilities because teachers give less positive and more negative feedback to girls in their class than they do to boys (Blickenstaff 2005; Eccles and Blumenfeld 1985; Sadker and Sadker 1994). Adolescent boys have reported higher levels of striving for success in school (Eccles et al. 1993; Hyde and Durik 2005) and stronger social and parental pressures to succeed in school than girls (Skaalvik 1983). Moreover, Hattie (1992) argued that adolescent boys placed more value on being intelligent, while girls valued more the love within their family, being sure of themselves, and liked in class. Boys are thought to be under greater pressure from their families and significant others to adhere to stereotypical male role models, such as being the family

“breadwinner,” than girls to the stereotypical female roles (Eccles et al. 1993).

Some researchers who have studied the impact that peer relationships have on individuals' self-concept and emotional stability have claimed that girls demonstrated higher levels of attachments to their peers than boys, who frequently were more attached to their parents (O'Koon 1997). An alternative point of view is that the development of a boy's masculine self-image is more defined through group and reputational enhancement activities with male peers, particularly for boys involved in antisocial behavior (Carroll et al. 2009; Kaplan 1996).

Some Continuing Psychosocial Dilemmas

In their research, this essay's authors have attempted to deal with a number of the difficulties one faces when synthesizing the previous research on the influence of parent and peer influences on adolescents' self-concept and emotional stability. While it is relatively easy to generate global statements about factors that affect the development of self-concept from childhood and into late adolescence, there are many issues that affect individuals including age, disability, family background and dynamics, culture, same-sex and opposite-sex peer attachments, delinquency, and mental health, to name just a few. Researchers have addressed these issues individually but in no comprehensive multifactor way. For example, Hay (2000) found that adolescent girls who were suspended from school had low self-concept scores for emotional stability and parent relationship compared to Marsh's Self-Description Questionnaire (SDQ; 1990) norming population. In contrast, males who were suspended from school had high SDQ ratings for attachments to same-sex peers along with low ratings for parent relationships and general self. The profiles in Hay's research suggested that males' antisocial behaviors might have reflected a desire for a masculine self-image and peer acceptance, while females' antisocial behaviors might be linked to social marginalization and anxiety.

Researching the formation of general self-concept (confidence and self-worth) and emotional stability (calmness, freedom from anxiety, and depression) with adolescents aged 14.5 years, Hay et al. (2000a) and Hay et al. (1998c) identified parent relationships as a significant influence on males' but not females'

emotional stability. Both males' and females' sense of self-worth was, however, influenced by their parental relationships. In addition, for females, opposite-sex peer relationships affected emotional stability, but for boys (and not girls) there was significant impact from same-sex peer relationships on emotional stability for this age group. Selman (1981) hypothesized that there is a shift during adolescence, with peer relationships changing from a group intimacy stage to a stage of greater individual accountability for one's own actions and behaviors. Brown et al. (1986) also proposed that at about age 15 years, adolescents become less susceptible to group peer pressure. If this is the case, what is the relative influence of parents and peers on males' and females' emotional stability and general self-worth for adolescents older than 15 years? The work of this essay's authors has complemented that of others, as reported below in a study that exemplifies some of the difficulties researchers encounter when dealing with the complex domain of self-perceptions.

An Illustrative Study of 16-Year-Olds' Self-Concept

An illustrative study conducted by the authors of this essay was based on a sample of 275 girls and 380 boys all attending Year (Grade) 10 in two government and three nongovernment schools in two Australian states. The schools were located in both urban and rural settings and across a range of socioeconomic areas. The mean age of the cohort was 16.0 years ($SD = 4.3$ months). The Self-Description Questionnaire-II (SDQ-II; Marsh 1990) was used to measure self-concept. The test includes three academic subtests (Mathematics, Verbal, and General School) and seven nonacademic subtests (Physical Ability, Physical Appearance, Opposite-Sex Relations, Same-Sex Relations, Parent Relations, Honesty-Trustworthiness, and Emotional Stability). The SDQ-II also provides a measure of General Self-concept. The focus of this research was on items in the SDQ-II self-concept test that investigated general self-concept (confidence and self-worth) and emotional stability (calmness, freedom from anxiety, and depression).

Multiple regression analyses were used to examine the relationships between general self and emotional stability and the academic and nonacademic areas. Standardized beta values were calculated and produced significant t -values ($p < .01$) indicating the relevant

beta values importance to the analyses undertaken using the boys' and the girls' SDQ-II ratings. Self-perceptions of mathematics ability, physical appearance, honesty and trustworthiness, emotional stability, and general school self-concept were important for both boys and girls. In other words, there were no sex differences on these SDQ-II subscales. Boys and girls differed on three subscales. The data revealed the importance of boys' relationships with parents and with same-sex peers. These were not significant for girls. For the girls but not boys, self-perceptions of verbal ability were significant. These findings suggest that although there were some common variables that influenced the formation of adolescents' general self-concept and emotional stability, the variable pattern for each sex is slightly different. In a related study, Tarrant et al. (2006) also noted that adolescent boys reported higher levels of self-esteem than girls in the domain of emotional stability.

The above findings are important for four reasons. First, they challenge some previous views about boys' inability to articulate their personal thoughts and feelings (Douvan and Adelson 1966; Cole and Cole 2001). Second, they suggest a reciprocal relationship between general self-concept and emotional stability, with confidence and self-worth both an influence on, and being influenced by, calmness, freedom from anxiety, and depression. Third, they challenge the belief that adolescent males are more concerned with establishing independence from parents than females. Fourth, they suggest that females develop emotional stability from parents earlier than males, which may be linked to their earlier onset of puberty compared to males (Natsuaki et al. 2009). On this last point, Natsuaki et al. claimed that early maturing girls had higher levels of internalizing problems, such as anxiety and depression, and these were partially attributed to girls' heightened self-sensitivity to their own general interpersonal stress.

In reviewing the literature on adolescents' self-concept and related variables, it is hard to know how much evidence is needed before one could confidently accept a relationship between variables as having been established. Certainly, there will always be variations within groups and individuals who do not conform to accepted patterns of behavior, for which the unique backgrounds cause disparity with empirical research. Overall, it appears to be somewhat contrary to expectations that the parent relationships are more important for 16-year-old boys' emotional stability, than for

16-year-old girls', unless it is interpreted within a psychological and developmental framework, and that this process is part of "normal" human development that demonstrates that adolescents increasingly transfer their emotional attachment from parents to peers in a process called individuation (Gecas and Schwalbe 1986; Peterson 2005). An expected finding in the Hay and Ashman (2003) research was the influential nature of same-sex and opposite-sex friendships on adolescents' emotional stability. This is consistent with the belief that as adolescents develop and form their identity, they transfer their emotional attachment from parents to peers and others as they mature physically, intellectually, and emotionally.

While Hay's longitudinal research (Hay et al. 2000; Hay and Ashman 2003; Hay et al. 1998c) was conducted using large-scale survey instruments, recent neuroimaging research by Sebastian et al. (2008) has demonstrated that activity in the brain regions associated with self-processing, including the medial prefrontal cortex, changes between early adolescence and adulthood. These studies indicate that neurocognitive development might contribute to behavioral phenomena characteristic of adolescence, such as heightened self-consciousness and susceptibility to peer influence. This recent research integrates well with this essay's authors' own findings generated using developmental and social psychology research procedures. Again, there is some evidence to suggest that girls may start this neurocognitive development earlier and so begin the process of developing their emotional stability away from their parents earlier, as the Hay and Ashman (2003) and Natsuaki et al. (2009) research suggested.

One of the clear findings from the research of this essay's authors (i.e., Hay 2000; Hay et al. 1999; Hay and Ashman 2003; Hay et al. 1998c) is that during adolescence, networks of relationships outside of the family unit widen and take on greater importance in terms of the development of individuals' self-identity, coping strategies, and emotional stability. Such widening acts as an early marker of adolescents' quest for self-autonomy and self-identity which in turn encourages their ability to selection their own social relationships and advice. Both a positive self-identify and positive social relationships during adolescence are important protective and resilience factors that can help moderate against risk factors, such as poverty or disadvantage in the home and community, a claim that is also made by

Hawkins and Catalano (1992) and Rutter (1979) from their seminal research on protective factors, children, and disadvantage.

Self-Identity and Generation Y

At a basic level, adolescent self-identity can involve the adoption of dress conventions and in-group behavior that reflect conduct standards of a circle of friends with whom one seeks affiliation. Put another way, seeking identity involves the conscious use of strategies that enhance personal and social power (Lindholm 2007). Establishing identity causes tensions between perceptions of self (e.g., self-sufficiency and independence) and the support and feedback that are garnered from others. During childhood and early adulthood, the family provides the foundations that are adjusted as young people develop friendship networks during and outside the school hours.

Of importance to all adolescents is the blurring of the positive, normative ways that encourage young people to develop a sense of belonging, self-reliance, autonomy, and connection with their peer group. Self-assurance develops through social interactions and peer support networks and also from young people's successes in formal and informal learning situations and in the adolescent years, through romantic relationships. Not surprisingly, for many teenagers there is a shift of influence from the family (parents) to one's peer group. Of importance, young people who see their friends as being supportive compared with those who do not report fewer school-related and psychological problems, greater confidence in their social acceptance by peers, and less loneliness (Bagwell et al. 1998). There is a further matter that might explain some of the inconsistencies that appear in the literature, namely, the change in sociocultural standards that have occurred over the past 40 years.

Those who were born between 1960 and roughly 1980 are referred to as Generation X (see Coupland 1991). Typically, in the Western world, this generation grew up in relatively stable social circumstances in which previously held traditional family values were reconfirmed. There were, however, sociocultural changes developing that influenced their children's social and psychological development, such as greater migration from the rural to the urban environments, more transnational migration, greater media exposure through television of national and global tensions and

events, the relatively rapid expansion of cities through housing developments, and economic growth generating new methods, industries, and services.

Today's adolescents are Generation Y, a term that implies the transition from X. Generally, these individuals in Generation Y are born into the Information Age, a period of rapid change and compared to their parents', a social world where there is greater cultural diversity and less focus on gender stereotypical values, expectations, and roles (Lightfoot et al. 2009). Generation Ys are said to be street smart, informal, lifestyle centered, gratification seekers, technologically competent, practical, skeptical, ambitious, and impatient (Goldgehn 2004; Warner 2006). It is hardly surprising that today's youths might turn more toward their technically proficient peers for support and engagement rather than their parents. Certainly, in the developed economies of the Western world, compared to the 1960s, there is now a longer delay before adolescents achieve economic self-sufficiency from parents and most young people are now expected to attend school for 12 or more years (Muuss and Portton 1998). This greater emphasis on formal education in the 2000s may also encourage adolescent boys to be more comfortable about expressing their feelings and emotions than those who were recruited by Douvan and Adelson (1966).

Conclusion

In his recent book, Hattie (2009) has used a metaphor for self-concept. He suggested that self-concept is like a rope that consists of many fibers that are intertwined and overlap with no single thread predominating. The strength of the rope depends upon not one fiber or strand, but the overlapping of fibers. This conceptualization is similar to one proposed by Koch and Shepperd (2004) in relation to self-complexity, the notion that the self is multifaceted rather than unitary. They argued that complexity comes from differences in the definition and confusion over how research is conducted and how the findings might be interpreted.

In the review of the self-concept literature and from work undertaken by the authors of this essay over the years, Hattie's metaphor makes sense. He makes a distinction between self-estimates of ability and self-concept of ability, the latter being what the researchers intend to measure while the former are the data actually collected. The field is hardly simplified by the

plethora of research that draws individual bodies (fiber-specific) of research together showing interactive relationship between self and many variables with strong effects separating sex differences in some, although not all domains (Gentile et al. 2009).

It is highly unlikely that researchers will ever separate the threads to determine specifically their individual effects, but perhaps this is not the issue. In Hattie's (2009) model, the rope is a dynamic mix of variables involving affective, cognitive, and physiological strands. The suggestion is that the self-concept strand interacts with the other variables but also influences how adolescents filter, select, and interpret the information they receive and act upon. Thus, this makes self-concept an important agent for maintaining or changing how individuals react to their life's events. The evidence is from research indicating that parents, peers, and school personnel play an important role in the formation of preadolescents and adolescents' general self-concept (confidence and self-worth) and emotional stability (calmness, freedom from anxiety, and depression). Consequently, there is a need to incorporate into the regular school curriculum, programs that assist children and adolescents to achieve a more secure sense of personal identity, and where necessary to provide individuals and their parents access to community and school-based support and counseling services that can facilitate the development of a positive self-identify formation, emotional stability, and coping skills.

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Self-consciousness

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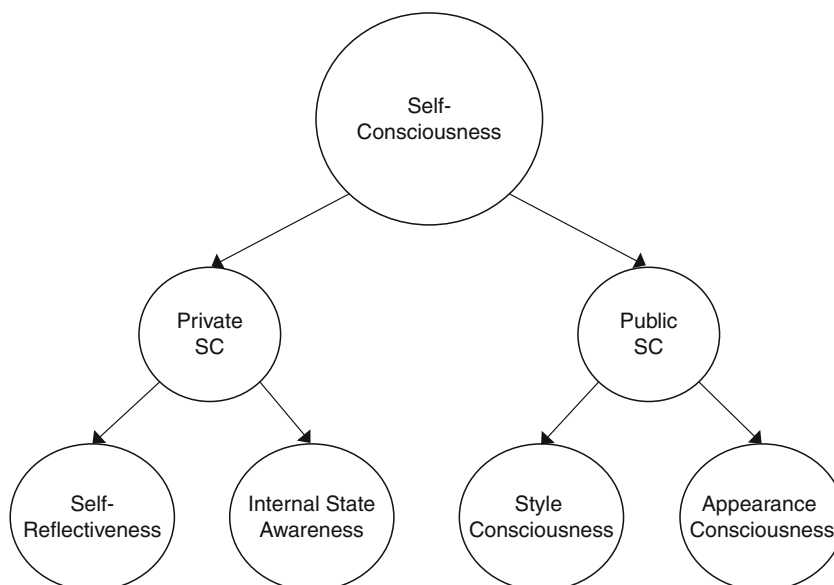
Overview

Self-consciousness (SC), or the dispositional tendency to attend to aspects of the self, such as emotions and public image (Fenigstein et al. 1975; Panayiotou 2004), begins to develop in preadolescent children and is especially salient during early adolescence. Adolescence is a period characterized by significant neurobiological and hormonal changes, social-emotional development, and cognitive maturation. There are increasing social demands, pressures from peers, romantic interests, and a greater independence from parents and other adults. Cognitively, adolescents are developing Piagetian formal operations (the ability to think abstractly). They engage in metacognition (thinking about their own thoughts) and can also consider the thoughts of others. Adolescents begin to place greater importance on the opinions and perceptions of their peers as they begin to

become more aware of themselves as individuals and as social objects. It appears that SC develops in young adolescents and continues to develop through young adulthood where it becomes a stable personality trait. This essay examines the facets of SC, the relationship between SC and the imaginary audience phenomenon, the relationship of SC to mental health problems such as anxiety and depression, age and gender differences in SC, and the measurement of SC.

The Facets of Self-consciousness

Self-consciousness does not appear to be unitary construct. Rather, it appears to be made up of at least two and as many as four different related constructs (see Fig. 1). Most researchers have found support for two major facets of SC, private self-consciousness and public self-consciousness (Fenigstein et al. 1975). Private SC refers to attention directed to covert or personal aspects of the self, such as feelings and beliefs whereas public SC describes attention to public aspects of the self, such as appearance and manners. Private SC is associated with awareness of internal sensations (Scheier et al. 1979), attitude consistency over time (Scheier 1980), and higher correlations between self-report and behavior (Scheier et al. 1978). In contrast, public SC is associated with conformity, low self-esteem, low risk taking (Tunnell 1984), and a tendency to temper privately expressed attitudes in



Self-consciousness. Fig. 1 Facets of self-consciousness

public (Scheier 1980). Although private SC and public SC are related, they repeatedly emerge as separate factors (e.g., Fenigstein et al. 1975; Scheier and Carver 1985; Higa et al. 2008) and they distinguish disparate self-regulatory process, one representing evaluation of self without reference to others and the other indicative of evaluation of the self in a social context (Carver and Scheier 1987; Fenigstein 1979; Froming and Carver 1981; Froming et al. 1982).

To complicate the matter, a number of researchers have demonstrated that rather than two factors of SC, there may actually be four factors with private SC and public SC each being further divided into two separate but related constructs. According to some researchers, private SC is the combination of two factors, self-reflectiveness and internal state awareness (Anderson et al. 1996; Burnkrant and Page 1984; Cramer 2000; Nystedt and Ljungberg 2002; Piliavin and Charng 1988). Researchers have described self-reflectiveness as characterized by ruminative self-preoccupation (Anderson et al. 1996) whereas internal state awareness appears to represent a more neutral and even mildly positive style of self-interest, and is associated with higher self-awareness, positive affect, and positive mental health (Anderson et al. 1996; Higa et al. 2008; Watson et al. 1996).

In addition, some have suggested that public SC is also the combination of two separate constructs, style consciousness and appearance consciousness (Higa et al. 2008; Mittal and Balasubramanian 1987; Watson et al. 1996). Style consciousness represents awareness of behaviors observed by others while appearance consciousness represents awareness of how one looks to others. Although less research has supported the distinction between style consciousness and appearance consciousness than self-reflectiveness and internal state awareness, some argue that this distinction helps explain some of the differences observed in patients with different kinds of psychopathology. For example, Ruipérez and Belloch (2003) found that individuals with social phobia scored significantly higher on style consciousness and individuals with depression scored significantly lower on appearance consciousness than individuals with other anxiety disorders and control subjects.

Imaginary Audience Phenomenon

Related to public self-consciousness is the normal developmental phenomenon termed the *imaginary*

audience (Elkind 1967). The imaginary audience (IA) phenomenon is an enhanced public self-awareness or the perception that other people are as concerned with their behaviors and appearance as adolescents are themselves. According to Elkind (1967, 1978), IA may account for many different adolescent behaviors, including the tendency to conform, desire for privacy, and feelings of shame. IA is an example of Piagetian adolescent egocentrism (i.e., an inability to differentiate others' points of view from one's own), which occurs during formal operations when the adolescent begins to consider abstract possibilities. More recently, research has failed to confirm this link between the development of egocentrism and formal operations (Vartanian 2000). As a result, Lapsley and his colleagues theorized a "new look" at adolescent egocentrism, instead defining IA as linked to the psychoanalytic ego developmental process of separation-individuation (Blos 1962) and asserting that it functions to express anxiety associated with the decreased dependence on their parents (Lapsley 1993; Lapsley et al. 1989; Lapsley and Murphy 1985). Specifically, the "push-and-pull" of being attached to their parents while concurrently moving toward independence is manifested in IA and allows the adolescent to avoid overwhelming separation anxiety (Kroger 1998). Lapsley et al. (1989) administered New Look measures of IA to a sample of 6th–12th graders and found that IA was negatively correlated with separation anxiety and positively correlated with narcissism, development of object relations, and self-centeredness. As Lapsley's New Look theory suggests, it has been demonstrated that egocentrism may in fact extend into young adulthood (Frankenberger 2000).

Although IA appears to be a normal developmental phenomenon, higher ratings of IA do appear to be correlated with poorer mental health outcomes. For example, IA is negatively correlated with self-esteem and self-concept (Kelly et al. 2002; Markstrom and Mullis 1986; Ryan and Kuczkowski 1994). Further, IA is associated with shyness, audience anxiety, social anxiety, social avoidance, nervousness, depression, and poor social skills (Cohn et al. 1988; Baron 1986; Baron and Hanna 1990; Kelly et al. 2002).

Self-consciousness and Mental Health

Similar to findings in IA, SC and trait self-focused attention (SFA; another term used to describe self-

consciousness) are also strongly implicated in chronic negative affect (NA) and more specifically, anxiety and depression in children, adolescents, and adults (Allgood-Merten et al. 1990; Bowker and Rubin 2009; Higa et al. 2008; Mor and Winquist 2002). Mor and Winquist's (2002) meta-analysis demonstrated that public SC is more strongly related to anxiety than private SC. More specifically, the relationship between public SC and social anxiety appears to be particularly strong with studies across children, adolescents, and adults demonstrating this consistent finding (Higa and Daleiden 2008; Higa et al. 2008; Hofmann and Heinrichs 2003; Kashdan and Roberts 2004; Mansell et al. 1999; Mellings and Alden 2000; Woody 1996). However, according to Mor and Winquist (2002), studies of individuals with generalized anxiety disorder (GAD) revealed no difference between private and public self-focus. On the other hand, self-reflectiveness, a sub-factor of private SC, appears to play a unique role in the severity of GAD symptoms in adults (Nuevo et al. 2007), and adults with GAD score higher on self-reflectiveness than adults with other psychopathology (Ruipérez and Belloch 2003). It is possible when internal state awareness (and thus the more positive aspects of a focus on the self) is removed from private SC, a tendency to self-reflect may be a risk factor for the development of worry or GAD. In addition to worry and GAD, researchers have found that self-reflectiveness also predicts shame, guilt, and negative affect (Anderson et al. 1996; Watson et al. 1996).

SC also appears to play an important role in adolescent depression (e.g., Andrews et al. 1993; Garber et al. 1993; Lewinsohn et al. 1997). Mor and Winquist (2002) reported in their meta-analysis that the relationship between private SC and depression is stronger than the relationship between public SC and depression. Additionally, researchers have found that private SC is associated with self-reported loneliness in adolescents (Franzoi and Davis 1985). This is consistent with the findings discussed above that private SC, and in particular, self-reflectiveness, is closely related to generalized anxiety that has been demonstrated to be more closely related to depression than other anxiety disorders (Higa-McMillan et al. 2008; Lahey et al. 2008). Further, in a recent community sample of adolescents, participants experienced higher levels of NA when they engaged in self-focused thoughts, and the relationship

between NA and self-focused attention was stronger in adolescents who were recently diagnosed with depression compared to adolescents who were recently diagnosed with an anxiety disorder, comorbid anxiety and depression, or no diagnosis (Mor et al. 2010).

Although most research to date has examined the relationships between public and private SC and internalizing adjustment problems, only one study has examined the differential effects of gender on which type of SC (public or private) produces greater risk for poor adjustment. Bowker and Rubin (2009) examined SC and internalizing symptoms in young adolescents. They found that when controlling for the effects of public SC, private SC accounted for more adjustment problems in girls, suggesting private SC represents a unique cognitive vulnerability risk factor for psychopathology among girls. On the other hand, public SC was significantly associated with anger and anxious rejection sensitivity for boys but not girls (after controlling for private SC), suggesting that public SC plays a more significant role in excessive social concerns and worries among boys. Given the relatively small sample size in the study, additional research is needed to more fully understand the unique contributions of public and private SC to mental health outcomes in adolescent boys and girls.

Developmental and Gender Differences

Although the different facets of SC may pose differential mental health risks to boys and girls, one consistent finding across all studies, samples, and ages, is that girls report significantly higher levels of IA and all components of SC (e.g., Allgood-Merten et al. 1990; Bowker and Rubin 2009; Davis and Franzoi 1991; Elkind and Bowen 1979; Higa et al. 2008; Lewinsohn et al. 1998; Liu and Li 2007; Rankin et al. 2004; Ryan and Kuczkowski 1994) except for internal state awareness (Higa et al. 2008). Although the direction of the relationship has not been formally tested, it is possible that female gender is a risk factor for SC.

The development of IA has been more widely studied in the extant literature than the development of SC. Initial studies found that young adolescents (ages 12–13) reported greater IA than older adolescents and preadolescent children, demonstrating an inverted U-shaped distribution with age (Elkind and Bowen

1979; Enright et al. 1980; Gray and Hudson 1984; Ryan and Kuczowski 1994). However, more recent studies revealed that adolescent egocentrism does not demonstrate a curvilinear increase and decrease between childhood and middle-to-late adolescence, but rather appears to continue to increase even into late adolescence and young adulthood (Peterson and Roscoe 1991; Rycek et al. 1998; Schwartz et al. 2008).

Although less studied, some research has examined the developmental course of SC in youth, and investigations in adolescents have produced mixed findings. Bowker and Rubin (2009) reported that young adolescents reported more public than private SC. In a longitudinal study, Davis and Franzoi (1991) reported no significant changes in SC in 9th–12th graders over 3 years. In contrast, Rankin et al. (2004) found that in two cohorts of adolescents (ages 13 and 15) across 4 years, private SC increased while public SC decreased, suggesting that public SC peaks in early adolescence similar to early findings on IA. To date, studies have examined age effects on IA and adolescent egocentrism cross-sectionally and there are only two longitudinal studies of SC that the authors are aware of – and they produced conflicting findings. In order to establish whether there are true changes in the levels of SC, IA, and egocentrism across development, additional longitudinal studies are needed.

Recent developments in neuroimaging and observation of the developing adolescent's brain may be another avenue of research that could illuminate the biological changes that account for or contribute to SC behaviors during adolescence. For example, structural magnetic resonance imaging (MRI) studies have demonstrated that brain regions involved in self-related processing continue to develop between 10 and 20 years of age (Giedd et al. 1999; Gogtay et al. 2004). MRI studies have demonstrated that the amount of white matter in the prefrontal cortex, temporal cortex, and parietal cortex increases (Paus 2005) whereas the amount of gray matter develops in an inverted U shape during adolescence (Bates 1990; Giedd et al. 1999; Gogtay et al. 2004). It is hypothesized that heightened SC during adolescence may be in part due to neurocognitive development in the medial prefrontal cortex (Sebastian et al. 2008). As the understanding of

the adolescent brain continues to advance, more will be learned about how brain biology contributes to SC, both cognitively and behaviorally.

Measurement of Self-consciousness

The most widely used measure of SC is the Self-Consciousness Scale (SCS; Fenigstein et al. 1975), a 23-item self-report scale that measures private SC, public SC, and social anxiety in adults. Primarily investigated in college students, the SCS has demonstrated 2-week test–retest reliability (Fenigstein et al. 1975), acceptable internal consistency (Piliavin and Charng 1988), and factorial and construct validity (Fenigstein et al. 1975). Despite the extensive research on the SCS in adult samples, very little research has examined the SCS in adolescents. The few studies that have investigated the psychometric properties of SCS with adolescent samples have demonstrated its test–retest reliability and convergent validity with measures of depression (e.g., Andrews et al. 1993; Lewinsohn et al. 1997). In terms of the performances of the subscales, Rankin et al. (2004) found that in their sample of two cohorts of adolescents, the public SC scale evidenced better internal consistency estimates than the private SC scale.

In the first study of SC in children, Abrams (1988) revised the original SCS and tested it in a sample of preadolescent children. His version retained 10 of the original SCS items but also included five additional items (for a total of 15 items). Exploratory factor analysis revealed two separate factors (private SC and public SC). Internal consistency was in the low to moderate range for both private and public SC. Test–retest reliability was weak for private SC but in the moderate range for public SC. More recently, Higa et al. (2008) examined a combination of the original SCS (eight items were modified for age-appropriateness) together with Abrams' five additional items (SCS for Children; SCS-C). Higa and colleagues found that Abrams' items performed poorly in their sample and after removing those items, found support for four factors of SC and one social anxiety factor (similar to Mittal and Balasubramanian 1987). Although the three major subscales (private SC, public SC, social anxiety) evidenced strong internal consistency, the minor subscales (self-reflectiveness, internal state awareness, style consciousness, appearance consciousness) did not. Convergent

validity was established via measures of social anxiety and negative affect, and discriminant validity was established via a measure of positive affect.

Some researchers have suggested that given the multifaceted nature of SC, in order to comprehensively measure the construct, additional items should be generated and tested because 23 items does not provide enough reliability per scale (Silvia 1999; Watson et al. 1996). Given the low internal consistency estimates for the subscales of the private SC and public SC scales in youth, Higa-McMillan et al. (in preparation) created additional items and evaluated a revised version of the SCS-C in children and adolescents. The Revised SCS-C demonstrated improved internal consistency for all scales (alphas.72 or greater), strong convergent and divergent validity, and 2-week test–retest reliability, and a five-factor model was best supported by the data.

Conclusion

Adolescence is a period marked by significant internal and external change. It is believed that self-consciousness develops as a result of the ability to have meta-cognitions and the increasing social pressures adolescents feel to conform to certain standards. SC has multiple dimensions that can be reliably measured in children, adolescents, and adults, and it appears that adolescents today begin to develop SC in early adolescence and this continues to increase throughout middle and late adolescence and into young adulthood. This is an important finding for researchers, educators, and clinicians who work with adolescents to keep in mind as they develop research protocols, adapt teaching styles, and integrate developmental principles into effective treatment approaches. For example, teachers might consider using alternate approaches to having students complete assignments at the board and might be more sensitive to speech anxiety in the classroom. Further, clinicians might consider how their adolescent clients have heightened self-consciousness that may be a risk factor for anxiety and depression. For clients who tend to be socially anxious or have generalized anxiety, clinicians might consider testing unrealistic social beliefs through cognitive restructuring and using exposure exercises designed to decrease discomfort with heightened SC (e.g., video feedback; Hofmann and Scepkowski 2006). On the other hand, given the findings that self-focus

tends to increase negative affect in adolescents with depression, clinicians might consider having adolescent clients engage in activities that encourage focus outside the self and decrease opportunities for intense self-focus, such as highly interactive team sports like soccer or basketball. Further, mindfulness-based therapy has been found to be helpful for adults with anxiety (Hofmann et al. 2010) and although additional research is needed, such techniques may also be helpful for adolescents with unpleasant SC. The development of SC is just one of the many fascinating developments that occurs during adolescence, and by having a greater understanding of SC, educators, clinicians, and researchers will be better equipped to help adolescents reach their full potential.

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Self-construal in a Cultural Context

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Overview

Self-construal is typically defined as the way in which an individual conceptualizes and experiences oneself. Markus and Kitayama (1991) distinguished between an independent self-construal that prioritizes an individual's personal needs and goals and is typical of North American and Western European cultures, and an interdependent self-construal that prioritizes one's social relationships and is typical of Asian, Latin-American, and African cultures. With a bulk of the literature focusing on self-construal and its implications for well-being primarily in college students, little research attention has been paid to the relation of self-construal to adolescent development and well-being. Following an overview of the ways in which self-construal is defined and measured, along with related controversies, literature pertaining to the implications of self-construal for individual psychological processes such as cognition, motivation, and emotion is reviewed. The development of self-construal in the family context and the implications for individual functioning and mental health, as well as peer and romantic relationships, are examined with a focus on adolescence.

Introduction and Definitions of Self-construal

The construct of self-construal was first introduced in a seminal article by Markus and Kitayama (1991) to describe cultural variation in the ways in which individuals define themselves. Simply put, self-construal is the way in which an individual conceptualizes and experiences oneself. Markus and Kitayama (1991) proposed that an independent self-construal is characteristic of North American and Western European cultures, in which an individual's behavior is organized and made meaningful by reference to one's own internal attributes (e.g., thoughts, feelings, or actions) rather than those of others. In contrast, in many Asian, African, and

Latin-American cultures, a view of self as *interdependent* is predominant, in which an individual's behavior is organized and made meaningful by reference to one's social relationships (Markus and Kitayama 1991). For individuals with an independent self, expression and validation of one's internal attributes is an important determinant of self-esteem, while for those with an interdependent self-construal, "self-in-relation-to-other" is focal in individual experience, and emphasis is placed on fitting in with others and existing harmoniously with them.

Similar conceptualizations of variation in self have been proposed by anthropologists prior to Markus and Kitayama's (1991) work. For instance, Marriott (1976) used the term "dividual" to describe people from India, whom he considered emotionally, socially, and physically tied to others in contrast to the Western notion of persons as relatively bounded and self-contained "individuals." Shweder and Bourne (1984) described people in non-Western countries as sociocentric who are "linked to each other in an interdependent system" and "take an active interest in another's affairs" (p. 194) as opposed to Western individuals as egocentric – "autonomous, indivisible, and bounded" units (p. 190). Moving beyond the dichotomous conceptualization, psychologist Kağitçibaşı (1996) has proposed autonomous-relational self as a third possible configuration (in addition to "autonomous" and "relational" self) that incorporates an orientation toward maintaining autonomy with a sense of connectedness with others.

While self-construal describes differences across cultures at an individual level of analysis, Hofstede (1980), and subsequently Triandis (1989, 1995), used the dimension of individualism versus collectivism to describe variation at a cultural level of analysis. Briefly, collectivism is a social pattern consisting of closely linked individuals who see themselves as parts of one or more collectives (family, coworkers, tribe, nation), while individualism is a social pattern that consists of loosely linked individuals who view themselves as independent of collectives (Triandis 1995).

According to Markus and Kitayama (1991), self-construals play an important role in influencing emotional, cognitive, and motivational processes, and consequently have implications for one's psychological well-being. In the almost 2 decades since the publication of Markus and Kitayama's article, the bulk of

research has examined the influence of self-construal on various psychological processes among samples of college students with little research attention paid to self-construals in the developmental context. Important developmental considerations include both the development of self-construal within the family, as well as changes in self-construal across early childhood, through adolescence, and into adulthood.

Measurement Challenges and Controversies

Measuring a construct such as self-construal can be difficult, particularly given the inherent challenges that come with the measurement of any construct across cultures. Whereas many researchers find the construct of self-construal to be meaningful and beneficial to various domains of study (e.g., Cross et al. 2000; Singelis 1994), others have argued that the self-construal construct is invalid, inconsistent, or unsupported by research (Matsumoto 1999; Park and Levine 1999). Yet, despite these challenges, various investigators have developed self-report measures of self-construal that draw from the interdependent/independent typology outlined by Markus and Kitayama (1991) and other similar classifications.

One classic self-report measurement tool is Kuhn and McPartland's (1954) Twenty Statements Test (TST). The TST instructs respondents to provide 20 statements in response to the question "Who am I?" The 20 responses are then coded into categories, typically independent versus interdependent or an extended four-way categorization (i.e., idiocentric, small group, large group, and allocentric responses). The TST is unique in that its open-ended response format allows participants to choose their own responses about the way in which they view themselves.

A second commonly used measure to date is Singelis' (1994) Self-Construal Scale (SCS), which lists 24 statements and asks the respondent to rate each statement using a five-point Likert scale. These statements, which are characteristic of either an interdependent or an independent view of self, were constructed based on Markus and Kitayama's (1991) description of self-construal as well as other measures of self-construal and individualism–collectivism. Leung and Kim (1997) and Gudykunst et al. (1996) have proposed similar measures.

Other measures of self-construal are more finely focused on different domains related to self-construal. For instance, the 11-item Relational-Interdependent Self-Construal Scale (RISC; Cross et al. 2000) was designed to measure a relational-interdependent self-construal, emphasizing the importance of close interpersonal relationships (as opposed to group membership) as one form of the interdependent self. In contrast, various other instruments (e.g., Collectivism Scale; Yamaguchi 1994) are designed to measure group membership and allegiance.

The validity of current self-report measures of self-construal has been debated in the literature (Gudykunst and Lee 2003; Kim and Raja 2003; Levine et al. 2003). After conducting a meta-analysis of cross-cultural studies that used the measures of Singelis (1994), Leung and Kim (1997) and Gudykunst et al. (1996), Levine et al. (2003) concluded that there are "serious and persistent flaws in existing self-construal scales," whereby "the intended two-factor measurement fails to fit the data, fails badly, and fails consistently" (p. 247). Do these findings highlight problems with current measures of self-construal, or deeper problems with the construct itself? The answer remains unclear, but the varied findings with current measurement tools does highlight the challenge associated with measuring self-construal. For instance, the use of self-report measures may itself be more appropriate within Euro-American cultures than Eastern cultures (Kanagawa et al. 2001; Markus and Kitayama 1998). Given the complexity of within- and between-culture differences, as well as the intricate balance between different conceptualizations of interdependent and independent view of self, it is not entirely surprising that results across studies vary.

To date, few investigators have measured self-construal from a developmental perspective. In one recent study, Pomerantz and colleagues (Pomerantz et al. 2009) modified the RISC Scale (Cross et al. 2000) to specifically measure early adolescents' relationships with their parents and peers as relevant to their interdependent self-construals (Parent-oriented Interdependent Self-Construal Scale and Friend-oriented Interdependent Self-Construal Scale, respectively). Amidst many relational changes – with parents, peers, and romantic partners – as well as differences in cultural expectations of autonomy in adolescence, the challenge continues for future researchers

to more carefully examine self-construal within a developmental context. Such careful consideration may provide evidence for *what* self-construal is in adolescence, *when* the construct of self-construal might be meaningfully useful, and *how* (the *mechanisms* by which) such a construct informs development across the life span. Markus and Kitayama (1991) focused on the influence of self-construal on cognition, emotion, and motivation, and a return to these factors within a developmental framework might be particularly worthwhile.

Cognition, Emotion, and Motivation

Markus and Kitayama's (1991) seminal paper described a theoretical framework and preliminary evidence supporting the influence of self-construal on individual experiences related to cognition, emotion, and motivation. In considering the ways in which self-construal impacts emotional processes and experiences, Markus and Kitayama (1991) suggest that individuals with an independent view of the self more frequently express, and possibly experience, *ego-focused emotions* (or, *socially disengaging emotions*; Kitayama et al. 2006). These include emotions such as anger, frustration, or pride that are related to personal achievement and violation of personal goals and desires. In contrast, those with interdependent selves more frequently experience and express *other-focused* (Markus and Kitayama 1991) or *socially engaging emotions* (Kitayama et al. 2006), such as sympathy or the Japanese emotion of *amae*, which are focused on the importance of maintaining connections with others and, in turn, supporting one's interdependence. Kitayama et al. (2006) found that Japanese college students were more likely to experience socially engaging emotions, and these emotions were related to their self-reported subjective well-being, while American college students were more likely to experience socially disengaging emotions, which were related to their subjective well-being.

Likewise, just as emotional expressiveness can be understood through the lens of self-construal, one's view of self also impacts motivation. Markus and Kitayama (1991) outline the difference between interdependent and independent motives, in addition to cognitive consistency whereby persons strive to reduce the cognitive dissonance that arises when what one feels and what one says or does are incongruent.

The need for cognitive consistency is particularly evident in understanding the independent self, whereas those with an interdependent self-construal are more likely to see the ability to control – rather than express – one's innermost feelings in the favor of the goals and preferences of others as virtuous. More recently, Markus and Kitayama (2003) have described differences in motivation in terms of two types of agency: *conjoint agency* and *disjoint agency*. In the former, associated with interdependent self-construal, motivation integrates personal interests and the interests of others, whereas the latter more clearly separates personal interests from those of others and is associated with independent self-construal.

Substantial research suggests that cultural differences related to interdependence and independence contribute to differences in cognition and cognitive processes (Markus and Kitayama 1991; Nisbett 2007). Markus and Kitayama (1991) examined three consequences of self-construal differences: (1) those with an interdependent self-construal may be more attentive and sensitive to others than those with an independent self-construal, (2) an interdependent self-construal will contribute to viewing the self-in-relation-to-other as context-dependent, and (3) the emphasis on social context and attentiveness characteristic of the interdependent self will influence nonsocial cognitive processes such as categorization and counterfactual thinking. Whereas Western perception and cognition prioritizes a focus on a central object (and thus, is more analytical), Eastern perception and cognition prioritizes a focus on relationships and contextual understanding and thus, is more holistic (Nisbett and Miyamoto 2005; Nisbett et al. 2001). For example, Kim and Markus (1999, Study 3) found that East Asians (Chinese and Korean) and European Americans chose different colors when given the opportunity to give a colored pen as a gift. Specifically, East Asians chose the most common color (the one that emphasizes conformity), whereas European Americans more often chose the rarest color (the one that emphasizes uniqueness). These differences in perception and cognition impact attribution processes, reliance on rules, and categorization (Nisbett 2007), suggesting that “cognitive and perceptual processes are constructed in part through participation in cultural practices” and are not as fixed and universal as has often been assumed (Nisbett and Miyamoto 2005, p. 472).

Since Markus and Kitayama's (1991) thorough review, surprisingly few research studies have specifically considered self-construal and relevant implications for cognition, emotion, and motivation during the developmental stage of adolescence. Although many studies have used college students whereby some participants may be considered to fall under the category of "adolescents," these studies were not designed to specifically examine the relevant constructs through the developmental lens of adolescence (for an exception, see Pomerantz et al. 2009). As a period of substantial growth and transition that impacts cognition, emotion, and motivation, there is an important need to examine the ways in which self-construal impacts the transition into, the trajectory throughout, and the subsequent outcomes of adolescent development. In adolescence, youth navigate complicated peer relationships, increased personal decision-making, sexual development and, in some cultures, the beginning of romantic relationships, as well as future prospects related to career and education options (Kerig and Wenar 2006; Steinberg 2011). Thus, it is important for investigators to consider how these developmental challenges are impacted by differences in cognitive, emotional, and motivational processes associated with one's self-construal.

Particularly, the study of cognitive, emotional, and motivational processes in adolescence must consider cultural aspects related to normative development. For example, adolescence may be considered as the developmental period that is characterized by the onset of formal operational thinking (Piaget 1972), and yet recent research has suggested that formal operations itself may not be universal, particularly among those who cannot read or write, among societies that do not place a high priority on formal education (Hatano and Inagaki 1998), or among societies which place an emphasis on social intelligence (Serpell 1994). In addition to advances in cognitive development, Euro-American psychology has emphasized separation from parents as an increasingly important developmental task throughout adolescence, but current thinking emphasizes a more nuanced view of the balance between autonomy and relatedness, and the way in which this balance unfolds is culture-specific and may be informed by one's construal of self (Greenfield et al. 2003; Kağıtçıbaşı 2005, 2007). When considering cultural differences that may emphasize different ways of

viewing self in relation to other, it is likely that cognitive, emotional, and motivational processes across the life span (including adolescence and emerging adulthood) will be impacted by related factors of autonomy and connectedness, which is particularly relevant in understanding the family context in adolescence.

Self-construal Within the Family Context

In order to understand the contribution of family context to the development of self-construal, Kağıtçıbaşı (1985) conceptualized the self as situated within the family, and the family as situated within the larger social and cultural context. Based on a large research study conducted in nine countries in the 1970s (the Value of Children Study; Kağıtçıbaşı 1982), and a more recent project that involved ten countries (Kağıtçıbaşı and Ataca 2005), Kağıtçıbaşı (1985) proposed three different models of family interactions based on varying levels of autonomy and relatedness. These included (1) the traditional family that was characterized by strong material and psychological interdependence across generations, (2) a family based on more individualistic tendencies that values intergenerational independence with respect to both material and psychological aspects, and (3) a synthesis of these two types of families, such that material independence is present alongside psychological interdependence (see Table 1). Kağıtçıbaşı (1996) proposed a specific parenting style and childrearing orientation that corresponded to each type of family model, and the consequent development of a specific type of self-construal within each family. The first model of family interaction, the total interdependent family, is considered to be present in rural or urban lower socioeconomic status families in much of the world, especially in Asia (Kağıtçıbaşı 1982). Authoritarian parenting style that focuses on fostering child obedience is considered typical in these families. It is important for children to remain connected to the family in order to ensure "old-age security value" (Kağıtçıbaşı 1982, p. 32); thus, autonomy and independence are seen as threats to the familial structure, and therefore, discouraged (Kağıtçıbaşı 1996). The heteronomous-related self emerges from this family model, which is characterized as being high in relatedness but low in autonomy. The second model of family interaction, the independent family structure, is more commonly seen in families in

Self-construal in a Cultural Context. Table 1 Kağıtçıbaşı (1996) models of family interaction patterns within and across cultures

Family interaction model	Type of self	Parenting style	Emphasis on relatedness	Emphasis on autonomy
Total interdependence	Heteronomous-related	Authoritarian	High	Low
Independence	Autonomous-separate	Relatively Permissive	Low	High
Synthesis of interdependence and independence	Autonomous-related	Authoritative	High	High

the Western industrial world where autonomy and self-reliance are emphasized (Kağıtçıbaşı 1996, 2005). Although there is some research suggesting that an interdependent family structure is found in many families in industrialized Western nations, particularly among families from a lower socioeconomic status background (Kagan 1984), the majority of families still identify with a more independent model. In Kağıtçıbaşı's (1996) model, a relatively permissive parenting style with a high degree of affection and warmth and low levels of behavioral control is considered typical in these families. However, research has demonstrated that an authoritative parenting style, rather than permissive parenting, may be optimal for child development in Western cultures where autonomy and individuation are prioritized (Dornbusch et al. 1987; Maccoby and Martin 1983; Steinberg et al. 1989). Nonetheless, in independent families, a child who is autonomous is not seen as a threat to the family's livelihood and is therefore encouraged to become more independent. The self that emerges within this family context is the autonomous-separate self, which is characterized as high in autonomy but low in relatedness. The third type of family model is one where both interdependence and independence are present but in different domains, such that psychological interdependence is present with material independence. With increasing urbanization and wealth in the non-Western world, members of urban middle-class families across generations are relying less on one another financially, while they continue to be interdependent with respect to psychological ties. Parents of these children encourage both autonomy as well as relatedness, and an authoritative parenting style that combines a high degree of warmth and affection with behavioral control is typical in these families. The self

that commonly emerges within this family context is the autonomous-related self and is characterized as being high in both relatedness and autonomy (Kağıtçıbaşı 1996, 2005). As globalization and urbanization continues in many parts of the world, it will be important for researchers to study how these different models of family interactions differentially influence child and adolescent development.

Functioning and Well-being in Adolescence

In addition to the family context, researchers have been particularly interested in self-construal's impact on individual psychosocial functioning and well-being, though there are surprisingly few studies that have examined the relation between self-construal and well-being specifically among adolescents. Self-esteem, depression, and anxiety have been three areas of functioning that have received some attention, and the limited findings to date provide a mixed picture. Some of the challenge rests in differences in the way in which certain constructs may be understood in different cultural contexts. For example, in their review of self-esteem among Chinese and Western children and adolescents, Wang and Ollendick (2001) suggest that "the construct of self-esteem may have different 'meaning' in the Chinese culture than in prevailing Western cultures" (p. 265) and emphasize the importance of considering the nature of self-identity in association with collectivism/individualism and other cultural factors. Singelis et al. (1999) also raise the possibility of cultural differences in the construct of self-esteem in their cross-cultural research. These investigators unexpectedly found that self-esteem was not differentially associated with self-construal among Hong Kong, Hawaii, or mainland United States college students;

rather, both independent and interdependent self-construal predicted self-esteem, and significant interactions between culture and self-construal were not present. This finding provides support for the notion that independent or interdependent self-construals are not isolated or culture-specific, but may exist simultaneously. The authors suggest that the constructs of self-esteem and self-construal might be interrelated, whereby there may be an *interdependent self-esteem* and an *independent self-esteem*. Whereas independent self-esteem may focus on the self as a distinct unit, interdependent self-esteem, or collective self-esteem, may remove the focus on worth as resting solely with the individual, but rather the worth of families, relationships, and other interdependent contextual associations.

Among Vietnamese-American adolescents, Lam (2006) found that students with both a strong interdependent and independent self-construal (referred to by Lam as *bicultural students*) reported lower levels of depression and distress and higher levels of self-esteem and family cohesion than students with either a strong interdependent or independent self-construal or youth with low scores on both interdependent and independent self-construal (*marginal students*). Interestingly, Lam (2005) also found that self-construal did not have a direct relationship with depression, but rather contributed to depressive symptomatology through indirect pathways. Among the same sample of Vietnamese-American adolescents, interdependent self-construal was associated with high family cohesion, which in turn was associated with higher levels of self-esteem and lower levels of depression. In contrast, independent self-construal was associated with higher self-esteem and high peer support, which in turn were associated with decreased depression.

Interestingly, other research has found that the extent of endorsement of independent or interdependent self-construal was not predictive of depressive symptoms, but was related to social anxiety, whereby a lower independent self-construal was significantly related to higher reports of social anxiety among Asian American and White American college students (Okazaki 1997). It may be that an individual with lowered levels of an independent self-construal may feel socially insecure or less likely to engage

socially, particularly when living in a more individualistic culture. Among a sample of predominantly Euro-American college students, Hardin et al. (2006) found that self-construal moderated the relationship between social anxiety and career exploration for males, where for males with low levels of independent self-construal, increasing social anxiety predicted decreasing exploration. Also, for females, but not males, higher levels of interdependence was associated with lower levels of vocational commitment, highlighting the importance of considering gender when examining self-construal (Cross and Madson 1997). The authors (Hardin et al. 2006) suggest that for females, interdependence is associated with interpersonal relationship or *relational interdependence*, whereas for males, interdependence may be associated with group belonging or *collective interdependence* (see Gabriel and Gardner 1999). Differences between a relational interdependence and collective interdependence have implications not only for the developmental task of career exploration and commitment in late adolescence, but also earlier developmental tasks related to peer relationships and, in some cultures, the onset of romantic relationships.

Peer and Romantic Relationships

In many Western cultures, adolescence and emerging adulthood are marked by youth navigating increasingly complicated peer and romantic relationships. The ways in which individuals communicate and relate to one another in these relationships is often a function of how they perceive themselves in relation to the other and in the overall relationship. According to Cross et al. (2000), the relational-interdependent self-construal, or the relational self-construal, is characterized by emphasizing relationships with others, self-enhancement, and self-expression with others. This conceptualization of relational self-construal is similar to Markus and Kitayama's (1991) concept of the interdependent self-construal and will be used interchangeably here. Individuals with a highly relational self-construal engage in behaviors and cognitions that foster and maintain close relationships with others and thus conceptualize themselves primarily in the context of these relationships (Cross and Morris 2003). Those with a lower relational self-construal are conceptualized as having a more independent self.

Research with same-sex young adult peers has indicated that those who view themselves as interdependent are primarily prevention-focused in their communication, whereby communication is used in order to avoid a conflict and personal expression is often more indirect, as passive and obliging strategies are used (Lee et al. 2000; Gudykunst et al. 1996; Markus et al. 1996). In turn, students who identified themselves primarily as independent engaged in active and open communication strategies, in addition to dominant conflict approaches when dealing with same-sex peers. In another study that focused on relationships between college roommates, researchers found that students who rated themselves as engaging in a highly relational self-construal were better able to predict their roommate's beliefs and values and engaged in more optimistic thinking about their relationship with their new roommate than students who identified themselves as having a more independent self-construal (Cross and Morris 2003).

Research with romantic partners has focused primarily on self-construal and conflict. Sinclair and Fehr (2004) examined the different strategies used when dealing with dissatisfaction in romantic relationships based on an interdependent versus independent self-construal. The authors found that college students who conceptualized themselves as having an independent self-construal were vocal and active when expressing their dissatisfaction with their romantic partner, while those who conceptualized themselves as having an interdependent self-construal were more passive, as they optimistically waited for conditions to improve in the relationship. The literature thus far has limited research in examining the role of self-construal in romantic relationships among adolescents and college-aged young adults. One potential reason for this deficit may include a lack of information or consistency related to romantic relationships across cultures, particularly given the different social norms and the wide range of acceptability of young adults entering romantic relationships. It is also possible that college students – and their roommates – provide a convenient sample to study self-construal in relationships in emerging adulthood. It is important to increase awareness of this part of the field by engaging in more research that furthers the understanding of self-construal in romantic relationships, in addition to

longitudinal research that examines how peer relationships in adolescence influence future romantic relationships.

Conclusion

The study of self-construal provides an important dimension for understanding differences in self within different cultural contexts. In addition to differences across cultures, research also highlights the need to expand the view of culture beyond race and nationality, and to consider other variables such as socioeconomic status, gender, and acculturation. In a study with 191 youth in India, Reddy and Gibbons (1999) found that an increasingly autonomous self-construal throughout adolescence was most true for males from the elite social class, compared with females or males from the lower social classes. Also, within-culture differences are also necessary to consider (e.g., between southern and northern Italy; Putnam 1993), and aspects related to acculturation are also directly relevant, which adds to the methodological complexities of self-construal research.

Certainly, it is also important for investigators to increasingly consider the developmental context in studies of self-construal. Particularly, an understanding of self-in-relation-to-other is intricately associated with adolescent development, as adolescents navigate family and peer relationships, as well as in some cultures, the emergence of romantic relationships. It is believed that healthy development in adolescence includes both autonomy and relatedness, and it is unclear the extent to which this developmental task may be associated with differences in self-construal or be nuanced by cultural variations. Given the impact of self-construal on motivation, cognition, and emotion, as well as relationships and individual functioning, self-construal may be an important construct for furthering the scientific knowledge related to cultural contexts of adolescent development.

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Self-Control Theory

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The notion of self-control figures prominently in the study of adolescence. Most notably, deficiencies in self-control play an important role in psychopathology, and it tends to be the centerpiece of research conducted by other names, such as delay of gratification, self-regulation, impulsivity, and self-discipline (see Strayhorn 2002). These terms help highlight the centrality of self-control to healthy development, such as impulsivity and its place in impulse control problems, conduct disorders, and addictions. It is difficult to overestimate the significance of self-control in adolescent development.

Although the notion of self-control, in its different guises, is ubiquitous in the study of adolescence and central to healthy development, “Self-control Theory” generally refers to the groundbreaking work of Gottfredson and Hirschi (1990). In their conceptualization of a general theory of crime, they contend that all deviance (including crime and delinquency) can be subsumed under self-control theory. In fact, their “general theory of crime” eventually became known as self-control theory. Their theory had many features, one of the most important of which was the observation that individuals who commit any one deviant act will tend to commit other deviant acts as well. That observation was then nuanced by several others that supported why that generality existed and persisted. Under their conceptualization, self-control essentially involves a crime-prone propensity. They identified several key aspects of crime-prone propensities. They noted, for example, an urge to gratify desires immediately, a lack of diligence and persistence in a course of action, a lack of commitment to children or jobs, a deficit in skills and planning, and a tendency to use illegal drugs, drink excessively, or gamble. Research quickly showed that these characteristics and behaviors did relate to delinquent and criminal behavior (Hay and Forrest 2006). Research also was quick to criticize the theory for being tautological due to the close links between self-control and delinquency, with the claim that the theory subsumed delinquent behavior as a predictor of itself,

which led to no surprise that, for example, delinquent behavior predicts delinquent behavior (see Akers 1991). Although highly scrutinized and criticized by criminologists, self-control theory continues to gain considerable support.

Self-control theory posits many points that mirror important research in developmental sciences. It posits that there is stability in self-control, which receives considerable support from research showing impressive consistency over context and time (see Block 1993; Hay and Forrest 2006), an area of research that continues to gain support from cutting-edge studies focusing on brain development, genetics, and neurotransmitters (Beaver et al. 2008; Schepis et al. 2008). It also posits that self-control emerges quite early in life, which receives support from multiple areas of research relating to human development (Strayhorn 2002). Also receiving support is its proposition that individuals who have difficulty with one aspect of self-control (e.g., drug abuse) tend to have difficulties with others (e.g., gambling) see (Jessor et al. 1991). The theory also asserts that an individual's sense self-control emerges early in childhood, and that it results from parental socialization; considerable evidence does support the claim that factors such as family climate, associated family processes, and specific parenting behaviors, all are key to the socialization of self-control (see Vazsonyi and Belliston 2007). Although nuanced and not immune from limitations, the theory remains an important one that pulls together several strands of research and helps move fields forward as they assess its viability.

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Self-determination

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Self-determination is an action accompanied with a sense of choice, volition, and commitment due to the action's being based in intrinsic motivations rather than extrinsic (or controlled) motivations (see Ryan and Deci 2000). Whether motivations are intrinsic or extrinsic is of significance in that they help determine the source of regulatory control. When regulation is autonomous (as in, from “inside” the person), an individual acts out of a sense of volition, choice, endorsement, as well as relative freedom. When regulation is controlled, actions are based on seduction, coercion, and pressure (as in, from forces external to the person). Researchers associate self-determination with autonomous regulation, and note a wide variety of benefits that accrue to individuals who act with self-determination. Self-determination theory hypothesizes, and research generally supports, that autonomous regulation fosters optimal behavioral development and well-being, while controlled regulations forestall psychosocial adjustment and even foster a vulnerability to maladjustment and psychopathology (see Deci and Ryan 2000).

Both extrinsic and intrinsic motivations involve motivation to some action; however, the source and outcome of the type of motivation differ rather significantly. The nature of the outcome of each type of motivation is due to the psychological processes related to each. For example, an adolescent who is given money

to perform an activity well and punished for performing the activity poorly is externally compelled to perform well. That type of pressure to perform well, however, will most likely result in feelings of resentment and alienation from the activity, as it is merely a means for financial gain. An adolescent who feels internally compelled to perform well, however, will most likely have volition and agency in their activity because it reflects their inner needs, values, and self. In self-determination theory, autonomous self-regulation is characterized by personal endorsement of behavior.

Autonomous self-regulation and controlled regulation each involve two distinctive types of regulation, and these are of significance to understand given that only autonomous self-regulation enables an individual to be fully self-determined and many circumstances involving youth foster controlled regulation. The first type of autonomous self-regulation is based on intrinsic motivation that stems from a natural draw towards an activity. These behaviors, because they are interesting and enjoyable, do not require reinforcement and are the prototype of self-determination. The second type of autonomous self-regulation stems from the internalization of extrinsic motivation. This route to internalization derives from an individual's initially behaving in ways that they find uninteresting because they receive a reward; but, through time, the individual internalizes the value and regulation of that behavior and optimally integrates it into their sense of self. Together, intrinsic motivation and integrated regulation are the basis for self-determination. In controlled regulation, an individual can experience external regulation and introjected regulation. On one hand, a behavior may remain primarily controlled by external rewards and punishments. On the other, extrinsic motivation does not become completely integrated into an individual's sense of self. In this form of controlled self-regulation, introjected regulation, individuals internalize and employ controlling contingencies to pressure and coerce themselves into performing a behavior. Here, an individual's behavior may become internalized, but never be accepted as their own.

Numerous studies examining various life domains have revealed the diverse positive consequences associated with acting in a self-determined fashion, and much of that research has involved adolescents. These findings have been found in research examining academics, sports, career decision making processes,

the parenting of adolescents, friendships and other personal relationships, exercise performance, weight control, therapy and rehabilitation, as well as identity development itself (see, e.g., Soenens and Vansteenkiste 2005; Luyckx et al. 2009). Indeed, it would be difficult to find an area of adolescent development that would not relate to self-determination issues, perhaps because learning how and the extent to which one can self-govern and become the initiator of one's actions is much of what the transition to and out of adolescence is all about.

Given the potential benefits that can attach to autonomous self-regulation, researchers have explored methods of promoting self-determination (see Ryan and Deci 2000). Self-determination theory suggests that effectively integrating external behavioral regulation into self-identity requires addressing three basic needs: relatedness, competence, and autonomy. Internalizing the regulation of a behavior is found more frequently when an individual's immediate social network values a particular behavior. If family, friends, or group members endorse a behavior, the individual will likely internalize the regulation of that behavior. In this way, providing individuals with a sense of personal relatedness with others who value a behavior may be a way of increasing their autonomous self-regulation of that behavior. Additionally, individuals who feel that they possess the skills and understanding required to execute a behavior will more likely internalize and integrate a behavior. Ideally, an individual would be appropriately challenged and given effectance-relevant feedback to facilitate internalization. Lastly, autonomous self-determination can be increased by allowing the individual to understand the meaning of a behavior for themselves, have their own perspective acknowledged, and feel as though they have a choice in performing the behavior. Essentially, this requires providing supports for an individual to be autonomous.

Self-determination is a concept indicating an individual's level of choice, volition, and commitment to a behavior. Autonomous self-regulation can be increased through highlighting relatedness, enhancing competence, and facilitating autonomy and has particularly beneficial outcomes as compared to controlled behavioral regulation. Drawing from behavioral analysts and cognitive theorists' work, the theory of self-determination has delineated several key concepts

relating to behavioral regulation and has improved understandings of self-determination. Those understandings have led to important developments in the study of adolescence. The study of adolescence likely will continue to benefit from understanding how behaviors marked by more self-determination and less external control tend to elicit more personal commitment, greater persistence, more positive feelings, higher quality performance, and better mental health.

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adolescents' mental health (see Horesh et al. 2004; Vieno et al. 2009). Importantly, less researched is the disclosure of adults toward adolescents. The best research in this area comes from studies examining therapeutic relationships, which help to highlight key points in the understanding of self-disclosure toward adolescence. Still, given the significance of self-disclosure in fostering relationships, and the potential vulnerabilities involved in disclosure, it remains odd that it is an area of relatively undeveloped research.

The place, and importance, of self-disclosure during adolescence recently has been the subject of considerable interest due to its being part of a general reconceptualization of research on parenting. Parents' behaviors have long been associated with adolescents' mental health, actions, and other outcomes (see, e.g. Simons and Conger 2007). Parental knowledge of youths' activities has been deemed a key factor. Rather than assuming that parental knowledge is a matter of parents' actions (such as monitoring and control), recent research views it as including parents' asking their adolescents, limiting or controlling their adolescents' activities, or as involving adolescents' self-disclosure (Kerr and Stattin 2000; Stattin and Kerr 2000). This reconceptualization has involved suggesting that parental knowledge, and its effects, actually may be related to individual differences in adolescents' self-disclosure than parental practices (see also Stattin and Kerr 2000). Numerous studies have confirmed that self-disclosure plays a key role in fostering parent–child relationships and the effect those relationships has on numerous adolescent outcomes (see Vieno et al. 2009).

In the contexts of therapeutic relationships, the notion of self-disclosure has focused less on the clients than on the therapists themselves. Commentaries in this area highlight that it remains a controversial topic given that self-disclosure is intended to build rapport. This sharing, sometimes described as transparency, involves a therapist's offering, for example, their own experiences, emotions, or family background to aid in promoting connection with clients (see Jourard 1971). Self-disclosure in therapeutic contexts is divided into four types: deliberate, unavoidable, accidental, and client-driven (Stricker and Fosjer 1990; Zur 2007). Deliberate disclosure refers to a therapist's intentionally revealing something of themselves; this can be subtle (through personal effects

Self-disclosure

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Self-disclosure involves communicating with others by sharing information about oneself, either deliberately (such as by telling them) or not (such as by the way one looks). Self-disclosure occurs in all forms of relationships and variety of contexts in which individuals interact. During adolescence, self-disclosure certainly is an important phenomenon, as it relates to family and peer relationships (see Bauminger et al. 2008) as well as new forms of relationships being shaped by technology and emerging media (such as online relationships) (see Cho 2007). Despite a wide variety of potential contexts and relationships involving communication, the study of adolescents' self-disclosure (or lack of it) has focused mainly on parent–child relationships and the effects that disclosure has on their relationships as well as on

decorating an office) to overt (explicitly discussing one's personal views). Deliberate self-disclosure can be used to express a therapist's views on a subject, or to reflect on the effect of what a client has said; deliberate self-disclosure strictly for the benefit of the therapist is considered unethical. Unavoidable self-disclosures includes aspects of a person that are apparent through observation (race, age, gender, overt religious paraphernalia, body modifications, personal dress and manner of presentation, etc). Accidental self-disclosures are those that are the result of interactions between therapists and clients when therapists do not maintain their professional demeanors; this can occur when they are surprised and caught off-guard or when therapists encounter clients outside professional settings. Client-driven self-disclosures result from a more open culture, combined with internet technology. Clients have come to view themselves as entitled to information on their therapist's background, and easy access to the Internet makes it easy to acquire such information. The appropriateness of self-disclosure varies based on the therapist, the client, and the particular situation. Some therapeutic techniques like feminist and humanist approaches lend themselves to self-disclosure to emphasize the egalitarian nature of counseling relationships, and others like cognitive-behavioral approaches use self-disclosure to provide feedback to a client's words or actions, and others like psychoanalysis aim to be opaque to clients in an effort to use, for example, projection and other therapeutic techniques (Henretty and Levitt 2010). As expected, the variety of therapeutic methods and self-disclosure challenges efforts to understand the effects of self-disclosure, but this area of research does highlight that self-disclosure is a key component of relationships and can serve to shape those relationships.

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Self-Discrepancies

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Overview

The tale of Dr. Jekyll and Mr. Hyde provides a vivid image of a self-discrepancy: a contradiction between two distinct inner “selves.” In reality, self-discrepancies are not confined to moral conflicts nor are they generally as extreme or as rare as the split personality of Dr. Jekyll/Mr. Hyde. Rather, inconsistencies between and among private thoughts, feelings, beliefs, desires, goals, and motivations are quite common across the life span (Markus and Nurius 1986). In adolescence, *self-discrepancies are both normative and necessary*; their exponential growth following late childhood results from and gives rise to important developmental processes including abstract thinking, goal setting, and goal attainment (Harter 2006; Gestsdottir and Lerner 2008). Despite the prevalence and functionality of self-discrepancies, they are associated with emotional

discomfort, especially for midadolescents. This is because adolescents are wrestling with the task of identity formation and are still developing the ability to make sense of, and to some extent make peace with, internal contradictions (Erikson 1968; Harter 1999). Although the literature on adult self-discrepancies far outstrips the work with younger populations, there has been some important and diverse work with adolescents.

This essay begins by discussing a number of perspectives on the self which have shaped modern research on self-discrepancies, particularly among adolescents. Following is a discussion of the dominant theoretical conceptualization of self-discrepancies and new research findings that challenge and expand this conceptualization. Finally, the clinical relevance of self-discrepancies will be considered along with future directions for treatment and research. In this essay, the terms self, self-view, and self-representation will be used interchangeably, as will the terms discrepancy, conflict, and contradiction.

How Do Self-discrepancies Come About?

The notion of dualities within the self dates far back in human history, but scientific curiosity about self-conflicts arose on the heels of modern psychological conceptions of the developing self. Thus, any discussion of adolescent self-discrepancies must begin with a discussion of the self in general, and the adolescent self in particular. Several major theorists have been influential in shaping current views of the self. These include William James (multiple selves, psychological significance of the ratio of one's actualities to potentialities: 1890/1950), Charles Horton Cooley (looking glass self – parents' views of children becomes embedded in children's self-views: 1902), Sigmund Freud (primacy of parent-child relationships, conflicting inner id, ego, superego: 1923/1961), Erik Erikson (identity formation across several domains during adolescence: 1968), and Urie Bronfenbrenner (self as active contributor to its own development: 1979). Taken together, these perspectives hold that *self-knowledge begins to evolve in infancy and becomes increasingly complex, multidimensional, and purposeful as individuals approach adulthood.*

Intertwined with the cognitive, pubertal, social/relational, and environmental/educational changes

that characterize the transition into adolescence, conceptions of self also undergo unique qualitative and quantitative changes (Wigfield et al. 1996; Harter 1999). Adolescents start to envision themselves in new ways and create multiple versions of the self, including numerous *self-guides*, which represent their desired end states. In addition to the self as it is (actual/true or current self), adolescents imagine themselves as they desire to be (ideal self), as they are duty-bound to be (ought self), as dreaded (undesired/feared self), as seen by a significant other (e.g., parental ideal for self), and as an infinite number of other past and future possible selves (Markus and Nurius 1986). Adolescents also begin to view themselves differently across relational contexts – as early as seventh grade, adolescents can describe differences between their attributes and behaviors when they are with parents, friends, and romantic partners (Harter and Monsour 1992).

Ideal and ought selves are the *self-guides* or *self-standards* that have received the most attention perhaps because parents are believed to be the primary contributors to their development. Children develop strong ideal and/or ought self-guides according to the focus of parenting messages. Messages regarding the importance of achieving positive outcomes lead to strong ideal selves, whereas messages regarding avoiding negative outcomes lead to strong ought selves (regulatory focus theory: Higgins 1997; Manian et al. 2006). Indeed, research in several countries including Germany, Israel, Jamaica, and the USA indicates that there is often a high degree of similarity between adolescents' values and ideals and their perceptions of their parents' wishes for them (see Cashmore and Goodnow 1985; Ferguson and Dubow 2007), particularly for girls (Moretti and Wiebe 1999). Societal values also play a role in the development of ideal and ought self-guides. For example, children across multiple societies tend to adopt ideals for physical appearance that represent culturally valued physical characteristics to the citation (e.g., Cramer and Anderson [Ferguson] 2003).

Increasing cognitive sophistication is the platform that allows for the rapid multiplication of selves during adolescence (cognitive developmental perspective: Harter et al. 1997). Due to the rise of formal operations (Piaget 1970), there is rapid growth in hypothetical and abstract thinking – adolescents are much better able to consider possibilities beyond their immediate experience. Early adolescents also demonstrate highly

compartmentalized thinking, which aides in the formation of numerous self-representations. Furthermore, having developed better perspective-taking ability (i.e., the ability to put themselves in another's shoes, which emerges in mid-/late childhood), early adolescents are more orientated toward social relationships and the standards of significant adults. This unique point in cognitive and social development results in greater differentiation of the self across different social contexts and relational roles (Harter 2006). As self-views rapidly multiply, so do contradictions between those self-views. Thus, *the prevalence of self-discrepancies during adolescence is a logical consequence of the exponential growth in self-representations*. Although the content of adolescents' selves differs based on what attributes are culturally prized, the proliferation of selves and corresponding increase in self-discrepancies during adolescence are considered to be universal phenomena (Harter 1999).

What Purpose Do Self-discrepancies Serve?

Self-discrepancies play a role in how adolescents go about evaluating and modifying their behaviors to achieve their goals (intentional self-regulation: Brandstädter 1999). *Their purpose is simple but essential: to spur growth toward self-development*. Whereas adolescents' desired and undesired selves specify the end states they want to approach and avoid, respectively, self-discrepancies between current self-states and those end states provide the *motivation* to do so. The motivational power of self-discrepancies lies in the fact that they create an unpleasant internal state that individuals instinctively desire to resolve by somehow bringing the dissonant selves back together (cognitive dissonance: Festinger 1957; self-discrepancy theory: Higgins 1987).

Cross-sectional and longitudinal research indicate that adolescents play an active role in eliminating self-discrepancies in order to reverse the negative emotional state they bring about. For example, US adolescents in identity moratorium, who are actively exploring identity options, report significantly more self-discrepancies than adolescents with achieved, foreclosed, and diffused identity statuses who are not actively exploring identity options (Makros and McCabe 2001). This indicates that self-discrepancies are not simply a feature of having an uncommitted identity, but they

are associated with actively seeking a resolution, a task that requires motivation and effort. Research among undergraduate students is also consistent with this view. Among US undergraduate students, personal growth initiative (i.e., "active intentional involvement in changing and developing as a person") mediates relations between self-discrepancies and affect (Hardin et al. 2007, pp. 86). In other words, students' self-discrepancies lead to greater focus and effort toward self development, which in turn lead to improved affect. Longitudinal research also supports the notion that adolescents use self-discrepancies to achieve their self-development goals. A longitudinal investigation of changes in self-discrepancies among German adolescents indicated that adolescents seek to achieve their desired end states by intentionally heightening their goals in relevant domains, thus, intentionally enlarging their self-discrepancies (Pinquart et al. 2004). They then resolve these self-discrepancies by bringing their actual self to meet their ideal self over time (assimilation) rather than vice versa (accommodation).

These findings strongly support the action theoretical perspective on intentional self-development, which holds that the self is both a product and producer of self-development (Brandstädter 1999; Lerner 1982). That is, partly influenced by background and current environment, *each adolescent intentionally creates a variety of possible selves that give rise to self-discrepancies and, in turn, create the adolescent's own future*. This view greatly expands on the cognitive developmental perspective, which focuses on the self as a product rather than as a producer.

How Do Researchers Study Self-discrepancies?

Because of the nature of self-discrepancies as internal contradictions between two self-states, researchers have commonly studied them by asking participants to describe the relevant opposing selves. *The actual self is treated as the reference point and the degree of discrepancy from a comparison self is calculated*. Based on traditional self-discrepancy theories, researchers have been most interested in ways in which the actual self falls short of its self-standards (Brandstädter 1999; James 1890/1950; Harter 1999). *Idiographic measures* require adolescents to generate a list of attributes for each self-state and rate the degree to which

each attribute describes the different self-states (e.g., Selves Questionnaire: Higgins et al. 1985). On the other hand, *nomothetic measures* require adolescents to rate their self-states on pre-generated attributes (e.g., Self-Description Questionnaire, Self-Standards Questionnaire: Dubois 1993a, b). The former have been critiqued for being too complex to complete and score, and the latter have been critiqued for being too canned and impersonal. To solve this problem, a combined idiographic/nomothetic measure has been designed for use with adults, but has not yet been piloted with adolescents (Integrated Self-Discrepancy Index: Hardin and Lakin 2009). Another creative measurement approach combines a spatial element with an idiographic format (Harter and Monsour 1992).

There is now evidence that adolescent self-discrepancies also occur in the reverse direction wherein the actual self actually exceeds the self-standard (Ferguson et al. 2009). The possibility of a “reverse discrepancy” had been largely overlooked for decades until very recently, presumably because of the counter-intuitive logic involved, but perhaps also because of limitations in the commonly used self-discrepancy measures. In a study with Jamaican high school students, Ferguson and colleagues demonstrated the existence of self-discrepancies in both directions using a graphical pie instrument, which has been used in parenting research. The Identity Pie requires adolescents to share up a presliced circle/pie chart among prespecified areas of life according to how important each area is to the actual and ideal selves, respectively. Thus, the Identity Pie makes it possible for adolescents to indicate when an area of life such as family or religion is not actually as important to their identity as they would ideally like it to be (traditional self-discrepancy), or when an area of life is actually *more* important to their identity than they would ideally like it to be (reverse discrepancy).

Having adolescents respond to domains (e.g., schoolwork) rather than attributes (e.g., intelligent, dumb) is a major strength of the Identity Pie because it maintains a self-descriptive rather than self-evaluative tone, thus, avoids biasing the adolescent toward viewing their ideal self as more positive than their actual self. An explicit self-evaluative focus may be one reason that other measures have not captured a reverse discrepancy despite having the capability

to do so (e.g., Self-Description Questionnaire, Self-Standards Questionnaire: Dubois 1993a, b; Self-Attribute Rating List: Makros and McCabe 2001). That is, an ideal attribute is by definition more desirable than an actual attribute (which is what most measures capture); however, the importance one ideally places on a life domain can be either higher *or* lower than the current importance ascribed to that domain (which is what the Identity Pie captures).

The Identity Pie is also unique in that it assesses the relative salience of domains within each self-state and helps the researcher understand the rank-ordered importance of each domain for the adolescent. However, being a finite whole, it limits the variance of domain scores (i.e., proportion of the pie assigned to each domain), and scores do not represent the absolute level of importance an adolescent places on each domain. For example, an adolescent who finds family very important to her identity may nevertheless assign only 30% of her Identity Pie to family because she finds schoolwork and dating slightly more important and has already assigned 35% to each of those domains. Like other graphical measures, the format of the Identity Pie makes it simple, engaging, quick, and more impervious to differing levels of adolescent verbal competence.

Are Self-discrepancies Problematic for Adolescents?

Although self-discrepancies evolve from normative developmental processes, a great deal of research across several countries indicates that they can also be a liability. Adolescent self-discrepancies are associated with momentary and/or chronic emotional distress and related adjustment problems (Ferguson et al. 2009; Hankin et al. 1997; Meleddu and Scalas 2003; Moretti and Wiebe 1999; Piquart et al. 2004; Renaud and McConnell 2007; Sanderson et al. 2008). However, the nature and extent of the problems associated with self-discrepancies depend on what particular selves are discrepant (actual/ideal discrepancies seem to be worse); how discrepant they are (larger discrepancies are worse); the domain of discrepancy (appearance and social/relational discrepancies are worse); and characteristics of the adolescent (high feminine gender orientation, and ruminative coping style are worse) (Ferguson et al. 2009; Higgins 1987; Klingenspor 2002; Moretti and Wiebe 1999; Papadakis et al. 2006).

Part of the reason that self-discrepancies become increasingly distressing as youth enter adolescence is that their self-descriptions and ideals are more likely to be based on stable traits or dispositions (e.g., physical attractiveness: I have a pretty face) rather than on shifting behaviors or situations (e.g., physical attractiveness: I am pretty when I wear my hair this way, but ugly when I wear it that way) (Papadakis et al. 2006). Discrepancies between one's traits and trait goals, both of which are perceived to be stable, are likely to have a greater emotional impact than discrepancies between one's transient behaviors. The distressing quality of self-discrepancies may actually be a necessary motivational ingredient for active self-improvement, and whereas this state of tension does not cause significant problems for most adolescents, there is a minority of adolescents with large and/or numerous self-conflicts who experience very high levels of distress and require clinical attention. This sub-group of adolescents will be specifically addressed in the next section.

Self-discrepancy theory (SDT; Higgins 1987) is the predominant theory used to understand the relations between self-discrepancies and emotional experience. It expands upon prior theories by making specific predictions regarding how and why particular emotions are linked to particular discrepancies. According to SDT, dejection-related feelings result specifically from actual/ideal discrepancies and anxiety results specifically from actual/ought discrepancies. Unlike research with adults, research with adolescents does not provide strong support for SDT's prediction of differential emotional consequences of specific discrepancies. Rather, several studies have found actual/ideal and actual/ought discrepancies to be highly intercorrelated, and actual/ought discrepancies to be weakly related or unrelated to anxiety (Meleddu and Scalas 2003). Furthermore, the correlation between these two self-discrepancies is significantly larger among children than among adults (Rubin et al. 1996). Taken together, these findings suggest that adolescents may not experience their ideal and ought self-standards to be as distinct as do adults.

Self-discrepancies are more distressing for adolescents when they pertain to physical appearance, peer relationships, and romantic relationships. Adolescents become more oriented towards social and relational contexts starting in late childhood when social comparison skills emerge strongly. In addition, these are domains in

which adolescents have less control over the outcome: one's own biology/puberty and the actions/choices of other people play a very large role in achieving goals related to being physically attractive and securing a relationship, respectively.

During the adolescent years teenagers become increasingly preoccupied with their attributes, especially physical appearance, and become more self-conscious. Although both boys and girls place equally high importance on appearance, girls are especially vulnerable to large self-discrepancies in this area due to unrealistically high societal standards of female beauty (Meleddu and Scalas 2003). In Western societies in particular, the "thinner is better" ideal is in direct contrast to the physiological changes accompanying the onset of puberty for girls (e.g., widening hips, increased body fat). This no-win situation becomes reflected in lowered self-esteem, greater body dissatisfaction, and increased symptoms of depression, anxiety, and disordered eating (Harrison 2001; Sanderson et al. 2008).

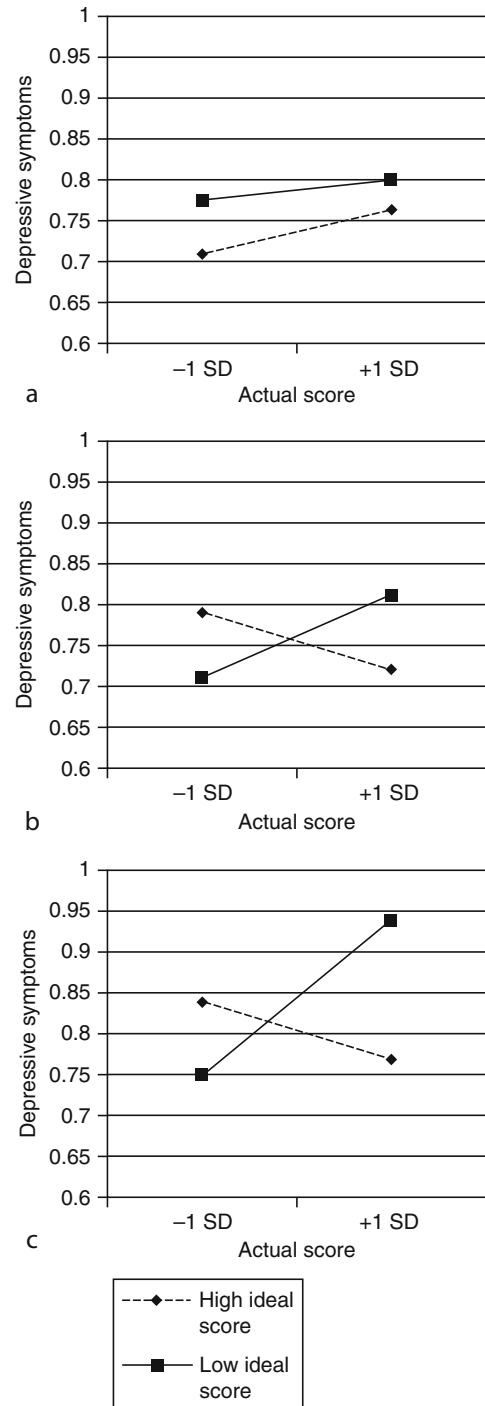
Moreover, among US adolescent girls with self-discrepancies, those who ruminate experience more discrepancy-related depressive symptoms (Papadakis et al. 2006). Papadakis and colleagues suggested that rumination interferes with adaptive coping by becoming like a quicksand which inhibits helpful behavioral action: "whereas under optimal conditions the momentary distress associated with perceptions of self-discrepancy motivates the individual to either increase their efforts in goal pursuit or to switch to a different goal, rumination intensifies distress at the same time as it makes disengagement more difficult" (Papadakis et al. 2006, p. 824). Work among undergraduate male and female students in the Netherlands supports these findings and suggests that rumination partially or fully mediates the association between self-discrepancies and depression (Roelofs et al. 2007).

In their study using the Identity Pie, Ferguson and colleagues found that Jamaican adolescents with larger actual/ideal self-discrepancies in the friendship and dating domains had lower self-esteem, more depressive symptoms, and lower school grades (Ferguson et al. 2009). This was true for adolescents with discrepancies in the traditional direction *and* in the reverse direction. That is, it was just as problematic for adolescents when their actual self fell short of their ideal in the dating

domain as it was when their actual self exceeded their ideal self-ratings in that domain (see Fig. 1).

Age also makes a difference in the level of discrepancy-related distress adolescents experience and these age-related differences are associated with cognitive developmental changes across adolescence (Harter & Monsour 1992; Harter et al. 1997). Although self-representations begin to multiply in early adolescence, adolescents maintain fairly compartmentalized self views at that developmental stage. Because they have little interest in integrating their perceived attributes into a coherent self-portrait, early adolescents are less cognizant of the contradictions between those attributes and they experience little discrepancy-related distress. In midadolescence, however, youth become more self-aware, make finer distinctions between self-representations, and begin to compare and contrast self-attributes. As a result, *self-discrepancies become very noticeable to midadolescents, who report significantly more opposing self-attributes and more conflict between attributes*. Unfortunately, midadolescents still lack sufficient cognitive sophistication to successfully integrate these contrasting attributes. Consequently, they struggle to pull together the diverse conceptions of themselves into a coherent self-portrait and experience significant discomfort. In Ferguson et al. 2009 study, midadolescents with high ideal scores but low actual scores and those with high actual scores but low ideal scores (larger actual/ideal discrepancy in both cases) reported more depressive symptoms than midadolescents without self-discrepancies (pictured in Fig. 1, graphs b and c). However, self-discrepant early adolescents (pictured in Fig. 1, graph a) did not report more distress than non-discrepant early adolescents. Near the end of adolescence significant advances in cognitive integration skills make adolescents better equipped to handle self-discrepancies by weaving together opposing self-attributes into higher order traits (e.g., the trait label “moody” integrates a view of self as happy in one setting, depressed in another, and anxious in a third), and also by coming to accept that no-one is perfectly congruent (for detailed discussion, see Harter 2006).

The impact of self-discrepancies on self-esteem can be moderated by cultural values. In a study of actual/ideal discrepancies regarding skin color among children in Jamaica, self-esteem was significantly higher among fifth/sixth graders whose actual skin color matched



Self-Discrepancies. Fig. 1 Interaction between actual and ideal Identity Pie friendship scores in relation to depressive symptoms for early and midadolescents. (a) 12.47 mean years (SD = .69 years, $n = 51$); (b) 14.30 mean years (SD = .48 years, $n = 106$); (c) 16.33 mean years (SD = .66 years, $n = 55$) (Reprinted with permission from Ferguson et al. 2009)

their ideal skin color *only if* their ideal was aligned with the cultural ideal (Ferguson [Anderson] and Cramer 2007). That is, the self-esteem of non-discrepant children whose ideal skin color differed from the cultural ideal was as low as the self-esteem of children with discrepancies between their actual and ideal skin color.

What Can Be Done About Self-discrepancies?

It is important to remember that self-discrepancies in adolescence are, for the most part, adaptive in that they promote self-growth. Therefore, the eradication of self-discrepancies would ultimately not be beneficial. Furthermore, most adolescents do not experience intense or chronic levels of distress related to their self-discrepancies; rather, significant problems arise for a small subset of adolescents when self-discrepancies are too plentiful and/or too large. Thus, *strategies to identify these high-risk adolescents may be the most useful approach*. Quick, easy, and portable self-discrepancy measures, such as the Identity Pie, may have utility as screening tools to identify adolescents at risk for emotional difficulties due to large self-discrepancies. In fact, because self-discrepancy measures do not assess mental health problems (e.g., depression), their use may be more readily accepted in nonclinical setting (e.g., schools, community centers). Referrals for treatments can be provided as needed for youth evidencing very large or numerous self-discrepancies and those voicing significant distress related to self-discrepancies.

Longitudinal research has demonstrated that changing one's actual self to meet one's ideal self (i.e., assimilation) predicts significantly higher self-esteem for adolescents (Pinquart et al. 2004). Consistent with this, Harrison (2001) recommended that adolescents with weight-related discrepancies select media (magazines, television programs) which promote fitness or diet strategies that will ultimately help the adolescent decrease his/her discrepancy by bringing his/her actual self in accord with his/her ideal.

Adolescents seeking clinical treatment for depression are especially likely to be experiencing large self-discrepancies. Self-system therapy (SST: Vieth et al. 2003) treats depression as a disruption/dysfunction of self-regulation, which includes but is not limited to a focus on self-discrepancies. In a randomized clinical trial, SST has been shown to be equally efficacious to Cognitive Behavioral Therapy (CBT) in treating depression

among adults, and superior to CBT for a subset of individuals (Strauman et al. 2006). Given that SDT appears to explain depressive symptoms in adolescents as well as it does in adults, SST may offer a promising avenue for clinical intervention with adolescents. Research is needed on the applicability and efficacy of this clinical treatment with adolescents.

Where to from Here? Gaps in the Literature and Future Directions

As with many other areas of study, the bulk of knowledge about self-discrepancies comes from the adult literature, specifically, US undergraduate students. Although undergraduates are just beyond adolescence themselves, there are some unique aspects of adolescent development that suggest caution in generalizing research findings from emerging adults to adolescents. For example, as has been discussed, due to a unique combination of newfound cognitive capabilities and limitations, midadolescents experience significantly more discrepancy-related distress compared to late adolescents. This important developmental vulnerability during midadolescence would be masked by leaning solely on adult research.

Within the modest literature, research interest in adolescent self-discrepancies is not equally spread across types of discrepancies (disproportionate focus on actual/ideal and actual/ought), domains (disproportionate focus on body-related self-discrepancies), age groups (disproportionate focus on late adolescents and older), or socioeconomic groups (disproportionate focus on socioeconomically and educationally advantaged youth). Future research is needed to address these gaps. In addition, there are interesting lines of adult self-discrepancy research that have not even begun to be investigated among adolescents. For example, research with US undergraduates reveals that priming self-discrepancies suppresses the body's immune functioning whereas priming self-congruency for highly self-discrepant individuals boosts immune functioning (see Strauman et al. 2004). Another line of research with US undergraduates demonstrates that actual/undesired self-discrepancies are associated with depressive symptoms (Hardin and Leong 2005). These are two fascinating avenues for future exploration among adolescents.

The traditional unidirectional view of self-discrepancies in which the actual self is permanently

cast as the underdog to lofty self-standards misses half the story. Thus, the bidirectional view is a new frontier to be explored further. In any given area of life, an adolescent may perceive himself/herself to have fallen short of or to have exceeded a particular self-standard, and discrepancies in both directions can be equally problematic. Self-discrepancy researchers should take this into account by using measures that capture discrepancies in both directions (e.g., Identity Pie) or adapting measurement techniques capable of the same (e.g., Selves Questionnaire) (see Ferguson et al. 2009).

Much of the self-discrepancy literature is problem focused. However, there is evidence that awareness of self-discrepancies can be heightened in order to promote positive behavior change among adolescents. For example, college students are more likely to purchase condoms after they have been made more aware of the discrepancies between their beliefs and behaviors regarding safe sex (Stone et al. 1994). This intervention approach could be explored to promote other positive physical and emotional health behaviors such as healthy eating or not smoking. Other interesting work among undergraduate students suggests that low self-esteem individuals can move their actual selves closer to their ideal selves just by thinking about a favorite celebrity (Derrick et al. 2008). The potential benefits of these “faux” relationships for low self-esteem adolescents could also be explored, especially given their heightened engagement with celebrity culture.

Conclusion

The current understanding of adolescent self-discrepancies is based on the past 3 decades of scientific research. This body of knowledge demonstrates that adolescents start to envision themselves in new ways, creating multiple versions of the self and experiencing resulting self-discrepancies. These self-discrepancies are largely normative, intentional, and adaptive; they serve both as markers of the gulf between an adolescents' present state and his/her goal state, and as fuel to cross that very gulf. For adolescents, who they are (cognitive capabilities, personal goals, family background, and cultural values) shapes their self-discrepancies, and their self-discrepancies shape who they become.

Research on adolescent self-discrepancies has until recently been somewhat myopic in its focus on only

one direction of discrepancy – when the self-standard exceeds the actual self. New research indicates that adolescents also experience discrepancies in the opposite direction – when the actual self exceeds the self-standard. Discrepancies in both directions can be problematic. Internal distress decreases as adolescents bring their actual state in agreement with their self-standard. Adolescents with larger or more numerous self-discrepancies may benefit from clinical help targeting their self-discrepancies and self-regulation strategies.

More self-discrepancy research among adolescents is needed in the published empirical literature and there are many new avenues to apply and expand one's current knowledge. Certainly among those avenues are additional investigations of reverse self-discrepancies, validation of self-system therapy for use with adolescents, and exploration of discrepancy-related immune reactivity among adolescents.

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accredited with identifying, developing, and providing the empirical support for the construct of self-efficacy. Bandura described self-efficacy as “self-reflectiveness about one’s capabilities, quality of functioning, and their meaning and purpose of one’s life pursuits” (Bandura 2001, p. 1). In other words, self-efficacy is the individual’s belief in their abilities and capacities that enables him or her to adapt and adjust in a given environment. Moreover,

- ▶ [P]eople’s beliefs in their efficacy influence the choices they make, their aspirations, how much effort they mobilize in a given endeavour, how long they persevere in the face of difficulties and setbacks, whether their thought patterns are self-hindering or self-aiding, the amount of stress they experience in coping with taxing environmental demands and their vulnerability to depression. (Bandura 1991, p. 257)

Since social cognitive theory underpins self-efficacy, the construct is both impacted by the environment and is underscored by self-determination. That is, the decisions made by the individual play an important part. The central and pervasive mechanism of personal agency is the individual’s belief in their capacity to exercise control over events that affect their life. The causal structure of social cognitive theory is heavily influenced by perceived self-efficacy; efficacy belief will not only affect how the individual will personally adapt in a given environment but these self-beliefs will have further implications on other factors in the given situation.

Bandura acknowledges that the individual’s environment is inconsistent and unpredictable and even though they may have knowledge on what to do in a given situation, it is also a matter of determining *how* they will use the knowledge. The individual’s efficacy requires self-reflection and regulation of their abilities, cognitive social skills, behavior, and organization (Bandura 2001). The individual’s ability to reflect and assess their behaviors and abilities will affect the choices, aspirations, motivations, and coping mechanisms.

Measurement of Adolescent Self-efficacy

Even though self-efficacy is a widely recognized and researched concept, its measurement is somewhat inconsistent. In many of the studies referenced in this section, the researchers have developed different tools

Self-efficacy

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Self-efficacy, like much of the seminal research in psychology, has been developed from an adult-centric perspective and the evidence-based theories then extended to the field of adolescence. Hence, research relating to self-efficacy is considerably more modest in the adolescent than in the adult domain. Nevertheless, the concept has been useful in a general sense and particularly helpful in identifying elements of the construct, such as academic, social, and filial self-efficacy, which are pertinent to the world of the adolescent. This essay briefly reviews that literature as it particularly focuses on the general nature of self-efficacy, its measurement, its various forms, and some of its links and programs that can enhance it.

Bandura and the Construct of Self-efficacy

Albert Bandura, best known for his significant contribution in the field of social cognitive theory, is

to measure the construct. Some of the instruments used are tailored for specific populations, for example, teenage self-efficacy in “resisting alcohol.” The following table lists some of the measurement tools used to investigate self-efficacy (Table 1).

In the name of scientific research, it would be ideal to have an established and widely used measure for self-efficacy; however, it must be acknowledged that self-efficacy is a highly subjective concept. Despite differing approaches to the measurement of self-efficacy, there are some reliable and robust measures available. These various measures have provided the means to objectively measure self-efficacy.

Types of Self-efficacy

Since self-efficacy was first defined by Bandura, increased research and interest in the concept has led to various forms of self-efficacy being identified. This includes social, familial, mathematical, and academic self-efficacy. All these specific areas of self-efficacy have been researched in relation to adolescence and adolescent well-being. The following section reviews the different forms of self-efficacy that have been reported.

Social Self-efficacy

Social self-efficacy is the ability to utilize behaviors and strategies in order to build personal relationships.

Thus, having friends is as an aspect of social self-efficacy. Studies have suggested that it is important for adolescents not only to develop their personal self-efficacy but also their social self-efficacy. Social self-efficacy, that is, a capacity to have friends, can potentially act as a protective factor against depression and interpersonal stress.

Academic Self-efficacy

Academic or educational self-efficacy relates to how one sees one’s capacities in an academic setting. Academic self-efficacy includes aspirations, self-regulation in learning and pro-social behavior, and lower vulnerability toward depression. Educational self-efficacy is the attitudinal and behavioral investments relating specifically to education.

Numerous factors can affect both academic outcomes and academic efficacy. For example, they are influenced by both successes and failures and the perceptions of others, including parents, teachers, and peers (Bandura et al. 2001). Other factors include socio-economic status, self-regulatory factors that include self-monitoring of academic progress, achievement in the form of grade point average, and whether one is victimized or favored. All these factors can impact academic motivation and learning (Zimmerman 2000). Additionally, academic self-efficacy is susceptible to

Self-efficacy. Table 1 Measurement of adolescent self-efficacy

Instrument	Source	What does it measure?
Self-efficacy questionnaire for children (SEQ-C)	Muris (2002)	Assess children’s sense of self-efficacy in three domains 1. Academic 2. Social 3. Emotional
Self-efficacy questionnaire for depression in adolescents (SEQ-DA)	Tonge et al. (2005)	12-item Likert scale
Physical self-efficacy scale	Rykman et al. (1982)	22 items addressing perceive strengths in physical ability
Perceived self-efficacy	Bandura et al. (1999)	37 items representing seven domains
Depression coping self-efficacy scale (DCSES)	Tucker et al. (2002)	24-item instrument
General self-efficacy scale	Schwartz (1992)	6-item scale
Resisting smoking	Ford et al. (2009)	4 items addressing ability to resist smoking
Drinking refusal self-efficacy questionnaire – revised (DRSEQ-R)	Oiu et al. (2005)	19-item measure assessing one’s ability to resist alcohol under social pressure

instruction and other social-cultural influences. In the academic context, it depends on the perceived difficulty of the task (e.g., spelling words) and it is dependent on performance capabilities and not just personal abilities.

Mathematics Self-efficacy

Self-efficacy in mathematics is an exemplar of the numerous forms of self-efficacy that can be considered. More particularly, it is generally addressed in the educational context. Both mastery and social persuasion have been considered as important, but the latter has been found to be more than four times as important for girls than mastery (Usher and Pajares 2006). In a more qualitative investigation, using semi-structured interviews with eight middle school students of high and low self-efficacy clear differences in the groups emerged. Low-efficacy students reported poor achievement in mathematics and low mastery students relied on sources outside themselves, and drew on vicarious learning. Self-regulation was important but students who were low in efficacy experienced their arousal as disheartening, whilst those high on efficacy experienced arousal as motivating (Usher 2009).

Coping Efficacy

Coping self-efficacy is the belief in one's capacity to control one's thoughts, feelings, and behaviors. These actions, combined with a positive attributional style, are associated with greater use of positive coping responses. An individual's belief in their coping strategies will affect their coping efficiency. For example, an individual who chooses to use nonproductive coping strategies is more likely to be associated with depression and other forms of emotional and social malfunctioning.

Problem-Solving Efficacy

Problem solving is an essential life skill and most relevant to schooling. Adolescents who demonstrate poor problem-solving strategies and self-efficacy are likely to develop psychosocial problems and school attrition. Problem-solving skills are an important resource for helping young people to cope with academic, social, emotional, and physical challenges. For example, Lewis and Frydenberg (2007) examined differences in the coping strategies of Australian adolescents living in

Melbourne who assessed the efficacy of their own problem-solving strategies. The findings illustrated that students who reported high self-efficacy in their perceived problem solving were more likely to utilize productive coping strategies such as, accepting one's best efforts, focusing on the positive, and engaging in social action. Gender differences in problem-solving efficacy and coping were also identified. Female students who reported a low efficacy in their problem-solving ability were more likely to use strategies such as giving up, acknowledging defeat, keeping the issue to themselves, and using self-blame. Boys, on the other hand, specifically used more humor and spent time with friends, and girls relied more on social support, physical recreation, and working hard.

Collective Efficacy

Self-efficacy is usually considered in terms of the individuals and their interaction with the environment. However, a collective of individuals (e.g., a team or organization) can demonstrate collective efficacy through the use of combined abilities and actions to solve problems. There has been little research into collective efficacy and motivation in relation to children and adolescents. Recent research has highlighted that social cognition grows over time. Older adolescents (ages 12–15) demonstrated that a high collective efficacy resulted in greater group cohesion and better performance, whilst younger adolescents (ages 10–12) did not demonstrate this collective efficacy indicating that there is still need for maturity in their social cognition. In a large study of 7,097 young people in Northern Italy, where the interest was in the relationship between social support, sense of community in school and self-efficacy, as resources during early adolescence it was found that self-efficacy and school sense of community mediated the effects of social support on psychosocial adjustment (Vieno et al. 2007). Collective efficacy is particularly relevant when it comes to social action. Individuals who have grown up in an environment where they have seen social activism demonstrated are more likely to engage in such practice.

Filial Self-efficacy

Filial self-efficacy describes the perceived self-efficacy in relation to managing and maintaining family relationships. Adolescents' perceived filial self-efficacy has

been found to be linked directly and indirectly with students' satisfaction with their family life. Adolescents who reported greater self-efficacy also reported a more satisfactory family life, were likely to experience greater open communication with parents, and greater acceptance of their parents' monitoring of their activities.

Self-efficacy, Gender, and Depression

Consistent with the stress, coping, and well-being literature, age and gender differences have been reported in self-efficacy. Compared to males, females have reported lower self-esteem, higher negative self-efficacy, unhappiness, and more frequent experiences of worry. In addition, social persuasion also appears to be more important for girls than for boys, particularly, academic self-efficacy and self-efficacy in mathematics (Usher 2009).

There is a clear association with low self-efficacy and depression. This association is true in a number of areas (Bandura et al. 1999; Bergmann and Scott 2001). For example, low academic self-efficacy showed the highest correlation with depression, suggesting that adolescents place a lot of importance on their academic self-efficacy. High levels of general and physical self-efficacy are also associated with reduced levels of depression (Ehrenberg 1991).

Gender differences were also associated with predictors of depression. Academic self-efficacy was the most significant predictor of depression in early adolescent males, general self-efficacy for middle adolescent males, and social self-efficacy for late adolescent males. For females, in early adolescence it is social self-efficacy that is the significant predictor for depression, and as for middle and late adolescence, physical self-efficacy is a major predictor (Ehrenberg 1991).

Recently, Tonge et al. (2005) developed a 12-item self-efficacy questionnaire for depression in adolescents (SEQ-DA) in order to measure self-efficacy expectancies and their relation to coping with depressive symptoms which they trialed with adolescents in special settings to deal with their depression. Finding showed a good test-retest reliability (.85) and good internal consistency with a Chronbach's alpha reliability coefficient of .73. Construct validity with a depression scale showed a predicated negative correlation with a Pearson's r of $-.67$. Others have found that low self-efficacy was generally associated with high levels of trait anxiety/neuroticism, anxiety, and depression.

Programs to Enhance Efficacy

Self-efficacy can be enhanced through both direct and indirect instruction. For example, programs that relate to life skills with a particular focus, such as social skills, conflict resolution, coping skills, or educational and social and emotional learning skills in a more general sense, can have a direct or indirect impact on the sense of efficacy or belief in an individual's capacity to deal with situations effectively. When the instruction is not directly focused on efficacy, there is not as great a likelihood of a beneficial outcome. In addition to skill building, there needs to be an increase in the individual's belief in their capacities. For example, a recent study by Harrell et al. (2009) showed the benefits of implementing an intervention program such as the Social Skills Group Intervention-Adolescent (S.S. GRIN-A), a 10-session program aiming to improve peer relationships by making adjustments to the causal process and increasing adolescent awareness of their thoughts, feeling, and behaviors. Findings showed that post-program, adolescents demonstrated significant increases in their global self-concept and social self-efficacy and a decrease in internalizing behaviors. There is a case for continuing to implement specific programs in secondary years in order to give adolescents skills and resources to maintain and further develop their self-efficacy, which in turn is likely to improve well-being.

Adolescents who present with Learning Disabilities (LD) are more likely to show low self-efficacy, low self-confidence, and less confidence to develop satisfying relationships. Research from Firth et al. (2008) has demonstrated that adapting a general coping skills program, such as The Best of Coping (Frydenberg and Brandon 2007a, b) can assist these students to develop their coping skills. Findings showed that LD students who utilized that program showed an increase in the use of productive coping strategies, such as working hard and solving problems. Targeted programs can assist learning-disabled students to become empowered despite their disabilities.

A study by Jenkin (1997) showed the relationship between coping and self-efficacy when assessing student perception in participating an Outward Bound (a rugged outdoor camping) program. Findings showed that the best predictors for distinguishing between high and low self-efficacy

were the coping strategies focusing on the positive, focusing on solving the problem, and working hard to achieve.

Ferrari et al. (2007) investigated the relationship between problem-solving abilities and self-efficacy beliefs in adolescents who were at risk for maladjustment. Adolescents from a business school in an Italian province who were known to be at greater risk for psychosocial problems compared to other provinces, reported a positive correlation between self-efficacy and problem-solving abilities. Using the Adolescent Coping Scale (Frydenberg and Lewis 1993) as a measure, the study reported positive correlations between self-efficacy beliefs and working hard to achieve and worry. Negative correlations were found between problem-solving ability, not coping, and self-blame. Problem-solving ability correlated positively with focus on problem solving, working hard to achieve, and worry. When intervention effects for the Best of Coping program were then investigated, results indicated that although the intervention did not have a significant effect on self-efficacy beliefs, the intervention did have an impact on problem-solving abilities. There was a meaningful difference between the control and experimental groups after the program.

It can be generally concluded that it is both possible to raise self-efficacy through a range of interventions that might target specific skills that are desirable in a setting, or a rise in self-efficacy can be achieved through teaching social emotional competence skills, such as coping, but that is not always the case. The important element in skill development is the emphasis that is placed on positive self-assessment in terms of one's efficacy and belief in one's capacities.

Since recognition of the importance of belief in one's capacities, that is self-efficacy, the delineation of self-efficacy in a number of domains such as academic and social, for example, enable benefits to be achieved in terms of both assessment and intervention. Thus, attention can be directed to areas that are deemed to be important universally or in a particular setting or community. For example, sport or physical self-efficacy might be the focus of attention in one setting and mathematics self-efficacy in another. Training programs can be developed to target areas of need. This makes the construct highly valuable in an educational sense.

Cross-References

► [Self-Efficacy and Adolescents' Health](#)

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Self-Efficacy and Adolescents' Health

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Overview

Self-efficacy refers to optimistic beliefs about individual ability to deal with tasks at hand. Several major

psychological theories explain how these beliefs operate in concert with other cognitions, affecting adolescents' health behavior, emotions, somatic symptoms, and reactions to stress. The most frequently applied approach to self-efficacy (Social Cognitive Theory) clarifies how this construct should be measured. The essay provides a review of investigations of effects of adolescents' efficacy beliefs on their health. Research on health-compromising behaviors (e.g., smoking), health-promoting practices (e.g., physical activity), disease management (adherence to treatment), psychosomatic symptoms and mental health issues (e.g., pubertal depression), as well as stress responses (e.g., coping effectiveness) are discussed. The essay concludes with an overview of burning issues in this area, including the role of age and gender.

Definitions: Self-Efficacy and Its Role in the Context of Adolescents' Health

Perceived self-efficacy pertains to personal action control or agency. People who believe that they can cause events may lead active and self-determined lives (Bandura 1997). Self-efficacy reflects the confidence that one is able to master challenging demands by means of adaptive action. This belief mirrors a sense of control over one's environment. It affects emotional and cognitive processes (such as goal setting), and actions (Luszczynska and Schwarzer 2005). According to Social Cognitive Theory (Bandura 1997), low sense of self-efficacy is associated with depression, anxiety, and helplessness, whereas a strong sense of personal efficacy is related to better social integration. In terms of thinking, a strong sense of competence facilitates cognitive processes and performance in a variety of settings, including decision-making, goal setting, and school achievements (Maddux 1995; Bandura 1997). Further, self-efficacy perceptions are a powerful determinant of affect, physiological responses to stress, and symptoms of mental disorders (Bandura 1997). In sum, efficacy beliefs have a great potential to influence physical and mental health outcomes, health behaviors, and self-care.

Self-efficacy is based on four main sources (Bandura 1997). First, self-efficacy beliefs can be enhanced through personal accomplishment or mastery, as far as success is attributed internally and can be repeated. Adolescent's experiences of mastery over temptations to snack on fatty foods or drink alcohol,

or control over health symptoms (e.g., headache, negative moods) would build up their efficacy beliefs. A second source is vicarious experience. When a “model person” (e.g., admired peer) successfully masters a difficult situation, social comparison processes can enhance self-efficacy. Third, efficacy beliefs can be enhanced through verbal persuasion (e.g., a health educator reassures an adolescent that he or she is competent and able to refrain from smoking). The last source of influence is emotional arousal, that is, the person may experience no apprehension in a threatening situation and, as a result, may feel capable of mastering the situation.

The social, psychological, and physiological changes occurring during adolescence may affect self-efficacy perceptions, their development, and fluctuations. Believing in one's own capabilities results from developing skills, increased cognitive capabilities, abstraction, reflection, and social comparisons (Schunk and Meece 2006), as well as empowering experiences of mastering over one's own reactions and the environment. Research indicated an increase of self-efficacy over the adolescence period (Schunk and Meece 2006).

Major Theories: How Health and Self-Efficacy Are Related? Major Theoretical Models

Several theories explaining *health-related behaviors* incorporate self-efficacy beliefs among their key components. Health behaviors include health-compromising actions (such as substance use, risky driving) and health-promoting actions (e.g., healthy nutrition, physical activity), screening behaviors, healthcare utilization, and adherence to medication.

The Theory of Planned Behavior (TPB; Ajzen 1991) claims that intention is the most proximal predictor of behavior, but it lists perceived behavioral control (perception about being able to perform a specific behavior) among most powerful predictors of intention. Self-efficacy and behavioral control are often seen as almost synonymous constructs (Luszczynska and Schwarzer 2005). According to *Social Cognitive Theory* (Bandura 1997), perceived self-efficacy is directly related to health behavior, but it also affects health behaviors indirectly, through the impact on goals. Self-efficacious individuals set high or challenging goals and focus on opportunities. The Transtheoretical

Model (Prochaska et al. 1992) proposes five stages of change, which depict the cycle of changes in health-related behaviors. The stages start with precontemplation (individuals do not even consider making any behavior change) and end up with the maintenance (the action is performed for a longer time; Prochaska et al. 1992). Together with perceived pros and cons, self-efficacy is seen as the main cognitive variable that facilitates stage transition. The importance of efficacy beliefs increases when individuals move on to the later stages. Finally, Health Action Process Approach (Schwarzer 2008) suggests a distinction between motivation processes that lead to a behavioral intention, and volition processes that lead to initiation and maintenance of a health behavior. Self-efficacy beliefs might be specific for these processes and therefore explain intention formation, taking initiative, maintaining behavior change, and managing relapse (Luszczynska and Schwarzer 2005).

Self-efficacy may also influence the process of risk perception. The tendency to take risks among adolescents may be attributable to novelty and sensation seeking, which increase dramatically during puberty. Health risk behaviors are particularly common among adolescents because of their “feelings of invulnerability” (Milam et al. 2000). This may avoid them thinking about future consequences even if they are aware of the negative health outcomes. Although adolescents often demonstrate that they are capable of effective decision-making regarding health risk behaviors, their lack of life experience and knowledge could lead to errors in these judgments (Rodham et al. 2006). The role of self-efficacy in this process, however, depends on the nature of behaviors. Self-efficacy, generating a problem-focused attitude toward health risks may contribute to a higher awareness of accidents. However, the role of self-efficacy in risk perception of substance use is negative. This means that self-efficacy may lower the level of perception of smoking or alcohol-related risks, perhaps through generating a feeling of invulnerability (Piko and Gibbons 2008).

Besides its relationships to health behaviors, self-efficacy determines the ways individuals *perceive and cope with stress*, and therefore it influences mental and physical health. Self-efficacious individuals perceive stressful situations as challenging and controllable, which may reduce the negative impact of stress on health (Bandura 1997). Efficacy beliefs are seen as

a proximal determinant of *physiological stress response*, affecting levels of cortisol, catecholamines secretion, and immune system response (Wiedenfeld et al. 1990; Bandura et al. 1985). It is assumed that because self-efficacy determines that stressful situation is perceived as manageable, the neuroendocrine and immune response to stress is reduced, and therefore a stressful situation becomes less harmful to physical and mental health. Finally, Social Cognitive Theory (Bandura 1997) suggests that self-efficacy is a resource determining the way individuals cope with stress. In particular, efficacy beliefs facilitate the selection of active coping strategies, increase coping effectiveness, affect mental health directly, and buffer stress indirectly (reducing negative affect).

Measurement Issues

Social Cognitive Theory (Bandura 1997) suggests that self-efficacy measurement should refer to the particular health-related task, specific behavior, and barriers relevant for the target population. For example, to explain adolescents' tobacco use one should apply self-efficacy referring to refraining from smoking in those situations that increase a risk for obtaining a cigarette (Chang et al. 2006). If the aim is to predict diabetes management and the control over diabetes symptoms, then diabetes self-efficacy beliefs should be evaluated (Grey et al. 2000). Again, such a measure would cover the ability to deal with diabetes-related self-care in the context of the typical barriers that arise when an adolescent tries to integrate diabetes self-care into their daily routines. Consequently, interventions aiming at a specific change (e.g., increase of a chronic disease management) should target beliefs that are specific for the main health outcome of the intervention and address barriers relevant for the target group.

Researchers have also proposed that optimistic self-beliefs may be measured as more general, or that they should be tailored to particular stages of behavior change (Schwarzer and Luszczynska 2006). Applying general self-efficacy measures may be particularly useful if the investigation aims at predicting a broad range of mental and/or physical health outcomes. Measuring stage-tailored behavior may be particularly useful if a target population is in a particular stage of behavior change (e.g., the intervention is applied to adolescents who have not initiated sex life; therefore, they are in motivational stage in terms of condom use).

Self-Efficacy and Adolescents' Health-Compromising Behaviors

Several health-compromising behaviors are usually initiated during adolescence. Examples include cigarette smoking, alcohol consumption, illegal substance use, and unprotected sex. When measured at the same time-point, stronger self-efficacy beliefs are usually related to less-frequent health-compromising behaviors (Schwarzer and Luszczynska 2006).

Longitudinal studies covering a period from early to middle adolescence indicate that low self-efficacy to refrain from *smoking* is one of significant predictors of smoking continuation (Ausems et al. 2009). However, it may play a negligible role in predicting smoking initiation, which is more affected by modeling by family members and peers (Ausems et al. 2009). It has to be noted that peer networks and families are most relevant contextual factors, which affect adolescent efficacy beliefs (Schunk and Meece 2006). Further, high levels of refusal self-efficacy in middle adolescence may differentiate nonsmokers from those who initiated smoking in late adolescence (Chang et al. 2006). Self-efficacy referring to ability to maintain nonsmoking status despite internal and external smoking cues as well as beliefs about ability to recover after a relapse predicted smoking reduction in late adolescence and early adulthood (Schwarzer and Luszczynska 2008). Finally, smoking resistance self-efficacy measured in late adolescents predicted smoking cessation in adulthood, with larger effects observed among young women (Tucker et al. 2002).

Experimental studies usually target self-efficacy beliefs together with other constructs from a specific theory, which are expected to facilitate smoking reduction or cessation. For example, a computerized smoking cessation program may target an increase of self-efficacy for quitting and perceived benefits of reduced nicotine dependence. Adolescents who participated in the computerized smoking cessation program increased their intention to quit, reduced the number of cigarettes smoked daily, or quit smoking (20% at 1 month after the intervention; Fritz et al. 2008). Such multicomponent interventions allow for cautious conclusions that manipulations targeting self-efficacy with other beliefs (such as perceived pros) result in a decrease of substance use.

Health promotion interventions may also train refusal skills and resisting pro-use influences referring

to *alcohol and drug use*. Such trainings provide mastery experience, which enhance self-efficacy beliefs, which in turn affect behaviors. In line with this assumption, experimental studies indicated that compared to controls, girls participating in a computer-based intervention applying such training reported greater efficacy beliefs about ability to avoid underage drinking and consumed less alcohol at follow-ups (Schinke et al. 2009).

Multicomponent interventions aim at reduction of *unsafe sexual practices* (including sporadic use of condom and engaging sexual behavior while under the influence of alcohol) among adolescents. Randomized controlled trials that evaluated programs targeting condom-use self-efficacy and other beliefs (e.g., positive attitudes toward condom use and normative perceptions) indicated a decrease of risky sexual behaviors at posttests (Schmiege et al. 2009). Importantly, the effect of the intervention was explained by self-efficacy for condom use, which predicted intention to practice safer sex and risky sexual behavior, whereas norms for and attitudes toward condom use did not explain the effects of the intervention on practicing safer sex (Schmiege et al. 2009).

With school health promotion overloaded, programs could *apply a transfer-oriented approach, targeting adolescents' beliefs about ability to refuse*. Such programs should target selected skills or cognitions that would stimulate adolescents to apply beliefs developed for one domain (e.g., allowing to resist tobacco use) to other domain (e.g., alcohol use, unprotected sex). Systematic reviews indicated that refusal self-efficacy (together with beliefs about immediate gratification, peer norms, peer and parental modeling) is among most powerful determinants across health-compromising behaviors and therefore the best candidate for transfer-oriented interventions (Peters et al. 2009).

Self-Efficacy and Adolescents' Health-Promoting Behaviors

Body weight and body mass index are related to age, gender, foods availability, but dietary self-efficacy explains adolescents' body weight even if these factors are controlled (O'Dea and Wilson 2006). The role of psychological determinants of nutrition may change with age (Zabinski et al. 2006). Effects of such social cognitive variables as self-efficacy are smaller in

early adolescence (e.g., among 11-years old) than in middle adolescence (e.g., among 15-years old; Zabinski et al. 2006). Systematic reviews of adolescent studies indicate that modeling is consistently related to *healthy diet* indicators, such as low fat consumption, low sugar snacking, low sweetened beverage consumption, and high fruit and vegetable intake (McClain et al. 2009). It is worthy to note that modeling is a major source of self-efficacy beliefs. Self-efficacy is not as consistently related to diet as modeling, if different nutrition indices are considered and the whole adolescence period is taken into account (McClain et al. 2009).

Interventions promoting self-efficacy (together with outcome expectancies and goals development) are effective tool in change of *physical activity* (Shilts et al. 2009). Compared to controls, adolescents who participated in such an intervention improved their physical activity and self-efficacy beliefs (Shilts et al. 2009). Importantly, changes in exercise levels, obtained by means of the intervention, were explained (mediated) by self-efficacy. This result indicates that the increase in activity levels may be ascribed to a change in beliefs about own ability to maintain active lifestyle, regardless the obstacles that arise overtime. Compared to physical activity education, an intervention enhancing self-efficacy and intrinsic motivation for physical activity among 11–12-year-olds resulted in greater increases in moderate-to-vigorous physical activity (as measured with 7-day accelerometry estimates; Wilson et al. 2008). Again, such intervention had a positive impact on the main cognitive mediator (i.e., self-efficacy) and intrinsic motivation (Wilson et al. 2008).

Systematic reviews of psychological factors that mediate between a theory-based psychological intervention and adolescents' physical activity indicated that self-efficacy is one of most commonly evaluated mediators (Lubans et al. 2009). Additionally, the reviews suggested that mediating role of self-efficacy is strongly supported, whereas the evidence supporting the mediating role of other cognitions is mixed (Lubans et al. 2009). This means that most of theory-based psychological interventions addressing adolescents' physical activity affect their beliefs about ability to exercise. These beliefs, in turn, are related to an increase in physical activity. In sum, there is a large body of evidence indicating that interventions for adolescents, targeting their efficacy beliefs about ability to exercise

regularly and eat healthy food should affect respective behaviors (in particular in late adolescence). Behavioral change is explained by an increase of respective cognitions, that is, dietary or physical activity self-efficacy.

Self-Efficacy and Chronic Disease Management

Adherence to medication is strongly determined by beliefs about ability to regularly use prescribed medication, regardless any internal or external obstacles. Suboptimal adherence to self-administered medication is a common problem in the treatment of acute and chronic illnesses. Besides increasing knowledge about disease and treatment, interventions for ill adolescents often take agentic perspective, addressing control over disease and empowering young patients to take active part in the treatment process (Kato et al. 2008). Such interventions may be delivered in a form of a computer or a video game. Compared to the control group, adolescents and young adults (with malignancies such as acute leukemia, lymphoma, and soft-tissue sarcoma) who were invited to take part in such an intervention showed higher adherence at 3-month follow-up, as indicated in serum metabolite assays analysis (Kato et al. 2008). Adherence was accompanied by an increase in knowledge and self-efficacy beliefs, which may be interpreted in a way that the significant effects of the intervention on adherence were obtained because the intervention increased efficacy beliefs (Kato et al. 2008).

Among adolescents diagnosed with tuberculosis, a group-based intervention had an effect on self-efficacy (as compared to the control group participants; Morisky et al. 2001). Completion of medication was predicted by self-efficacy for medication taking, measured after the intervention (Morisky et al. 2001). Interventions designed to enhance self-efficacy were also organized for adolescents with Type 1 diabetes mellitus in order to improve their adherence to a recommended lifestyle. Such interventions resulted in weight gain prevention and improvement of metabolic control and overall psychosocial well-being of participants (Grey et al. 2000).

In line with findings presented above, systematic reviews of the effects of the psychosocial interventions facilitating child and adolescent adaptation to chronic illness (e.g., asthma, juvenile arthritis, chronic fatigue

syndrome, chronic pain, diabetes) suggested that the effectiveness of the interventions depends on inclusion of self-efficacy-building techniques (Barlow and Ellard 2004). Other moderators of the effectiveness of the reviewed interventions included other competence variables, knowledge, self-management of disease, family variables, social isolation, and physical health and well-being (Barlow and Ellard 2004). Fostering beliefs about ability to manage chronic health problems is a vital ingredient of the intervention, which works across different diseases.

Self-Efficacy, Psychosomatic Symptoms, and Mental Health

Cross-sectional studies indicated that lower general self-efficacy and self-efficacy in dealing with school-related tasks were associated with higher psychosomatic distress (headache, stomachache, backache, dizziness, irritability, insomnia, etc.), especially if teenagers perceived low support from their teachers (Natvig et al. 1999). Levels of anxiety and affective disorders symptoms among 12–19-year-old adolescents were related to self-efficacy, with the strongest relationship found for social phobia, school phobia, generalized anxiety, and panic disorders (Muris 2002). The relationship is significant, even after controlling for neuroticism and trait anxiety (Muris 2002). Adolescents exposed to traumatic stress who developed posttraumatic stress disorder presented lower self-efficacy levels than those who survived trauma but did not meet posttraumatic stress disorder criteria (Saigh et al. 1995). Unfortunately, studies testing for the associations between efficacy beliefs and psychosomatic or mental disorder symptoms often apply cross-sectional design (see Muris 2002; Natvig et al. 1999; Saigh et al. 1995). Therefore, besides pointing to concurrence of higher efficacy beliefs with lower level of symptoms of mental disorders, causal conclusions about the influences of self-efficacy cannot be drawn. So far, systematic reviews of the research investigating relationships between efficacy beliefs and posttraumatic adaptation included both adolescents and adults (Luszczynska et al. 2009). These reviews indicated that efficacy beliefs have small-to-moderate effects on subsequent or co-occurring posttraumatic distress across youth and adults' samples (Luszczynska et al. 2009).

Longitudinal studies indicated that among 10–15-year-old girls, beliefs about poor ability to control one's

own emotions doubles the risk of incidence of depressive symptoms, measured 1 year later, controlling for various confounding variables (Patton et al. 2008). It can be suggested that the pubertal rise of depressive symptoms may be well explained by adolescents' perceptions about ability to control their own emotions (Patton et al. 2008). Among adolescents with social anxiety disorder, cognitive treatment may result in changes with social anxiety symptoms, and the changes in symptoms are strongly related to changes in self-efficacy for social situations (Gaudiano and Herbert 2007).

Besides adolescents' efficacy beliefs, an intervention may target parents of adolescents with mental health problems (Deitz et al. 2009). Such interventions may affect adolescents' mental health indirectly, increasing parental skills and modeling, and therefore influencing symptom management among youth (Deitz et al. 2009). Web-based programs addressing knowledge, skills, and control beliefs among parents of adolescents with mental health problems have shown to affect parents' beliefs about their self-efficacy in handling their children's mental health issues (Deitz et al. 2009).

Self-Efficacy, Stress, and Coping

When assessed at the same time-point, domain-specific self-efficacy is usually negatively related to perceptions of stress, referring to the same domain. For example, self-efficacy referring to ability to deal with interpersonal situations was negatively associated with stress perceptions in the domain of interpersonal stress and associated to lower use of strategies of coping with social stress among adolescents (Matsushima and Shiomi 2003). Among 15–18-year-old students (exposed to stress related to pressure of high school achievements), higher academic self-efficacy was related to lower perceived academic stress, more positive academic stress appraisals, and higher coping by means of family communication (Suldo et al. 2008). Academic self-efficacy was unrelated to the use of negative types of coping, such as avoidance or coping focused on negative emotions (Suldo et al. 2008). Further, higher self-efficacy (specific for selected target, e.g., management of issues related to chronic illness) was related to higher perceived coping effectiveness (in respective area, e.g.,

referring to stressful situations related to the disease; Berg et al. 2009).

Longitudinal studies on school-related stress and careers indicate that self-efficacy (measured at ages 12–15) predicts lower levels of stress at the age of 18 (e.g., lower stress referring to job application), which in turn predicted higher job satisfaction and lower unemployment rates during early adulthood (Pinquart et al. 2003). Stress management trainings for adolescents (aged 10–14 years) resulted in an increase of self-efficacy levels at post-intervention assessment and 3-month follow-up, lower perceived stress, and more frequent use of adaptive coping (Hampel et al. 2008). These effects were not found among control group respondents. The younger participants (in their early adolescence) benefitted more than older ones (i.e., those in middle adolescence; Hampel et al. 2008). Meta-analysis including stress management programs for children and younger adolescents (7–14-years old) found out, however, that in general the effects of such programs on self-efficacy may be negligible (Kraag et al. 2006). These results indicate that a closer look into the relationships between age and efficacy beliefs is needed and that curvilinear relationships should be considered.

Controversies and Gaps in Knowledge

The major controversies include publication bias and the causality in the relationship between self-efficacy and health-related outcomes. These debates are not specific for adolescent research, but pretty often investigations focusing on adolescents' health build up these controversies. First, some systematic reviews indicate that there is a positive publication bias toward research discussing the effects of interventions including self-efficacy beliefs (Kraag et al. 2006). This positive bias, however, is specific for some research areas such as stress studies, whereas other areas suffer from a negative publication bias. For example, factors facilitating recovery from mental disorders (such as self-efficacy) gained considerably less attention than risk factors. For example, meta-analyses of psychological determinants of the development of posttraumatic stress disorder usually excluded self-efficacy (cf. Luszczynska et al. 2009).

A vast majority of research dealing with adolescents' health addressed the relationships between self-efficacy

and health outcomes applying a cross-sectional or prospective design, but not controlling for the health outcome at the baseline. Therefore, no casual conclusions can be drawn. Although the theories presented in this essay suggest that cognitions (including self-efficacy) precede the health-related behaviors, physiological and psychological response to stressors (Bandura 1997; Prochaska et al. 1992; Schwarzer 2008), there is no compelling evidence for this assumption. The randomized controlled trials, which could build up stronger case for the causal of efficacy beliefs, are relatively scarce.

Most important gaps in knowledge refer to the role played by self-efficacy in multifactor interventions. The interventions including self-efficacy usually address other beliefs (e.g., pros or cons of a behavior change) or skills (e.g., goal setting) that Social Cognitive Theory refers to (Bandura 1997). Evaluation of multicomponent interventions usually involves the evaluation of health outcomes, without testing for the changes in the cognitive mediators and the relationships between the changes in the cognitive mediators and health. In result, it is hard to indicate which component of the intervention played an active role. Fortunately, some recent studies identified this gap and tested if self-efficacy mediates between the participation in the intervention and changes in health (Kato et al. 2008; Schmiede et al. 2009; Shilts et al. 2009).

It remains unclear if compared to older adolescents, younger adolescents may benefit less from enhancing their self-efficacy. It is assumed that competence beliefs should increase from ages 11 to 18 (Schunk and Meece 2006). It remains unclear, however, if this can be translated into the role that efficacy beliefs can play in predicting health over the period of adolescence. Research evidence is ambiguous, but there is an increasing number of studies supporting the notion that in early adolescence self-reported self-efficacy beliefs are of lower relevance for health, compared to other psychosocial factors such as modeling (Ausems et al. 2009; Zabinski et al. 2006). Others, however, indicate that among 11–14-year-old youth younger ones may benefit more from self-efficacy interventions (Hampel et al. 2008). Consequently, the role of age requires a systematic investigation.

Finally, some studies showed that gender moderates the effects of self-efficacy belief on health. The role of

gender is not always analyzed, and therefore, only preliminary conclusions can be drawn. Self-efficacy seems to play a more relevant role in predicting health outcomes among girls (Patton et al. 2008; Tucker et al. 2002). A cautious approach would suggest that self-efficacy-enhancing programs for adolescents should be gender-specific (Schinke et al. 2009).

Cross-References

► Self-efficacy

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Self-esteem

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Overview

Of the multitude of psychological constructs used in the study of adolescence, self-esteem is one of the most pervasive. While a wide variety of claims have been made in the literature about the importance of self-esteem in adolescence, more recent research has cast doubt on many of these claims, for both conceptual and methodological reasons. In particular, studies using prospective longitudinal data have shown that the causal effects of self-esteem in adolescence on later outcomes likely range from small to nonexistent. The current state of evidence regarding self-esteem in adolescence suggests the need for a reconceptualization of the construct and its place in the psychological landscape.

Introduction

The term “self-esteem” is used almost ubiquitously in the lay literature on adolescence (Baumeister et al. 2003). For example, a Google search of the terms will turn up literally thousands of references to Web sites and other online sources providing information on this topic. What is gleaned from these sites is that self-esteem in adolescence is important; without self-esteem, or without sufficient amounts of it, an adolescent is at increased risk of a variety of adverse life outcomes, including mental illness, substance abuse, aggressive and violent behavior, and early pregnancy and parenthood. Conversely, according to this literature, a high or healthy level of self-esteem is protective against these outcomes, and is an indicator of positive adjustment and a bright future. From this perspective, it could be argued that the advantages of holding a positive self-worth are so clearly obvious and straightforward that efforts to enhance self-esteem among adolescents would seem to be a simple and cost-effective way to improve a broad range of personal and social outcomes. As such, the concept of self-esteem is a pillar of the self-help literature on adolescent adjustment (Baumeister et al. 2003).

The psychological literature, on the other hand, paints a somewhat different picture of the concept. While the number of studies examining self-esteem in adolescence is very large indeed, only a minority of those studies present evidence that suggests that self-esteem plays a key causal role in life outcomes in adolescents (Baumeister et al. 2003; Boden et al. 2008). In particular, more recent studies, using more refined and focused methodologies, have begun to question whether self-esteem has any causal power at all, or whether it should be viewed more as a consequence, an attitude toward the self that is formed via experience and behavior over a long period of time (Baumeister et al. 2003; Boden et al. 2008). Further studies suggest that self-esteem is a generally stable measure, and that an individual's level of self-esteem is relatively resistant to change (Roberts and Robins 2004), suggesting that attempts to alter self-esteem in the service of improving outcomes is likely to prove a futile task. Finally, examination of the methodological issues arising from studies linking self-esteem to outcomes suggests that the evidence is relatively weak, and plagued by issues pertaining to study design and threats to study validity (Boden et al. 2007, 2008; Boden and Horwood 2006).

The purpose of this essay is to evaluate the nature of the evidence concerning the role of self-esteem in adolescence. It begins by examining the roots of the concept, showing how it rose to prominence not only as a key explanatory construct in psychology, but also in the lay literature. Then, it examines some of the key issues in the study of self-esteem, and surveys more recent evidence that calls into question many of the claims made for self-esteem. In particular, the essay examines several studies of the links between self-esteem in childhood and adolescence and later life outcomes, using prospective longitudinal data, and advanced methods of data analysis to model the putative causal role of self-esteem. Finally, it concludes with brief suggestions for ways to move forward in the study of the role of self-esteem in adolescence. It should be noted that, while the essay frequently refers to “self-esteem” without specifying age, the vast majority of self-esteem research has been conducted with children and adolescents, and so the findings are generally thought to apply to these age groups unless otherwise specified.

It should also be noted that while it does not intend to examine specifically the nature of the concept of

self-esteem, for the purposes of this essay, the author has adopted a “working definition” of self-esteem such that self-esteem refers to an evaluation of the relative worth of the self, which generally corresponds to the definition used in the current literature on the topic in social/personality psychology (Leary and Baumeister 2000). It is also assumed that this evaluation can be measured, with varying degrees of success, using a variety of self-evaluative attitudinal measures.

The Growth of the Concept of Self-esteem

As Baumeister and colleagues pointed out (Baumeister et al. 2003), while the notion of an evaluative aspect of the self is a very old concept, the roots of self-esteem in modern academic discourse reside in the notion of “the looking glass self,” in which the self-concept (and therefore self-evaluation) develop as a result of interactions with others. On this theory, because an understanding of the self is developed via interactions with others (in the same manner as with any other concept), it follows that the self will be subject to the same evaluative mechanism that applies to any form of information available to the individual. Furthermore, throughout the course of the history of the discipline of psychology in the twentieth and twenty-first centuries, the existence of an evaluative component of the self has been a relatively uncontroversial issue. For example, in terms of the psychometric properties of the numerous self-esteem scales that have been developed over the course of 3 decades for research and clinical practice, the vast majority rely heavily upon items pertaining to the individual’s evaluation of their own worth and value, and their perception of the extent to which others regard the individual as worthy and valuable.

Research on self-esteem began to grow significantly during the 1960s, a time during which there was extensive growth of both social/personality psychology and clinical psychology (Baumeister et al. 2003). As part of this research, several measurement scales for the assessment of self-esteem, such as the popular and enduring nine-item Rosenberg self-esteem scale (Rosenberg 1965), were developed. The newfound facility in measuring self-esteem helped to spur a growth in research on the links between self-esteem and other factors of interest. In general, much of the research during this period examined whether one’s level of self-esteem was related to outcomes in various domains, such as

academic achievement. The research was underpinned by various observations, such as (for example) the fact that academically successful young people appeared to have a greater level of self-belief and self-confidence. And indeed, a number of early findings suggested that higher levels of self-esteem were related to both experimental and real-world phenomena, such as increased persistence on frustrating tasks presented in the laboratory, better school grades and examination scores, and reporting having more friends and more satisfying personal relationships. Conversely, lower levels of self-esteem were related to lower levels of task persistence, lower levels of academic achievement, and increasing levels of social problems. The results of these early studies suggested that the links between self-esteem and outcomes could possibly be a causal one; that is, it was possible that the evaluative component of the self somehow played a causal role in determining later outcomes, with more positive outcomes being associated with more positive evaluations of the self.

Baumeister et al. (Baumeister et al. 2003) have also noted that at the same time that the new research on self-esteem was emerging (in the late 1960s and early 1970s), there were enormous cultural changes taking place in Western society. It was a period in which there was extensive interest and experimentation into new ideas and new approaches to living, and two of these changes in particular turned out to have had critical implications for the concept of self-esteem. The first of these, derived from the discipline of psychology, was the rapid growth and development of psychotherapy and clinical psychology. One of the primary interests in clinical psychology during this period was the attempt to develop new and effective psychotherapeutic interventions and treatments, based on recent findings in social, personality, developmental, and cognitive psychology, to improve general functioning and outcomes. As such, the new findings regarding the potential role of high self-esteem in improving outcomes across a range of domains seemed a promising avenue for the development of clinical interventions. In particular, there were a number of interventions developed during that time period that were aimed at improvement of self-esteem in young people. Under the assumption that, if low self-esteem caused social and interpersonal problems, then it seemed obvious that improving or increasing self-esteem would help the individual to solve these problems, or even better avoid these

problems altogether. The focus on improving self-esteem was given even further impetus by the increasing number of laboratory and field studies emerging in social psychology in which self-esteem was a feature. The importance of the construct of self-esteem was growing rapidly, and for a time, it seemed as though self-esteem was going to be one of the major themes of at least two strands of Western psychology in the late twentieth century.

The second cultural change that had specific implications for the concept of self-esteem, according to Baumeister (Baumeister et al. 2003), was the rise in the early 1970s of the self-help movement, beginning first in the United States, then gradually spreading through other Western societies. It was during this time period that the first major expansion of the “lay psychology” literature occurred, with books and periodicals appearing on the shelves at an ever-increasing rate. As the focus of most of this literature was on the notion of “self-improvement,” and because the concept of self-esteem was prominent in academic psychology, it seems only natural that self-esteem began to occupy a central place in the lay literature in psychology. Indeed, it could be argued that this coincidental pairing of cultural change and concept greatly increased the “recognition factor” of self-esteem among a large segment of the population, many of whom would have never had the chance to read an academic journal article or a psychology textbook. Within a few short years, self-esteem had become a cultural buzzword. This cultural notoriety was to have significant effects for both academic and lay psychology for the next 2 decades and beyond.

One effect of this cultural notoriety was that self-esteem was given the credit – or blame – for a wide range of social outcomes (Baumeister et al. 2003). Without the hindrance of the sort of critical examination that might take place in an academic context, a number of authors writing for the popular press were able to make a variety of unverified claims concerning the power of self-esteem both to create profound difficulties for individuals who lacked it, and to miraculously improve the lives of individuals who acquired it. At the same time, assumptions about the negative impacts of self-esteem had become a popular belief. An example of such a belief is the commonly held notion that gang members and other violent criminals engage in violent and destructive

behavior because they have low self-esteem. If they had greater regard for themselves, the argument suggests, then these individuals would not want to behave in such a manner.

The growth of the self-esteem movement reached its apex in the mid-1980s, when the California State Assembly, led by Assemblyman John Vasconcellos, organized and funded a program called the Task Force on Self-Esteem and Personal Responsibility (Mecca et al. 1989), on the premise that raising self-esteem, particularly in children and adolescents, would solve a wide range of problems faced by residents of the state, such as crime, early pregnancy, substance abuse, and poor educational achievement. In their initial proposal, Vasconcellos and colleagues suggested that self-esteem enhancement might serve as an appropriate developmental intervention, a kind of social vaccine, which would protect the individual from a variety of adverse outcomes, and reduce the overall burden of adverse behavioral outcomes to the state. The proposal proved compelling enough for the Task Force to be funded with a budget of \$245,000 for several years, and the authors set to work assembling scholars to examine the data emerging from more rigorous experimental and field studies regarding self-esteem. Perhaps not surprisingly, the Task Force discovered that the data were considerably less compelling than they had originally thought, and that many of the claims that had been made for self-esteem had very little empirical evidence to support them (Mecca et al. 1989).

Issues with the Links Between Self-esteem and Outcomes

One of the major findings of the Task Force on Self-Esteem was that the rampant growth of the importance of the concept in the 1970s and 1980s had taken place with very little empirical evidence to serve as a foundation. Across a range of outcomes, the review found only limited associations between self-esteem and outcomes, and very little support for claims regarding the broad causal powers attributed to self-esteem in some quarters. The Task Force was not isolated in its findings, however. A review of the empirical findings both past and present gives way to a more balanced view of the academic literature on self-esteem, suggesting that the available evidence requires that more modest claims be made about self-esteem and its possible effects (Baumeister et al. 2003).

There were several reasons why the inflated claims, and in particular causal claims, about self-esteem turned out to be largely groundless. The two most important of these reasons are that: (a) the observed associations between self-esteem and a range of outcomes were generally weaker than had been assumed originally and (b) there was little evidence to suggest that the associations between self-esteem and a range of adverse life outcomes were in fact causal.

Baumeister and colleagues examined the literature regarding the links between self-esteem and a range of outcomes, showing that, in most cases, the evidence suggested that the links between self-esteem and outcomes were weak at best, and that there was in most cases insufficient evidence to support causal claims regarding self-esteem (Baumeister et al. 2003). While the review examined the empirical evidence for links between self-esteem and a range of outcomes, for the purposes of this essay, a few key themes emerging from the literature, of particular relevance to adolescence, will be discussed.

Self-esteem and educational achievement. Much of the early research on self-esteem and outcomes pertained to school performance and educational achievement, with consistent links being drawn between higher levels of achievement (higher grades, greater likelihood of attaining qualifications) and self-esteem. On the basis of this early work, it was considered almost a point of fact that high self-esteem was a key component in educational attainment, whereas low self-esteem would lead to educational failure. However, as Baumeister and colleagues pointed out, there were serious flaws in this reasoning (Baumeister et al. 2003). The primary flaw with much of the early research was that causal conclusions were drawn from correlational data, in many cases cross-sectional data, from which causal conclusions were not warranted. It could be argued, for example, that the observed links between self-esteem and educational achievement could be due to a causal process in which educational success increases self-esteem, or educational failure damages self-esteem, rather than vice versa. Alternatively, it could be argued that both self-esteem and educational achievement were linked via third or confounding variables that were associated with both self-esteem and educational achievement. Indeed, later research tended to support these alternative interpretations of the findings. Analyses of longitudinal data

suggested that the causal links between self-esteem and educational achievement could either be attributed to: (a) the influence of confounding factors or (b) represent a somewhat weak causal process in which higher levels of educational achievement at one point in time were associated with higher levels of self-esteem at a later point in time. On the basis of this evidence, there is very little reason to expect that interventions designed to raise self-esteem would in turn improve academic performance and raise overall levels of educational achievement.

Self-esteem and interpersonal relationships. One of the areas of considerable interest to researchers in self-esteem has been the sphere of interpersonal relationships. It seems logical to assume that the extent to which a person values himself or herself would correspond to success in interpersonal relationships: having more friends, having closer friends, reporting more satisfying and meaningful relationships, and greater success and satisfaction with intimate relationships. As was the case with educational achievement, earlier research in the area of self-esteem and interpersonal relationships tended to support this notion, with a number of studies concluding that high self-esteem led to greater success in the interpersonal arena, whereas low self-esteem led to less success (Baumeister et al. 2003). In particular, a number of studies suggested that self-esteem was associated with social skills and popularity, such that high self-esteem led to an improvement in social skills and higher levels of popularity, while low self-esteem led to the opposite. Again, however, the issue of a possible alternative explanation in which interpersonal success or failure predicted self-esteem level, rather than vice versa, proved to be a key feature of the debate concerning self-esteem and interpersonal relationships. More refined analyses, using longitudinal data in which the causal effects of self-esteem on interpersonal relationship success, social skills, and popularity were tested, revealed that there was very little evidence to suggest that self-esteem predicted relationship success and relationship skills. There was, however, evidence to suggest that interpersonal success and relationship skills predicted self-esteem.

Furthermore, evidence suggested that the links between self-esteem and interpersonal success were, in a sense, in the “eye of the beholder.” Several studies showed that self-esteem levels were linked with

self-reported popularity level, such that high self-esteem individuals rated themselves as more popular while low self-esteem individuals rated themselves as less popular. At the same time, however, self-esteem was unrelated to objective measures of popularity, such as peer and teacher ratings of popularity. These and related findings suggested that there was very little evidence to support the putative causal role of self-esteem in enhancing or diminishing the quality and number of interpersonal relationships (Baumeister et al. 2003).

Self-esteem and violence. One of the key areas of self-esteem research in the last 3 decades has been the examination of the links between self-esteem and antisocial behavior, and in particular violent criminal behavior. As with the areas noted above, one of the key concepts in this area has been the notion that violent and antisocial behavior arises from processes in which the self is undervalued, or unvalued, which results in a kind of violent retaliation against the world. As with the hypotheses in other domains, the putative links between low self-esteem and violence made a certain intuitive sense; certainly, if one viewed the violent behavior of members of street gangs, it would be difficult to understand how individuals who routinely engage in such behavior have any regard for themselves at all. It is perhaps unsurprising then, that primarily on the basis of clinical observation and impression, that a commonly held belief formed among both psychologists and lay people in which low self-esteem served as a primary driver of aggressive and violent behavior, particularly among young people. This belief, in turn, proved to be quite influential in psychological and lay circles for at least 2 decades.

One of the difficulties with this hypothesis, however, is that, as Baumeister and colleagues pointed out (Baumeister et al. 2003), the general patterns of behavior observed among low self-esteem individuals do not correspond to the behavior of individuals who routinely act in a violent and aggressive manner. Indeed, low self-esteem people tend to be less inclined to take risks, and are more likely to behave in ways that try to smooth over social and interpersonal difficulties. In order to examine this issue more closely, Baumeister et al. (1996) reviewed the literature spanning psychology, sociology, criminology, and other related fields to examine the case for low self-esteem being related to violence and aggression. What they discovered was that

there was almost no evidence to support this assertion. The evidence did suggest, however, that it was high self-esteem that was more likely to be related to violent and aggressive behavior than low self-esteem. On the basis of this evidence, Baumeister et al. (1996) formulated the “threatened egotism” hypothesis, in which they suggested that it was a combination of unstable high self-esteem (similar to narcissism) and a threat to the ego of the individual that would be more likely to result in violent and aggressive behavior.

Following the publication of the review, the “threatened egotism” hypothesis was tested in a large number of studies that have provided support for the hypothesis (Baumeister et al. 2003). As an example, several studies have shown that unstable high self-esteem, in which the individual not only frequently reports high levels of self-esteem but also shows a high degree of variability in these reports, is strongly linked to increased risks of violent and aggressive behavior both in the laboratory and in real-world outcomes (Bushman and Baumeister 2002). Also, several studies have shown that bullying among school children is more often carried out and assisted by young people who report having higher levels of self-esteem (Baumeister et al. 2003).

Critics have argued, of course, that variable or unstable high self-esteem actually represents low self-esteem, and that the links observed between high self-esteem and violent and aggressive behavior are actually indicative of low self-esteem. However, there is very little evidence to suggest that this is actually the case. On the basis of the evidence, it would appear that the purported links between low self-esteem and violence were not only incorrect, but in fact were rather the opposite of the actual state of affairs; violent and aggressive people are in fact more likely to report higher levels of self-esteem, and it is a combination of an unstable form of high self-esteem and a threat to the self that results in much of the violent and aggressive behavior that takes place (Baumeister et al. 2003).

Recent Evidence from Longitudinal Cohort Studies

One of the primary difficulties that has plagued the study of self-esteem over the past several decades has been problems inherent in the methodologies by which self-esteem, and its links to various outcomes, has been

studied (Baumeister et al. 2003; Boden et al. 2008). The primary sources of evidence regarding self-esteem were, for a long period of time: (a) laboratory studies examining the relationship between varying levels of self-esteem, laboratory manipulations, and lab-based tasks in which such variables as task persistence was measured and (b) correlational studies of self-esteem and real-world outcomes, with data that were usually cross-sectional in nature. At the root of these difficulties has been the fact that the kinds of hypotheses that were being formulated about the effects of self-esteem across a wide variety of life outcomes could not in fact be tested using these designs, for the following reasons.

In terms of laboratory studies, there are two major methodological issues that call into question the extent to which the results of these studies can be generalized to a wider population. The first of these issues is the extent to which experimental tasks and variables are ecologically valid, and have a close relationship to tasks and processes outside of the laboratory. This is a well-known problem in experimental behavioral research, and while it is not generally considered a fatal flaw in this research, it does mean that the conclusions based on such methodologies must be qualified to some extent. The second major methodological issue is perhaps more serious in nature. Laboratory studies that use an individual difference variable, such as self-esteem, are generally referred to methodologically as quasi-experiments, because at least one of the independent variables cannot be manipulated, and participants cannot be randomly assigned to some level of the independent variable. This means that there is an increased chance of confounding, in which the effects of the independent variable on the dependent variable may in fact be attributable to the effects of a third, unmeasured variable that is related to both the independent and dependent variables. Both of these methodological issues raise questions as to the validity of laboratory findings regarding the links between self-esteem and outcomes.

Correlational field studies, usually undertaken in the form of surveys, do not necessarily suffer from the same limitations as laboratory studies. The questions are generally ecologically valid, in that they sample respondents' real-world behavior, and issues of confounding can be addressed through the measurement of a variety of covariate factors. One main difficulty with correlational studies, however, is that it can

be very difficult to ascertain a causal relationship between variables, particularly when the study has been carried out cross-sectionally, with contemporaneous measures. In a cross-sectional study of self-esteem and educational outcomes, it would be impossible to determine the direction of causality; for example, it would be difficult to determine whether self-esteem played a causal role in determining educational outcomes, or whether educational outcomes played a causal role in determining self-esteem. Again, this is a well-known problem in behavioral research, but it does create difficulties again in terms of assessing the validity of the findings arising from such studies.

One way of addressing each of the problems encountered in the use of laboratory and correlational studies in the field of self-esteem research is through the use of longitudinal cohort studies. In these studies, prospective measures of self-esteem, a range of outcomes, and a variety of covariate factors can be obtained, improving the ecological validity of the research. To address questions of causality, the power of the longitudinal design can be employed, on the assumption that *earlier events cause later events*. In order to test causal hypotheses concerning self-esteem, the associations between self-esteem and outcomes can be modeled at varying points in time (e.g., self-esteem measured prior to outcomes, or vice versa), and these models can be extended to account for a range of confounding factors that may exert an influence on both self-esteem and outcomes. Furthermore, advanced statistical techniques using repeated measures of self-esteem and the outcome can be employed to examine whether there are changes in the nature and magnitude of these associations over time.

In recent years, several studies using data from longitudinal birth cohorts have examined the associations between self-esteem and a range of life outcomes. Three of these studies were conducted by Boden and colleagues, using data from the Christchurch Health and Development Study, a study of a longitudinal birth cohort of over 1,000 individuals born in Christchurch, New Zealand, in 1977, and followed to age 30 (Boden et al. 2007, 2008; Boden and Horwood 2006). In these studies, Boden and colleagues used a robust methodology to test some of the long-standing causal hypotheses about the effects of self-esteem in childhood and adolescence on a range of later outcomes. The studies examined whether self-esteem in childhood and

adolescence (measured at ages 10 and 15) was related to a variety of life outcomes in early adulthood (ages 18–25), including: mental health disorders; substance dependence; relationship outcomes; life satisfaction; hostility; self-reported violent offending; and risky sexual behavior. In these studies, the associations between self-esteem in childhood and adolescence and later outcomes were adjusted for a variety of factors that could have confounded the association because of their own relationships with either self-esteem or life outcomes. These factors included: exposure to socioeconomic deprivation in childhood; childhood disruptive and inattentive behavior; family dysfunction and instability; parental adjustment; parental attachment; intelligence and school grades; personality; and several other related factors. In addition, tests of mediation were undertaken, in which covariates pertaining to life circumstances in early adulthood (employment; relationship status; welfare dependence; life stress) were entered into the models to determine whether any effects of self-esteem on later life outcomes could be explained by causal pathways corresponding to either positive or negative life circumstances.

The results of these studies largely failed to provide evidence for a causal role of self-esteem. Bivariate associations between self-esteem and later life outcomes, in which only self-esteem and the outcome variable were accounted for, showed an association between lower levels of self-esteem and higher rates of adverse outcomes, including poorer mental health, greater risks of substance dependence, lower levels of life and relationship satisfaction, greater hostility and self-reported violent offending, and greater levels of risky sexual behavior. However, control for a range of potentially confounding factors reduced the magnitude of these associations, such that they became very small and statistically nonsignificant. The only exceptions to this pattern were findings of a persistent association between self-esteem and life satisfaction, and a persistent association between self-esteem and relationship satisfaction. Also, congruent with the threatened egotism hypothesis, Boden and colleagues found a persistent association between unstable self-esteem in childhood and adolescence and hostility/offending in early adulthood. In general, there was very little evidence to suggest that there was a causal relationship between one's level of self-esteem in childhood and a range of adverse life outcomes among these data;

instead, the observed associations between self-esteem level and outcomes could be attributed to the effects of common confounding factors that exerted a causal influence on both self-esteem and the outcomes in question.

On the basis of these findings, Boden and colleagues concluded that the data from the Christchurch Health and Development Study provided very little support to long-standing assertions about the importance of self-esteem in influencing later outcomes, and suggested that a reconceptualization of the concept of self-esteem might be in order. In their view, self-esteem might be more appropriately viewed as a *risk marker*, in that it was related to poorer outcomes and could perhaps indicate persons who are at greater risk of those outcomes, but that attempting to reduce the risk of poor outcomes via influencing self-esteem was likely to be a wasted effort, as self-esteem seemed to have very little causal power of its own (Boden et al. 2007, 2008; Boden and Horwood 2006).

Interestingly, two other studies employing a longitudinal cohort design similar to that used by Boden and colleagues arrived at a somewhat different set of conclusions. Donnellan and colleagues (Donnellan et al. 2005), and Trzesniewski and colleagues (Trzesniewski et al. 2006), used data from the Dunedin Multidisciplinary Health and Development Study, a longitudinal cohort study that is in many ways similar to the Christchurch study data used by Boden and colleagues. The studies using the Dunedin data examined the links between self-esteem measured in childhood and early adolescence, and a range of life outcomes including aggression, criminal behavior, delinquency, mental health, physical health, and unemployment in early adulthood, controlling for a number of potentially confounding factors. Unlike the studies by Boden and colleagues, both Donnellan and colleagues and Trzesniewski and colleagues found that the associations between self-esteem and a range of adverse life outcomes remained statistically significant after controlling for confounding factors, suggesting that, in contrast to Boden and colleagues' findings, self-esteem in fact *does* play a causal role in later outcomes, with lower levels of self-esteem being associated with increased risks of adverse outcomes (Donnellan et al. 2005; Trzesniewski et al. 2006).

The differing conclusions that have been drawn from these two similar studies raise questions as to

the source and nature of these differences. One major reason for the differences in the two studies may be differences in the statistical models employed. In their analyses of the Christchurch data, Boden and colleagues controlled the associations between self-esteem and outcomes using a large and diverse set of covariate factors. The analyses of the Dunedin data, on the other hand, used a rather more limited range of covariate factors in their analyses. It could be argued, therefore, that any differences in the findings between the two data sets may be due at least in part to methods of covariate control, and the possible influence of unmeasured confounding in the Dunedin data. It should be noted, however, that although both studies using the Dunedin data concluded that self-esteem played a causal role in outcomes, both studies noted that the effect sizes were in fact quite small. Trzesniewski and colleagues suggested, for example, that attempts to address the increased risks of adverse life outcomes via increasing self-esteem would likely be ineffectual, given the small magnitude of associations found in their data (Trzesniewski et al. 2006). Furthermore, data from both the Christchurch and Dunedin studies clearly suggest that the low self-esteem may be more usefully construed as a risk marker for maladjustment, than as a powerful causal agent.

Why Have There Not Been More Robust Findings for Self-esteem?

Although a number of claims have been made about the causal power and importance of self-esteem, the results of more rigorous studies with strong methodologies show that there is very little evidence to support these claims. The evidence shows that, at best, any causal powers held by self-esteem are weak in nature, and these causal powers may be limited to certain areas of interpersonal life, such as life and relationship satisfaction. Yet, the intuitive sense that an overall positive or negative evaluation of the self should somehow affect one's life outcomes still remains, to some extent. The question arises as to why the findings for self-esteem have not been robust, or more precisely, why the evaluative component of the self seems to have very little causal power.

One important reason why self-esteem may have less causal power than expected is that the all known measures of self-esteem are, for all intents and purposes, attitudinal measures, with the target of the

attitude in this case being the self. One of the hallmark findings in the field of social psychology is that, for attitudes to have any degree causal power, the attitudes in question must be closely linked to specific instances of behavior; otherwise, attitude-behavior inconsistency results (Ajzen and Fishbein 1977). This raises two serious issues for studies of self-esteem. The first issue is that most self-esteem measures provide only general descriptions of behavior, and in fact rely primarily on globally favorable or unfavorable impressions, which do not lend themselves to attitude-behavior consistency (Baumeister et al. 2003). The second issue is that while more domain-specific measures of self-esteem, such as measures of academic and social self-esteem, use items with greater behavioral specificity, these measures have strong links in predicting only domain-relevant behavior (Baumeister et al. 2003). Most of the causal assertions made regarding self-esteem are not limited to specific domains; indeed, it could be argued that the attractiveness of the thesis lies in the fact that it predicts ubiquitous effects for self-esteem across a range of domains.

Where Does the Field Go from Here?

If self-esteem is not the powerful causal force that many believe it is, a further question arises as to the future of the construct in the field of psychology. Despite the evidence of the limited causal powers of self-esteem presented above, the construct may still be of some value, for a number of reasons.

The first reason is that, as noted above, while self-esteem may not have strong causal powers, it does serve as a risk marker; those individuals who are at greater risk of later mental health disorders, substance abuse, and violence and aggression, for example, generally display lower levels of self-esteem at an early age. This inference suggests that one potential value for self-esteem is its potential for use in the prevention of adverse life outcomes. While it is unclear how such preventative measures might best be implemented, what is clear is that self-esteem level in childhood and adolescence may provide important clues as to an individual's future life course (Boden et al. 2008).

A second reason is that, while the evidence concerning one's level of self-esteem has provided very little evidence of causal associations, there is evidence to suggest that the variability of self-esteem may be causally related to outcomes. Research by Kernis and

colleagues has suggested, for example, that those individuals who display an unstable level of self-esteem (as opposed to more stable high self-esteem, or stable low self-esteem) are more likely to behave aggressively and show symptoms of mental health disorders (Kernis and Waschull 1995). Indeed, as noted above, Boden and colleagues, using the Christchurch data, found a persistent association between self-esteem instability and increased risks of self-reported hostility and violent behavior (Boden et al. 2007). What these findings suggest is that there may be a causal relationship between self-esteem and outcomes, but only in terms of whether one's self-evaluation is stable or unstable. However, this work is still very much in its preliminary stages, and further research is needed to elucidate the possible links between self-esteem stability and outcomes.

Conclusions

The concept of self-esteem is clearly one of the most successful of psychological constructs, at least in terms of its penetration into everyday discourse. As a subject of an extensive and rich body of research, self-esteem has had rather more mixed fortunes, however, with relatively scant evidence to support many of the causal claims made about it. It is clear, however, that interest in, and discussion of, the role of self-esteem in the development of the individual will continue long into the future, and research will continue to address some of the key questions concerning the role of self-esteem in the psychological landscape. As it stands now, the evidence suggests that self-esteem may play a rather limited causal role in the lives of most adolescents, but the potential remains that a more refined conceptualization of self-esteem may provide valuable insight into an individual's possible future paths.

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Self-Monitoring

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Self-monitoring involves the extent to which individuals observe their own behaviors and adjust them to avoid or control undesirable actions. The psychological construct of self-monitoring, as initially proposed by Snyder (1974, 1979), seeks to differentiate individuals according to their sensitivity to social cues and their willingness to adapt their behavior to conform to the expectations of social situations. Snyder postulated

that, in an attempt to uncover exactly what a particular situation calls for, high self-monitors will study situations and typical behavioral responses more often and for longer periods of time than will low self-monitors (Snyder 1987). High self-monitors are sensitive to others' messages, including detecting them better, registering them, and responding to them. High monitors, for example, are more likely to endorse socially acceptable attitudes that they do not privately espouse, and use these attitudes to guide their behaviors (Snyder 1987; Graziano et al. 1987). Whether or not self-monitoring is a healthy trait, and even whether it will manifest itself or not, depends on situations. Traits like self-monitoring only influence behaviors in relevant situations.

Although relevant to any part of the life span, self-monitoring tendencies are of particular significance to adolescents. As might be expected, the tendencies help highlight reasons for the potential importance of social pressure, especially peer pressure, during adolescence. For example, self-monitoring has been shown to influence the relationship between peer influence and problem behavior during adolescence. An important longitudinal study of over 350 adolescents found, for example, that high self-monitoring adolescents who believed that cigarette smoking was a normative behavior eventually were more than three and a half times more likely to progress from complete nonsmoker to current smoker than were high self-monitors who did not believe that smoking was a normative behavior. On the other hand, normative beliefs did not influence the onset of smoking among adolescents who were deemed low self-monitors (Perrine and Aloise-Young 2004). Given the significance of self-monitoring, it is not surprising that it now figures prominently in therapeutic and educational interventions involving youth (see, e.g., Mooney et al. 2005; Briesch and Chafouleas 2009).

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Self-perception

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Overview

Self-perceptions, or different beliefs individuals have about themselves, exert a powerful influence on the kinds of activities individuals engage in, the amount of effort they will expend on that activity, as well as the likelihood that they will engage in that activity in the future. Understanding how self-perceptions influence behavioral outcomes and ultimately contribute to healthy adolescent development has been a longstanding goal of researchers. Unfortunately, the literature on topics related to self-perception is rife with inconsistency and confusion over the definition and measurement of constructs. The purpose of this essay is to unpack and review different aspects of self-perceptions and how they relate to developmental outcomes. This understanding is of significance in that it allows for developing interventions and educational programs to address maladaptive patterns in understandings of people's sense of self.

The Self

Issues around self and self-reflection can be considered one of the major organizing factors of all psychological research. Indeed, the ability to think objectively about ourselves and our actions is what distinguishes humans from other animal species (Leary and Tangney 2005). It is not surprising, then, that there is a vast amount of

literature in the social sciences on the topic of self. Nor should it be surprising that, given the myriad approaches and frameworks available, this topic is “bogged down in a conceptual quagmire as muddy as any in the behavioral and social sciences” (Leary and Tangney 2003:6). Not only do some researchers use the same terms differently, others who are talking about the same construct label it differently (Byrne 1996). According to Byrne (1996), part of the problem lies in the fact that because we are talking about something we all know about (the self), researchers often fall short of providing precise, academic definitions.

In addressing self-perceptions, several researchers have returned to the distinction William James (1890) drew over a century ago. Specifically, he parsed the “self” into the subjective self (I-self) and the objective self (me-self). Essentially, the I-self can be considered the active knower and observer of self; whereas the me-self can be considered the observed object, or as Lewis (1994) suggests, the “idea of me.” The purpose of this essay is to focus on the latter conception of self, namely, the perceptions, descriptions, evaluations, etc., that individuals have about their “self.” This essay seeks to synthesize some of the adolescent-based research done in this area, as well as provide a reference for unraveling the conceptual ambiguity around terms.

Definitional Issues

Historically, self-perception was considered a unidimensional construct and was measured by summing or averaging item-scores of self-evaluations across several facets or domains of life (Butler and Gasson 2005; Shapka and Keating 2005). However, in 1979, Wylie critiqued this approach by arguing that simply combining item-scores masked the distinctions that individuals make in assessing their unique competencies and the importance of these competencies across different areas of their lives. Indeed, several decades of research have now confirmed the inadequacy of a nomothetic model and provided evidence for a multidimensionality perspective of self-perception (e.g., Byrne 1996; Harter 1999; Marsh 1990). In fact, since Shavelson et al. (1976) proposed of a multidimensional, hierarchical model of self-concept, most researchers have embraced this approach and moved in this direction (Butler and Gasson 2005).

Despite this understanding and direction in research, there continues to be confusion in the

literature about the distinction between self-descriptions (e.g., self-concept) and self-evaluations (e.g., self-esteem), as well as the global- vs. domain-specific nature of these components. Some self-researchers have distinguished between the two by viewing self-concept as the information-based appraisal of different aspects of ourselves or the abilities we have (the description); and self-esteem as the global subjective evaluation (positive or negative) of these appraisals (e.g., “how good I am”) (Byrne 1996; Hattie 1992). Attempts have been made by researchers to parse the evaluative component from the descriptive component of domain-specific self-perceptions, e.g., by weighting domain-specific perceptions of competency according to the reported amount of importance placed on them (Byrne 1996; Shapka and Keating 2003). However, these attempts have been largely unsuccessful and, to date, there has been little empirical evidence for discriminating between the two components (Byrne 1996).

More recent work in this area recognizes that self-descriptions are not valence free and cannot be separated from their evaluative component (e.g., Harter 1999, 2003; Marsh and Hattie 1996; Marsh and O’Mara 2008). Indeed, as Kernis and Boldman (2003) aptly state: “. . .most self-representations have an evaluative component to them, as people are especially prone to attach positive and negative values to their self-aspects” (p. 107). As such, researchers now tend to distinguish between domain-specific and global components of self-perception. From this perspective, self-concept is considered the domain-specific evaluation of competencies (which are both descriptive and evaluative), and self-esteem is the global component representing one’s overall sense of self-worth (Harter 1999; Marsh and O’Mara 2008). Stated more concretely, self-concept can be defined as the way in which we assess our competencies across different dimensions of our lives, such as our academic ability, our physical appearance, our athletic ability, our social skills; and self-esteem is our overall sense of worth as a person (e.g., Harter 1999; Marsh and Hattie 1996). There is probably the most consensus around this approach to self-perceptions, and, as described in the next section, models of self-perception that endorse a hierarchical, multidimensional approach seem to have the most relevancy for adolescent development.

Attributes of Self-Perceptions

Perhaps the two most prominent contemporary researchers who examine self-perceptions in children and adolescents, from a multidimensional, hierarchical perspective, are Herbert Marsh and Susan Harter. Although there are unique aspects to Marsh and Harter's models, there is also much overlap. Specifically, both models have adopted Shavelson's view that self-perceptions are (1) multidimensional, (2) hierarchical, and (3) become more differentiated with age (Marsh and Hattie 1996). For the purposes of this essay, this last point is notable. Essentially, although it is universally recognized that self-assessments are compiled through experiences and social interactions, both Harter and Marsh's model describe the mechanisms for how this happens. More specifically, one of the central features of both Harter and Marsh's model is a developmental framework – both theorists recognize that the ways in which we think about ourselves changes across childhood and adolescence. Moreover, both Harter and Marsh have prioritized this by incorporating a developmental perspective in how they measure self-perceptions. Below is a more detailed description of the three attributes of these models of self-perception as they apply to an adolescent population.

MultiDimensional. As noted above, there is consensus in the field that self-perceptions are multidimensional – that children and adolescents have specific self-descriptions for each of the unique environmental contexts in which they find themselves operating within (e.g., Bracken 1996; Byrne 1996). Harter (1999), Marsh (1990), and Marsh and Hattie (1996) have each developed models that identify specific domains of functioning for adolescents. Harter's work has identified nine domains, including Scholastic Competence, Social Acceptance, Close Friendships, Romantic Relationships, Athletic Competence, Physical Appearance, Behavioral Conduct, Job Competence, and Global Self-Worth (Harter 1999). Marsh's model tends to be more specific than Harter's model and identifies 13 domains of functioning: Academic Domains (English, Mathematics, General School), Peer Relationships (Same Sex Friendships, Opposite Sex Friendships), Physical Ability, Physical Appearance, Parental Relationships, Emotional Stability, Problem Solving/Creative Thinking, Religion/Spirituality, and Honesty/Reliability (Marsh and Hattie 1996).

It is recognized in the literature that these domains are not mutually exclusive and that they are likely interrelated (Bracken 1996). However, psychometric testing and construct validation studies have provided evidence that adolescents do organize their self-perceptions such that they are categorized along discrete domains (Harter 1998, 1999).

Hierarchical. In addition to being multidimensional, self-perceptions are hierarchical in nature, with overall self-worth at the apex and the various domains (e.g., cognitive, social, and physical appearance) and more specific sub-domains (e.g., academic achievement, close friendships, and athleticism) below it. As described above, self-worth/self-esteem is considered to be global and distinct from these domains and is the most relevant to emotional well-being, but is influenced by the self-evaluations in the subordinate domains (Harter 1999). For example, low self-perceptions of one's physical ability might not be detrimental to that person's overall self-worth if they place more value on scholarly abilities than on physical prowess (Harter 1999).

Extant research has shown that there are commonalities in the influence of certain domains on an individual's overall self-worth (Shapka and Keating 2005). Specifically, it appears that Physical Appearance tends to be the most predictive of overall self-worth (which is not surprising given our society's focus on appearances). Social Acceptance and Scholastic Competence are also closely related to a person's evaluation of him or herself, and as individuals move through adolescence, Scholastic Competence becomes more important (Shapka and Keating 2003).

Differentiated with Age. A third aspect of the multidimensional, hierarchical model of self-concept is that it becomes increasingly differentiated with age. According to Bracken (1996), domain-specific differentiation likely starts during early childhood, increases significantly throughout adolescence, and continues to develop into adulthood, as the individual continues to experience new environments. Similarly, Crain (1996) suggests that, as they get older, children are exposed to a broader range of people and environments; they accumulate new experiences of success and failures, and the reactions from other people that permit them to assess their behaviors within each new situation. As noted, Harter and Marsh's models are the only two

models that have truly incorporated a developmental perspective; they have done so by adjusting their models appropriately for different age groups (e.g., children, adolescents, adults; Marsh and Ayotte 2003; Dusek and Guay McIntyre 2003). For example, in describing self-perceptions for children, Harter (1999) only includes six domains of functioning; whereas, for adolescents, there are nine domains (the additional domains are: Romantic Relationships, Job Competence, and Close Friendships).

According to Harter (1999), the developmental changes in self-perceptions can be interpreted using a Piagetian framework of cognitive development. For example, the finding that the young child is more likely to describe himself or herself in terms of concrete, observable characteristics (such as “I have two dolls” or “I have brown eyes”) is congruent with the cognitive abilities and limitations of the preoperational stage. Similarly, the older child describing himself or herself in terms of traits (such as being smart, honest, or helpful) requires hierarchal organizational skills that surfaces during the concrete operation stage. With regards to adolescent development, the emergence of the formal operation stage and the capacity to think in an abstract fashion allows adolescents to hold complex views about themselves – e.g., recognizing that they could simultaneously be intelligent and an “airhead” (Harter 2003).

Although a Piagetian theory provides a framework for understanding the development of self-perceptions, it is recognized that this theoretical perspective focuses primarily on cognitive changes and therefore does not do justice to the complexity of self-development. Theorists adopting information-processing, neo-Piagetian, and social constructivist perspectives emphasize that the development of self also is influenced by social and contextual factors (see Case 1992; Rogoff 1990). As such, children’s family environment, culture, and social setting will dictate what features of the events and objects are most relevant to their self-theories (Harter 2003). Moreover, although one would expect dramatic developmental transition in regards to cognitive ability, e.g., that upon entering adolescence, youth should be able to think abstractly, think deductively, and form formal theory. In reality, cognitive changes are not instantaneous. As such, Harter (1999) posits that self-representations during early and middle adolescence fall short on this principle.

Development of Self-Perceptions During Adolescence

Early Adolescence: In early adolescence (ages 12–14), interpersonal relations and the concomitant social skills that influence one’s interaction with others become highly salient (Smetana and Villalobos 2009). With this comes the recognition that selves vary according to the social context. Although advancement in cognitive development leads to greater differentiation in different relational contexts, the differentiation is compartmentalized and the adolescent is still only capable of thinking of each trait as an isolated characteristic of the self (Harter 1999). Furthermore, the ability to apply and integrate hypothetic-deductive thinking to one’s self-system is not fully developed. These cognitive limitations result in all or nothing thinking which can be unrealistic at times, e.g., feeling very intelligent at some moments, but at another point very dumb.

Middle Adolescence: As adolescents move into middle adolescence (ages 15–16), self-descriptors become less compartmentalized. Middle adolescence is characterized by a preoccupation with discrepancies between the real and ideal self, as well as a concern over what significant others think of the self. Due to further advances in cognitive processes, adolescents are increasingly able to integrate self-representations with these opposing views, confusions, and conflicts (Harter 1999).

Late Adolescence: By late adolescence, adolescents are cognitively able to integrate abstract ideas, which afford them the capacity to develop an integrated sense of self. They also are able to integrate and internalize society’s standards, beliefs, and values. In addition, they are focused on the future, which gives them a sense of purpose and direction, and which also further facilitates the integration process. Much of the conflicts and confusions of earlier stages are resolved due to this ability to construct higher order abstractions (Nurmi 2004) and adolescents are now fully capable of thinking of the self as being flexible and adaptive depending on the social context and relation (Harter 1999).

Patterns of Change Across Adolescence

In addition to understanding how the structure and complexity of self-perceptions develop, there is also a burgeoning body of literature that explores the

patterns of gains and losses in different domains of self-perception over the course of adolescence, as well as how these patterns are influenced by gender and other factors (e.g., Cole et al. 2001; Shapka and Keating 2003). Although self-researchers have postulated that self-perceptions become more stable with age and tend to increasingly reflect reality (Crain 1996; Shavelson et al. 1976; Wylie 1979), the historically prevailing view of adolescent development as an intense period of storm and stress lead many theorists to make assumptions about the instability of self-perceptions during adolescence. In general, it was believed that adolescents were susceptible to dramatic and incapacitating changes in how they viewed themselves (Crain 1996; Shapka and Keating 2005). However, more recent views about the changes occurring during adolescent development suggest that it is not as turbulent as originally thought – that the majority of adolescents weather the developmental changes without very much upheaval (Arnett 1999). As such, the view of how self-perceptions change also has been moderated. It is now recognized that, during adolescence, the changes in self-perceptions appear to evolve very gradually, in small increments (Crain 1996). According to Adams et al. (1994), however, self-perceptions are likely to be least stable during early adolescence due the substantial bodily changes brought about by puberty and the psycho-social impact of this. In support for this, it does appear that self-perceptions in most domains of functioning drop during early adolescence, but that they then very slowly recover through late adolescence, in a U-shaped fashion (Crain 1996; Harter 1998; Shapka and Keating 2005).

Gender. In looking at gender differences in self-perception, it is important to keep in mind that, in general, as with many gender differences, there is greater variance within-gender than between-gender. Much of the work that has explored gender differences in self-perceptions has found that any differences that do exist tend to be along gender stereotypical lines, with boys having higher perceptions of themselves in the domains of Physical Appearance and Abilities (Crain 1996; Harter 1999; Wigenbusch and Merrell 1999) and girls having higher perceptions of their Social Acceptance and Close Friendships (Shapka and Keating 2005; Wigenbusch and Merrell 1999). Many of these gender differences exist in early childhood (Cole et al. 2001) and are surprisingly stable over time,

although in a meta-analysis by Wigenbusch and Merrell (1999), they showed that girls' lowered perceptions of their Physical Appearance becomes more prominent during adolescence – likely the result of pubertal changes and a focus on appearance in the media. Regarding perceptions of global self-esteem and self-worth, most studies find no gender disparities (Crain 1996; Harter 1999; Wylie 1979).

Culture. As with much research on adolescents, there is a paucity of research looking at how self-perceptions differ as a function of culture and ethnicity. In fact, much of the research examining this question has focused on identifying differences in global self-worth scores (self-esteem) and has focused on racial differences between white adolescents and black adolescents in North America (Crain 1996). In a review of this research, Gray-Little and Hafdahl (2000) found small but consistent racial differences in self-esteem. Although the findings were overall similar across races, these authors found that black children and youth reported higher levels of self-esteem than their white counterparts after controlling for preexisting characteristics such as socioeconomic status. Although unconfirmed, the authors postulate that children and youth who are black, because they are from a visible minority, emphasize their distinctiveness, and this emphasis enhances their self-esteem. Regarding domain-specific differences in self-perceptions, again, much of the work has focused on North American racial differences. The few studies that have explored domain-specific perceptions have found that African American youth held higher perceptions of their Physical Appearances (Crain 1996) and Caucasian American youth reported higher scores on Social and Academic self concepts.

Clearly, more work is needed to explore how culture influences the development and expression of an individual's (or society's) self-concept. Ultimately, humans are fundamentally embedded in our culture and society, and according to Joerchel (2007), construction of self-perception relies heavily on this environment. Ignoring the role of culture will leave us less informed about this construct, and our studies will likely be biased.

Causes and Correlates of Self-Perceptions

In addition to understanding how self-perceptions change across the life span, clinicians and researchers

alike have long been interested in explicating the role that self-perceptions play in well-being (Butler and Gasson 2005). A core tenet guiding much of this work is the notion that having a positive sense of self is critical for healthy, adaptive functioning – that if we feel better about ourselves, we will function at a higher level and be more successful (Haney and Durlak 1998; Harter 1999). Understanding the impact of self-perceptions for adolescents is particularly important given the amplified focus on self-exploration and growth during this developmental period (Dusek and Guay McIntyre 2003). More specifically, the gains afforded adolescents in abstract and complex reasoning (Flavell et al. 2002), equipped them with the ability to approach one of the major developmental tasks of adolescence, namely, to begin to answer the question of “Who am I,” of which a major part is an understanding of self.

Extant research has focused on understanding the specific role self-perceptions play in maladaptive behavior (e.g., Marsh et al. 2004). To this end, much attention has been paid to linking self-perceptions to various aspects of well-being. For example, having a high self-concept and sense of self-worth has been shown to be protective against poor mental health outcomes, such as depression (e.g., Harter 1999) and anxiety (e.g., Orth et al. 2008; Pyszczynski et al. 2004), as well as antisocial and delinquent behavior (e.g., Leve 1997; Trzesniewski et al. 2006) and poorer employment prospects (Trzesniewski et al. 2006). A large body of work also has linked conceptions of self with educational outcomes. For example, a great deal of work has linked both low self-worth (for a review see Dusek and Guay McIntyre 2003) and low academic self-concept with poorer school achievement (e.g., Byrne 1996; March and Craven 2006; Shapka and Keating 2003). There is no doubt that self-perceptions relate to numerous important developmental outcomes.

Self-perceptions and behaviors influence each other in reciprocal fashion (March and Craven 2006). In other words, self-perceptions influence the way we act, and our actions in turn influence our self-perceptions (Marsh and O’Mara 2008). As such, it is also important to recognize that self-concept is an aspect of mental health and has been investigated as an outcome in its own right (Marsh and O’Mara 2008; Winters et al. 2002). To this end, researchers have explored the direct and indirect impact on self-

perceptions (both domain-specific and global self-worth) of such things as peer victimization (Callaghan and Joseph 1999), depression (Cole et al. 1997), physical activity (Strong et al. 2005), weight gain (O’Dea 2006), obesity (Zametkin et al. 2004), as well as socioeconomic status (Twenge and Campbell 2002).

In general, it appears that self-perceptions are related to several markers of healthy development in a reciprocal fashion (March and Craven 2006), suggesting that it is important to understand how they function both as a predictor as well as an outcome. With this in mind, much work also has looked at the effectiveness of interventions that are focused on improving self-esteem. In a review of studies that had a goal of changing self-perceptions in children and adolescents, Haney and Durlak (1998) found that programs that were focused directly on improving self-esteem were more effective than programs where self-perceptions gains were only a secondary goal, with the primary focus being something else, such as behavioral change. They also noted that self-esteem/self-concept improvements did moderate adjustment in other areas, such as risk behaviors, mental health, and academic performance.

Methods and Measures

Efforts to measure self-perceptions, given their subjective nature, traditionally have used self-report methodologies (Butler and Gasson 2005). Although this is likely the best way to get at self-perceptions, it does make response biases, such as social desirability, an issue (Butler and Gasson 2005). The instrument usually involves having participants decide, on a Likert scale, how true (or false) a given statement is about them (Dusek and Guay McIntyre 2003). Alternatively, participants are requested to choose between two bipolar statements (Dusek and Guay McIntyre 2003).

Despite there being over 200 existing measures that examine children and adolescent self-perceptions, many of these are not credible as they were developed for a specific research study and therefore lack a theoretical framework (Butler and Gasson 2005). Moreover, most of these measures were never replicated or examined for their psychometric properties (Byrne 1996; Keith and Bracken 1996; Marsh and Hattie 1996). Unfortunately, this proliferation of potentially unsound measures prevents the field from being consistent in terminology and likely contributes

to instances of mixed findings in the literature (Byrne 1996). Furthermore, almost all of the measures (psychometrically sound or not) are of western origin, where individuality and self as independent-from-others is highlighted. Unfortunately, this may contribute to invalid findings when these instruments are used with cultures that view self as in relation to others and be interdependent (Butler and Gasson 2005).

Another important aspect of measures relating to self-perception that is often not factored into instruments is a developmental perspective. As described above, self-perceptions become increasingly differentiated and more complex with age. As such, a “one size fits all” measure is likely to be invalid. As noted above, the models postulated by both Harter (e.g., Harter 1999) and Marsh (e.g., Marsh 1990) have incorporated a developmental approach. In creating their measures of self-concept, they have created different measures for different age ranges. For example, Marsh’s series of Self Description Questionnaires (SDQ) involves three different instruments: SDQ I for primary-aged schoolchildren, SDQ II for secondary-aged school children, and SDQ III for adults. Similarly, Harter has developed separate Self-Perception Profiles for children, adolescents, college-aged students, and the elderly. Both Harter (Harter 1999) and Marsh (Marsh and Hattie 1996) have provided good evidence that the scales they have developed for each age group measure equivalent constructs.

Although both Harter and Marsh offer scales that encompass the evaluative, descriptive, global, and domain-specific aspects of self-perception (Marsh and Hattie 1996; Harter 1999), there are other stand-alone measures that measure different aspects of self-perceptions or self-perceptions in specific domains of functioning. For example, Rosenberg’s highly used Self-Esteem Scale is a short scale that solely looks at global self-worth (Bagley and Mallick 2001; Rosenberg 1965, 1979). Although most self-perception scales were developed for use with normal populations, some claim to be appropriate for clinical populations as well (e.g., Tennessee Self-Concept Scale; Byrne 1996). In general, when choosing a measure of self-perception, it is important to be conceptually and theoretically clear about the intended use of that measure. For example, it is important to recognize that different measures of self-perception measure theoretically and psychometrically different aspects of the self-structure,

that the domains of functioning that are explored differ according to the instrument in question, that different measures are appropriate for different ages, have been validated on different populations, vary in how recently the psychometric properties have been explored, and vary in the length of the instrument (Butler and Gasson 2005). Fortunately, as guidance, there are several current (Butler and Gasson 2005; Winters et al. 2002) and older reviews (e.g., Byrne 1996; Marsh and Hattie 1996) that summarize the more popular and psychometrically sound measures, as well as discuss the strengths and weaknesses of each.

Future Directions

Going forward, it is important for researchers to be diligent at providing clear operationalizations of any self-related terms at the outset of any research programs, especially if the study of self-perception is a central component of the work. There is consistency emerging about the different aspects of the self-structure, but there continues to be inconsistencies and vagueness in the literature around self-terminology and constructs, as well as a tendency for some researchers to use domain-specific (e.g., self-concept) and global (e.g., self-esteem) terms interchangeably (Butler and Gasson 2005). Continued clarification of terms is important.

Regarding cultural issues, as noted above, there continues to be gaps in our understanding of cross-cultural factors that influence self-perceptions. Future work in this area needs to validate both the measurement and structure of existing models cross-culturally. More specifically, it needs to move beyond translations of existing measures and develop culturally specific measures that take into account such considerations as being part of a collective vs. individualistic culture (Kitayama et al. 2000). For example, it is likely that in a western culture, where autonomy and individuality are highlighted, dimensions of the self that are most salient are those related to physical attributes and academic success. In contrast, in non-Western societies, the self as it is in relation to others is likely to be most central to one’s self-perceptions. As such, social dimensions of self-concept are likely to be paramount. Moreover, the parsing of the descriptive (e.g., self-concept) and evaluative (e.g., self-esteem) might look different for non-Western samples. For example, although slightly dated,

a series of studies by Watkins and Dhawan in the late 1980s (as described in Byrne 1996) was able to show that although the descriptive and evaluation components of domain-level self-perceptions were related, they were distinguishable for non-Western samples. The authors postulated that this was due to an emphasis on a collective culture.

Another gap in the literature that needs to be addressed is an understanding of how specific domains of self-perception influence behavioral outcomes. There is a plethora of research linking global measures of self-worth to risk behaviors in adolescents, as well as studies that link perceptions in a specific domain with how one functions in that domain (e.g., it is known that scholastic competence is linked to academic achievement and perseverance; Eccles 2004). However, there is a lack of understanding about the relationship between specific domains and risk behaviors. For example, it is plausible that individuals who perceive of themselves as highly competent athletes are likely less inclined to experiment with smoking or inhaled drugs. Conversely, it is known that that obesity is linked to lowered evaluations of physical appearance, but it would be interesting to know what the direct and indirect effects are on risk behaviors (e.g., engagement in smoking to lose weight).

Related to this, is the need to explore proposed links between self-perception and actual behaviors. Given that the preponderance of the work in this area relies almost exclusively on self-report data (Butler and Gasson 2005), it is important to be careful to recognize the difference between the “intention” to engage in certain behaviors and actually engaging in these behaviors. Indeed, in a review looking at the impact of self-esteem on the likelihood of engaging in sexual risk-taking behaviors (e.g., unprotected sex, early sexual debut, etc.), the authors, Goodson et al. (2006), did not find a significant relationship between self-esteem and actual sexual risk-taking behaviors, but instead found a relationship with the *intention* to engage in these behaviors. They are concerned that this artificial relationship may over-inflate the estimations of the impact of self-perceptions on adolescent functioning. Fortunately, with the advent of large-scale, longitudinal scales, there is the capacity to incorporate complex designs to examine these distinctions.

In conclusion, self-perceptions continue to be an important construct for understanding the development

of adolescents’ well-being. It is known that lowered perceptions of self-worth are linked to a whole host of maladaptive outcomes (Emler 2001), and that high perceptions of self act as protective factors (Harter 1999). Continuing to collect longitudinal data to identify the causes and correlates of how the self-systems change during adolescence to harness the benefits of high self-regard will help mitigate the damage from maladaptive perceptions of self.

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Self-reflection

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Self-reflection refers to the capacity to exercise introspection and the willingness to learn more about one's purpose, essence, and true self. The capacity to self-reflect is considered one of the hallmarks of adolescents' cognitive and social development. For example, Erik Erikson (1968) proposed that the period of adolescence concerned itself with identity issues, which fundamentally involved a period of questioning, exploration, and self-reflection with respect to a sense of identity. Although adolescents' ability to self-reflect has long been accepted as an important development, considerable controversy has attached to this ability in terms of whether it contributes to problematic or beneficial outcomes.

One of the striking aspects of literature relating to self-reflection is how it can be viewed as a problem for adolescents. Some researchers view self-reflection as not generally something positive for adolescents, as conventional wisdom and research suggest that adolescents tend to be prone to rumination rather than enlightenment. This view suggests that the time adolescents appear to spend thinking about themselves rarely leads to any particular insights. Indeed, adolescent rumination can have surprisingly negative effects. Self-reflection has been related to both depression and physical symptoms, as well as lower self-esteem. This is possibly because

adolescents' self-reflection may focus on worrying about negative issues rather than thinking about positive ones or working on self-improvement. The negative effects of introspection are consistent with stereotypical images of adolescents as egocentric, with egocentrism characterized as individuals focusing on themselves (with perceptions of themselves as being unique and as being the object of others' thoughts) resulting in heightened self-consciousness that contributes to such negative outcomes as inappropriate risk taking and substance use (for reviews, see Elkind 1967; Vartanian 2000).

Despite negative views of self-reflection during adolescence, engaging in self-reflection can be critical to positive development (see, e.g., Damon 2000). Self examination can contribute to adolescents' successful individuation, as they ponder who they really are and what makes them distinct from their peers. Creating their own narrative allows adolescents' personalities to grow. Introspection also can relate to stronger relationships with friends, possibly due to the development of empathy. These probabilities are supported by research finding that, among late adolescents, information-oriented identity processing is related to reduced diffuse or avoidant personality styles (Berzonsky and Sullivan 1992). In fact, even recurrent thoughts, such as rumination, have been conceptualized as a positive process of problem-solving or self-regulation that can increase self-knowledge and facilitate psychological adjustment (see Takano and Tanno 2009).

The different images that arise from self-reflection render it a problematic concept for understanding adolescents. From some perspectives, it is an excuse for adolescents to wallow in their own issues and drag them into negative affect. From others, it is a necessary and invaluable aspect of personal development. Importantly, recognition that self-reflection has both positive and negative aspects permeates the study of self-reflection in other age groups as well (see Watkins 2008). Not surprisingly, the study of self-reflection tends to focus on two of its core aspects, one that centers on rumination (which is a negative, chronic, and persistent self-focus motivated by perceived threats, losses, or injustices to the self and contributing to neuroticism and depression) and a more healthy form of self-reflection (which is motivated by curiosity or epistemic interest in the self and associates with openness to experiences and the promotion of self-knowledge and positive mental health) (see, e.g., Trapnell and Campbell 1999).

Regardless of the perceived effect, self-reflection likely has important effects on adolescents.

Cross-References

► [Rumination](#)

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Although important throughout the lifespan, the ability to self-regulate is particularly vital in the promotion of optimal psychological adjustment during the period of adolescence (Gestsdottir and Lerner 2008). While adapting to the typical physical, cognitive, and socio-emotional changes of adolescence, teens also begin to make adult-like decisions which can tax their self-regulatory skills and can carry significant immediate and long-term consequences. Teens who experience regulatory difficulties are at elevated risk for a variety of maladaptive outcomes, including internalizing problems (Scott et al. 2008), externalizing problems (Brody and Ge 2001), substance use (Wulfert et al. 2002), and sexual risk-taking behaviors (Raffaelli and Crockett 2003). Yet, youth with sufficient self-regulatory abilities tend to engage in high levels of prosocial behavior and academic achievement (Moilanen 2007; Tangney et al. 2004), and experience other positive outcomes as well.

Populations Generally Studied/ Sources of Data

Much of what is known about adolescent self-regulation has come from investigations conducted with typically developing samples. For example, Gestsdottir and colleagues (2009) examined self-regulation during middle adolescence using data from the 4-H Study of Positive Youth Development. Likewise, Finkenauer and colleagues (2005) conducted school-based surveys of 1359 Dutch youth aged 10–14 years in their research on parenting, self-regulation, and adolescent behavioral and emotional problems. A subset of research addressing adolescent self-regulation has employed samples of with many low-SES youth (e.g., the Children of the NLSY-79 sample, which was employed by Raffaelli and Crockett 2003), who are thought to be at elevated risk for various forms of poor psychosocial and behavioral adjustment that are commonly attributed to self-regulatory difficulties. Although typically developing samples are more widely used in this area during adolescence, clinical and “at-risk” samples have also been employed in research on the subdimensions of self-regulation implicated in various forms of developmental psychopathology. For example, research on adolescent emotion regulation has been conducted with samples of youth reporting high levels of depression symptoms (e.g., Betts et al. 2009).

Self-regulation

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Overview

In adolescence, self-regulation is the ability to flexibly control and direct one’s behavior, attention, and emotions in response to direction from internal cues and external feedback, in order to follow social conventions and/or reach personally meaningful goals (Moilanen 2007). At the most basic level, self-regulation can be likened to self-control over impulses, behaviors, attention, and emotions; this is frequently how self-regulation is conceptualized during childhood.

Most empirical research on self-regulation during adolescence has been cross-sectional in nature. For example, in Finkenauer and colleagues' (2005) study, self-regulation, parenting, and adolescent behavior were assessed simultaneously. Self-regulation has been included in studies with longitudinal designs, typically as an antecedent or predictor of subsequent risk behaviors (e.g., sexual risk taking; Raffaelli and Crockett 2003). It has only been very recently that some initial inquiries into the longitudinal stability and structure of self-regulation have appeared in the literature (e.g., Gestsdottir et al. 2009). Additional longitudinal investigations of this type are necessary in order to establish more concrete descriptions of how self-regulation develops throughout the adolescent years.

Controversies

The empirical and theoretical literature on adolescent self-regulation is plagued by two related conceptual issues. First, there is no commonly accepted definition of self-regulation during the adolescent years, likely because self-regulation has only recently begun to receive serious attention from scholars of adolescence. In these initial forays, many adolescence researchers have studied discrete dimensions of adolescent self-regulation (e.g., emotion regulation: Betts et al. 2009; delay of gratification: Wulfert et al. 2002), while others have focused on adolescent self-regulation in a comprehensive way, viewing the regulation of attention, emotions, and behaviors as a unitary process (Raffaelli and Crockett 2003). Relatedly, there is no common theoretical model of adolescent self-regulation. Researchers have typically drawn upon childhood-era frameworks or models that are not age-specific (e.g., the tripartite model of the impact of the family on children's emotion regulation and adjustment: Morris et al. 2007). The absence of a dominant theoretical model of adolescent self-regulation may be one reason why a consensus definition is missing, but it can also be argued that such a definition must be in place before theory can develop from this basis.

Key Definitions

Despite the definitional controversies outlined above, there is growing agreement among researchers that compared to children, adolescents are capable of self-regulating over longer periods of time and in more purposeful, intentional ways. Barkley (1997) suggested

that the understanding of time is a key element of self-regulation: adolescents are able to plan or prepare for events that are both near and distant in time, while children are limited to events that are temporally near. In sum, in adolescence, it becomes necessary to distinguish between short-term and long-term regulation.

Short-term self-regulation is the aspect of self-regulation that has received the most attention in developmental research, including adolescence research. Short-term self-regulation can be likened to the control of impulses, attention, behaviors, or feelings in the "heat of the moment" (Moilanen 2007). This resembles what Gestsdottir and Lerner (2008) refer to as "organismic regulation," which they define as the automatic processes that assist individuals in their typical environmental interactions. Short-term self-regulation most closely corresponds to childhood-era self-regulation, in that it has a finite capacity and is oriented toward the present moment in time. Specifically, adolescents demonstrate short-term self-regulation when they suspend inappropriate behaviors or emotions or initiate constructive actions in order to act properly in the immediate context. Youth may have explicit, personal goals for particular instances of short-term self-regulation (e.g., teens may stop themselves from yelling at a friend because they know it will ruin their conversation) or they may regulate their actions automatically in order to follow engrained social conventions (e.g., teens may stop themselves from yelling at a friend because they understand that public displays of anger are rude).

Years before long-term self-regulation began to receive any attention in the empirical literature, theorists posited that adolescents can regulate their actions and emotions in the immediate or short-term context in order to attain their long-term goals (Demetriou 2000). In Moilanen's (2007) model, long-term self-regulation involves the purposeful control or direction of behavioral, emotional, and attentional effort over longer periods of time, specifically weeks, months, or years, in order to attain goals. In Gestsdottir and Lerner's (2008) model, intentional self-regulation includes goal-directed behaviors that are consciously initiated in order to meet individual goals within contextual constraints. For example, an adolescent might save their wages from an after-school job for many weeks or months in order to buy an expensive digital music device. Long-term self-regulation may also

involve substantial planning, such as designing a course of study in college, in order to attain distant career goals.

To date, little is known about how short- and long-term aspects of self-regulation are related to one another. Moilanen's (2007) cross-sectional validation study revealed a strong positive correlation between these two factors, such that youth with high levels of short-term regulation also reported high levels of long-term regulation. Conceptually, it seems possible that youth with better short-term self-regulation abilities in childhood and early adolescence will be well positioned to develop superior long-term self-regulation skills during the adolescent years. For example, preteens who have mastered strategies for controlling their negative feelings "in the moment" will then be able to learn techniques for controlling stress due to longer-term challenges, such as preparing for college entrance examinations. This notion is supported in research on adolescent and adult Attention Deficit Hyperactivity Disorder (ADHD): Individuals who struggle to control their attention often make impulsive decisions that prevent them from attaining their ultimate goals (Barkley 1997; Toplak et al. 2005). Notwithstanding, additional longitudinal investigations with repeated-measures designs are necessary to explore this hypothesis.

Measures and Measurement Issues

A recent review of the measures used in self-regulation research indicates that to an overwhelming degree, adolescent self-regulation has been assessed using self-report questionnaires (Moilanen et al. 2009). Developmentally appropriate task- or observation-based measures exist (e.g., the adapted delay of gratification paradigm for adolescents; Wulfert et al. 2002); likely questionnaires continue to be favored because they are easy to use in adolescence research. Most of these questionnaires focus on youths' self-perceptions of their self-regulatory abilities, or in other words, the products of self-regulatory success or failure. A subset of these questionnaires assesses the specific strategies teens use for regulation (e.g., how frequently teenagers use positive reappraisal to manage negative emotions).

It is notable that these questionnaires share a near-exclusive focus on regulation in the immediate or short-term context. Typically, questionnaire items do not specify a temporal context or time frame, but in

other instances, individual items may be collapsed into broad scales without regard to item time references. Researchers have begun to address this limitation by creating new measures that separate short- and long-term self-regulation into distinct factors (e.g., the Adolescent Self-Regulatory Inventory; Moilanen 2007), and by measuring self-regulation in terms of personal goal processes (e.g., Scott et al. 2008).

While several of these questionnaires of short-term and/or long-term self-regulation have been validated extensively, not all of these measures have received such scrutiny. Commonly, validation examinations involve correlating scores from one self-report questionnaire with scores from another similar questionnaire. Although these validations are better than nothing, it may not be possible to identify validity problems present in one questionnaire if the same problems are present in the comparison measure. As interest in this research area continues to grow, continued measure validation efforts are necessary, and these studies should include multiple informants and methodologies other than adolescent self-report questionnaires whenever possible. This gap further emphasizes the need for additional developmentally appropriate task- or observation-based assessments of self-regulation for adolescents. Validation studies can and should be designed to fill substantive knowledge gaps, including testing the tacit assumption that youth with better self-regulatory abilities use more adaptive types of cognitive strategies to self-regulate (e.g., employing positive reappraisal to manage negative emotions; Garnefski et al. 2007). Similarly, validation studies focused on the confluence of personal goal processes and long-term self-regulation abilities promise to enrich both research areas and provide novel information on how youth actually self-regulate over extensive spans of time.

Gaps in Knowledge

Three pressing issues require additional attention in research on adolescent self-regulation. Specifically, more information is required about developmental stability and change, crucial socialization experiences during adolescence, and the role of specific self-regulatory abilities in the development of adolescent adjustment problems. Given the importance of self-regulation in the development of adolescents' psychological and behavioral problems, these lingering

questions must be answered in order to inform prevention and intervention efforts.

How does self-regulation change across the adolescent years? To date, there is very little published data about longitudinal stability and change in self-regulation during the teen years. The available data indicate that there is developmental continuity in individuals' self-regulatory abilities, but also gradual improvements in self-regulation over time. At least two recent studies suggest that there is rank-order stability in short-term self-regulation from ages 10 to 11 (Moilanen et al. 2010) and from ages 12 to 13 (de Kemp et al. 2009). In their work with the 4-H Study of Positive Youth Development, Gestsdottir and colleagues (2009) provided evidence of longitudinal stability of long-term or intentional self-regulation from ages 14 to 16.

Notwithstanding, such investigations of rank-order stability do not answer questions about the degree and timing of longitudinal change in self-regulation. This issue was addressed in two recent investigations, including one longitudinal and one cross-sectional study. In a 3-year longitudinal study, Lengua (2006) modeled latent growth in children's temperamental effortful control in a sample of youth aged 9–12 years at the study's first assessment. Children's average levels of effortful control were initially rather low, but increased gradually over the years. Interestingly, growth rates were not correlated with initial levels of effortful control, which indicates that the degree of change was not attributable to individual differences at the onset of the study (Lengua 2008). A recent cross-sectional study suggested that long-term self-regulation also continues to improve throughout adolescence and early adulthood: Compared to adults, adolescents were much less adept at planning ahead, anticipating future consequences, and delay of gratification (Steinberg et al. 2009). These investigations collectively indicate that there is continuity in self-regulation during early adolescence, and that self-regulatory abilities continue to grow during the teen and early adult years. Regardless, more information about the course and timing of self-regulatory change across the entire second decade of life is needed in order to target critical opportunities for intervention.

How is self-regulation socialized during adolescence? The comparatively rich literature on the development of self-regulation in childhood heavily emphasizes the

role of the family context in its socialization (Morris et al. 2007). Adolescence researchers have also addressed questions about socialization, but to date much of this research has focused on replicating findings established in the childhood-era literature. For example, high levels of maternal warmth have been linked to high levels of short-term self-regulation in childhood (Colman et al. 2006) and adolescence (Finkenauer et al. 2005).

Several gaps render the adolescence literature incomplete. First, studies on self-regulatory socialization during adolescence have strongly emphasized parenting practices (e.g., parental psychological control), but have generally ignored other potentially important components of the family context that may exert independent effects or moderate the impact of parenting practices on youth's self-regulation (e.g., the emotional climate of the family; Morris et al. 2007). Second, much of the research on parental socialization during adolescence has been cross-sectional in nature and has predominantly focused on short-term aspects of self-regulation. Consequently, many researchers have not been able to consider whether parental socialization attempts are correlated with improvements in short-term or long-term self-regulatory abilities. Finally, the potential socializing influence of peers has been virtually ignored in self-regulation research at all ages. This omission is particularly surprising, given the shift in peer and parent relationships that occurs during adolescence (Furman and Buhrmester 1992). Substantial contributions to the literature on self-regulatory socialization sources and processes during adolescence could be made through addressing these gaps, and likewise, there is great potential to identify vital intervention targets through these investigations. Existing datasets may be suited to such inquiries: For example, these first two identified gaps in adolescent self-regulatory socialization research were addressed in one recent short-term longitudinal study of existing data from the Pitt Mother and Child Project. This analysis of secondary data revealed that rank-order improvements in boys' short-term self-regulation from ages 10 to 11 were attributable to low levels of maternal antagonistic parenting and high levels of mother-son relationship quality (Moilanen et al. 2010). This suggests that the mechanisms of parental socialization of self-regulation vary across childhood and adolescence, and that both parenting practices and

the affective context of the parent–child relationship matter during the teen years.

What specific self-regulatory abilities contribute to the development of the full range of adolescent adjustment problems? With some exceptions, the broader field of adolescent self-regulation has predominantly focused on the subcomponent of inhibition (e.g., ignoring distractions, or suppressing negative behaviors or emotions) and its long-term impact (e.g., Mischel et al. 1989), at the cost of limited attention to other important elements of self-regulation and their consequences for adjustment and well-being. In their influential hybrid model of executive function, Barkley (1997) described eight distinct systems or skills that make self-regulation possible. Beyond inhibition (“inhibition of task-irrelevant responses” and “control of behavior by internally represented information”), these include components of activation (“executing of goal-directed responses” and “execution of novel/complex motor sequences”), adaptation (“behavioral flexibility” and “task re-engagement following disruption”), monitoring (“sensitivity to response feedback”), and perseverance (“goal-directed persistence”; Barkley 1997, p. 191).

Theoretically, adolescents should become capable of using each element interchangeably, purposefully, and appropriately for the particular context and their personal goals (Barkley 1997). More information is needed about how each of these capacities independently and collectively contributes to optimal adjustment. It is possible that each component serves as a separate pathway to distinct adjustment outcomes: For example, poor inhibition is an established antecedent of externalizing difficulties (Kochanska and Knaack 2003), and high perseverance predicts academic success (Duckworth et al. 2007); yet, this full range of self-regulatory abilities has rarely been studied simultaneously in a single investigation. Researchers could employ batteries of tasks in order to assess distinct components of self-regulation, an approach used by Kochanska and colleagues in their research on young children’s effortful control (e.g., Kochanska and Knaack 2003). Each source of data could be analyzed separately or aggregated into a composite or latent construct. Alternately, researchers who prefer to use survey methodologies could use questionnaires that assess this full array of self-regulatory abilities. A combination of behavioral tasks and questionnaires

may also be fruitful. Ultimately, such research may increase the impact of interventions by identifying youths’ specific self-regulatory skill strengths and deficiencies.

Major Theorists and Researchers/ Concluding Comments

At this time, it seems somewhat premature to identify major theorists and researchers in the area of adolescent self-regulation. Scholars of adolescence have become interested in this topic only relatively recently (Tobin and Graziano 2006), and the issues raised throughout this encyclopedia essay typify a research area still in its infancy. Clearly, the time is ripe for scholars of adolescence to move beyond the basis provided by the comparatively rich childhood-era literature on self-regulation. With such vast territory still uncharted, there is great potential for researchers and theorists to make lasting contributions through addressing the methodological limitations of existing research, by answering lingering and new conceptual questions, and by developing a cohesive definition and theory of adolescent self-regulation. The importance of self-regulation for adolescent adjustment is well established and understood, and, ultimately, establishing a subliteration of self-regulation specific to the teen years will be of great benefit to the field of adolescence as a whole.

Cross-References

- ▶ [Delay of Gratification](#)
- ▶ [Self-Monitoring](#)

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Self-reports

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Overview

Adolescents may face obstacles on their paths to adulthood including delinquency, substance use, early or unprotected sex, family conflict, and mental illness. Adolescent self-report is the primary source of information about these factors, and the only source for some factors, but adolescents may not answer surveys accurately. Adolescents' self-reported risk behaviors are collected by surveys including the Youth Risk Behavior Survey, Monitoring the Future, and the National Survey on Drug Use and Health, which are used by federal, state, and local governments to monitor risk behavior prevalence, set policy priorities, and promote legislation. Understanding the limitations of adolescent self-report is important for accurately measuring changes over time, determining geographic areas and demographics with greater risk behavior prevalence, and

targeting and evaluating public health interventions. Inaccurate data can easily lead to mistakes in policy creation and evaluation.

The limitations of adolescent self-report are primarily found using two methodologies. First, researchers can compare adolescents' self-reported survey responses with the true answer, as determined by a gold standard. Second, several survey methods can detect inconsistent responses that suggest that the survey responses are inaccurate.

Like adults, adolescents' self-reported behavior is most accurate for easily recalled information that is not sensitive or deviant within their social context. Binary/dichotomous questions are more easily recalled, and have greater accuracy than questions with many potential answers, such as recalling dates or number of times. The theories of adult self-report can generally be directly applied to adolescents. These theories are summarized in Stone et al. (1999); Sudman, Bradburn, and Schwartz (1996); Tanur (1992); Turner and Martin (1984).

Inaccurate self-report does not only show the limitations of data: it can also be constructive. The limitations of adolescent self-report can also serve as a form of revealed preferences that may give researchers insight into respondents' attitudes about their behaviors. Adolescents who are surveyed twice separated by some time period, and who retract their earlier reported risk behaviors reveal that they perceive themselves to have changed, more effectively than a simple survey question could determine.

Measures and Measurement Issues

The validity of some survey items can be evaluated by comparing the survey report with the true answer, as measured by a gold standard test. Survey item validity can be quantified using epidemiological methods for medical tests. The survey question is analogous to a medical test, with sensitivity, specificity, positive predictive values, and negative predictive values.

For test-retest data, the standard epidemiological methods are still an area of active research. Epidemiology has developed methods to estimate standard epidemiological quantities (e.g., sensitivity, specificity) for diseases with no gold standard test. New epidemiological methods, including Bayesian methods, can analyze test-retest data and compute prevalence, sensitivity, specificity, and predictive values (Joseph, Gyorkos,

and Coupal 1995); (Rosenbaum 2009). Changes between test and retest are evaluated using analysis methods for paired data, such as the McNemar test to detect prevalence changes. A standard *z* or chi-squared test for prevalence cannot be used because these tests assume independence, and test-retest data is paired.

Many agreement measures could be used to evaluate test-retest data, including raw agreement, Cohen's kappa, polychoric (tetrachoric) correlation, Pearson correlation, Kendall's tau, and Spearman's rho (Adejumo, Heumann, and Toutenburg 2004). In practice, Cohen's kappa is the most commonly used measure of agreement in test-retest data. Raw agreement is the sum of the proportions of those who answer consistently positive and consistently negative, but it does not adjust for the fact that some agreement will be due to chance. Cohen's kappa is a chance-adjusted measure of agreement, but kappa is sensitive to marginal values: a binary question with prevalence farther away from 50% – where the behavior is either very rare or close to universal (100%) – will have lower kappa, so it does not allow questions with different prevalences to be compared. Low kappa values can indicate low agreement, but they can also indicate either low prevalence or prevalence change between waves. Kappa is considered to be fair to good if it is between 0.4 and 0.75, and excellent if it is above 0.75.

Polychoric correlation (PCC) is constructed to be independent of prevalence, so rare and common behaviors can be compared on the same scale and low agreement cannot be attributed to either low prevalence or prevalence change between waves. PCC assumes that discrete responses are based on an underlying normally distributed continuous variable. PCC corrects for the attenuation in correlations due to discretization of response options, and is an agreement measure independent of prevalence, in contrast to the conventionally used kappa, and can be interpreted like the usual correlation, in which 0 is chance agreement and 1 is perfect agreement. PCC can also adjust for potential differences in response tendency by wave, such as if adolescents redefine risk behaviors on retest; PCC is high if the primary response tendency difference is a shift.

These three agreement measures examine only the similarity of responses without considering the direction of the consistency: retraction and apparent initiation measure the direction of consistency. These

measures give easily interpretable means to compare observed inconsistency with inconsistency expected from chance. Absolute retraction is the proportion of the sample contradicting an earlier reported behavior: an affirmative answer followed by a negative. Relative retraction is the proportion of those who initially reported the behavior who subsequently retract their report: absolute retraction divided by wave 1 prevalence. Absolute apparent initiation is the proportion of the sample who appear to initiate the behavior between waves by reporting the behavior at wave 2, but not at wave 1. Relative initiation is the proportion of wave 2 endorsers who did not report the behavior at wave 1: absolute initiation divided by wave 2 prevalence. Retraction and initiation depend on prevalence: absolute retraction and initiation are bounded from above by the prevalence of the risk behaviors; rare behaviors have more variable relative retraction and initiation because the denominator is small.

Some researchers make a distinction between consistency (retraction and apparent initiation) over a short period and a long period. For long periods such as 1 year, they refer to external consistency. For shorter periods like 2 weeks, they refer to internal consistency. Both measures are computed the same way; the only difference is in the data used.

Error due to inconsistency can be estimated as a standard error multiplier derived from a Bayesian simulation model (Rosenbaum 2009). Estimated error due to inconsistency is another method of quantifying the impact of inconsistency on adolescent risk behavior surveillance. Error is derived from a model that makes different assumptions than PCC, but both are independent of prevalence.

Populations Studied and Sources of Data

Information about the validity of adolescents' self-report comes from 3 collections of methods: comparison of survey responses against a gold standard; comparison of prevalence estimates obtained from survey data against known base rates (aggregate validity); and survey techniques. Survey techniques to identify misreport are extensive, including bogus and bona fide pipelines, fictitious questions, test–retest data, asking respondents whether they told the truth, and comparing prevalence estimates under different survey modes.

Comparison Against a Gold Standard

Studies of survey response validity began in the late 1940s, just over a decade after the rise of polling data. The Denver Validity Survey of 1949 compared survey responses from a random sample of 920 adults against a gold standard for questions such as voting and registration status, having a library card, and car ownership, and found inaccurate survey responses. It also found that adults misreported related items such as voter registration and voting, but not unrelated items, such as owning a library card, having a telephone, and voting, findings which were subsequently replicated in the 1980s. The political science literature has extensive data about overreport of voting because voting self-report can be compared with administrative data. Respondents who say that they value voting and view voting as a civic obligation, and respondents with a third party in the room during the interview are more likely to overreport voting, suggesting that respondents are concerned both with their self-image of civic participation and with their appearance to others.

Similar to adults, adolescents misreport related items, such as math SAT score, verbal SAT score, and GPA.

A saliva test for cotinine detects smoking in the last 24 h. A 1991 RAND Corporation study conducted as part of Project ALERT compared survey responses with cotinine test results. This survey found almost no underreporting, and some over-reporting: 0.3% of the sample tested positive for cotinine but reported no tobacco use on the survey; 2–6% claimed to use tobacco but had no positive test for cotinine, which could be due to light and experimental smoking. These biomarker findings may not generalize to other testing conditions: if the biomarker were collected prior to survey administration or subjects were told before the survey that their answers would be verified, this knowledge may suppress underreporting. Other studies comparing survey responses with cotinine test results find that adolescents may underreport smoking. A 1985 study of adolescents aged 12–14 ($n = 1,854$) used salivary cotinine, salivary thiocyanate, and alveolar carbon monoxide as gold standards for smoking and smokeless tobacco. Subjects were told about the biomarker collection. Of the 175 subjects who tested positive for cotinine and would be considered by other studies to be smokers, 40.8% tested negative for the other two indicators of smoked tobacco and were likely smokeless tobacco users. The population of adolescents and the

sensitivity of the cotinine test to detect adolescent smoking likely affect whether a cotinine test reveals underreporting or overreporting.

A 1996–1998 study of HIV-positive adolescents ($n = 182$) compared self-reported marijuana use with a urine test and found that more respondents reported using marijuana than the urine test detected. The researchers assumed that negligible numbers of nonusers claim to use marijuana, but this pattern is consistent either with low marijuana test sensitivity or with respondents who self-identify as marijuana users claiming to have used marijuana recently irrespective of actual recent use, which is similar to overreporting of other types of self-identification such as organization affiliation.

In comparisons of self-report with the true answer, adolescents overreport height and underreport weight; underreport delinquency or arrest; and misreport their circumcision status. A 2003 study of a geographically dispersed and diverse convenience sample of US high school students to validate the YRBS ($n = 2,032$) found that adolescents overreported height by 2.7 in. and underreported weight by 3.5 lb, resulting in a 2.6 kg/m² higher body mass index when based on self-reported versus measured values, enough to move an individual's classification from normal to overweight or from overweight to obese.

A 2002 study of indigent youth in Houston ($n = 1,508$), of whom half were circumcised, found that only 65% of circumcised adolescents considered themselves circumcised, 23% did not know, and the remainder considered themselves uncircumcised; only 65% of uncircumcised adolescents considered themselves uncircumcised, 31% did not know, and the remainder considered themselves uncircumcised. Among the 73% of adolescents who thought they knew their circumcision status, the sensitivity of self-reported circumcision status was 90.5% and specificity 94.8%.

Unprotected sex can be detected with two biomarkers. Johns Hopkins Sexually Transmitted Disease Center developed a polymerase chain reaction (PCR) assay for semen Y chromosome (Yc) collected on a vaginal swab as a biomarker for unprotected sex in the last 2 weeks, abbreviated YcPCR. Among African-American female adolescents in a reproductive health intervention (Atlanta, 2002–04) who reported 100% condom use in the last 2 weeks in 2002–2004 ($n = 186$), 34% tested positive for Y chromosome. In

archived samples collected in 1992–1994 from a Baltimore sexually transmitted disease center patient sample reporting 100% condom use in the last 2 weeks ($n = 141$), 55% tested positive on the YcPCR. The YcPCR test is more sensitive than tests for prostate-specific antigen in vaginal fluid which are only sensitive for 24–48 h.

Aggregate Validity: Comparison with Known Base Rates

Another method of discovering inaccurate self-report is by comparing the proportions in a representative sample with gold standard administrative data that indicate the true population proportion. Examples of aggregate validity in adults include reports of voting in the most recent election compared with administrative records, reports of donating blood in the past year compared with quantity in blood banks, and reports of current membership in an organization with the actual membership numbers. The Harvard Injury Control Research Center has documented many such examples from extrapolation of nationally representative polls of adults including overreports of shooting a criminal in self-defense compared with the total number of people reporting to emergency departments for any reason or compared with the total number of burglaries. National random telephone surveys find 4–10% of respondents claim to belong to the National Rifle Association (NRA) but NRA figures report only 1.5% of American adults; 15% claim to subscribe to Sports Illustrated, but the magazine reports only 3% of American households purchase a subscription; 20 million Americans report that they have seen alien space craft and 1.2 million report having been in actual contact with creatures from other planets, but the true number is (almost certainly) zero.

Aggregate validity methods have not been used much if at all in adolescents, perhaps because of lack of gold standard administrative data about adolescents. The author's analysis of the nationally representative Add Health data using the Harvard Injury Control Research Center's methods finds that adolescents likely overreport having been shot or shooting others.

Bogus and Bona Fide Pipelines

Respondents may be more accurate if they believe their self-report will be verified. Two survey techniques attempt to elicit honesty through verification.

A bogus pipeline is a survey technique of taking a physiological measurement or collecting a bio-sample which purports to verify respondents' reports without analyzing it. A bona fide pipeline actually measures or analyzes the sample. A bona fide pipeline is the gold standard method above, but the intent is to insure that the respondent knows about the test when answering the survey, and the test is sometimes used as a comparison group for a bogus pipeline group. If more respondents report a behavior on a survey accompanied by physiological measurements than without, researchers conclude that the respondents may conceal their behavior on an unverified self-reported survey, assuming most respondents find the pipeline believable (e.g., respondents may believe that a saliva swab could detect smoking, but not, for instance, unprotected vaginal sex).

Adult respondents subjected to a bogus pipeline produce higher prevalence of reporting deviant behavior than respondents not subjected to a bogus pipeline, and respondents who are asked to predict the bogus pipeline's results estimate higher prevalence as well. These techniques have been used in adults to increase accuracy of women's reporting of their sexual attitudes and behavior or food diary reporting in unsuccessful dieters.

Adolescents report more smoking when their answers are verified using physiological samples. Adolescent smokers enrolled in a smoking cessation program reported less cessation when their answers were verified with physiological tests or bogus pipeline condition compared with only a self-administered survey. Adolescents report more smoking and substance use in surveys in which respondents believe their lies can be detected using hair or breath samples.

Fictitious Drugs

Another method of approximating the proportion of respondents who are overreporting is used in surveys of drug use by placing names of fictitious drugs on the survey. It is hypothesized that adolescents who overreport drug use are more likely to claim to use the fictitious drugs. Adolescents who report use of fictitious drugs also reported using many other drugs. Respondents who report using fictitious drugs may, however, be indiscriminate drug users and not know the names of the drugs that they use.

Inconsistency: Test-Retest Data

In the absence of a gold standard test or a credible bogus pipeline, researchers can administer the same questions twice in a short time period and assess the reliability of adolescents' reports. If questions are specific enough that changing answers is logically impossible or very unlikely, administering a survey twice in a short time period can identify misreport: for example, an adolescent may state that they have engaged in a behavior, and subsequently say that they have never engaged in the behavior. Retracting earlier-reported behaviors – initially reporting having ever engaged in a behavior, and subsequently reporting having never engaged in the behavior – implies logically that the respondent gave inaccurate information in at least one of the two surveys, although the data can't reveal which. The Center for Disease Control and Prevention (CDC) does reliability studies of the Youth Risk Behavior Survey (YRBS) and publishes prevalences and kappas, but does not release the data publicly.

Most reliability studies are by-products of other longitudinal studies in which questions are separated by a larger interval; consistency over a longer time interval is sometimes called external consistency in the literature. Only inconsistent responses are clearly inaccurate because respondents could initiate behavior in a longer time interval. Depending on the questions asked and the time interval between surveys, researchers can detect different types of inconsistencies, including denial of lifetime use after admitting use in previous wave; denial of use in the past year after admitting recent use in a survey within the past year; and admitting use in the distant past after having denied lifetime use in previous waves.

Studies of recanting have found that adolescents recant their earlier reports of engaging in sexual intercourse, cigarette smoking, the use of alcohol and illegal drugs, abortions, pregnancy, virginity pledges, having a permanent tattoo, driving for respondents under age 15, and pierced ears for men.

Demographic factors associated with greater retraction include low education, African-American race, Latino ethnicity, male gender, and younger age. Most demographic factors may not be explanatory, but rather could be indicators of an underlying factor which actually causes the retraction. For example, blacks and less educated respondents may be more concerned about self-presentation in front of white

interviewers. Low education could be associated with retraction due to poor reading comprehension, which would add noise to the responses. One study that measured sentence complexity through sentence length finds that consistency is on average higher for questions with simpler sentences.

Mode Effects

Studies where researchers administer the same questions in two different survey modes have found that self-administered surveys yield larger proportions of self-reported risk behavior, including number of sex partners and frequency of unprotected sex.

Computer-assisted interviewing appears to elicit at least as many reports of sensitive behaviors as pen and paper surveys, but only if the computer terminals of respondents are separated so that respondents do not suspect that their neighbor can see their responses or if the survey is administered by audio computer-assisted self-administered interview (ACASI). School-based surveys appear to elicit systematically more reports of all behaviors than household-based surveys, both sensitive and nonsensitive behaviors. The theory for why school-based surveys elicit more reports of sensitive behaviors is that adolescents may feel self-conscious about household members potentially seeing their responses, but the theories do not explain why respondents would report systematically more nonsensitive behaviors such as eating fruit and participating in exercise.

More adolescents report weight control practices in self-administered surveys than interviews: [almost] no adolescents admit unhealthy weight control practices such as vomiting and fasting in interviews, and few report healthy weight control practices such as diet and exercise.

Randomized Response

One method proposed to reduce underreporting is randomized response. Randomized response estimates prevalence at the population level but cannot yield correct data for the individual. Rates of reporting sensitive behaviors such as abortion are higher on randomized response surveys.

Controversies

The reasons for inaccurate self-report are not well-understood. Proposed explanations include cognitive factors, social presentation, and self-presentation.

These proposed explanations are not mutually exclusive: they may all be true to differing extents.

Cognitive Factors

Survey response can be modeled as four stages: question comprehension and interpretation; memory retrieval; translation into survey response; and editing for self-presentation. Inconsistency can occur due to errors at any of the four stages, and similar factors can cause inconsistency at multiple levels: respondents' interpretation of survey questions and translation of memories into survey response can be influenced by their beliefs and social context, especially in ambiguous situations. Respondents who misreport their risk behavior to peers, parents, or on surveys, may have formed false memories, as rehearsal of incorrect responses can change respondents' memories. Salient behaviors – those respondents consider important to their identities, and possibly central – are more available in memory due to rehearsal, so respondents are likely to have more consistent self-presentation of salient behaviors, whether or not the self-presentation is accurate. Adolescence is a period of identity formation, and many adolescents define themselves by their risk behaviors. Adolescents who repeatedly present themselves as having engaged in a risk behavior or not, are more likely to repeat that self-presentation to researchers consistently, but if they change their identity, they would be expected also to change their survey reporting, even of past behavior.

Social Factors: Self-Presentation to Others

Risk behaviors are considered to be sensitive, that is, respondents may be concerned about social undesirability of their answers, invasion of privacy, and risk of disclosure of their answers to third parties.

Survey response psychologists have traditionally viewed social desirability as reflecting either most respondents' concern with the opinion of the researcher or the need by a subset of respondents for social approval. There is a third possibility: respondents could be concerned with their self-presentation as related to their own self-image.

Privacy invasion is conceptualized by researchers as a product of the question topic, as some topics are intrinsically invasive to ask about, irrespective of the answer. Assessing sensitivity is difficult to do.

Some surveys have asked respondents which survey topics would make “most people” “very uneasy,” but these ratings change as social norms do. Although researchers have hypothesized a relationship between question sensitivity and nonresponse, the relationship has empirically been found to be weak. Unit nonresponse seems related to topic saliency (i.e., respondents’ interest in the topic), motivation, and ability to complete the survey (e.g., literacy), rather than topic sensitivity.

Respondents’ beliefs and social influences have empirically been shown to be associated with their survey reporting. Behavior that conflicts with respondents’ beliefs is likely to be misreported.

Respondents who consider a behavior counter-normative are also less likely to report the behavior and more likely to skip those questions. Gold-standard studies with adults show respondents with greater levels of political interest are more likely to overreport voting and respondents who consider traffic violations and bankruptcy counter-normative report fewer of their traffic violations and bankruptcies. Adolescents may underreport stigmatized behavior due to self-presentation bias or question threat, or overreport to improve social status.

Retraction of earlier reported risk behaviors is most common for intimate, deviant, or illegal behaviors and experimental behaviors initially reported as infrequent. Adolescents’ retrospective reports of substance use are more highly correlated with self-reported present use than with self-reported use reported at the actual past time period.

Identity Factors

The identity theory of self-report is that respondents use surveys as an expression of their identities, so they will answer surveys according to their identities rather than their actual behavior.

Several aspects of the literature of self-report give evidence for the identity theory of self-report. This theory complements the self-presentation theory and is not exclusive of it.

First, self-presentation theory predicts that adolescents will underreport stigmatized and deviant behavior, such as marijuana, smoking, and drug use, and for younger adolescents sexual behavior. In fact, adolescents seem to overreport these behaviors. The self-presentation theory predicts that adolescents are only

concerned with their appearance to others, and it predicts that adolescents are less likely to report deviant behaviors, even if they engaged in them. Self-presentation theory alone does not account for overreport of deviant behaviors.

Second, in short periods, adolescents are actually most consistent in their reports of behaviors such as alcohol and drug use, smoking, and sex, although self-presentation predicts that adolescents may conceal these behaviors (Rosenbaum 2009).

Third, adolescents change their reports of deviant behaviors over long periods, even for behaviors that are unlikely to change, such as having a tattoo and pierced ears for boys. Adolescents who take a virginity pledge or become a born-again christian are more likely to retract earlier reports of having had sex, while adolescents who have sex or leave born-again christianity are more likely to retract earlier reports of having taken a virginity pledge. Changed reports of pierced ears for boys and tattoos could indicate changed identity.

Fourth, adolescents seem to anchor on current behavior in reporting past behavior. Longitudinal studies of drug use find that adolescents’ recollection of their level of past drug use is more similar to their current level of drug use than to their actual earlier-reported drug use.

Fifth, respondents may interpret some survey questions as asking about group affiliation rather than actual behavior. For example, the factor of five difference between the 15% of the American population who claims to subscribe to Sports Illustrated subscribers and the 3% of the population who actually do subscribe may be explained by respondents interpreting the question whether they currently subscribe to Sports Illustrated as the identity question “Are you the type of person who subscribes to Sports Illustrated?” Likewise questions about actual past voting behavior may be interpreted as asking about group membership in the set of people who actively vote. Respondents who perceive their current behavior as aberrant from their self-image may answer according to identity rather than actual behavior, “to give the right idea” about themselves in Jack Fowler’s (1995) words.

The risk behaviors that adolescents engage in are a central part of their identities. The consistency of adolescents’ survey behavior reveals adolescents’ preferences for how to portray themselves to an adult outside their life. Revealed preferences in behaviors

have been used increasingly in economics to measure consumer preferences and attitudes instead of survey responses about hypothetical situations. Inconsistent survey responses may reveal a lack of commitment to a behavior, experimentation with a behavior, and the lack of salience to identity in a shorter period. In a longer period, inconsistent responses may indicate changed identity. Risk behaviors with high levels of inconsistency may be unimportant to adolescents or a domain where many adolescents change their behavior.

Inconsistent reports may also carry information about adolescents' beliefs and priorities. Inconsistent reports are more likely for behaviors that conflict with respondents' identities or values. Respondents are likely to report behavior that conflicts with their beliefs inaccurately: for example, adults with greater levels of political interest are more likely to overreport voting, and respondents with more negative views of traffic violations and bankruptcy report fewer of their own traffic violations and bankruptcies.

Adolescents' retraction of earlier reported risk behaviors is most common for intimate, deviant, or illegal behaviors and experimental behaviors initially reported as infrequent. Adolescents seem to revise their pasts as their current behavior changes: their retrospective reports of substance use are more highly correlated with self-reported present use than with actual past use, adolescents who take a virginity pledge or become born-again christians are more likely to retract earlier reports of having had sex, and adolescents who have sex or stop being born-again christians are more likely to retract earlier reports of having taken a virginity pledge. Adolescents' self-images may influence them to be less likely to report weight control practices in interviews than self-administered surveys, both healthy and unhealthy practices, including exercise, diet, vomiting, and fasting. Self-image may also play a role in adolescents' decisions to report using fictitious drugs.

Attempts to Improve Report

To allay respondents' concerns about disclosure of their answers to third parties, surveys give elaborate confidentiality measures, and assurances to respondents, but respondents may not pay attention to them; the wording of confidentiality statements is not associated with response rate for sensitive topics. For nonsensitive topics, confidentiality clauses can decrease response

rate because they raise concerns that respondents had not considered. Question sensitivity is also not highly associated with item nonresponse, which may imply either that respondents may not edit their answers or that respondents answer regardless of question sensitivity but misreport if they are uncomfortable with the question.

Randomized response techniques seem to reduce misreporting, but not eliminate it: fewer respondents underreport and overreport of drug use, but 35% of those arrested for drunk driving did not report the arrest even with randomized response. Rates of reporting sensitive behaviors such as abortion are higher on randomized response surveys. Randomized response techniques may not be able to always elicit true answers due to rehearsal of false memories; adults arrested for drunk driving who rehearse an inaccurate self-presentation to their peers are more likely to give that inaccurate report to researchers, despite anonymity afforded by randomized response.

Self-Report Issues in Social Sciences

Researchers may not attend to issues of self-report because they are inconvenient and not easily remedied. As Jack Fowler stated, researchers may refer to the validation of risk behavior survey instruments "as if having been validated was some absolute state, such as beatification" (1995).

Major Theorists and Researchers

Adolescent self-report is studied by both survey methodologists and subject area researchers, whose research often remains independent of each other due to disciplinary boundaries. Survey methodologists publish in journals for survey methodology and public opinion. *Public Opinion Quarterly*, a journal of the American Association of Public Opinion Researchers (AAPOR), has published papers on the validity of self-report since the late 1940s. Survey methodologists working for the US federal government test the validity of their surveys by studying the accuracy of self-report, and present their findings to the Federal Committee on Statistical Methodology. Subject area researchers specialize in studying adolescent self-report in their subject area. Separate bodies of research on the accuracy of self-report exist within many fields including substance abuse, sexual behavior, political science, and

criminology. Despite thematic similarities, these areas of research often remain separated.

Conclusions

All researchers of adolescence need to understand the accuracy of adolescents' self-report in order to interpret adolescents' true behavior, design interventions to improve their behavior, and protect adolescents from risky behavior. Inconsistent self-report is not just an inconvenience to research; it can also serve as a window to adolescents' norms, self-image, and how adolescents see their own behavior and interpret their pasts.

Cross-References

- ▶ [Diary Methods](#)
- ▶ [Reliability](#)
- ▶ [Validity](#)

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need for physiological arousal, novel experience, and willingness to take risks to obtain such arousal (Zuckerman 1994). Sensation seeking rests on the notion that individuals reliably differ in their preferences for or aversions to stimuli or experiences with high-arousal potential, and that this need to seek out novel experiences is highly biologically based. Individuals with higher sensation-seeking tendencies are more willing to take more social, physical, financial, and legal risks. That willingness also results in more negative outcomes for those who engage in higher levels of risk taking.

Although sensation seeking, as a trait, was not developed specifically to apply to adolescents, it is a trait that has great relevance to the adolescent period. Sensation seeking is associated with a host of problem behavior, including illicit drugs, sexual risk taking, reckless driving, smoking, aggressive behaviors, and alcohol use (for a review, see Zuckerman 2007). Importantly, sensation-seeking traits are reflected very early in development. For example, adolescents who report higher sensation-seeking tendencies are more likely to begin engaging in problem behaviors earlier than their peers with lower sensation-seeking tendencies, as have been shown with a variety of different drug use (Zuckerman 1994). As seen below, sensation seeking is of considerable importance to the study of adolescence in that it serves as a marker for intervening to address as well as prevent problem behavior.

Although much of the research on sensation seeking has involved psychological studies using brief assessments of the trait, research also has shown that individual differences in sensation seeking relate to biochemical differences. Biochemical research reveals that engagement in novel behaviors or exciting stimuli elicits a rapid, albeit transient, surge of dopamine. That surge is revealed in an enhanced functioning of the mesolimbic DA (dopamine) reward pathway in the brain of individuals who respond to high novelty (see Donohew et al. 2004). When individuals engage in novel or thrilling experiences, the experiences activate the release of dopamine, which along with serotonin and norepinephrine, results in a chemical reward that is experienced as a positive emotional response. It is this chemical response that individuals describe as the “rush” of strong physical or emotional arousal. This area of research also has led to conclusions supporting

Sensation Seeking

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Sensation seeking is a concept that describes a personality trait relating to an individual's relative

the notion that sensation seeking is a heritable trait. For example, adolescent twin studies suggest that sensation seeking, as a trait, is at least partially heritable (Hur and Bouchard 1997; Koopmans et al. 1995). Research in this area, from both human and other animal research, further reveals that dopaminergic activity increases during adolescence, which may explain why the period of adolescence is seen as potentially fueling an increase in sensation seeking (see Chambers et al. 2003). Evidence in humans indicates that this drive declines from late adolescence onward, suggesting that it peaks during the adolescent period (Zuckerman 1994). Increases in this drive have been viewed as at least partially responsible for the surge in experimentation and risk-taking activities during adolescence. Findings like these suggest that the need for activation and sensation seeking appears, in part, genetically driven to produce underlying biological differences in need for activation, and that these differences may be inherited and that they differ across the life span.

Rather than viewing sensation seeking's apparently high heritability and apparent surge during adolescence as cause for disappointment in efforts to reduce its negative outcomes, researchers have taken advantage of it. And they have done so with considerable success. Sensation seeking actually has become an attractive individual difference variable for envisioning and implementing interventions for a variety of risk-related or illegal behaviors. The robust associations between sensation seeking and adolescent problem behaviors have prompted some to promote sensation seeking as a screening test for those at risk; for example, sensation seeking serves as a useful tool to identify adolescents at risk for onset of binge drinking and established smoking (see Sargent et al. 2010). These efforts are important given, for example, that efforts tailoring antidrug-use messages to adolescents with high sensation-seeking propensities have shown that sensation seekers are more drawn to messages that are novel, complex, intensely stimulating, and arousing. These are important findings given that efforts can then be targeted to specific sensation-seeking tendencies. Research also reveals that these efforts already have been shown to be effective.

Prevention and intervention research using the sensation-seeking construct has been remarkable for

its breadth of behaviors examined as well as for the striking effectiveness of the interventions. Palmgreen and Donohew (2003), for example, have shown how the construct of sensation seeking can be useful in media campaigns aiming to reduce risk behavior. They reveal that the concept provides an important avenue for segmenting or targeting the at-risk audience, designing effective messages, and strategically placing these messages in contexts attractive to sensation seekers. For example, time series analyses indicate that current marijuana use by high-sensation seekers dropped between 27% and 38% in two medium-sized cities where an antidrug media campaign targeting sensation seekers was implemented (Palmgreen et al. 2001, 2002). Similarly, media campaigns targeting high-sensation-seeking and impulsive-decision-making young adults have been shown to increase safer sex practices (such as increases in condom use, condom-use self-efficacy, and behavioral intentions) (Zimmerman et al. 2007). Interventions aimed at alcohol use have revealed similar results, with a leading research group assessing sensation seeking, negative thinking, anxiety sensitivity, and impulsivity to identify adolescents at higher risk for alcohol use; they found that tailored interventions designed to address the identified risk factor resulted in reductions in binge drinking among sensation seekers that were attributable to the intervention; results were mixed for the other personality assessments (Conrod et al. 2008). Several other types of efforts to take advantage of our knowledge of sensation seeking have been shown successful. Most notably, classroom-based interventions have successfully reduced risky sexual behaviors with high-sensation seekers (Donohew et al. 2000). Importantly, these findings should not be seen as surprising in that research on risk taking and problem behavior has long revealed that numerous factors can act to counter the drive for sensation seeking, such as religiosity, self-esteem, and educational/life aspirations, as well as other buffers like responsive parenting (Jessor and Jessor 1977).

Cross-References

► [Risk-Taking](#)

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Sensational Interests

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Overview

This essay examines the current status of sensational interests and their relationship with offending in adolescence. The essay describes sensational interests, their measurement and how they came to be associated with criminal behavior. New research, which addresses the complexity of the relationship is discussed and recommendations are made for further developments in the field.

Defining Sensational Interests

Sensational interests denote an interest in the dramatic and bizarre observed in the histories of serious offenders, but which are often raised transiently in adolescents and young adults (Weiss et al. 2004). This overlapping of population interests necessitates cautious and systematic work on such interests, as it is not possible to extrapolate from a single offender's recreational, musical, or filmic tastes to the clinical-forensic inference that such interests denote risk without making a *post-hoc ergo propter hoc* (after this so because of this) error (Egan 2004). Sensational interests are now commonly measured using the Sensational Interests Questionnaire (SIQ) developed by Egan et al. (1999). The SIQ comprises 28 items, which measure interests along a scale of –2 for “great dislike” through to +2 for “great interest.” The development of the SIQ has allowed over a decade of quantitative research in this area to flourish and provide new insights into the role of sensational interests in different populations. The significance of sensational interests in a criminal or psychopathological context was previously defined from unsystematic and poorly conducted reported case studies and qualitative research (e.g., Brittain 1970). These methods of analysis meant that many groups who may have sensational interests were

ignored, e.g., the normal adult population and adolescents. Using such sources of information also reinforced the notion that sensational interests were inherently pathological.

Agreement on what constitutes a sensational interest is debatable as they are culturally and historically (and possibly age-) dependent. Factor-analysis of SIQ items reveals two broad dimensions of militarism and the supernatural. The militarism dimension includes an interest in guns, martial arts, crossbows, swords, survivalism, and the SAS. This group of interests consistently emerges in a variety of research samples ranging from normal adolescents (Charles and Egan 2009), student populations (Weiss et al. 2004), adults (Hagger-Johnson and Egan 2010), and psychopathological participants (Egan et al. 2003); in conjunction with more general traits associated with criminality, it also predicts weapons carrying in adolescents (Barlas and Egan 2006). There is, however, some debate around supernatural interests and how they may manifest in different groups. The original SIQ presented a factor of violent occultism interests (e.g., paganism, black magic, and werewolves) alongside the more benign factor of occult credulousness (e.g., flying saucers, the paranormal, and astrology). Research with adolescents has shown that these two factors overlap (Charles and Egan 2008; Charles and Egan 2009) and that adolescents do not make the same distinctions between these interests as adults do. This may reflect a lack of detailed knowledge on the subjects or a more sanitized knowledge gained through the media rather than through genuine involvement. It could be argued, for example, that “Harry Potter,” “Doctor Who,” or “Buffy the Vampire Slayer” and their various foes are fantastic or supernatural, yet an interest in this popular entertainment is not comparable with a non-psychotic individual who may believe they practice black magic.

The Media’s Role in Sensationalism

The role of the media is important in considering where the link between unusual interests and crime comes from and how that link is maintained in the public imagination. Curiosity concerning the relationship between unusual, sensational interests and criminality has been evident in the psychological and psychiatric literature for decades (Charles and Egan 2008). The general public, however, tend not to form their opinions from these sources and rely instead on

the presentation of individual case studies and the myths generated by cinematic representations of offender profiling (Snook et al. 2008). It is easy to find examples of both adult and adolescent offenders who have the kind of interests discussed above. The 20-year-old Richard Samuel McCroskey III was indicted of the killing of three persons in Virginia, USA, and was allegedly a “horrorcore” rapper who performed alongside the rap and death-metal pop groups such as “Dismembered Fetus” and “Phrozen Body Boy” (Drash 2009). At the time of writing, the UK media reports that Stephen Griffiths is charged with the murder of three prostitutes in Bradford, Yorkshire. Griffiths, although 40, has maintained the lifestyle of an outsider adolescent, and has already identified himself in court as “the crossbow cannibal” and media outlets are reporting at length his interest in serial killers, gothic subculture, and carnivorous lizards (Gray 2010). Such cases have an implied causation. The murder of Jodi Jones by Luke Mitchell in Scotland in 2003 is an often-discussed example of the keenness to connect satanic or “gothic” interests to crime. Mitchell was reported as being a heavy cannabis user, writing messages about the devil on his schoolbooks, and was identified as a Goth (Charles and Egan 2008). Prior to this phase in his life Mitchell had been an army cadet. His victim, Jodi, also aspired to being a Goth but this was considered as something, which made her vulnerable, rather than violent (which suggests that the interest is interpreted differently depending on whether it is held by a perpetrator or a victim). Scott Dyleski, who was found guilty of a brutal murder in 2005, is a US example of a homicidal teenager who followed a “gothic” identity. Like Mitchell, Dyleski also used cannabis and had a reported interest in serial killers (Mitchell was supposedly fascinated by the Black Dahlia murder). Dyleski’s youth and his transformation from a conservative looking young boy into a macabre looking teenager were visually documented in the US media and he was described by some as “weird” (Sweetingham 2006). Though slightly older than the teenagers Mitchell and Dyleski, Kimveer Gill (aged 25), who killed one person and injured 19 in 2006 after a mass-shooting at Dawson College in Montreal, was essentially also adolescent, as the context and circumstances of his offenses reflect an adolescent attitude. Gill had reportedly become fascinated with the Columbine High School shootings and posted

numerous images of himself posing with guns on the Web site vampirefreaks.com (BBC 2006). Gill listed the computer game “Super Columbine RPG” as one of his favorites. The photographs appear to have been taken in Gill’s bedroom where the walls were adorned with horror film and gangster posters. The published details of his life suggest a fascination for guns, knives, Gothic culture, and that Gill spent 1 month receiving military training after claiming he wanted to be a mercenary.

The cases briefly outlined above show how easy it is through the media to link extreme and serious crime with sensational interests in both adults and adolescents. In recent years, this has arguably become easier as individuals leave behind weblogs and social networking pages detailing their thoughts, interests, and plans. A trail of evidence, which may have previously been seen or deduced only by those closest to the offender, and the police, is now open to everyone and remains cached in search engines long after it has officially been removed. The reverse side of this is that it is also easy to see just how common sensational interests are. The Web site vampirefreaks.com has over two million profiles with names such as *MorbidLoser*, *kill-yourself*, *MechanicalCannibal*, and *silentmurders*. If one of those individuals were to commit a crime, the presence of his profile would be used as evidence of his strangeness and violent potential. However, this profile is one of two million and has no forensic significance without other information. The bookseller Amazon has 815 different Satan encyclopedias for sale (a subset of the 3,300 books, which come under the more generic “reference” heading for Satan), and the bestselling book “The Satanic Bible” has 187 customer reviews (Amazon 2010). A similar example of mass-market sensational interests is the film “Saw V” for which nearly 41 million tickets were sold in 2008 (<http://www.the-numbers.com/market/Genres/Horror.php>). This observation serves to highlight how mainstream sensational interests are and what an appetite many “normal” people have for them. Such interests only assume a pathological significance when they are linked to criminal or otherwise deviant behavior.

Research on Sensational Interests and Crime

Turning from the media to research, an example of this tendency for retrospective analysis has been seen in the

literature on deviant sexual fantasies, which has routinely linked deviant fantasy with sexual homicide (Gee and Belofastov 2007). Although Gee and Belofastov acknowledge the lack of empirical research clearly explaining the nexus between deviant fantasies and offending, they go on to discuss an escalation and desensitization approach, which suggests fantasy becomes progressively more harmful and graphic until it is acted upon. They believe that this model is useful in offender profiling as “signature behaviors essentially mirror a perpetrator’s core fantasies; therefore, by attempting to understand the offender’s sexual fantasies, the investigator may develop a better insight into the psychological makeup of the offender” (Gee and Belofastov 2007, p. 65). As with sensational interests, there are plenty of case studies, which apparently show deviant fantasy to be very important with one of the most widely known being Ted Bundy. Bundy was interviewed shortly before his execution and claimed that his deviant fantasies and sexual offending had developed from watching progressively more explicit pornography (Caputi 1989). However, Bundy’s claim can be seen as an attempt to evade personal responsibility; most people who use pornography do not become sexual criminals themselves (Ferguson and Hartley 2009).

An issue with this line of reasoning around building profiles is that many adult and adolescent men and women have what can be described as “deviant” fantasies, so it is difficult to know what kind of psychological picture one could paint based on knowing the details of the fantasy. Leitenberg and Henning (1995) reviewed the literature on sexual fantasy and found that “sex offenders often report that they have sexual fantasies related to their offence. However, these kinds of fantasies are also not uncommon in people who have never acted on them” (p. 491). Maniglio (2010) offers a comprehensive overview of the research in this area and highlights the relevance of the offender’s wider experience rather than focusing on fantasy and crime as a relationship in a vacuum. Overall, the vast majority of research in this field involves adults; moreover, the research that exists on sexual fantasies in adolescents is overwhelmingly focused on those persons at risk (or already convicted) of committing a sexual offense, so findings do not compare control samples and offenders on deviant fantasies. A far more salient predictor of risk of sexual violence is maligned masculinity and general

criminality (Ferguson and Hartley, *op cit*; Murnen et al. 2002).

The pattern of linking fantasy with action is similar to linking sensational interest with action. There are many examples where it seems intuitively appropriate (as discussed above), and academic research has tended to follow this assumption, look for correlations between interest and behavior, and then consider how that association came about, without considering a more detailed profile of the individual. Many of the mechanisms to explain how interest becomes action are described in the sexual offending literature by Seto et al. (2001) and in the sensational interests arena by Egan (2004). These mechanisms form a group of causal models and cover conditioning theories, excitation transfer, and social learning theory. Both conditioning and social learning theory rely on an individual obtaining some form of reward or reinforcement from their interest or engagement with it. That reward may be internal in the form of pleasure or it may be external in the form of a perceived reward (others who do the same thing are rewarded). Over time, habituation occurs and the interest or activity must evolve in some way to produce the same kind of reinforcement or reward. This is much the same as the approach adopted by Gee and Belofastov (2007) in their discussion of the role of deviant fantasy. Excitation transfer assumes that arousal is not linked to a specific emotion. Engagement with a sensational interest, e.g., a militaristic computer game, may cause arousal, which then needs to be paired with an emotion. If that emotion is excitement, rather than anxiety, the user of that game is likely to continue his engagement. As with conditioning and social learning, there is eventually habituation of arousal so that the game no longer produces any arousal.

Violent computer games have often featured in the adolescent case studies described above, and there are many games, which link very closely to the items covered in the SIQ. Unsurprisingly, such games and related media have become the focus of research. Boxer et al. (2009) examined juvenile delinquents and normal adolescents to see what role violent media played in the expression of short-term aggression and the long-term development of aggressive behaviors. Boxer et al's research marks a departure from the limited perspective of noting a correlation and attempting to explain it (which has often been seen in research concerning

fantasy and interests). The more limited perspective alluded to is now virtually unknown in other research areas; it would be most unlikely in any recent research to find an article merely stating that there is a negative correlation between IQ and offending and then trying to explain that relationship by focusing solely on one side of the association. Research on the causes and correlates of criminality now widely acknowledges the interactions between a multitude of biological, environmental, and social variables. This acknowledgment is only just beginning to occur with variables associated with sensational interests.

Boxer et al. (2009) consider the role of media violence in the context of a risk matrix and describe violence as multiply determined. Their findings show that a preference for violent media makes a significant contribution to actual violent behavior in those with both a high and low cumulative risk for violence. This is an interesting contribution to the literature as it provides a more comprehensive understanding of how interests and preferences may work across very different adolescents with varying backgrounds and risk profiles. It appears to provide good evidence that sensational preferences make an adolescent more likely to act in a violent way. Although Boxer et al's study is one of the better designed and more thorough pieces of research on this topic, there is still scope for improvement in terms of a longitudinal dimension. Adolescents do change their interest preferences over relatively short periods of time.

Egan and his colleagues have also evolved a fuller approach to analyzing sensational interests. Early criticisms of the SIQ highlighted how important context and behavioral engagement could be in terms of giving the interest meaning. What else is there to the individual other than his or her unusual interests, and what are the cardinal influences on their behavior? The most recent research in this area has gone some way toward addressing these issues. Egan and Campbell (2009) found that a small correlation between the SIQ and sustaining fantasies and stated that "negative sustaining fantasies may provide a ruminatory retreat for the unhappy or disturbed, while sensational interests provide more active escapism via dramatic imagery and concepts" (Egan and Campbell 2009, p. 468). They also go on to discuss the possible importance of alienation as a factor for increasing the risk for violence and comment on how important it is to view aggression

and violence through an assessment of the individual rather than through recreational choices.

Hagger-Johnson and Egan (2010) examined sensational interests and their link with sadistic personality disorder. It was Brittain's (1970) original article in this area, which first linked sensational interests with sadism 40 years ago. Hagger-Johnson and Egan could not, however, clearly link sensational interests with deviance or sadism, and the research made the familiar conclusion that the interest itself is not the crucial factor in contributing to criminal behavior. A criticism of this study, and of most of the others discussed here, is that there is no longitudinal component to the analysis. It is not yet clear how sensational interests work over time in determining an individual's behavior.

It is in the area of longitudinal research that adolescence research is ahead of the studies carried out with adult samples. Preliminary analysis of research carried out by the current authors allows for some commentary to be made on the function of sensational interests over a 1 year period in UK teenagers. Two hundred and eighty three adolescents (51.2% male, mean age 15.02 years, $SD = 0.88$) had their personality, psychopathology, intrasexual competition, self-reported offending, and sensational interests measured at time 1 and then 1 year later at time 2. Correlations on all variables between time 1 and time 2 were significant (Pearson's r values ranging from 0.47 to 0.66). This shows that some degree of prediction for any of the measured variables is possible over a 1-year period during adolescence. Further analysis using repeated measures t tests showed that there is a significant increase in offending behavior in the sample (which is to be expected given the age group). What is also evident is that there is a significant decrease in self-reported interest for militaristic topics while interest in the more supernatural themes shows no change. This result is of particular interest as militaristic topics are most often linked to offending, weapons carrying, unpleasant personality characteristics, and high mating effort. The fall in interest level was observed across the age range, suggesting that adolescent sensational interests may be particularly affected by what is considered popular or fashionable. This may not be the case for adults but longitudinal research on adult populations is currently non-existent, so educated guesses have to be made based on how the SIQ factor

structure differs with a younger sample. A fuller analysis of the adolescent longitudinal data will be forthcoming, but these preliminary analyses are promising in the insight, which they offer to this difficult research topic.

Many of the studies described in this essay have been limited by the use of self-report measures and a reliance on cross-sectional data. It is likely to prove difficult to address the limitation of self-report in this area as it is problematic to measure a person's interests purely behaviorally in a reliable way, although Gosling's work may suggest methods for overcoming this impasse (Gosling et al. 2002). In some respects, this research area faces the same difficulty as sexual fantasy research. In order to know what a person is interested in and thinking about it is necessary to ask him and then hope the answer is truthful, or rely on inexact and indirect inferences. Many people do self-identify as having particular interests by their public activities on the Internet but they do not necessarily represent everyone who has those interests and may in fact represent a particular subset. The problem of purely cross-sectional research is somewhat easier to address. Now research on sensational interests is becoming a more established field that it should be possible for the SIQ to be incorporated into longitudinal projects, which assess a wide variety of measures. Studies such as this could also help address the often cited conclusion that the whole individual needs to be considered rather than his interests in isolation.

Conclusions

Research on sensational interests has come a long way in the last decade in terms of the variety of samples it has included and with regard to the spread of other variables, which are analyzed. A clear picture has emerged from the research, which shows that where sensational interests are linked to offending it is usually mediated by other variables (namely personality or intrasexual competition), whether this is in adults or adolescents. This suggests that sensational interests themselves cannot reliably be used as predictors for offending or as an explanation for offending after the fact. A causative relationship remains in the public imagination because of media analysis of very violent and often sexual crimes where the perpetrator has unusual or bizarre interests. Some high-profile offenders may also deliberately draw attention to their

sensational interests as a way to define themselves through personal identity myths, their sensational interests being a form of projective expression more important than their untrammelled selves (e.g., the Stephen Griffiths case mentioned previously (Gray 2010)). This may have some personal compensatory function. Forthcoming work on the longitudinal assessment of sensational interests in adolescents will take SIQ research to the next level and address and often cite limitation in this and related research areas.

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Sense of Entitlement

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Overview

Researchers have defined the sense of entitlement as a “pervasive sense that one deserves more and is

entitled to more than others” (Campbell et al. 2004, p. 31); as an “expectation of special favors without reciprocating” (Emmons 1984, p. 292); and as one of several features of narcissism, specifically, “the expectation of special privileges over others and special exemptions from normal social demands” (Raskin and Terry 1988, p. 890). Similarly, the American Psychiatric Association (1994, p. 661) defines entitlement as “the expectation of special favors without assuming reciprocal responsibilities.” Researchers have found that entitled beliefs in adolescents and young adults are associated with a host of societally problematic dispositions and behaviors. However, less is known about the causes of self-entitlement. Recent research has begun to examine possible dimensions of entitlement, and whether adolescents may exhibit domain-specific manifestations of entitlement. In the sections that follow, we outline the measures that are used to assess entitlement and examine the correlates of entitlement during late adolescence. We also describe various parenting and societal factors that have been proposed to cause entitled attitudes among adolescents. Last, we describe recent research that has examined two potential dimensions of entitlement and a domain-specific manifestation of this disposition: students’ entitled attitudes and behaviors in the academic domain.

Measurement of Entitlement

Raskin and Hall (1979) developed the Narcissistic Personality Inventory (NPI) to assess the level of narcissistic beliefs among nonclinical populations. They regarded narcissism as a trait characterized by grandiosity, feelings of superiority, exploitiveness, feelings of entitlement, and a lack of empathy. Subsequent factor analyses (Raskin and Terry 1988) found that the NPI could be broken down into several subscales, including a subscale that assessed entitlement beliefs (NPI-E). This was the first measure to specifically assess levels of entitlement in normal populations and is still widely used today. However, Campbell et al. (2004) argued that the NPI-E subscale suffers from several conceptual and empirical problems. These problems include low inter-item reliability ($\alpha \approx .50$ across several studies), items that lack face validity, a forced-choice format that limits variability in the possible range of scores, and socially undesirable item choices. In response to these theoretical and practical problems, Campbell et al. (2004) developed the Psychological

Entitlement Scale (PES), a nine-item measure of self-entitlement designed to address the shortcomings of the NPI entitlement subscale. Both the NPI-E and the PES assess entitlement as a unifactorial personality characteristic.

Correlates of Entitlement

Trait entitlement, as operationalized in the PES (Campbell et al. 2004) and in the NPI-E (Raskin and Terry 1988), is associated with a wide range of maladaptive personality characteristics. Raskin and Terry (1988) found that trait entitlement was associated with college students’ distrustfulness and lack of self-control. Witte et al. (2002) found that entitlement was associated with higher levels of trait anger in a sample of 130 male college students. McHoskey (1995) found that college students with high levels of entitlement also were high in Machiavellianism, a trait characterized by manipulateness, insincerity, and callousness. Similarly, more entitled college students had higher levels of psychopathic symptoms (Benning et al. 2005), characterized by the manipulateness and callousness noted by McHoskey, and additionally by thrill-seeking, impulsivity, and aggressiveness. In a series of studies by Campbell et al. (2004), entitlement was related to greed, overharvesting, aggression following ego-threat, and selfishness in personal relationships, in various samples of college students. On a somewhat different note, college students high in trait entitlement have a poor work ethic and low levels of social commitment, or interest in helping others in society (Greenberger et al. 2008). These negative characteristics and behaviors are not lost on observers; rather, college students who are high in entitlement are viewed by others as hostile or deceitful (Raskin and Terry 1988).

Entitlement, as described in previous investigations, seems to be closely related to maladaptive aspects of narcissism, including exploitiveness (see above) and exhibitionism (Raskin and Novacek 1989; Watson and Biderman 1993; Watson and Morris 1990). Barry et al. (2003) found evidence that, among younger adolescents ($M = 12$ years old; range 9–15), the entitlement, exhibitionism, and exploitiveness subscales of the NPI taken together form a maladaptive dimension, characterized by a need to achieve power over others, to be viewed as more important than others, and to receive attention and praise. This cluster of traits was positively

associated with conduct problems and negatively related to self-esteem.

However, studies that focus specifically on self-entitlement show inconsistent associations with self-esteem. Some researchers have suggested that self-entitlement may be positively related to self-esteem, since feelings of greater self-worth may lead to feelings of more deservingness (Campbell et al. 2004). However, although many studies have shown a moderate association between self-esteem and narcissism (meta-analytic $r = .29$; Twenge and Campbell 2001), few studies have found a substantial association between entitlement and self-esteem. Although Campbell and colleagues found a modest association between the Psychological Entitlement Scale (PES) and the Rosenberg Self-Esteem scale (RSE), ($r = .13$), several studies have not found a significant association between the NPI Entitlement subscale and the RSE (Bogart et al. 2004; Strelan 2007). Yet other studies have found an inverse association between entitlement and self-esteem (Emmons 1984, 1987).

Entitlement and Positive Illusions

Young adults' views of themselves and their expectations about their futures have become inflated over time. Eighty percent of adolescents agree with the statement "I am an important person," up from just 12% who agreed with that same statement in the 1950s (Newsom et al. 2003). Fifty-one percent of recent high school graduates expect to obtain a graduate or professional degree, even though only 9% of adults actually obtain these degrees. Similarly, 63% of recent high school graduates expect to be working in a professional job by age 30, far more than the 18% of 30-year-olds who actually hold such positions (Reynolds et al. 2006). However, while these unrealistically high aspirations are fairly pervasive, most older adolescents do not have very high levels of entitlement, as measured by the NPI-Entitlement subscale or the PES. For example, in one recent study, the average undergraduate participant agreed with 39% of the forced-choice NPI items, but only 24% of the Entitlement subscale items, suggesting that these views are not very widespread (Moeller et al. 2009). Similarly, across a range of studies involving older adolescents, the average score on the PES was substantially below the midpoint, suggesting that most participants moderately disagreed with these items (Campbell et al. 2004; Moeller et al. 2009).

Further, research suggests that these aspirations become more realistic as adolescents approach important transitions (e.g., Heckhausen and Tomasik 2002; e.g., applying to a college, deciding on a career), suggesting that adolescents do not feel entitled to these aspirations, but rather use them as a source of motivation, and develop more realistic expectations when necessary. Thus, as with self-esteem, it is important not to conflate positive illusions about the future with self-entitled attitudes.

Psychoanalytic Perspectives on the Origins of Self-entitlement

Freud (1916, as cited by Nadkarni 1995) observed that many of his patients, whom he labeled "exceptions," assumed that they had special rights and privileges because of past injustices they had experienced. He surmised that most people would like to express such beliefs but felt constrained not to reveal them. Freud argued that these exceptional patients felt that they deserved special treatment to make up for childhood hardships such as congenital diseases or disabilities for which they felt they were not responsible. Following Freud's view, early clinicians within the psychoanalytic tradition viewed the attitude of entitlement as an individual's feeling himself or herself to be an exception, without the normal obligations that others feel. This attitude was viewed as a hindrance to full psychological maturity.

For example, Horney (1950) suggested that entitled beliefs developed because the child is raised in an atmosphere lacking in warmth and security. Rothstein (1980), expanding on this view, argued that self-entitlement arises when a mother is not available and responsive to the child's needs. As a result, the child feels disappointment, rejection, and feelings of abandonment and isolation. In order to defend against these painful feelings, and protect the ego, the child develops entitled attitudes. These attitudes serve to buffer the child from underlying feelings of anxiety, rejection, and abandonment.

In contrast, Adler (1964) suggested that entitlement and other narcissistic attitudes were caused by "pampering." Pampering, characterized by excessive affection, "makes behavior, thought, and action, and even speech, superfluous for the child" and leads to the child's developing a tendency "to take and not to give" (Adler 1964, pp. 149–150), and to exploit others,

rather than engage in appropriate behaviors to achieve his or her goals. Adler argued that because pampered children expect their needs to be satisfied by others, they do not learn to become self-reliant or self-confident and are likely to lack empathy or altruistic impulses. Adler's view that what we might now refer to as indulgent parenting leads to entitled, narcissistic attitudes and behaviors has been widely adopted by clinical psychologists (Capron 2007).

However, little quantitative research has examined the link between parenting and the development of self-entitled attitudes. The few studies that have examined this link suggest that parenting behaviors may explain only partially why self-entitled attitudes develop. For example, Capron (2007) found that "overindulgent" parenting was significantly associated with NPI-Entitlement scores, but this association was modest. Greenberger et al. (2008) found similarly modest associations between parenting variables and several measures of entitlement. Other social influences, including positive media portrayals of entitled behavior, changes in the technological environment (among them the rise of relatively impersonal and instant forms of communication, such as e-mail) may play a role in the development of entitlement.

The Self-esteem Movement and Entitlement

Several researchers have noted that adolescents' and young adults' self-esteem has risen substantially over the last 40 years. Some researchers and commentators have argued that entitlement, along with other narcissistic attitudes such as vanity, exploitiveness, and manipulateness, have increased as a result of efforts to bolster adolescents' level of self-esteem (Twenge 2006). In a meta-analytic analysis of college students who took the Rosenberg (1965) Self-Esteem Scale (RSE) between 1968 and 1995, Twenge and Campbell (2001) found that the level of self-esteem rose substantially over that time, with the average student in the mid 1990s having a higher self-esteem score than 73% of their late 1960s peers.

The self-esteem "movement" began in the 1970s and became more prevalent during the 1980s and 1990s. Classroom practices were designed to protect adolescents' sense of self-worth from parents' and teachers' criticism and negative appraisals, in order to reduce the risk of adverse outcomes that were thought

to arise from low self-esteem, including teenage pregnancy, delinquency, academic failure, and drug abuse (Twenge 2006). Twenge and colleagues (Twenge 2006; Twenge et al. 2008a) contend that this movement has had the unanticipated effect of artificially inflating children's and adolescents' feelings of self-worth, regardless of their actual abilities and accomplishments (Crocker and Knight 2005). As a result of youths' inflated views of their capabilities, Twenge and others suggest that young people may feel entitled to rewards and praise that objectively are not warranted. In a recent meta-analysis, Twenge and colleagues (2008a) found that overall scores on the Narcissistic Personality Inventory (NPI) increased substantially between 1982 and 2006 ($d = .33$). They did not report the trend for the Entitlement subscale.

Other researchers have disagreed with the view that the rise in narcissistic attitudes such as entitlement is a by-product of the self-esteem movement. Trzesniewski et al. (2008), in a meta-analytic study of California college students, found that scores on the Entitlement subscale of the NPI did increase slightly between 1982 and 2007 ($d = .17$), although scores on the NPI did not change over time. In response to these findings, Twenge and colleagues reanalyzed their data (Twenge et al. 2008b), and found that scores on the NPI did not increase over time in samples drawn from California, but did increase substantially among college students in other parts of the country. This finding is problematic for Twenge's thesis, given the importance of self-esteem-related curricula in the California educational system during the 1980s and 1990s. Although there is substantial evidence that entitlement and other narcissistic attitudes are rising in at least certain parts of the country, it is not clear why there are regional variations.

Multiple Types of Entitlement?

So far, we have discussed entitlement as a unifactorial, maladaptive, personality disposition – the consensus view at present. However, entitlement may be conceptualized as having an adaptive aspect as well. Based on a review of psychoanalytic case studies, Kriegman (1983) argued that "normal" entitlement, or the attitude that one can expect to be able to obtain satisfaction in life, is relatively universal, and that it is not harmful to have such attitudes. He contrasted this attitude with exaggerated, or narcissistic entitlement,

as well as with an excessively restricted sense of entitlement, arguing that while having an exaggerated or narcissistic sense of entitlement may be harmful, it is also harmful to feel that one is not deserving of, or entitled to, any positive outcomes whatsoever. Experimental psychologists studying US college student samples have shown that individuals believe that they and others are “entitled” to material rewards and opportunities for educational and job-related advancement as a result of their task-performance. For example, Bylsma and Major (1992) told college student participants that, in exchange for completing a data entry task, they could earn between \$3.50 and \$7.50. Students who received positive feedback asked for more compensation than did individuals who received negative feedback. In the absence of objective feedback, youths base their feelings of deservingness and entitlement on their own perceptions of their and others’ performance (Feather 1999; Major 1984; Bylsma et al. 1995). Such feelings of entitlement seem to have benefits for the individual: for example, individuals who are led to feel entitled to positive outcomes are more likely to ask for appropriate compensation for work performed and are also more likely to be aware of economic inequity (Major 1984, 1989; Bylsma and Major 1992).

Several recent studies of college students (Lessard et al. 2010; Greenberger et al. 2008; Nadkarni 1995; Schwartz and Tylka 2008) provide evidence that there may be two types of entitlement: an excessive, exploitive type of entitlement that is associated with a variety of maladaptive attitudes and behaviors, such as psychopathy, neuroticism, low self-esteem, a lack of social empathy, and a poor work ethic (Greenberger et al. 2008), as well as a more adaptive type of self-entitlement, similar to that suggested by Kriegman (1983), that is positively associated with self-esteem, and not associated with negative character traits.

Domain-Specific Entitlement

In addition to the possibility that the sense of entitlement might not be unifactorial, the exploitive dimension of entitlement may have domain-specific manifestations. In other words, some situations may be particularly potent in eliciting and even exacerbating entitled attitudes and behaviors, whereas other situations may have contrasting effects. For example, adolescents might be more likely to attempt to manipulate outcomes to their own advantage in situations

where the likelihood of a successful outcome is high and “failure” carries few costs (e.g., the target person is known to be “easy” and non-punitive), and *more* likely to engage in manipulation in situations where the outcome is of great personal importance, even if the risks or costs are high. The academic arena is one in which entitled attitudes and behaviors have been observed, and media outlets have documented instances of entitled behavior on the part of students with increasing frequency over the past decade (Lexis/Nexis 2009).

Achacoso (2002) conceptualized entitlement in the academic domain in terms of expectations of special accommodations, irrespective of fairness to others, and willingness to engage in entitlement negotiations (e.g., requesting a higher grade). Both factors of the resulting academic entitlement scale were associated with college students’ external attributions for academic success or failure. Scores on the entitlement negotiations subscale were positively correlated with use of meta-cognitive strategies (i.e., planning and self-monitoring) and with GPA. Using the same scales, Ciani et al. (2008) showed that male college students are more academically entitled than their female counterparts. Cianni et al. also found that academic entitlement scores were stable from the beginning to the end of the semester in the various courses from which participants were drawn.

Greenberger et al. (2008) described “academic entitlement” in terms of expectation of high grades for modest effort and demanding attitudes toward teachers (similar to Achacoso’s expectation of “special accommodations”). Sample items from their unifactorial Academic Entitlement (AE) scale include, “If I have attended most classes for a course, I deserve at least a grade of B” (agreed to by 34% of the college student participants in their sample) and “If I have explained . . . that I am trying hard, I think [the professor] should give me some consideration with respect to my course grade” (agreed to by 66% of participants). The researchers demonstrated that AE was positively correlated with Campbells’ PES ($r = .40, p < .001$) and with narcissism. AE also was positively correlated with self-reported academic dishonesty; and inversely correlated with a positive orientation toward work and with self-esteem – the latter, a modest $r = -.14, p < .05$. As in the Cianni et al. study, male students obtained higher academic entitlement scores. Chowning and Campbell (2009), using a different

measure, also found that academic entitlement was positively correlated with narcissism and negatively correlated with self-esteem.

Other findings of Greenberger et al. (2008) indicated that students who expressed more academically entitled attitudes perceived their parents as having encouraged academic competition and compared their level of achievement (often unfavorably) with that of other children and adolescents in their social network. Not surprisingly, students who scored higher on the AE scale also reported a higher level of extrinsic (i.e., grade-oriented) as opposed to intrinsic (i.e., curiosity- or mastery-oriented) academic motivation. However, as noted earlier, the measures of perceived parenting used in this study together accounted for only a small, albeit significant, amount of the variation in students' academic entitlement.

Summary

The sense of self-entitlement, especially among youth, has received a substantial increase in attention over the past decade (see Greenberger et al. 2008). The phenomenon of entitlement has been described by researchers as well as media commentators. Most research has been based on a unifactorial conceptualization of entitlement that focuses on its association with exploitive and socially disruptive attitudes and behaviors. Based on laboratory studies and self-report data, researchers have found, for example, that entitled beliefs in late adolescents and young adults are associated with greedy behavior, aggression in response to ego-threat, a poor work ethic, and reduced concern for the well-being of society. A few studies, however, have suggested that entitlement may be bi-factorial, the second dimension reflecting potentially adaptive attitudes that are largely independent of exploitive attitudes toward others. In addition to its dispositional nature, entitlement appears to have domain-specific manifestations, and several recent studies of academic entitlement provide largely convergent information on the nature and correlates of academically entitled attitudes.

Overall, little is known about the causes of self-entitlement. Several factors have been proposed to contribute to the development of this disposition, including various parenting behaviors and the self-esteem movement, but empirical studies reveal that these factors have relatively small or nonexistent associations with entitlement. More research is needed,

especially longitudinal studies that begin in early adolescence, in order to understand the development of self-entitled attitudes. These studies should focus not only on the family context but also on factors in the larger societal context that may be promoting or condoning exploitive attitudes and behaviors. Future research should also examine the origins of nonexploitive feelings of entitlement that are potentially adaptive and may contribute to favorable outcomes.

Cross-References

► [Narcissism](#)

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Separation Anxiety

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Separation anxiety is the distress a child experiences when isolated or separated from its primary caretaker.

The distress indicates the child's attempt to adjust to changes. Depending on the child's developmental stage, the distress can be normal and the separation symptoms may not in themselves be evidence of either personality defects or trauma. Although there is a tendency to view separation anxiety as something relevant only to children, it has implications for the development of adolescents.

Three examples illustrate the significance of separation anxiety for adolescents. First, separation anxiety can eventuate into severe pathological development. The clearest example is Separation Anxiety Disorder (SAD), which has the central phenomenology as a child's reluctance to be separated from major attachment figures because of the fear that something awful may happen to the attachment figure (for a review, see Lewinsohn et al. 2008). Although SAD can occur during childhood and adolescence, it links to negative outcomes, such as psychiatric disorders, during adulthood (Id.). Second, separation anxiety can relate to problem behaviors directly related to adolescents, such as school refusal (King and Bernstein 2001). Third, separation is of relevance to adolescents in that parents can experience it, which, in turn, influences their parenting (such as their demands and efforts to control adolescents) and adolescent outcomes (Soenens et al. 2006).

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Separation-Individuation

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The concept of “separation-individuation” was introduced to the study of youth and human development

by psychoanalytic researchers who described it as the process by which individuals increasingly differentiate themselves from others, particularly mothers and parental figures. Youth are believed to reach maturity when they are able to balance a sense of agency with a sense of communion. This balance means that they are able to remain attached to important others while avoiding enmeshment and fusion (communion) and have a sense of autonomy and independence that excludes isolation and alienation (agency). Achieving this balance is what separation is all about. Separation-individuation, then, fundamentally involves the process by which individuals mature by developing an autonomous self within ongoing relational commitments.

The process of separation-individuation was first conceptualized to occur during early childhood, but it has since been viewed as also occurring during adolescence, which is often called the second period of separation-individuation. Margaret Mahler and her colleagues (Mahler et al. 1975), who first described the process, developed four phases of separation-individuation seen in early childhood: differentiation phase, practice phase, rapprochement phase, and consolidation phase. In the differentiation phase, children start to notice objects, events, and people, and thus begin to emerge from an all-encompassing relationship with their caregiver. In the practicing phase, children's motor skills allow them to explore their environment, furthering the differentiation experienced in the first phase. Pleasure, energy, and narcissism characterize toddlers as they become enthralled with their newfound motor autonomy, although they still require consistent check-ins with caregivers for reassurance and encouragement. The rapprochement phase consists of a child's resolution of the ambivalence caused by their increasing independence and frustration caused by independence. As parents decrease their vigilance in monitoring, children feel frustrated and encounter impediments to functioning. In this phase, children are frequently in crisis as they display anger, tantrums, and sad moods, and as they require a transitional object such as a blankie or engage in ego splitting to cope with the demands of ego maturity. [Recall that ego splitting essentially means that coexistence of two clashing attitudes that do not affect each other from a psychic standpoint, such as, in its extreme, a double personality.] Finally, by 36 months, children are in the consolidation phase in which a child manages

to create a constant internal representation of its mother to use for comfort in her absence. The consolidation of the good and bad mother created by ego splitting is called object constancy, a phase that emerges when children understand that they and their mothers are separate individuals with separate identities.

In adolescence, individuals must transcend their internally represented caregivers and establish a sense of self based on their own evaluations. Here, adolescents reduce their psychological dependence on caregivers for approval, self-esteem, and standards of conduct; they instead rely on themselves for self-esteem regulation and self-definition (see Bloss 1979). Specific phases of separation-individuation in adolescence have been suggested to be the same as in early childhood; however more emphasis is placed on the rapprochement phase and the ambivalence caused by developing independence. Recent research suggests that separation from parents is not a precondition for individuation; instead, it suggests that separation and individuation are two parallel processes of development during adolescence (see Meeus et al. 2005). Proper separation-individuation is of significance in that its absence can lead to several psychological disorders, including borderline personality disorder, narcissistic personality disorder, family dysfunction, marital dysfunction, suicidal ideation, and college maladjustment (see, e.g., Frank et al. 2002; Meeus et al. 2005; Lapsley et al. 2001). These findings highlight how the process of separation-individuation can contribute to a periodic revision of internal working models across the lifespan and affect the development of a healthy self.

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Serotonin

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Serotonin, 5-Hydroxytryptamine (5-HT), is best recognized as a neurotransmitter that is primarily found in the gastrointestinal tract and central nervous system. The serotonin related to the central nervous system attracts the most attention provided it serves a variety of functions. Among the most important and studied functions are the regulation of mood, appetite, sleep, muscle contraction, as well as cognitive functions like memory and learning. Levels of serotonin have been linked to major psychiatric symptoms and illnesses, especially depression (see Uher and McGuffin 2008), autism spectrum disorders (Raznahan et al. 2009), and delinquent behavior (Golubchik et al. 2009).

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Service-Learning

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Overview

This essay examines the nature and importance of service-learning, with special reference to behaviorally

at-risk youth. The essay seeks to show how service-learning can be used to construct what is known as a “possibility” narrative of youth, rather than a deficit view. To do so, the essay begins with a definition of service-learning and a brief overview of constructivist theory applied to the perception of at-risk youth by school personnel, community members, and the youth themselves. After reviewing recent research relevant to service-learning, the essay then describes an educational program that engaged youth in meaningful educational experiences. The essay ends by making specific recommendations for educators who seek to involve at-risk adolescents in service-learning projects.

The Nature of Service Learning

Definitions of service-learning typically borrow from the National and Community Service Act of 1990 (PL 101–610). The act defines service-learning as:

- ▶ A method under which students or participants learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of a community; is coordinated with an elementary school, secondary school, institution of higher education, or community service program, and with the community; and helps foster civic responsibility; and that is integrated into and enhances the academic curriculum of the students or the educational components of the community service program in which the participants are enrolled; and provides structured time for the students or participants to reflect on the service experience (42 U.S.C. 12572 (a) (101)).

Service-learning programs still may differ considerably, but they tend to involve the goals and characteristics defined by the act.

Service-learning generally is accepted as combining the objectives of the service project with the learning objectives of the classroom in ways that change both the providers of the service and the recipients of the service in positive ways. Participants are provided an opportunity to reflect on their service activities by thinking, discussing, and writing about their experiences. Service-learning is an educational strategy, a type of youth programming that encompasses a philosophy of youth empowerment and that can help teens develop the assets needed for productive futures (Byers et al. 2000). Service-learning projects do so by including, as examples, environmental projects, tutoring programs

for younger students, assistance for senior citizens, neighborhood renovations, promotion of civic responsibility, campaigns against drug and alcohol abuse, antipoverty programs, and antiviolence programs (Texas Center for Service-Learning 2003). Such programs look at teenagers as resources and assets, and by doing so they can construct a more positive outlook and future for even the most difficult adolescents.

Typically, service-learning extends learning beyond the classroom and into the community. It provides students a way to build many of the developmental assets that are protective factors for their success (Benson et al. 1998; Byers et al. 2000). Although service-learning is an educational strategy, it encompasses a philosophy of youth empowerment helping children develop the assets needed for a productive future. The most successful service-learning projects are guided by youth voice and include a strong reflection component (Eyler 2002; Fredericks et al. 2001; Scales et al. 2000). Service-learning programs provide a forum for youth ideas, opinions, and initiatives. Dialogue between youth and adult partners is encouraged, which can actually affect public policy and community issues (Justinianno and Scherer 2001). Scales and Roehlkepartain (2004) describe service-learning as a gateway asset for building healthy development in young people. Participating in service-learning has the potential to lead to healthy outcomes, just as gateway drugs may lead to unhealthy outcomes. The more assets students have, the more potential for success they have. Providing students with healthy and meaningful activities is one way to help them acquire positive assets.

Behaviorally At-Risk Youth

Behaviorally at-risk youth are at risk for negative life outcomes. For example, according to the Children’s Defense Fund (CDF) (2009), a black boy born in 2001 has a one in three chance of going to prison in his lifetime; a Latino boy has a one in six chance; and a white boy has a one in 17 chance. A black girl born in 2001 has a one in 17 chance of going to prison in her lifetime; a Latino girl has a one in 45 chance; and a white girl has a one in 111 chance. Poverty is the largest driving force behind the school-to-pipeline crisis, exacerbated by race (CDF). The number of students who are suspended and expelled from schools nearly doubled from 1975 to 2000, according to the U.S.

Department of Education, Office of Civil Rights (2000). The reasons for the increase appear to be in the new zero tolerance policies and other punitive disciplinary policies (Weissman et al. 2005). Researchers have identified a link between Disciplinary Alternative Education Program (DAEP) placement and prison, a link that described as the school-to-prison pipeline (Wald and Losen 2003).

The links between some programs, like DAEPs, and prisons are many, and they relate to how adolescents view themselves and how others view them. For example, some researchers believe that the increase in placements in DAEPs stem from the inability of urban schools to meet the needs of poor, minority, and at-risk students (Weissman et al. 2005). Students placed in DAEPs struggle with their own identities and their place in the community. Adolescents often will associate with a teen group simply to find acceptance even if the peer group has negative implications for them and is considered undesirable in the community (Eckstein et al. 1999). Typically, students in DAEPs grapple with issues such as low academic achievement, learning disabilities, attention deficit with hyperactivity, communication disorders, sensory impairment, or chronic truancy (Foley and Pang 2006). Often, adolescents diagnosed with any of the above difficulties begin to view themselves as inadequate as do the adults who know these teens. A deficit view of adolescents is constructed and becomes the accepted norm for describing them and working with them in the schools and in the community at large. This essay examines how to move away from the deficit view by adopting a service-learning model.

A Constructivist View of At-Risk Youth

Relational Thinking

Moving toward a service-learning model requires adopting a theoretical perspective of at-risk youth that is “possibility focused” rather than problem focused. The broad implications of the at-risk label are that these students are problems and should be exiled to special schools designed to either rehabilitate them or keep them out of the mainstream. In his discussion of the Milan Therapeutic Team’s systemic approach, for example, Karl Tomm (1984) reminds us that “our linguistic habits tend to orient us to think in lineal, possessive terms rather than circular, reciprocal

ones” (p.119). If adolescents are considered in relational rather than linear terms, the systems (schools and community) assume as much responsibility for the students’ at-risk behaviors as the students themselves. In language, one might say that the students *show* at-risk behaviors rather than they *are* at-risk teens. Because of the reciprocal nature of the relationship between teens and the systems, the systems are ultimately responsible for how one thinks about those at-risk behaviors in adolescents. There is a clear possibility for different thinking in this approach, thinking that is helpful and hopeful for adolescents and that can be promoted in school systems.

Reconstructing Perceptions of At-Risk Teens

Service-learning is one way of reconstructing educators’ thinking about at-risk adolescents. It capitalizes on youths’ positive assets, their potential, and their possibilities. An important aspect of service-learning is to allow youth to be involved in talking about their concerns and interests, solving problems, and making decisions as they construct their own identities with the help and collaboration of supportive adults. The construction of disaffected youth as social and political change agents through service-learning empowers the students and the system in a reciprocal fashion.

The optimistic belief that at-risk adolescents have the potential to change and then designing programs based on that belief is a core assumption of service-learning programs for at-risk youth. Service-learning can be a powerful educational strategy in working with at-risk youth, particularly those who are placed in DAEPs. Benard (1997), for example, describes the impact of *turnaround experiences* and *turnaround teachers* on at-risk students as being instrumental in the transformation from risk to resilience. School personnel have the power to help construct positive identities in adolescents through creating a respectful and caring environment, validating feelings, having high expectations, and allowing expression of opinions and ideas.

Service-Learning Research

Closing the Achievement Gap

Research indicates that involvement in service-learning programs contributes to closing the achievement gap

between students from low socioeconomic backgrounds and those from more advantaged backgrounds (Scales and Roehlkepartain 2005). This research can help guide educators in the implementation of programming that will support educational reform which, according to the No Child Left Behind Act of 2001, must focus on closing the achievement gap. Students who might benefit from service-learning programs include students placed in DAEPs, English language learners, students with low scores on state-mandated tests, or students on free or reduced lunch. Often these are students who are not connected in positive ways to the school environment. Involving these identified students in service-learning programs has the potential to have a positive impact on student achievement.

In a nationwide study, students from low-income backgrounds who participated in service did as well or better on most measures of achievement than the students from high-income backgrounds who did not serve (Scales and Roehlkepartain 2005). Therefore, involving at-risk students in service projects may be an intervention integral to closing the achievement gap. Accountability of service-learning programs can be measured by collecting data from report cards, office referrals, and attendance reports before, during, and after identified students participate in service-learning programs. The data can then help inform stakeholders of the importance of the role of this type of programming in student achievement.

Effective Results Produced by Service-Learning

Service to others has clear potential for building prosocial behaviors, enhancing self-esteem, and enhancing school success (Billig 2004; Scales et al. 2000; Scales and Roehlkepartain 2005). Students in DAEPs across the state of Texas who were involved in the Texas Title IV Service-Learning Grant identified positive outcomes resulting from their participation in service-learning. Some of these outcomes were: better relationships with teachers, stronger engagement in academics, leadership potential, and acceptance of diverse people and ideas (RMC Corporation 2005). Teachers, administrators, and parents also identified positive outcomes for participants in the service projects, and school personnel reported that they had high expectations and positive feelings about the participants.

In a study involving middle school students, service to others indicated clear potential for improving behaviors, enhancing self-esteem, and supporting academic success (Scales et al. 2000). Some researchers indicated that service-learning programs have the potential to impact large numbers of students in positive ways (Scales and Roehlkepartain 2005; Scales et al. 2000; Skinner and Chapman 1999). A school-wide focus on service-learning may have a powerful impact on school environments and many of the at-risk students in those schools.

In a qualitative study of at-risk students in Delaware, Hecht (2002) found that students who engaged in service-learning found unexpected satisfaction in the service projects, and the experience with the service projects appeared to increase their engagement in school. Spring, Dietz, and Grimm (2007) conducted a national survey of 3,178 students between the ages of 12 and 18 and found the following: (a) youth from disadvantaged backgrounds were less likely than their more advantaged peers to participate in service activities; however, when they did volunteer, the disadvantaged youth demonstrated the same level of commitment as their more advantaged counterparts; (b) youth were more likely to participate when they were asked to serve particularly by teachers; and (c) youth from disadvantaged circumstances volunteered mainly to fulfill their religious and spiritual beliefs or to gain work experience unlike their more advantaged peers.

Another researcher (Kirby 2001) examined programs aimed at reducing teen pregnancy. Although, it is not clear why service-learning programs were successful in this area, these programs had strong evidence of being an intervention that reduced teen pregnancy while students were participating in the programs. Possible reasons for success include their having youth bond with adult facilitators, youth gain a sense of autonomy and competence, and youth had fewer opportunities to engage in risky behaviors.

Other studies report similarly positive results. Laird and Black (2002) examined risk-taking behaviors and participation in service-learning programs. Ninth graders in this study who participated in service-learning classes had more positive scores on all measures of resilience and were more likely to decrease their cigarette smoking. In the same study, 12th graders who participated in service-learning, some of whom were

rated highly at risk initially, maintained a low risk of dropping out of school compared to nonparticipating peers. A study of a 3-year demonstration project (Potts 2000) in which middle school students were paired with university students in service-learning projects, the middle school students reported the following: lower rates of some risk behaviors, a greater ability to resist dangerous situations, higher levels of positive peer influence, better school engagement, and higher levels of leadership abilities and interpersonal competence.

Opportunities for Service-Learning

Schools with less than 50% of their population on free or reduced lunch were more likely to have service-learning programs than those schools with more than 50% of their population on free or reduced lunch (Skinner and Chapman 1999). It appears that service-learning is an untapped intervention for schools in high poverty areas. Creating service-learning programs in low socioeconomic schools alerts students to community problems, engages them in the solutions, and creates opportunities for positive civic connections. Service-learning allows youth to have a voice in the school and community which increases the chances for them to feel connected and important to the workings of their schools, neighborhoods, and cities. Students who learn to advocate for safe schools and neighborhoods are on their way to the kind of civic engagement that is meaningful and productive.

An Example of Service-Learning Programming

A Service-Learning Model

Alternative schools in several school districts in a southwestern state have adopted an effective service-learning model that can serve as exemplars for other efforts. The DAEPs were funded through the Title IV Community Service Grant Program and received grant funding for service-learning projects. Funds were provided for personnel, capital outlay, materials for service-learning projects, and student travel. In order to guarantee that the ideas for the service projects were generated by the students themselves, the students competed for the grant money in the form of smaller

increments of the funds. Students wrote proposals for funding for service projects stemming from their own particular community interests and concerns. They competed for the funds just as the Title IV grant facilitators had competed for the original grant money.

Implementing the Model Through a Developmental Sequence

The opportunity to receive funding for service projects was announced to all students. Teachers and staff who were instrumental in the success of the competition assisted students as they generated ideas about projects they would like to have funded. The staff encouraged the students, gave them class time to work on the grant proposals, and guided students through the grant writing process. Students completed a checklist about various social and environmental issues that concerned them. The list included the following: the environment, elder care, drug and alcohol prevention, violence prevention, tobacco prevention, school safety, child safety, teen health issues, neighborhood safety, animal care, and the homeless. From this list of concerns, students identified their top three concerns. The teachers grouped students according to similar interests based on the checklists. Students then discussed and formulated ideas for the projects they wanted to have funded. This component of the process entailed researching topics, contacting potential community partners, and establishing the goals and objectives for the projects.

Students completed the grant proposals. Their applications required them to include a detailed description of the project, a rationale for completing the project citing the research they had done, the community partners who would be included in the project, the steps for completing the project, a timeline, and a detailed budget. The students gave presentations to their classmates to fine-tune their respective proposals and to practice the formal presentation they would eventually make to the funding agency which, in this case, was the Service-Learning Advisory Board comprised of students, teachers, and administrators at the school. After the proposals were finalized, the students made their formal presentations to the Service-Learning Advisory Board. Students used PowerPoint presentations and display boards for both highlighting their proposals and in providing a convincing argument for their proposed projects. The Service-Learning

Advisory Board voted to fund two projects. The students whose projects were not awarded funding joined the two funded groups. Rather than feeling defeated by virtue of not being selected, they, in fact, became instrumental players in those other peer-selected service projects.

Outcomes

Two projects were selected for funding. The first involved the construction of a playground at the new Salvation Army Boys' and Girls' Club of America, which was located across the street from the DAEP, and the second involved the renovation of a nearby neighborhood park that had fallen into disrepair due to neglect and vandalism. Each proposal was awarded \$10,000 to complete the project. The students designed the playground and the park renovation, brokered businesses for services, and did most of the labor at both sites on Saturday mornings. The partnership with the Salvation Army, the neighborhood homeowners' association, and the community businesses that were involved in the projects gave the students many opportunities to be heard in a way that validated their identities and their ideas.

The students reported that the projects gave them a sense of importance, self-confidence, and responsibility that they had not felt that they had before. For example, one student commented that he "didn't know that adults would actually listen to him and take him seriously." Students gained confidence to explain to parents, teachers, and adult visitors what service-learning is all about. They initiated these conversations using their own words to describe their experiences. Students who were initially very introverted gained confidence, were able to express opinions, and were not as quiet and shy. Students who were loud and boisterous acquired leadership qualities such as gaining consensus from the group, motivating others to participate appropriately, and representing the service-learning students at the project sites. Students developed relationships with the recipients of the projects and began to take ownership of the outcomes of the projects. They participated because others were counting on them and because they liked the feelings associated with service-learning such as pride, a sense of accomplishment, and a connection to the community.

The student grant writing model serves as a lesson in youth voice. The students designed projects addressing real needs in the community that were much more creative and useful than what the staff members themselves could ever have imagined. The entire process required collaboration, reaching consensus, planning, decision making, all important life skills. The student grant writing process also related to many classroom objectives, such as research skills, writing skills, identification and understanding of social issues, development of social skills, collaboration, problem solving, and decision making. As the projects became fine-tuned, specific links to classroom objectives in language arts, mathematics, social studies, and science were identified by teachers.

According to Fredericks et al. (2001), young people become dissatisfied when they are not an integral part of the planning and implementation of service projects. Service-learning is the perfect venue for the development of youth ideas, opinions, and creative thinking. Throughout the development of the student grant writing model, school personnel, parents, and community members validated youth voice. The foundation was reinforced for the future of youth civic engagement and leadership roles in the community. The caring adults involved viewed the students as resources to be developed, and the young people built competencies that will be reflected in their futures. Eckstein et al. (1999) point out that one of the hallmarks of the adolescent years is the egocentric nature of teens. However, through encouragement and modeling of social interest, adolescents can develop their own sense of community as demonstrated by this project.

Service-Learning Recommendations

Recommendations for Staff

The success of the above service-learning project was found to be contingent on factors that were critical before, during, and after the implementation of programming. These factors were compiled from the Points of Light Institute Learning in Deed, which is sponsored by the W. K. Kellogg Foundation, The Texas Center for Service Learning, and the authors' experiences in service-learning programs in DAEPs. The first recommendation involves intense training of the teachers, administrators, and staff to include

a mindset that all students will be treated as competent individuals whose ideas are valued. Providing examples of how to encourage youth voice is important. Staff retreats, professional development workshops, and ongoing training will elicit the most successful results. Teachers, in particular, will need curriculum training as they begin to integrate the service projects within their own content areas through writing, discussion, research, science experiments, math skills, and class projects that will enhance the experiential learning. When service-learning is a school-wide effort, the results have been found to be enhanced as everyone in the environment understands the purpose, process, and outcomes of the service projects. Service becomes a way of being and learning for the entire school population.

Recommendations for Students

Students also need training. Certain social skills must be taught and practiced before students venture out into the public arena to represent themselves and their schools. One training opportunity is to allow students to become ambassadors within their own schools. Students can meet and greet guests entering the school, give guided tours of the school to new students and their families, answer phones, help direct traffic in office areas, monitor halls and lunchrooms for cleanliness and neatness, become responsible for classroom routines and protocol, and translate for parents who need help with understanding school rules and procedures in a language other than English. These are just a few ideas that allow students to become empowered and connected to their school environments.

During service projects, students need ample time to practice and role-play what they have to say. They also should reflect before, during, and after service projects to evaluate what they want to accomplish, what is happening in the immediate moment, and which goals and objectives they have met or have failed to meet. In addition, it is critical that the projects are owned by the students. Adults can offer blueprints for service projects, but the students must do the actual work. Allowing students to be the driving forces of the projects means that mistakes will be made and sometimes projects will not turn out as anticipated. These challenges are opportunities for learning and growth.

In addition, students should be encouraged to promote their projects in every possible way. A few ideas

include the following: invite parents and favorite teachers to project sites allowing the students to serve as the guides to the projects; ask English teachers to assist students as they write promotional pieces for local papers, newsletters, and radio spots; encourage students to deliver flyers about their projects to local businesses; and have students videotape their service-learning journey to be shared with school district personnel and community members. One last idea is to help students use technology to use their voice. There are Web sites that specifically ask for youth input on national and world issues. Encouraging community, national, and global involvement will provide students with valuable experiences of empowerment and engagement.

Conclusion

Service-learning has emerged as an important way to engage youth and adopt a more constructive and positive view of them. This is especially important for youth who are deemed behaviorally at risk. Implementing programs that address the needs of students who are at risk of failing and dropping out of school can ensure school administrators and others that they are meeting the needs of all students and are at the forefront of educational reform. In this age of accountability, educators must create and promote programs that prove effective. Service-learning permits educators to achieve these mandates in that it is an intervention that is research based and that has the potential for excellent data collection. Equally importantly, service-learning can impact large numbers of at-risk adolescents and can help ensure that low-income and minority students are not “left behind” in the competitive school and work environments. It is an inclusive intervention that has the potential to meet the many needs of at-risk students, to change student behaviors as well as the way at-risk students are viewed by others, and to raise the expectations of these students to a level of achievement that is competitive with their more privileged peers.

Acknowledgments

Parts of this essay are adapted from “A Service-Learning Model for At-Risk Adolescents” by J. A. Nelson and D. G. Eckstein, 2008, *Education and Treatment of Children*, Volume 31, pp. 223–237. Copyright [2008] by West Virginia Press. Reprinted with permission.

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SES

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Socioeconomic status (SES) is a measure of a family's or an individual's relative economic and social ranking that typically includes level of education and occupational prestige (either of the individual or, if a child, of their parents). The role of SES in adolescent development figures prominently in adolescent research, with the most cutting-edge research focusing on intersections among SES and numerous other demographic factors (race, gender, age) in a variety of contexts (e.g., schools) (see, e.g., Goza and Ryabov 2009). That research focuses on a variety of adolescent outcomes,

ranging from more obvious factors (such as educational and occupational expectations (Mello 2009) to less obvious ones (such as psychopathology) (see Ayer and Hudziak 2009).

Cross-References

- ▶ [Affluent Youth](#)
- ▶ [Underclass](#)

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The development of gender role self-concepts has been the subject of considerable research (for a review, see Ruble and Martin 1998). That rich research reveals that gender role self-concepts emerge early in childhood and also reveals that socialization processes play an important role in the development of gender role self-concept. Children develop gender schemas, which are mental representations that shape their understanding of attributes and behaviors of the two genders (Bem 1981). Gender schemas develop before gender-typed preferences and behaviors (Martin et al. 2002) as well as before the development of gender role self-concepts (Hannover 2000). Although popular consciousness tends to image gender role differences as biological and “natural,” considerable research has long shown that many are socially constructed (Bandura 1986). Gender role issues become important during adolescence, as adolescents come to terms with their own sense of gender and as they interact with peers and engage more readily with broader social forces, and as that sense of gender influences, among other things, their mental health and interactions with others (see, e.g., Priess et al. 2009).

Sex Roles and Gender Roles

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The terms sex roles and gender roles often are used interchangeably to denote a repertoire of emotions, attitudes, behaviors, and perceptions that are commonly associated more with one sex than with the other. Individuals are deemed to adopt a gender role self-concept, which is the amount of gender stereotypical traits and behaviors that persons use to describe themselves and to influence their dispositions. These traits reflect expectations a society holds toward men and women (see Eagly et al. 2000). The classic conceptualizations of the male gender role associates it with instrumental/agentive behaviors and traits that reflect independence, assertiveness, and dominance; the female gender role has been associated with expressive behaviors and traits that reflect sensitivity to others and communality (Bem 1974). The conceptualization also includes androgynous traits, which are mixtures of traditional male and female gender roles (Bem 1974).

Cross-References

- ▶ [Gender Role and Identity](#)

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Sex Trafficking into the United States

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Overview

The sex trafficking of youth from other countries into the United States is increasingly recognized to be one of the most serious social problems of the early twenty-first century. Although laws, researchers, policymakers, and activists in this area use the term “child sex trafficking” (CST), most of the child victims of sex trafficking are adolescents. These constitute as many as one-half of all human beings trafficked into the US. Most of the trafficked youth are coerced by their traffickers to provide commercial sexual services, and the youth are held and forced to do sex work by their overseers through a type of indentured servitude, a modern form of slavery which is termed “debt bondage” that includes both boys and girls. Given its seriousness and ubiquity, CST is a major threat to the well-being and healthy development of adolescents. Characterized by limited agency, maturity, and autonomy, adolescents are highly vulnerable to becoming victims of sex trafficking; they are susceptible to trafficking. Even if they were not susceptible, youth legally cannot consent to being trafficked; their status as victims of the crime of human trafficking is codified in US federal laws. This essay examines these issues.

Sex Trafficking of Adolescents

The US is the world’s second (after Germany) largest destination or market country for women and children trafficked for purposes of commercial sexual exploitation (Mizus et al. 2003). By conservative estimates in 2003, there were projected to be 18,000 persons trafficked into the US per year and 96% of these are thought to be females, and almost one-half of all trafficking victims are thought to be children (both males and females) (Mizus et al. 2003). Other estimates of the numbers of persons are much higher, with some nongovernmental organizations (NGOs) and governmental agencies suggesting that as many as

50,000 trafficked persons enter the US annually. Since the US government estimates that 50% of the persons trafficked into the US are children and adolescents, based upon the estimates above, the actual numbers of youth trafficked into the US per year would total 9,000–25,000 youth. Recent studies by Gozdzia and her colleagues suggest that most of the trafficked children are adolescents, and most of them have suffered sexual exploitation, both boys and girls (See Gozdzia and Bump 2008, March; Gozdzia and Collet 2005).

The commercial sexual exploitation of women and children is officially thought to make up the largest share of human trafficking. Further, human trafficking is considered by many to be a major component of the larger worldwide, and exponentially increasing, slave trade (Bales 2003; Schauer and Wheaton 2006). Trafficking is slavery because it includes fraud or extortion in recruitment and it involves coercion, restraint, gang rape, threat of physical harm, loss of liberty, and loss of self-determination upon arrival in the destination industry. The incidence of slavery, in its sex trafficking form, appears to be directly correlated with the increasing universal marginalization of women (Schauer and Wheaton 2006). The focus on women, however, can be misleading in that it can ignore other groups.

In beginning their earlier study (2006), Schauer and Wheaton worked under the assumption that the trafficking of children would prove similar to the trafficking of women, but that assumption has not been substantiated in the scientific literature. Part of the confusion, and a major difficulty in distinguishing between the trafficking of children and adult women, is that many times when underaged females are trafficked, they are not identified as children, but rather they are officially listed as women. And just as often, adult females identified as victims in trafficking cases were in reality trafficked when they were under the legal adult age of 18. Therefore, upon further study, it appears that while the logistics of international trafficking are similar for both women and children, the attendant circumstances of children in their source countries, the logistics of their travel (e.g., usually accompanied by bogus “parents”), and the milieu of a well-established commercial child sexual exploitation industry in the US, argues for a separate research agenda for each, while still admitting areas of overlap (cf., Estes and Weiner 2001; Schauer and Wheaton 2006).

The largest sources of official data upon the subject of child sex trafficking are found in the reports from the Office of the Under Secretary for Democracy and Global Affairs (2008, June) of the United States Department of State, especially its annual *Trafficking in Persons Report* (TIPs), and from the United Nations Children's Fund (UNICEF, 2008a, b). Neither TIPs nor the UNICEF reports deal with the domestic sex trafficking (or the prostitution) of adolescents; nor do they shed light upon the sex trafficking of boys, while the few exploratory studies on this subject suggest that as much as 25% of commercial sex work is done by young males (see, Jeffrey and MacDonald 2006; Letherby et al. 2008; Gozdziaik and Bump 2008, March).

Empirical Findings

Empirical research reports on the subject of CST are scarce. Arguably, the best source of scientific information extant is the recent critical literature review by Gozdziaik and Bump, *Data and Research on Human Trafficking: Bibliography of Research-Based Literature* (2008, September). Those wishing to explore CST for the purpose of gaining an understanding of how CST fits into the broad-based scope of sexual predation and victimization, see Letherby et al. (2008) or Flowers (2006). Despite these important studies, this area of adolescents' lives remains pervasively understudied.

Child sex trafficking is a subject of great human anguish among, and human suffering visited upon, persons who have not attained full adult maturity or autonomy. Therefore, it would seem highly important for scholars and researchers to bring together the best scientific literature available in the English language on the subject of the commercial sex trafficking of children into and within the US. As a result, citizens and policymakers might be informed of the negative impacts of trafficking, the need for further research that would inform prevention and early intervention, insight for improving interdiction, enforcement, and prosecution of traffickers, and knowledge to respond to victims' needs for support, services, and reintegration into community. However, such specificity as to the parameters of CST is not possible at this time. Only bits and pieces of the whole are presently understood, and many of those informational snapshots that inform CST research and antihuman trafficking response are created through supposition and currently remain scientifically unsupported projections and conclusions.

Human trafficking may have become a high governmental priority, but research remains highly inadequate. With the trafficking of human beings having become an issue of high priority in official US government response since 9/11, along with terrorism and border security, much effort has been expended within the US both in human and financial resources in the fight against human trafficking – especially against the trafficking of women and children into the commercial sex industry. This has led to many publications produced by governmental agencies, NGOs, the news media, and by academics; but most of these reports are at best anecdotal in nature and some is produced with political or dogmatic bias (Schauer and Wheaton 2006). The attempt to find empirically based studies proves a difficult endeavor in the general field of human trafficking, and scientific research studies of many of the facets of child trafficking in general, and CST in particular, are nonexistent (such as the study of boys' experiences). On the other hand, however, two excellent critical literature reviews have been published recently (Gozdziaik and Bump 2008, September; Gozdziaik and Collett 2005). These studies show that by far the greater number of human trafficking publications present themes and draw conclusions based upon either anecdotal information or dogma, or simply restate positions in line with official (untested) narratives. Reviews also report how some studies repeat earlier propositions as fact and how some studies ostensibly about sex trafficking research when they actually are about prostitution. Finally, these reviews identify the extremely small number of human trafficking, sex trafficking, and child trafficking studies that are based upon rigorous scientific methodology, which we will highlight below.

One of the central problems that researchers confront is the reality that the scientific enterprise begins with operationalized definitions (i.e., definitions that can be scientifically tested); the process of empirical science is arrested by the lack of it. In the general subject area of human trafficking as well as in the more specialized area of CST, there exists little definitional agreement among the varied individuals and groups interested in curtailing sex trafficking; in fact, many NGOs are openly hostile toward one another because they disagree over definitions and possible solutions (Schauer and Wheaton 2006). While admitting definitional disagreements, and at the same time,

reserving judgment upon the purposes intended by governmentally created terminology, the usage of the terms of human trafficking found in the *Victims of Trafficking and Violence Prevention Act of 2000* (TVPA) (Office on Violence Against Women [OVAW] 2000) and within other related federal laws will be favored in this essay. These federal terms and their definitions are based on the usage of terms in the United Nations *Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children* (U.N. Protocol) (United Nations 2000). Finally, federal trafficking laws in the US are based upon the word usages of these two documents.

The human trafficking literature uses the term “child” to refer to persons who were under the age of 18 years when they were trafficked. In one of the few empirical studies of CST, among those identified as victims of child trafficking by the US government (named survivors by the researchers), the vast majority were found to range between 14 and 17 years of age. Those who were trafficked into the US unaccompanied by adults averaged 16 years of age and they ranged in age from 13 to 17, while the mean age of those accompanied by adults (usually their families) was 13 years with a range in ages from 2 to 17 (Gozdziak and Bump 2008, March, 56).

Challenges in Defining Sex Trafficking

Human trafficking is probably best understood by first learning the definition given to the term by the United Nations and second by comparing that with the definitions of the term given in the United States Trafficking Victims Protection Act of 2000. The U.N. Protocol (2000, 3) defines trafficking in persons in the following language:

Article 3

- (a) “Trafficking in persons” shall mean the recruitment, transportation, transfer, harboring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of

sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude, or the removal of organs.

- (b) The consent of a victim of trafficking in persons to the intended exploitation set forth in subparagraph (a) of this article shall be irrelevant where any of the means set forth in subparagraph (a) have been used.

The United States Trafficking in Victims Protection Act adds to the trafficking in persons concept by adding the term severe forms of to the UN Protocol terminology of trafficking in persons. Referring to this updated terminology, Schauer and Wheaton state that the US Congress in the TVPA emphasizes human trafficking by labeling it “Severe Forms of Trafficking in Persons” (OVAW 2000, 5), and, by so doing, distinguish trafficking from human smuggling. According to the TVPA, severe forms of trafficking fall into two classifications:

- (a) Sex trafficking in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age
- (b) The recruitment, harboring, transportation, provision, or obtaining of a person for labor or services through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery

Sex trafficking is further defined and elaborated upon in the Trafficking Victims Protection Act as follows:

The term “sex trafficking” means the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act.

A victim of a severe form of trafficking is logically defined as one “subject to an act or practice” described as “severe forms of trafficking in persons” above. Likewise, a victim of trafficking is “a person subjected to an act or practice described” in either of the two definitions of trafficking above.

The fact must be strongly emphasized that the sex trafficking of minors is, by definition of the TVPA above, a severe form of trafficking. The TVPA urges, almost requires, every effort of the international community to eliminate CST. In fact, according to the TVPA, the US government may withhold certain types of foreign aid to countries that are not making

serious attempts to curtail human trafficking; annual assessments are made of countries to assess their determination to that end. The TIPs reports document these assessments.

Human smuggling also is a term often used in the context of sex trafficking. The term often is confused in the literature and in common usage with human trafficking is a breach of federal immigration law rather than a breach of criminal law. Human smuggling relates to an agreement between persons in which at least one person (the smuggler) contracts to guide or transport another person (the smuggled person) across a national border illegally. Smuggling, then, may be involved in eventual trafficking, but it is not synonymous with it. Christien van den Anker (2008) emphasizes, for example, that many trafficking victims have first entered countries of destination (like the US) legally, and then at a later time become trafficked.

Suggested by the TVPA and the UN Protocol, the commercial sexual exploitation of children (CSEC) was the central issue of the World Congress against Commercial Sexual Exploitation of Children, held in Stockholm in 1996. CSEC was defined by the World Congress as sexual abuse by the adult and remuneration in cash or kind to the child or a third person or persons. The child is treated as a sexual object and as a commercial object (Clift and Carter 2000, 75–78). The TVPA definitions of severe forms of trafficking, which guide world perspectives, policies, and laws, make child sex trafficking synonymous with CSEC. Both of the designations may include a diversity of offenses including child sex tourism, the prostitution of children, child pornography, online sexual exploitation, and various types of child sexual abuse.

As noted before, the Victims of Trafficking and Violence Protection Act (TVPA) was enacted by the US Congress in 2000 in response to the growing problems of international trafficking. The three Ps are the focus of this legislation, that is, the TVPA is intended to combat the crime of human trafficking through the prevention of human trafficking, through the prosecution of human traffickers, and through the protection of the victims of human trafficking. The US Department of Health and Human Services certifies international human trafficking victims as trafficked persons under this law. When certified, victims are able to receive physical and mental health services, educational

and vocational programs, legal services, food stamps, language translation services, and housing. Persons who are victims of severe forms of human trafficking are also eligible to be granted T-visas, which allows them to remain in the US for 3 years and under the protection of the laws of the US. After 3 years, the trafficking victim may apply to become a permanent resident of the US (Sanborn et al. 2009, 20).

Concerns Regarding Adolescents

One of the major issues of concern relating to the sex trafficking of adolescents into the US concerns the identification of victims. It appears that there exists a significant disparity between the official estimates of trafficking victims brought into the US with those actually located and aided (Sanborn et al. 2009, 22). The Migration and Refugee services (MRS) at the US Conference of Catholic Bishops (USCCB) and the Lutheran Immigration and Refugee Services (LIRS) together constitute the only network of programs used by the US Federal Government to offer services to child victims of trafficking. Of an estimated number of 808–2,308 victims of CST referred by the preceding service agencies between 2004 and 2007, only 142 were deemed eligible to receive services by the Federal Government (Gozdziak and Bump 2008, March). Viewed another way, both the US government (through its *TIPs Reports*) and NGOs, in their most conservative predictions, have estimated that 18,000 persons are trafficked into the US annually (Office of the Under Secretary 2008, June). The official discourse next states that more than one-half of those trafficked are children. Of the trafficked children, most are said to be girls. If the numbers above are correct, then the extremely low number of child trafficking victims officially identified is indeed an incongruity. The disparity in numbers is difficult to understand, but a look at reports offers some potential answers.

Several possible answers can help explain why the statistics do not match. First, the official definitions, conceptualizations, narratives, or estimates may be faulty. Second, the criminal justice system may be so focused upon prosecutions, that many child victims who are unable or unwilling to serve as witnesses for the prosecution of traffickers are simply identified officially as non-victims rather than victims. Third, there may not be enough official emphasis on and

resource dedication toward training police (especially those fortifying and protecting the US borders) and social services professionals to be alert for and to identify victims of CST. Finally, a possibility exists that the TVPA has simply become another tool in the hands of federal authorities to barricade the borders of the US against the continually growing international labor migration (which labor migration increasingly consists of females and adolescents).

Sanborn et al. (2009) suggest that the reasons so few T-visas have been issued, and possibly the reason for the common delay in identifying victims, may be five-fold. First, the victims trafficked into the US are usually hidden from public view and therefore difficult to locate. Second, trafficked youth may not view themselves as victims, a point supported by Gozdzia and Bump's research (2008, March). Third, victims trafficked into the US are dependent upon their traffickers, and therefore not inclined to turn against them and toward the unknown possibilities represented by reporting to US authorities. Fourth, law enforcement may not recognize or sympathize with trafficking victims. And fifth, in extreme cases, the government has deported victims after being assisted by them in the prosecution of traffickers. Although not mentioned by Sanborn or Gozdzia, an obvious sixth possibility exists, which is that the estimations of the numbers of adolescent victims trafficked or sex-trafficked into the US may be (for whatever reason) grossly inflated.

Of the 142 children receiving victim services at the time of the empirical study of Gozdzia and Bump (2008, March), the child victims (survivors) had been trafficked into the US from the source countries of (from greatest frequency to least) Mexico, Honduras, Guatemala, Morocco, Ghana, Cameroon, India, Argentina, the Dominican Republic, and Nicaragua. Only 4% of these victims, unaccompanied by family, were boys. The mean age of this group was 16 years. Those accompanied by family (apparently also trafficked) included more boys and younger children. The most frequent type of trafficking within this group was CST. With the above said, it should be noted, however, that the trafficking of children into the US from nearly every country of the world has been documented.

In their study of child trafficking, Gozdzia and Bump (2008, March) found no evidence of official

identification of child trafficking or of border interdiction of child trafficking in process by either the US Border Patrol or US Customs. Part of the problem is that there are no border protocols or treaties in place between the US government and the Mexican or the Canadian governments to regulate human trafficking interdiction and enforcement. This is a critically important problem to solve, especially when the limited research literature relating to CST shows that child victims suffer exponentially more trauma as time and stage of intervention is delayed (Gozdzia and Bump 2008, March).

Responding to Sex Trafficking

A disjuncture also exists between the efforts expended to protect CST victims and efforts made in investigating and prosecuting traffickers. Government prosecutors have been seen as ignoring the concerns of child welfare professionals related to the adverse effects forced testimony and numerous interviews might have on a child survivor's healing process (Gozdzia and Bump 2008, March, p. 11). Investigators and prosecutors stand accused of bullying child care professionals and even using subpoenas to force child victims to testify in trafficking investigations and prosecutions. In a sense, therefore, these same children suffer double victimization. First, their human rights are violated by their traffickers, and second, the US government violates their rights by not giving the best interests of the child (Convention on the Rights of the Child, Article 3.1 1990) first and top priority.

Human trafficking is portrayed in the scholarly and professional literature as the world's fastest growing criminal enterprise, with profits that rival the illegal drugs and arms trade (Gozdzia and Bump 2008, March, p. 12). In reality, CST into the US resembles a Mom & Pop Operation in the Gozdzia and Bump study. Family involvement is shown to be a common factor in many of the children's trafficking cases. Many persons are involved in the child trafficking process, including family, and in no one case was only one person involved throughout the trafficking operation. Most often, both trafficked children and their families see the child trafficking as an operation in labor opportunity through migration.

The family involvement, which is quite prevalent in the trafficking of unaccompanied minors, often

becomes a major problem for investigations and prosecutions due to several factors. First, the children do not perceive themselves as victims. Second, they often do not view what has happened to themselves as crimes. Third, they do not wish to testify against their families. Lastly, they often wish to be released so that they can return to work in order to send money home to their families. In other words, the CST and child trafficking survivors tend to want to be free to return home or to work rather than remain in custody (that they might testify for the prosecution). They also tended to view traffickers as their helpers. While a few girls sex-trafficked into the US told Gozdzia and Bump that they had followed their boyfriends, for most of the CST survivors, the idea to migrate came from others and was presented as a favor (2008, March, p. 13) to earn money, or to find a better life, or to pay back and support parents.

The above research is important and does begin to fill important gaps, but research in this area is handicapped in several ways. First, it focuses on official discourse that is on the vulnerability and victimization of trafficked children, and doing so fails to recognize and consider the co-occurring factors of children's agency and resilience. This greatly impacts the manner in which research is conducted as well as the way in which ethical responsibilities to the children studied are understood. It also negatively affects the designing of services, programs, and policy responses (Gozdzia and Bump 2008, March, p. 14). Second, the US government's response to CST is almost exclusively focused upon the arrests, prosecution, and conviction of traffickers. This means that less attention is officially given to providing the services necessary to child victims, and less value is officially placed on listening to the victims' voices (i.e., their perceptions of their experiences and their desires).

The question remains whether those adolescents sex-trafficked into the US are victims or survivors. To understand one's self as a victim, on the one hand, may be a debilitating self-conceptualization, while, on the other hand, perceiving of one's self as a person who has survived gross injustice can be an exhilarating self-perception. Gozdzia and Bump inform the debate by reporting that "... conceptualizing these children as survivors with a great deal of resilience might be more suitable to promoting their best

interests. Unfortunately, the otherwise limited literature on child trafficking emphasizes mainly the trauma of the trafficking experiences and focuses on pathology" (2008, March, p. 16). Support for this claim also comes from the way treatment in the US follows the Western medical trauma treatment model, while little attempt is given to using models more applicable to the individual survivors of CST, such as indigenous coping strategies, building upon the child's own resilience and autonomy, or upon spiritual methods.

Issues such as the worldwide marginalization of people, economics, and general questions of poverty often are raised in the discussion of the causes of human trafficking in general and child sex trafficking into the US in particular. Gozdzia and Bump explain that, although poverty is somehow involved in most child trafficking, it is not a necessary and sufficient cause of child trafficking. The two factors most closely correlated with child trafficking and CST are child fostering and child labor. Child fostering and child labor, being culturally accepted in their countries of origin, strongly figure in children's conceptualizations of their own trafficking experiences (2008, March, p. 18).

Conclusions

Human trafficking appears to be in epidemic proportions across the world; the demand for commercial sexual services within the US, and also the eagerness of many persons worldwide to seek opportunities for labor migration, may be causing large numbers of adolescents to be trafficked into the US annually for the purpose of commercial sexual exploitation. While the numbers of persons victimized by commercial sexual exploitation appears to be significant, a great disparity exists between the official estimates of victims and the number of youth survivors who are actually located and aided. Also, although the Trafficking Victims Protection Act emphasizes the rescue, protection, and well-being of the child, when located, the tendency for the official agents of control is to prioritize the prosecution of the sex trafficker(s) over the well-being of the adolescent trafficked into the US. This essay has identified many areas of interaction between the authorities, social services, and adolescent sex trafficking survivors that demand major attention and improvement.

Cross-References

- ▶ [Sex Trafficking Worldwide](#)
- ▶ [Sex Trafficking within the United States](#)

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Sex Trafficking within the United States

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Sex trafficking within the United States has been receiving increased attention as more persons realize that both foreign and American minors are trafficked in the United States. This essay first defines child sex trafficking as sexual exploitation of a minor for profit. Focus is placed on describing how girls are seduced or tricked into repeated acts of prostitution and child pornography, and a case example of the Cadena family is provided. The essay then turns to efforts to craft effective responses to trafficking and ends by highlighting the importance of doing so.

Child sex trafficking involves sexual exploitation of a minor for profit. It might also be referred to as the commercial sexual exploitation of children. The latter is a preferred term to child prostitution because the word “prostitution” suggests consent to engage in an illicit enterprise. Consent is largely accepted to not be the case regarding child sex because the law views minors as being too young to consent to sex. The term “child” in this area of research and policy reflects the international definition of “child” as someone under 18 years. In many countries where children are exploited sexually, the problem is a local one. In the United States, the majority of persons trafficked domestically are adolescents (Guinn 2008). Child sex trafficking is difficult to address given a general societal ignorance of the nature and prevalence of the problem. The illicit, secretive, and violent dynamics of child sex

trafficking within the United States has made it a difficult arena to study; for example, the very age of victims might be in question. Thus, much of the literature includes estimates and insightful, yet limited anecdotal descriptions of the phenomenon. Most of those actively researching child sex trafficking are journalists and some are academics.

Cases of human trafficking for sex or other labor have been identified in many cities. Among the most commonly noted are New York, Los Angeles, San Francisco, San Diego, Las Vegas, San Jose, Fresno, Reno, Seattle, Minneapolis, Chicago, Atlanta, Dallas, Fort Myers, New Jersey, Newark, Boston, Washington DC, Philadelphia and Miami. Estimates are that about 50,000 persons are enslaved in the United States and that about half of these might be minors; yet, in 2006 only 11 persons were charged for human trafficking and slavery (Bales and Soodalter 2009).

According to a 2003 United Nations report, approximately 80% of trafficking involves sexual exploitation by persons called pimps. Most pimps operate independently, exploiting one to three girls concurrently (Albanese 2007). Nevertheless, pimps in the same location might support each other by monitoring each other's girls, assisting in recruitment, indoctrination, transportation, and discipline. In various studies of female sexual exploitation by males, including prostitution, there is often a history of sexual violence or early sexual objectification experienced by girl victims. Girls as young as five might be commercially sexually exploited by their mothers or others. Indeed, it is not uncommon for exploited girls to experience domestic violence and other forms of child abuse. Early nonconsensual coerced initiation into sexual activities may manifest in a trajectory of susceptibility to years of sexual exploitation unless there is substantial intervention. Internationally, there is a median age of 14 for entry into prostitution (Ekberg 2002 as cited in O'Connor and Healy 2006); however, the Polaris Project reports that entry into domestic child trafficking commonly begins at age 12–13. Often the victims are abused runaways or abandoned children to whom the trafficker offers initial support. This offer is the genesis of the eventual seduction of the minor into sexual exploitation. Thereafter, cooperation with the traffickers becomes a means of subsistence.

The path of initiation into sexual exploitation tends to follow a different pattern for girls trafficked into the

United States (an estimated 50,000 per government numbers as reported by Raymond et al. 2010) as opposed to domestic girls. Foreign girls tend to be older and are more likely to be coerced into the sex trafficking by their families or to repay a human trafficking debt; they also may enter into trafficking through deception that they would be doing legitimate work only to find out later that the work is commercial sex work. For domestic girls, the usual pattern of seduction into sex trafficking begins with a pimp identifying a vulnerable minor. The pimp then attempts to meet the minor's emotional and physical needs. Where girls are the victims, males will often engage them in a romantic relationship. The pimp will eventually threaten to withdraw affections and support unless the girl succumbs to commercial sex. Other hooks to facilitate adolescents' entry into sex trafficking include invitations to offer entertainment in malls, restaurants and clubs, offers to do modeling, offers of legitimate service jobs like maids or baby sitters, arranged marriage advertisements, having taxi operators locate and recommend vulnerable adolescents to sex traffickers and active recruitment of minors to provide sex in areas where large groups of men are working in agriculture, mining, and construction (Guinn 2008). Albanese (2007) reported that in other cases of child sex trafficking, a family member or friend sexually abuses a minor, and then commercially sexually exploits this victim through prostitution or into forced sex with others toward producing child pornography. Indeed, one report cited by Albanese claimed that 75% of child pornography victims lived at home. He also noted that other child sex victims are utilized in sex tourism. While many Americans cross the border into Mexico to solicit children for sex; others travel to places like New York and Las Vegas to access similar services. Indeed, domestic sex trafficking of children in the United States is deemed one of the most profitable illegal organized activities after drugs and weapons dealing. Knowledge of the entry points into child sex trafficking is significant for law enforcement efforts to quell the problem in that these scenarios offer opportunities for utilizing confidential informants. Moosy (2009) offered an example of a taxi operator informant who received multiple calls to take adolescent females to a certain hotel on numerous occasions.

Among US children who are sex trafficked domestically, their backgrounds are similar to those trafficked

into the country (Raymond et al. 2010). Those trafficked into the country are often from the former Soviet Union, Latin America, China, India, other parts of Asia, and from Africa, while US children might be exploited within their own communities. These children often have an early history of child sexual abuse and often are being pimped out by a family member. Victims are beaten and or threatened into sex acts in bikini bars, health spas, truck stops, massage parlors, and modeling studios. Such revelations have emerged from successful investigations in areas such as Houston, Florida, Arizona, and Nevada.

Running away is common and represents one way that children fall into domestic sex trafficking. Curiously, many runaways are not from low income homes, and a substantial number are White. One study found 70% of runaways used drugs and half of the males (often called “chickens”) under 14 were sexually active. Runaways are also at particular risk for HIV infection given their lack of job skills, experience, and education, which makes prostitution appear to be a suitable means of survival (Flowers 1994). Often, the prostitution follows chemical dependence and so it becomes a means to access drugs. Entry into prostitution is facilitated by early experiences of sexual abuse which represents an objectification of the body and sex as a commodity.

Child pornography (“chicken porn,” “kiddie porn”) refers to the depiction of sexually explicit images of children with objects, animals, adults and, or other children. Usually the child victim is drugged and psychologically or psychically coerced into engaging in the sex acts. Child pornography is estimated to represent about 7% of the US pornography business translating into about \$6 billion in sales from the exploitation of thousands of children (Flowers 1994). In short, the domestic sex trafficking of children is a supply response to a substantial demand. The supply might be delivered in three typical ways: by individual facilitators, a regional group of facilitators, or an international or national network (Albanese 2007).

Janice Raymond and colleagues (2010) investigated child sex trafficking nationally. They found that often there is a legal business with an illegal business of child sex trafficking in the background. In other cases, warehouses and trailers are converted into brothels at certain times of the day or night. Sex trafficking services are also common near military installations. The victims of child sex trafficking tend to vary in race and

ethnicity in accordance with the dominant demographics of their clients. Examples of this are that Asian females are more common in San Francisco, while Black and Latina females are more common in New York. These illicit services are subtly advertised in English and non-English community newspapers, pornographic magazines, the *Yellow Pages*, via the Internet, television, billboards, postings at truck stops, and word of mouth. The health of these trafficked females is of particular concern because often their clients want sex without a condom. Violence from customers and pimps is also an issue as many victims of sex trafficking manifest symptoms of traumatic brain injury (O’Connor and Healy 2006). Thus, many women report indulgence in alcohol and drugs to cope with the harshness of their existence.

Advocates often provide the information that sheds light on this area of adolescence. For example, Siddharth Kara (2009), a former banker now antislavery advocate, reported his experience in March 2006 of going to a massage parlor in Los Angeles for a “traditional Thai massage.” Therein, he was asked to pick a young masseuse from a group of girls and led to a room with a mattress. Once in the room, the girl inquired whether he wanted a “special massage” for an addition \$10–40. Another girl he interviewed, Lucita, revealed that she worked 12 h a day, with no days off, not even for menstruation, and she slept where she worked. She served mostly Asian men. These girls were told that the police would kill them if they were discovered, so they avoided law enforcement.

Kara (2009) and Coonan (2010) offer descriptions of the infamous Cadena family. The Cadena family of seven from Mexico was led by Rogeria Cadena. The family was federally prosecuted in 1999 for trafficking more than 25 women and girls from Mexico into the United States in 1996 and 1997. Their youngest victims were 14 years old; all were poor, with limited education, and none were fluent in English. The females had been recruited in Mexico by well-dressed women who promised them legitimate employment in the United States for approximately 6 months. Once in the United States, they were told that they owed their traffickers about \$2,000 and thus were forced to work as prostitutes in trailers at migrant worker camps in Florida to pay off their debts. Efforts to resist were met with gunfire, rape, and threats to harm family members in Mexico. Alcohol and drugs were also used to control the girls. The

victims serviced over 30 men per day, plus their captors. They had no days off and during menstruation they were required to have relations in a dark room – lest an awareness of their condition might upset their clients. Starvation and torture were routine. If they became pregnant, they were forced to have abortions.

To maintain operations, the women and girls were kept in groups of four or five and were moved from location to location about every 2 weeks to avoid the likelihood of clients becoming attached and attempting a rescue of the girls. The females were allowed to go out in public to places like the grocery store and laundromats, but they were always accompanied by an armed captor. Nevertheless, the girls managed to call the police on at least three occasions, but the Cadenas turned them away claiming that there must have been a mistake. Apparently, such scenarios with law enforcement are not uncommon in cases of child sexual exploitation. Neighbors also suspected illicit activity but had mistakenly assumed drug activity in lieu of sex trafficking. Notably, after being freed from the Cadenas, the girls described a need for safety as their greatest concern.

Child sex trafficking often is a federal matter; thus, it is usually investigated by the Innocence Lost Task Force of the Federal Bureau of Investigation (FBI). The Task Force was created in 2003. It includes the FBI, the National Center for Missing and Exploited Children, and the Department of Justice's Child Exploitation and Obscenity Section. These groups often partner with local law enforcement. In 2009, it claimed the rescue of 818 children and the conviction of over 500 offenders. They are also connected to the 10-year old Innocent Images National Initiative. The initiative involves catching child sex trafficking offenders who utilize cyberspace to distribute child pornography and/or locate potential victims. The FBI reported in 2006 that over 4,800 had been charged with a crime under these initiatives. Of these, by 2006 there were 2,135 Innocent Images cases.

The circumstances persist in part because of the rewards for the illicit activities given that the illicit demand is substantial. The problem also persists because of mainstream ignorance, such that signs of trouble are often missed. Those actively engaged in combating child sex trafficking might also claim that a lack of resources hampers their efforts (Bales et al. 2009). In 2009, Karen Kalergis at the Institute on

Domestic Violence and Sexual Assault in Austin, Texas, recommended that the response to child sex trafficking should include collaborations involving juvenile justice, social work, public health, mental health, law enforcement, and immigration (Kalergis 2009). All of these entities need to be better educated on what to look for and how to respond in dealing with girls who have been trafficked sexually. Moosy (2009) suggested that, initially, suspected victims of child sex trafficking should be separated from each other. This is recommended because often a victim will become an enforcer over other victims for their oppressor. Investigators might also expect the victims to be less than forthcoming given concerns about a loss of resources and the safety of themselves and their families. There is also the strong possibility that former victims exist as traffickers will get new victims over time.

Several other efforts need to be made to address the needs of youth involved in sex trafficking. Youth who have been trafficked will need options for income, a mentor, and 24 × 7 support to assist in remedying their social deficits after their experiences of being manipulated, exploited, and abused. Such multi-systemic efforts need to be outreach efforts because victims or survivors of child sex trafficking are often not inclined to seek assistance for themselves. Thus, they need to be located and actively assisted. Some social workers also recommend that, to the extent possible, girls are educated about how the pattern of seduction into exploitation unfolds. Guinn (2008) suggests educating men about the ills of exploiting females through prostitution and the consequences of doing so, and that this would need to be preceded by successful and sufficiently severe enforcement. Presently, a conviction for child sex trafficking in the United States means a mandatory minimum sentence of 15 years of incarceration. On a larger societal scale, Albanese (2007) and others recommend efforts to diminish the demand for child sex. Such efforts might include monitoring technological advances such as the use of child-like avatars in simulated online worlds to engage in sex. The feminization of poverty and its contribution to the vulnerability of females to exploitation is certainly a factor in the growth of the sex industry. To combat such dynamics, it is necessary to foster an increasingly positive image of women and children while also improving legitimate economic opportunities for woman and impoverished families.

A healthy and prosperous society in an increasingly global world cannot afford to ignore the ills of child sex trafficking given that the basic laws of supply and demand will persist, and this unattended problem might then increase; this is especially probably given that the United States has close neighbors in poverty and segments of its own community struggling to meet basic needs.

Sex trafficking is something to which minors cannot legally consent. In recent decades, with increased globalization and demand for sex, many minors are being sexually trafficked in the United States as sex providers and players in child pornography. Often those exploiting them for profit are pimps. Given that sexually trafficked youth might be perceived as both victims and offenders, responding to them necessitates cooperation between various social service entities and law enforcement.

Cross-References

- ▶ [Sex Trafficking into the United States](#)
- ▶ [Sex Trafficking Worldwide](#)

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Sex Trafficking Worldwide

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Overview

Child and youth sex trafficking (CST) exists in the early twenty-first century as one of the top international criminal enterprises. While the universal marginalization of people continues to increase, and while ubiquitous, abject poverty forms a background for nearly all of child trafficking, and the factors most associated with children's vulnerability to trafficking are child fostering and child labor (Gozdziak and Bump 2008). In recent decades, increasing numbers of adolescents are encouraged to seek paying jobs outside of their families' homes; some of these are approached by traffickers who promise them high wages if they will migrate to foreign lands. Similarly, the number of orphans in several regions of the world (such as in sub-Saharan Africa) expands so rapidly that traditional safety nets, which served them well in the past, are today overwhelmed. The lack of safety nets renders youth vulnerable and easily leads them into child trafficking in all of its forms and into child sexual trafficking in particular. On arrival at their destination and many times in transit, sex trafficking victims are forced to perform sexual services in the commercial sex industry.

Adolescents, often described by their limited autonomy, maturity, and agency, are especially vulnerable to the victimization of child sex trafficking. Worldwide, predatory sex traffickers actively seek to enmesh the more vulnerable adolescents into the highly lucrative criminal CST schemes. Worldwide, adolescents and children are in the most danger of the victimization

of sex trafficking and are the least protected of all trafficking victims. They face some of the greatest difficulties in accessing the benefits that supposedly are available to the victims of trafficking, and they are more likely deported rather than given victimization status (Brane' 2007, May). This essay examines these issues.

The Sex Trafficking of Adolescents

Governmental and nongovernmental organizations (NGOs) worldwide are following their divergent agendas in working toward eliminating sex trafficking. Sex trafficking is a concept that depends on the availability of innocent, unprotected young women (largely adolescents) and children who are especially vulnerable to the force, fraud, or coercion of those who would commodify them and merchandise them into the sex markets of the world. This innocence is founded on these women's/children's failure to understand the traffickers' motives and plans for them. Innocence also requires lack of agency (or autonomy) on the parts of the trafficked women and children (Schauer and Wheaton 2008).

Sex trafficking recently has become a major topic of interest in the discipline of criminal justice. Numerous presentations have been made in regional and national professional conventions beginning in 2004 and continuing through the present (e.g., the Academy of Criminal Justice Sciences annual conferences), and while there is much furor and emotion (supported by alarming, yet unreliable, statistics) in the sex trafficking debate, little information exists that would serve to further scientific inquiry (Schauer and Wheaton 2008). When the literature and debates of human trafficking are traced to their origins, the early suppositions or projections, having initially found their way into print, have been repeated over and over again in the literature of human trafficking to the extent that it has become difficult to separate fact from fiction.

Sex trafficking is one of the two classifications of severe forms of trafficking that the *Trafficking Victims Protection Act* (TVPA) so defines (Office on Violence Against Women [OVAW] 2000). Children (including adolescents), when trafficked, due to their innocence and lack of agency, are assumed by the TVPA to be victims of severe forms of trafficking. Presently, the US Government estimates that 18,000 persons are trafficked into the United States every year, and that 96%

of these are women. Worldwide trafficking projections range from 350,000 to 1.5 million victims, with, again, the vast majority being women and children. In addition, as many as 50% of all trafficking victims are said to be children or adolescents, both girls and boys (Mizus et al. 2003; Office of the Under Secretary for Democracy and Global Affairs 2008, June). Most of the trafficked women and children are assumed, by the US Government and by nongovernmental organizations, to be trafficked into the United States and worldwide for work in the arena of sex services (Mizus et al.). Many of the nongovernmental organizations (NGOs') estimates of trafficking into the United States arrive with figures upward of 50,000 persons per year, and the US Central Intelligence Agency suggests that the number trafficked annually worldwide reaches the figure of 700,000 persons (OVAW 2000) (Schauer and Wheaton 2008).

Challenges Facing Empirical Research

Basic scientific questions about trafficking are difficult to answer. Conflicting data predominates, as does the ubiquity of poorly defined or compromised definitions, polarities of opinion and purpose of key stakeholders, and divergent political goals that drive definitions, data collection, data retention, policy, and anti-trafficking policy analysis (Human Rights Watch 2003; see further Office of the Under Secretary for Democracy and Global Affairs 2008). Considering first the definitions, for example, few distinctions are agreed upon; and even the official definitions of the United Nations Protocol in this area (United Nations [UN] 2000) and the US Trafficking Victims Protection Act (Office of the Under Secretary for Global Affairs 2008) are at best compromises between the perspectives of parties who hold conflicting philosophically polar positions. For instance, the TVPA offers aid only to those who are useful in the prosecution of traffickers (Schauer and Wheaton 2008).

The scientific endeavor is again stymied in efforts to understand the incidence and extent of sex trafficking. Information appears to be provided or withheld based on personal, political, economic, or ideological agendas. The statistics may be bolstered or denigrated by selective interpretations and lack of agreement of who is to be counted and when. This statistical confusion is further heightened by failures to distinguish

between the related themes of labor migration, illegal immigration, human smuggling, human trafficking, and slavery.

With the confusion associated with ideological positions, the conflicting information, and the intense emotions displayed by chief actors in this sex trafficking drama, the less-biased observer is led to question, “What concrete facts do we have at our disposal regarding sex trafficking?” And the observer may question further, “Is this movement to eliminate sex trafficking simply a modern replay of the white slavery moral panic of a century past (Weitzer 2005; Grittner 1990; Schauer and Wheaton 2008)?” Definitions were fuzzy during the white slavery panic as well, and with the insight gained from history, scholars today assume that the chief victim of white slavery – the innocent blond-haired girl next door – never existed; or at least was not procured from her supporting home environment by the force or seduction of agents of the underworld, as was so commonly and officially postulated (Grittner 1990; Schauer and Wheaton 2008).

A powerful argument questions the official US (and world) narrative (and the definitions derived) summarizing human trafficking as an entirely criminal enterprise. It is just as likely that human trafficking is less a worldwide criminal enterprise and more a problem of labor mobility driven by the ever-increasing economic marginalization of women and children. It has been suggested that official efforts against human trafficking may be thinly disguised official efforts for prosperous nations of the northern hemisphere to bolster border security against undesired immigration from the south (Kempadoo and Doezema 1998; Gozdziaik and Bump 2008). In this last scenario, official antihuman trafficking efforts, along with the legal prohibition of prostitution, in actuality sustains the underground economy of sex trafficking and commercial sexual exploitation.

By far, the worst part of this confusion may be illustrated by the fact that myriad adolescents remain vulnerable to the criminal victimization of CST, while unproven, unscientific research continues to direct official solutions toward criminal justice prosecution and punishment responses. This continues rather than channeling anti-trafficking efforts toward prevention and victims’ services based on recognized children’s rights/human rights. While the official projections of

the scale and extent of CST is exceedingly high (usually over one million victims), the well-financed official anti-trafficking regimes rescue an exceedingly small number of victims.

The result is that, while no one knows how many children and adolescents are becoming victims of child sex trafficking, it is well known that the threat is real. There is much suffering among the youth who are trafficked. It also is known that many youth are performing sexual services on a worldwide scale under duress in the commercial sex industry. And, finally, it is known that the official human trafficking responses accomplish little to either alleviate the human suffering or stem the flow of human oppression.

As illustrated above, the present interest in sex trafficking correlates with the white slavery moral panic of the late nineteenth and early twentieth centuries. Current knowledge of sex trafficking is limited by inaccurate, unscientific statistics and by compromised definitions. US and international agencies have developed legal remedies that are likely to fail due to conflicting enforcement paradigms due to increasingly lucrative underground economies and due to the inaccurate definitions and descriptions of the issues. Trafficking definitions, measurements, and legal solutions derive from polar opposite philosophical interest groups and differing international political agendas (Schauer and Wheaton 2008).

Empirical Findings

Based on the above considerations, what follows is an attempt to define carefully the terms used in studies of child sex trafficking. The importance of careful and explicit definitions is to be found in the attempts of science to quantify and qualify the subjects; for without precise definitions the social sciences cannot seek and identify causes, nor can they suggest solutions. Thus, careful and precise definitions become the first steps in the scientific enterprise. Definitions also drive the making and wording of laws, the enforcement of those laws, attempts to benefit victims, and the attempts to control or stop child sex trafficking.

Any person who is under the age of 18 years is officially a child, by US statute (Office on Violence Against Women 2000) and according to United Nations Protocol (United Nations 2000), and is listed and understood as such in the literature of human

trafficking. Usage of such terms is critically important when it is understood that the United States rates all countries of the world according to their attention toward fighting human trafficking and threatens to withhold certain types of foreign aid to nations that fail to comply. This rating is published in the *Trafficking in Persons Report* (TIPs) that is circulated by the Office of the Under Secretary for Democracy and Global Affairs (2008, June). Therefore, while a particular nation's laws may recognize a person's maturity at 14 or 16 years of age, that nation's laws have no bearing on whether its efforts against trafficking may be censured by the USA due to the conclusions of the TIPs reports. Whether children (prepubescent or pubescent), or minors, or youth, or adolescents, any person whose age falls in the range of 0 to 17 years is counted as a *child* according to US federal trafficking law and by UN Protocol.

The United Nations Protocol defines trafficking in persons in the following terms:

(Article 3a) "Trafficking in persons" shall mean the recruitment, transportation, transfer, harboring, or receipt of persons by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude, or the removal of organs.

(Article 3b) The consent of a victim of trafficking in persons to the intended exploitation set forth in subparagraph (a) of this article shall be irrelevant where any of the means set forth in subparagraph (a) have been used (U.N. Protocol 2000, 3) (Schauer and Wheaton 2008).

In the Victims of Trafficking and Violence Protection Act of 2000, the US Congress added to the concept of human trafficking in the following way: As Schauer and Wheaton state, [The] U.S. Congress in the TVPA emphasizes human trafficking by labeling it "Severe Forms of Trafficking in Persons" (OAVW 2000, 5); and by so doing, distinguish trafficking from human

smuggling. According to the TVPA, severe forms of trafficking fall into two classifications:

- (a) Sex trafficking in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age or the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

The TVPA further defines sex trafficking as follows:

The term "sex trafficking" means the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act.

A victim of a severe form of trafficking is logically defined as one "subject to an act or practice" described as "severe forms of trafficking in persons" above. Likewise, a victim of trafficking is "a person subjected to an act or practice described" in either of the two definitions of trafficking above (OAVW 2000, 5) (Schauer and Wheaton 2008). CST is therefore defined as a severe form of trafficking by the TVPA above.

Two other terms, vital to an understanding of CST, are defined in the TVPA as follows:

1. The term "commercial sex act" means any sex act on account of which anything of value is given to or received by any person.
2. The term "debt bondage" means the status or condition of a debtor arising from a pledge by the debtor of his or her personal services or of those of a person under his or her control as a security for debt, if the value of those services as reasonably assessed is not applied toward the liquidation of the debt or the length and nature of those services are not respectively limited and defined (OAVW 2000, 4). Debt bondage is one of the most common techniques used to control children and adolescents by their traffickers; furthermore, debt bondage is the most common form of slavery in practice today.

Importantly, other terms continue to surface. Human smuggling relates to an agreement between persons in which at least one person (the smuggler) contracts to guide or transport another person (the smuggled person) across a national border illegally. Human smuggling, while admittedly a breach of national

immigration laws, is similar to the services of a travel agency and their carriers (Schauer and Wheaton 2006). Human smuggling, on the one hand, is a breach of immigration law rather than a breaking of criminal law. While on the other hand, human trafficking is a breach of criminal law.

Many sources, including media, government agencies, and professional publications, improperly use the terms “human smuggling” and “human trafficking” interchangeably. A smuggled person (illegal migrant) may be trafficked. But a citizen as well may be trafficked. In order to make these terms usable for scientific and legal purposes, these terms must be specified and separated, and every attempt must be made not to confuse the terms (Schauer and Wheaton 2006). Further, the commercial sexual exploitation of children (CSEC) was defined in 1996 by the World Congress Against Commercial Sexual Exploitation of Children sexual abuse by the adult and remuneration in cash or kind to the child or a third person or persons. The child is treated as a sexual object and as a commercial object (Clift and Carter 2000, 75–78). The TVPA definitions of severe forms of trafficking, which guide world perspectives, policies, and laws, make child sex trafficking synonymous with CSEC: Both of the designations may include a diversity of offences including child sex tourism, the prostitution of children, child pornography, online sexual exploitation, and various types of child sexual abuse.

Schauer and Wheaton (2006) suggest the adoption of the term “fautor” (by researchers and by criminal justice practitioners) in application to those who purchase and use commercial sexual services, especially those who exploit children sexually:

- ▶ There would exist no prostitution without willing customers; there would be little cause for supply if there were no demand. The term *fautor* fits the person as well as the act in having a double meaning: In middle English, *fautor* meant transgressor or miscreant; while in more modern usage, the term means patron, supporter, or abettor. The authors urge the usage of the term *fautor* when criminal justices and economists are referring to the persons (usually men) who frequent, use, and pay for the sexual services of other persons . . .

Soliciting to purchase and the purchasing of sexual services from children and adolescents is an onerous

form of child sexual exploitation – a particularly serious form of child sexual abuse (Brown and Barrett 2002).

Marginalization, conceivably the main and immediate cause of CST today, occurs when persons or families become incapable of economically providing sufficient food, clothing, and shelter for their sustenance. Economic marginalization has been exponentially increasing on a worldwide scale since the 1990s. Women are affected more, and in larger numbers, by economic marginalization than are men due to two factors: (1) Women’s labor is less valued than men’s labor and (2) women usually are more responsible than men are for the children. Thus, worldwide, women are the more stressed economically (this is commonly referred to as the feminization of poverty) and therefore bear the brunt of survival poverty; ultimately, the children suffer the most deprivation (Pettman 2006). The growth in numbers of economically marginalized people places increased pressure on millions of families worldwide who are faced with struggles for mere survival.

In the *10th Annual Trafficking in Persons Report* (2010, June), researchers of the US Department of State documented human trafficking in over 150 countries. Many, if not most, of those trafficked are women and children; if women and children, it logically may be deduced that many of them are trafficked for purposes of commercial sexual exploitation. Individual nations may serve as countries of origin, countries of transfer, or countries of human trafficking destination, or a country may serve as two or all three of these purposes. For example, a number of the states resulting from the breakup of the former Yugoslavia are known to serve as countries of the origin and transfer of human trafficking victims as well as of the destination intended by their traffickers.

The tendency is for trafficking victims to be recruited in nations that are suffering from economic turmoil, political unrest or instability, regions of long-lasting warfare, and areas suffering from catastrophic diseases; to then be transported to countries and regions where financial demand for their services is greater. The global migration, both typical and nontypical, tends to be from countries of origin in the southern hemisphere to destination countries in the northern hemisphere. Among those countries most sought by adolescents and women who are most

vulnerable for sex trafficking are nations in North America, Western and Northern Europe, Great Britain and her former colonies, Japan, the United Arab Emirates, and Saudi Arabia. Particular cities across the globe are also noted as destination hot spots for the sex trafficking of adolescents and women. Examples of these sex trafficking destination cities are Bangkok, Mumbai, Kolkata, Amsterdam, Tokyo, Houston, and Atlanta.

The high complexity of child sex trafficking worldwide is a major issue of global concern. Child victims range from those who are simply migrating internally or externally to find work, to those who seek asylum from war or persecution, to those who are encouraged by their families to seek better lives in another region or country, to those who are recruited and trafficked through force, fraud, or coercion. In some areas of the world where orphaned children abound, orphans are simply picked up off the street or out of the alleys by traffickers.

Causes and Responses to Worldwide Sex Trafficking

CST has become a global concern due to numerous changes in society and technology. It is a concern due to the ease of travel as well as the immediate transfers of knowledge concerning markets, profits, and risks. It is also a concern due to the demand for younger and younger children in the commercial sex industries as well as the ubiquity of vulnerable children. In fact, the development of globalism itself may be one of the major factors leading to the present apparent increase in the worldwide incidence and extent of CST.

One major explanation for the United States and many European countries to have intensified border security in recent years relates to problems with international labor migration. Some argue that the US Government leads under the guise of making the world safe from terrorism, while pointing back to the happenings of 9/11 for justification. This is being suggested while it is further argued that strengthened security of borders is in reality an attempt to keep migrants from the southern hemisphere out of the first world countries of the northern hemisphere (Segrave et al. 2009). Further developing this argument, human trafficking then should be defined as a problem of international labor mobility rather than as a crime

problem. Others explain that prohibitions against human trafficking and sex trafficking, and heightened border security, in fact result in a more lucrative trafficking trade and increased sex trafficking (carefully hidden away in the major cities of the USA within ethnic enclaves) (Kwong 1997).

The Trafficking Victims Protection Act of 2000 (Office on Violence Against Women (OVAW) 2000) has been viewed as problematic. For example, it leads the world in defining children as persons under the age of 18 years; in doing so assumes that persons under 18 possess no agency (or autonomy) and, as a result, are assumed to be trafficked if they are performing sexual services or working in debt bondage. The use of this age cutoff is simplistic – failing to take into consideration many cultures in which younger children actively seek employment away from their homes and the realities that children who are trafficking survivors tend not to view what has happened to them as human trafficking crimes. The limited empirical research studying children in these circumstances shows that most of the children rescued from trafficking are left wondering why the authorities took them from their jobs and are holding them against their will in safe houses (Gozdziaik and Bump 2008, March). The TVPA also creates a conceptual quagmire in making no distinctions between very young children and those who are at the threshold of adulthood.

It is a mistake to assume that CST is a gendered crime that does not include boys. When gender is assumed, scholars fall into the same partial understanding of the phenomenon of CST that historically has bedeviled research on prostitution. Boys are involved in prostitution as well as are girls, but the literature focuses on the girls involved in prostitution and seems to ignore the presence of boys engaging in prostitution. Even when boys are mentioned in the prostitution literature, the tendency has been to dismiss it (Brown and Barrett 2002). Yet, Jeffrey and McDonald (2006) reported a significant proportion of boys and young men involved among the street prostitutes interviewed in their recent research. The sex trafficking literature also excludes discussions focusing on the victimization of boys (see Gozdziaik and Bump 2008, March). The study of boys as victims of sex trafficking remains an important area of research. To complicate matters even more, when

governments or NGOs report gender, children of both sexes are often included in the category of *women*. Therefore, it is often impossible for research scientists to distinguish between boys and girls, and even between boys and women in statistical reports.

The dominant official statement of human trafficking also tends to present a simplified view in order to fit the criminal justice response model specified in the TVPA (OVAW 2000) and UN Protocol (Palmero) (United Nations (UN) 2000). This simplification leads to overlooking many diverse experiences and characteristics of trafficking victims. The US Government places pressure on other countries to make progress toward eliminating human trafficking by rating each on how closely it follows the TVPA and the Palermo Protocol in its annual *Trafficking in Persons Report* (TIPS) (Office of the Under Secretary for Democracy and Global Affairs 2008, June). As a result, the simplified view of trafficking essentially is used universally to the extent that the United States threatens other countries with foreign-aid restrictions for noncompliance with the TVPA. The importance of this oversimplification is that it stymies empirical research relating to sex trafficking and effectively excludes the voices of the victims of sex trafficking and, by doing so, shuts the door to information that might offer suggestions for better solutions.

In their article, *Sex Trafficking into the United States*, Schauer and Wheaton (2006) cautioned that the two major priorities of the TVPA and the Palermo Protocol appeared to be incompatible. It appeared to them that no single arm of government could rescue and rehabilitate victims of sex trafficking (in the process of protecting the human rights of victims) while, at the same time, vigorously pursue police investigations and criminal prosecutions of sex traffickers. Recent literature confirms the validity of their prediction (Segrave et al. 2009; Shan Women's Action Network 2007, 2003).

Criminal justice professionals, and nongovernmental organizations (NGOs) working with them, generally are the persons who determine whether a child or adult is a bona fide victim of human trafficking. Since the major outcome sought by the TVPA is the successful prosecution of traffickers, victims in possession of convincing evidence against traffickers are highly valued if they are willing to testify; these become those identified by the gatekeepers as victims.

All other persons taken into custody of police, whether having been trafficked or not, are identified by the gatekeepers as not being victims of trafficking. Thus, a victim of sex trafficking is not officially identified as a victim (deserving of counseling and social and other services) unless they are able and willing to serve police investigations of and likely successful prosecutions of human traffickers.

Persons deemed by the gatekeepers to not be useful in helping the criminal justice system orchestrate successful prosecutions of human traffickers are turned over to immigration control and border security for immediate repatriation. It is most likely that those who are labeled by the gatekeepers as not victims are sent back to their countries of origin as criminal aliens. So, once repatriated, many victims of trafficking are revictimized by the criminal justice system through labeling that further stigmatizes them by attaching criminal records when they are sent home. This differential treatment of victims, and great emphasis placed on successful prosecutions, is becoming universal criminal justice anti-trafficking practice due to the United States' ability to threaten countries with foreign-aid restrictions if they are not showing increasing numbers of successful prosecutions of traffickers as rated in the TIPS reports.

Placing the decision-making power for victim selection in elite units of federal police and federal prosecutors appears, on its face, to be a gross miscarriage of justice for most victims of trafficking and many victims of CST. The official emphasis is on prosecution, not on the rescue and rehabilitation of victims. This practice also goes against the written intent of the Palermo Protocol and of the TVPA that stress as priorities the human rights and the well-being of child victims of human. It is not surprising, as Brane' (2007, May) concludes that trafficked children are the least protected class of trafficked persons in the United States. They face immense difficulties in accessing benefits and are often deported. Given that the US Government can place pressure on other nations and have them adhere to its model of human trafficking interdiction and enforcement, Brane's conclusion ends up applicable around the globe.

In a global economy with the ever-increasing economic marginalization of women and children, the labor migration of and trafficking of women and

adolescents recently has bypassed the labor migration and trafficking of men. Economic, political, and medical crises as well as armed warfare have left many adolescents vulnerable to the victimization of child sex trafficking. The United Nations has developed a blueprint to guide individual nations in their developments of human trafficking and sex trafficking laws, in its *Protocol to prevent, suppress and punish trafficking in persons, especially women and children, supplementing the United Nations Convention against Transnational Organized Crime* (United Nations 2000). The United States also developed the model statute for other nations of the world to emulate, the *Victims of Trafficking and Violence Protection Act* (United States Congress (104th) 2000). Presently, the US Department of State guides the world in developing anti-trafficking legislation, in rescuing and aiding trafficking victims, and in prosecuting human traffickers through its annual TIPs reports (United States Department of State 2010, June).

Conclusions

Whether the trafficking legislation of the nations of the world is making a major impact to slow the high rates of the sex trafficking of young women and adolescents worldwide is left to conjecture. The numbers of victims of child sex trafficking appear to be increasing year by year; yet the number of victims of CST identified appears small in comparison to the official or NGO predictions of the incidence and the extent of victimization. Criminal justice responses to child sex trafficking may prove an insufficient remedy. The solution required to slow child sex trafficking may be better found in the study of and response to the universal feminization of poverty and the related push toward labor migration.

Cross-References

- ▶ [Sex Trafficking into the United States](#)
- ▶ [Sex Trafficking within the United States](#)

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Sexism

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Overview

Recent research has left little doubt that most adolescents in the USA experience sexist acts from peers and adults (American Association of University Women [AAUW] 2001; Leaper and Brown 2008). As subsequently described, these events can affect their self-concepts, motivation, adjustment, and achievement. This essay is organized into the following sections: First, sexism is defined. Second, factors related to increases in sexism during adolescence are summarized. Third, the prevalence and impact of two main forms of sexism during adolescence – sexual harassment and gender bias – are discussed. Finally, factors associated with adolescents' awareness of sexism and coping responses are considered.

What Is Sexism?

Sexism is a form of prejudice and discrimination based on a person's gender (see Bigler and Liben 2007, for a developmental model of prejudice). Prejudice refers to biased attitudes, whereas discrimination refers to biased actions. Thus, a person who holds sexist attitudes may manifest those prejudiced beliefs through discriminatory behaviors. For example, a boy who believes girls should not play sports (prejudice) may harass a girl who plays soccer (discrimination). As described below, researchers have identified different forms of sexism.

Traditional and Modern Sexism

Swim and her colleagues (e.g., Swim et al. 1995) distinguished between traditional ("old-fashioned") and modern sexist attitudes. *Traditional sexism* refers to the endorsement of traditional gender roles and the differential treatment of females and males. *Modern sexism* refers to the professed view that sexism is no longer a problem that needs to be addressed in society. Although traditional attitudes are not overtly endorsed in modern sexism, ongoing gender inequities are

ignored and thereby perpetuated. Hence, modern sexism is viewed as a more covert and subtle form of prejudice compared to traditional sexism. For example, opposition to girls' participation in sports as "unfeminine" would be a sign of traditional sexism, whereas opposition to efforts to increase girls' involvement in sports as unnecessary might be a sign of modern sexism.

Researchers have found evidence of traditional sexism in samples of adolescents in the USA and other countries (Galambos et al. 1990; Gibbons et al. 1991). Traditional attitudes tend to increase during adolescence and are more likely among boys than girls. Research on modern sexism has been limited primarily to undergraduates and other adult samples; however, one study found evidence of modern sexism in a sample of 17-year-old high school students (Masser and Abrams 1999). Research has not addressed whether modern sexism occurs among younger adolescents.

Hostile and Benevolent Sexism

According to Glick and Fiske's (1996, 2001) ambivalent sexism framework, females' and males' interdependence in heterosexual and family relationships can lead to the combination of both hostile and benevolent sexism. *Hostile sexism* refers to overt negative attitudes about girls or women who violate traditional gender norms. For example, this might include negative views toward girls who pursue sports or excel in math. *Benevolent sexism* includes paternalistic attitudes that men should protect and cherish women as well as traditional beliefs that females possess particular qualities (e.g., nurturance) that complement males. Signs of benevolent sexism might include expectations that boys are supposed to open doors for girls (but not the reverse) or the belief that girls are better than boys in providing emotional support.

Because behaviors such as chivalry tend to be socially acceptable and even encouraged, many people may not view benevolent sexism as a problem even though they disapprove of hostile sexism. However, benevolent sexism perpetuates the belief that women need protection, and that they are ill equipped to engage in masculine-stereotyped practices. Therefore, benevolent sexism and hostile sexism work in concert to reinforce traditional gender role norms: Nontraditional women are punished (hostile sexism) and traditional women are praised (benevolent sexism).

According to Glick and Hilt (2000), ambivalent sexism increases during the course of adolescence. During childhood, girls and boys often display antipathy toward members of the other gender. With the onset of heterosexual attraction, however, such overt hostility becomes problematic for adolescents who are interested in dating or belonging to mixed-gender cliques. This leads many adolescent boys to adopt benevolent attitudes toward the adolescent girls they are interested in dating; however, hostile attitudes do not disappear. Instead, hostile attitudes are directed toward girls who are perceived as threats because they do not adhere to traditional gender-role norms (especially norms related to heterosexual romantic relationships). Although there have only been a few studies in the USA and other countries measuring ambivalent sexism in adolescent samples (de Lemus et al. 2008; Lameiras et al. 2001; Masser and Abrams 1999; Silvan-Ferrero and Lopez 2007), their findings are consistent with Glick and Hilt's developmental proposals.

Factors Contributing to Increases in Sexism During Adolescence

From a developmental perspective, several factors contribute to sexism's increase in prevalence during the transition from childhood to adolescence. First, adolescents are beginning to contemplate more seriously the adult occupational and relationship roles that they will soon hold (Kroger 2003). Depending on their gender attitudes, this may lead them to value conventional or egalitarian roles for women and men (Galambos et al. 1985). Adolescents with traditional values may negatively evaluate others who violate gender-typed conventions for appearance, behavior, or achievement. Second, physical and sexual maturation contributes to the increased salience of adolescents' appearance and the potential for sexual harassment (McMaster et al. 2002; Petersen and Hyde 2009). Finally, adolescence typically marks the beginning of romantic relationships and a corresponding emphasis on heterosexual relationships. Because heterosexual dating norms call for the male to exhibit behaviors consistent with benevolent sexism, young women's experiences with benevolent sexism often increase substantially during adolescence. Moreover, hostile sexism may increase the likelihood of male sexual intimidation and violence in heterosexual dating relationships (Zurbriggen 2009). Furthermore, the

importance of heterosexual dating as the norm can lead to homophobic forms of sexual harassment aimed at peers who are viewed as violating traditional gender norms (Poteat 2007).

Sexist Discrimination During Adolescence

Two main forms of sexist discrimination during adolescence are reviewed below. One pervasive form of sexism is sexual harassment. Another common type of sexism is seen in gender-biased treatment in achievement contexts. The latter includes discrimination in particular academic subjects and athletics.

Sexual Harassment

Sexual harassment during adolescence involves unwanted verbal or physical actions that are sexual in nature. Physical sexual harassment may occur through unwanted touching, sexual gestures, and sexual coercion. Verbal sexual harassment includes sexually demeaning comments, homophobic insults, and spreading sexual rumors. In addition, sexual harassment can be expressed electronically through Internet chat rooms, web postings, and text messaging (Ybarra and Mitchell 2007).

Recent surveys in the USA and Canada indicate that over 75% of adolescent girls and boys have experienced sexual harassment (American Association of University Women 2001; Goldstein et al. 2007; Lacasse et al. 2003; Leaper and Brown 2008; McMaster et al. 2002). The problem is also common in many other countries in Europe (e.g., Timmerman 2005; Witkowska and Kjellberg 2005), Latin America (e.g., DeSouza and Ribeiro 2005; Merkin 2008), Asia (e.g., Uchiyama et al. 1998), and Africa (e.g., Fineran et al. 2003).

Adolescents experience sexual harassment from peers, teachers, employers, coworkers, and strangers. However, peers are the most likely sources, and these incidents usually occur at school (American Association of University Women 2001). In addition, both girls and boys are more likely to identify cross-gender than same-gender peers as perpetrators of sexual harassment. However, boys are more likely than girls to report same-gender peer sexual harassment.

As previously noted, overall rates for experiencing sexual harassment are similar for girls and boys in the USA and Canada. There are some average differences, however, in some aspects of girls' and boys' experiences

(American Association of University Women 2001). Homophobic comments are more likely to be directed toward boys than girls, whereas unwanted touching is more likely to be aimed at girls than boys. Furthermore, girls are more likely than boys to experience distress over incidents of sexual harassment (American Association of University Women 2001). Whereas some boys may view sexual harassment amongst peers as akin to playful bantering, girls are more likely to perceive sexual harassment as hostile and dangerous (Hand and Sanchez 2000).

Dating partners are another common source of sexual harassment for many adolescents. Some studies in the USA suggest that approximately one-fourth of teenagers experience physical or verbal aggression in dating relationships (Hickman et al. 2004; O'Leary et al. 2008), although the prevalence of dating aggression varies across different communities. Boys are more likely than girls to perpetrate aggression in these relationships (Swahn et al. 2008; Wolitzky-Taylor et al. 2008).

Sexual harassment among peers or in dating relationships both reflects and perpetuates traditional gender hierarchies. For example, when girls are victims of sexual harassment, they are commonly demeaned as sexual objects. Conversely, when boys are harassed, they are often subjected to homophobic and misogynist insults that reinforce traditional norms of masculinity (Murnen and Smolak 2000). Furthermore, sexual minority youth are especially at risk for sexual harassment (Williams et al. 2005). Sexual minorities violate traditional norms regarding sexuality and may challenge other gender roles (e.g., appearance, interests, expressiveness).

Consequences of sexual harassment. Sexual harassment can negatively impact girls' and boys' subsequent adjustment; for example, sexual harassment victimization predicts later increases in emotional distress, suicidal thoughts, substance abuse, and externalizing behaviors in both girls and boys as well as increases in negative body image and self-harm in girls (Chiodo et al. 2009; Goldstein et al. 2007). In addition, sexual harassment victimization can lead to academic problems and disengagement from activities (American Association of University Women 2001; Larkin and Popaleni 1994).

Repeated experiences with sexual harassment can also undermine adolescent girls' views of romantic

relationships. About a quarter of the girls in the AAUW report (2001) indicated that experiences with sexual harassment led them to question their ability to have a happy romantic relationship. Other research illustrates those girls who are sexually harassed within the context of a romantic relationship are at risk for lower self-esteem and dating violence (Chiodo et al. 2009; Goldstein et al. 2007; Larkin and Popaleni 1994).

Gender Bias in Academics and Athletics

Some people believe that girls are not well suited to excel in particular domains simply because of their gender. This prejudice can be based on stereotypes regarding girls' and boys' inherent capabilities. For example, some people believe boys are naturally better at science and math than are girls. Gender-biased beliefs about girls' abilities also may stem from traditional attitudes regarding gender roles. For example, some people believe that rough sports are appropriate for boys but not girls. When parents, teachers, or peers hold gender-biased expectations, they may treat girls and boys differently regarding their achievement in particular domains. These are forms of discrimination that create different opportunities for girls and boys; in turn, they foster gender inequalities in adult roles and status.

Girls' experiences with academic sexism. Although there has been a gender gap in achievement in science, technology, engineering, and mathematics (STEM), differences have dramatically narrowed over the years as equal opportunities have increased (Halpern et al. 2007). For example, girls and boys now demonstrate comparable rates of achievement in high school math and life sciences, and the gap in physical sciences and computers has become smaller. Nonetheless, many people continue to hold the prejudiced belief that girls and women are not capable of performing well in STEM fields.

Several studies point to ways that academic sexism has contributed to the gender gap in STEM achievement. Despite dramatic increases in gender equality, it is evident that American girls still experience sexist comments regarding their potential to succeed in science, math, and technology fields. In a study of adolescent girls' experiences with academic sexism, Leaper and Brown (2008) found that about half of their participants had heard at least one disparaging

comment about girls' abilities in math, science, or computers. Girls who heard these comments indicated they were most likely from male peers – followed by female peers, teachers/coaches, and parents, and other family members.

Academic sexism from male and female peers is significant given that most adolescent girls want to appear attractive to boys and to be accepted by other girls (see Leaper and Friedman 2007). In some peer cultures, girls may view excelling in math and science as incompatible with popularity and attractiveness (e.g., Bell 1989). However, when they belong to a peer group that supports math and science achievement, girls are more likely to maintain their achievement in these domains (Crosnoe et al. 2008; Fuligni et al. 2001; Stake and Nickens 2005).

Teachers' sexist comments about girls' abilities are also important because teachers can play a critical role in shaping students' interest, efficacy, and success. Research on stereotype threat makes it clear that even a single negative comment about girls' and women's capabilities in STEM can have detrimental effects on their performance in these domains (e.g., Good et al. 2003; Huguet and Régner 2007). Furthermore, research suggests that girls may be more sensitive to teacher expectations than are boys (Jussim et al. 1996).

Many parents also hold gender-stereotyped expectations regarding their daughters' academic abilities and potential in STEM (Eccles et al. 2000; Tenenbaum and Leaper 2003). In their longitudinal research, Eccles et al. (2000) found that parents' attitudes and beliefs predicted later gender-related variations in their children's academic self-concepts and achievement. For instance, when parents held low expectations for their daughters, the girls increasingly lost confidence in their mathematics skills; also, these girls subsequently spent less time studying mathematics in high school. Thus, parents' expectations may affect their daughters' motivation to succeed in particular domains such as math.

Girls' experiences with athletic sexism. Athletics are another achievement domain in which many adolescent girls continue to experience sexism. That is, some people continue to hold negative beliefs and attitudes about girls' and women's athletic abilities and their participation in organized sports. Girls' participation in sports has changed with history and varies across cultures. In the USA, the passage of Title IX in 1972 prohibited gender discrimination in public education;

this included a mandate that males and females have equal opportunities to participate in athletics. Girls' participation in high school sports has increased from 1 in 27 in 1971 to 1 in 2.4 in 2008; the rate for boys has remained 1 in 2 over the years (Women's Sports Foundation 2009). That said, there are still a number of high schools that are not in full compliance with Title IX, and it is not uncommon for males' athletic teams to receive more funding, better facilities, and more publicity than females' athletic teams (Messner et al. 2006; National Coalition for Women and Girls in Education 2007; Women's Sports Foundation 2009).

Despite increases in adolescent girls' participation in athletics, sexist attitudes persist. Some of these negative attitudes may have their basis in benevolent sexism (e.g., "Girls should be protected from the rough-and-tumble, competitive nature of sports"), but they can also be more overt and hostile in nature (e.g., "Girls are bad at basketball" or "You throw like a girl!"). In fact, overt sexism may be more prevalent in domains related to athletics than it is in other domains. In their survey of adolescent girls' experiences with sexism, Leaper and Brown (2008) found that over three-quarters of their participants reported hearing at least one sexist comment about their athletic abilities (versus approximately one-half who experienced a sexist comment about academic abilities). The most common perpetrators were male peers followed by female peers, parents, other family members, and teachers/coaches.

As seen with other forms of sexism, peers play an especially prominent role in girls' experiences with athletic sexism. Moreover, both boys and other girls are complicit in establishing norms for heterosexual attractiveness and femininity that may undermine girls' participation in athletics (Carr 2007; Guillet et al. 2006; Schmalz and Kerstetter 2006; Shakib 2003). Consistent with this explanation, one study found that girls were more likely than boys to cite social costs as reasons for decreasing or ending their sport participation during adolescence (Patrick et al. 1999). Thus, many girls still must overcome traditional gender stereotypes and homophobia if they pursue athletic participation into adolescence; however, these challenges are less pervasive than they were a few decades ago.

Parents can also play a role in girls' continued sport participation during adolescence. As support for girls' sports involvement has increased in North America,

more fathers and mothers are promoting physical activity in their daughters (Weiss and Barber 1995). However, some parents may continue to believe sports are not feminine for their daughters during adolescence. Fredricks and Eccles (2002) found that parents' expectations can affect their children's subsequent self-concepts and motivation in sports. They observed that many parents were more likely to consider their sons than their daughters as competent at sports; however, when parents positively evaluated their daughters' athletic ability, girls were more likely to develop positive sports-related self-concepts and motivation into adolescence (controlling for their earlier athletic competence). Thus, parents' expectations may become self-fulfilling prophecies.

Negative impacts of academic and athletic sexism on boys. The foregoing review of academic and athletic sexism has focused on discrimination against girls. Although traditional gender roles generally benefit boys and men by conferring them with higher status and power, there are also costs for many boys who conform to traditional notions of masculinity (Levant 2005). Thus, sexism also can negatively affect boys. For example, many boys may experience pressures to devalue feminine-stereotyped subjects such as reading (Whitehead 1996). Also, some boys' notions of masculinity may include opposition to teacher authority and being a good student (Kiefer and Ryan 2008; Van Houtte 2004).

Sexism in sports may negatively affect boys' psychosocial development. The traditional macho sports culture in many high schools tends to emphasize misogyny and homophobia (Messner 1998). Boys on sport teams who do not adhere to these social norms are subject to ridicule from coaches and teammates (Messner 1998; Schissel 2000). During adolescence, the acceptance of violence in the masculine sports culture may extend to sexual violence. In one study, tolerance for sexual violence was more likely among young men who had participated in high school sports than those who had not (Forbes et al. 2006).

Awareness of Sexism and Coping Responses

Given the potentially negative impact of sexism on adolescents' development, it behooves researchers to identify factors that may help them cope effectively with sexist events. Effective coping begins with identifying

the source of the stressor. Accordingly, factors related to adolescents' awareness of sexism are reviewed first.

Perceiving Sexist Discrimination

As research with adults has highlighted, individuals do not necessarily recognize when discrimination is directed at them (Crosby 1984). Brown and Bigler (2005) identified a combination of cognitive-developmental, individual, and situational factors that influence children's awareness of sexism (as well as other forms of discrimination). The cognitive prerequisites for perceiving discrimination (e.g., abilities to make social comparisons, moral judgments about fairness and equity) are typically achieved by middle childhood. Therefore, it is mainly the individual and social factors that affect adolescents' awareness of sexism. Some individual moderators that increase the likelihood of recognizing sexism include holding gender-egalitarian attitudes or being aware of feminism (Leaper and Brown 2008). Some examples of situational moderators that can aid sensitivity to gender discrimination include a perpetrator who is known to be prejudiced or the discrimination occurring in a gender-relevant condition (Brown and Bigler 2004).

Coping with Sexism

Research on stress and coping distinguishes between approach and avoidance coping strategies (Compas et al. 2001; Roth and Cohen 1986). Approach strategies are oriented toward addressing the threat (e.g., confronting, seeking social support); in contrast, avoidance strategies are oriented away from the threat (e.g., downplaying the event, avoiding the perpetrator). In general, research indicates that approach coping helps individuals cope more effectively with stress. With regards to coping responses to sexism, research indicates that adolescents use both strategies in response to sexist events. In one major survey, seeking social support from friends and parents was a commonly mentioned approach strategy, and keeping away from the perpetrator was a commonly cited avoidance strategy (AAUW 2001). There may be average differences in how girls and boys cope with sexism. On average, girls are more likely than boys to seek social support in response to stressful events, whereas boys may be more likely than girls to use avoidant coping (Eschenbeck et al. 2007; Frydenberg and Lewis 1993).

Possible Interventions to Reduce Sexism and to Promote Effective Coping

Researchers have identified successful strategies for reducing gender-based prejudice in schools. First, it is important to minimize gender labeling and gender stereotyping in classrooms and playgrounds (see Bigler and Liben 2007). Second, teachers can teach students about gender discrimination (e.g., Weisgram and Bigler 2007). Third, increasing cross-gender contact in cooperative group activities can reduce prejudice (see Paluck and Green 2009). Finally, intervention programs in schools can foster children's and adolescents' use of approach coping responses to sexist events (e.g., Lamb et al. 2009).

Summary and Conclusions

Sexism includes holding prejudiced gender attitudes as well as gender-based discriminatory behaviors. Although most of the research on sexism has focused on adult samples, there has been increasing attention during the last two decades to sexism among adolescents. This research indicates that many adolescents hold sexist attitudes. In addition, gender-based discrimination is common among adolescents in the forms of sexual harassment as well as gender-biased treatment in academic subjects and athletics. These experiences can negatively affect adolescents' adjustment, relationships, and achievement. Researchers are beginning to address factors that might help adolescents to effectively cope with these obstacles.

Cross-References

► [Double Standards](#)

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Sexual Addiction

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One of the most hotly debated aspects of sexual behavior involves the psychological condition known as sexual addiction, a condition in which individuals struggle to manage, especially limit, their sexual behavior. Some experts reject the concept, while others view it in terms other than addiction, such as sexual dependency, sexual compulsivity, and sexual impulsivity (see Kingston and Firestone 2008). Recent reviews, however, approach it more as an addiction (see Garcia and Thibaut 2010) and as a condition that may fit best under the broader rubric of hypersexual disorder (Kafka 2010). Although different terms may be used, researchers tend to view the construct as a pattern of sexual behavior that, although initially pleasurable, becomes unfulfilling, self-destructive, and difficult to control (see Sussman 2007). It is the loss of self-control that is of considerable significance and object of focus. The loss of control relates directly to negative consequences, including negative self-evaluations, a sense of desperation, lack of true intimacy, loneliness, and inability to concentrate on other matters that may be of great significance. In many ways, these outcomes eventually parallel those of other addictions in that sexual addictions may cause familial problems as well as lead to numerous results linked to risk behavior, such as delinquency, sexually transmitted infections,

pregnancies, and a variety of assaults. Despite these issues, this condition remains difficult to study as it relates to adolescents. Yet, understanding its relationship to the period of adolescence is important given that the condition clearly has developmental roots and adolescents who do develop a sexual addiction may embark on a lifelong struggle, engage in risky behavior, and be at risk for a host of negative outcomes.

The adolescent period challenges efforts to understand its relevance to sexual addiction. At its core, the period of adolescence means that adolescents are differently situated than adults and that they necessarily have different experiences. These experiences mean that sexual addiction likely differs between the two groups (see Sussman 2005, 2007). For example, because sexual behavior may interfere with development, it can sometimes be considered abnormal in adolescents. As a result, it may be difficult to define abnormal when it comes to adolescents because some may view any sexual activity as abnormal, while others may view adolescents as being sexually charged. Similarly, high-risk situations and contexts differ depending on an individual's development. As a result, for example, adolescents may engage in high-risk behavior while not having to be responsible for another individual, and their specific risky behavior may differ. Another key difference relates to the extent to which adolescents may experience a higher rate of comorbidity of sexual addiction, including substance use or mental health disorders. Also different is the greater tendency of adolescents not to seek treatment and the likelihood of experiencing relapse. Adolescents also are differently situated in law, which protects them in many ways when they engage in sexual activity (and also, in other ways, limits their sexual freedoms). Lastly, the adolescent period is highly sexually charged, with its being a time when sexual experimentation emerges and sexual risks increase (see Chen et al. 2010). Adolescent sexuality, then, poses important challenges to understanding sexual addiction simply because of the very nature of adolescence itself.

Empirical research seeking to explain this condition tends to be quite recent, and it increasingly focuses on biological, psychological, and social risk factors that contribute to the condition (see Fong 2006). Despite impressive developments, research on sexual addictions still tends to be focused on adults. Studies of the etiology of sexual addiction as it relates to adolescents

focus on sexual risk taking, and that area of study highlights many factors that may relate differently to adolescents as they would to adults' risk taking. The range of areas of focus in studies of sexual risk taking is quite broad, including some that view it as a problem syndrome, as an issue relating to cognitive development, and as a matter of familial, peer, and media influences. Some view sexual risk-taking as clustering with other deviant behaviors, such as drug use and also mental health disorders (Chen et al. 2010). Cognitive immaturity also may play a role, especially as it relates to sexual actions and perceptions of trust, communication, and social expectations (see Stuart-Smith 1996; Marston and King 2006). Parental behaviors, such as risk taking, sexual attitudes, monitoring, and family conflict, also relate to adolescents' sexual activity (see Wilder and Watt 2002; Silver and Bauman 2006). Similarly, peers highly influence risky sexual behavior; especially influential are peers' levels of deviancy and violence (Silver and Bauman 2006; Wilder and Watt 2002; Valois et al. 1999). The media also introduces adolescents to new images, modeling effects, and outlets for self-expressive sensation-seeking (Martino et al. 2006; Ybarra and Mitchell 2005; Levesque 2007). Although much research exists on adolescents' sexual risk taking, that research, to a large extent, reveals that sexual behaviors tend to be normative and not necessarily linked closely enough to clinical manifestations of sexual behavior.

Given the challenges of focusing on adolescence as a period that can involve sexual behavior that could be deemed an addiction, it is not surprising that researchers have not focused much on either creating or understanding prevention efforts; nor have they focused much on treatment. As with efforts to understand etiologies, prevention efforts relating to adolescent sexuality focus more on sexual risks (see, e.g., Dixon-Mueller 2009; Walcott et al. 2008). Prevention efforts focus on sexuality education and prevention relating to risk taking and sexual activity, and the methods for preventing sexual activity include individually based, school-based, group-based, case management, family-based, and community-based modalities. These varied approaches focus on a variety of ways to deliver the programs and on a variety of factors, such as psychoeducation and cognitive-behavioral training to address peer norms, motivations, and goals. Therapeutic work focusing on adolescents has tended to focus on

offenders, although treatment modes recently have widened, as reflected in a similar growth in the field of treatments for youth with sexual behavior problems (see Price 2004; Gerber 2008). Still, therapeutic efforts tend to draw from conceptualizations developed for adults, and prevention efforts draw on more general efforts to reduce adolescents' sexual activity and sexual risk taking rather than on what would be deemed the type of problem sexual behavior that would be considered sexual addiction in adulthood.

There may be an increasing recognition that sexual addiction emerges during adolescence, but research has yet to focus more earnestly on the adolescent period. The current understanding of this condition as it relates to adolescents remains considerably underinvestigated, especially in comparison to important advances in the understanding of hypersexuality as it relates to adults (see Kafka 2010). Efforts to further understand the developmental roots of sexual addiction and its experience during the adolescent period are likely to remain stymied as sexual activity among adolescents tends already to be seen as problem behavior and adolescents occupy a peculiar place in families and society that makes judgments about excessive or otherwise difficult to control sexual activity problematic.

Cross-References

- ▶ [Addiction](#)
- ▶ [Compulsions](#)
- ▶ [Risk-Taking](#)

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Sexual Debut

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Overview

The second decade of life involves rapid development of sexuality and the onset of sexual behavior for most adolescents living in the Western world. This essay begins by describing the most common theoretical and empirical orientations to research on adolescent sexual behavior. Following this, three primary topics are addressed by drawing from the past 40 years of research in psychology, public health, and related fields.

These topics include describing age-related patterns of adolescent sexual behavior; summarizing what is known about how individual biology, perceptions, attitudes, and social relationships are associated with early, typical, or delayed onset of sexual behavior; and considering how adolescents must and sometimes do balance the risks and benefits of sexual behavior. Throughout these topics, the importance of nationality, race/ethnicity, and gender are acknowledged, and known demographic differences are highlighted.

Adolescent Sexual Behavior

Adolescence brings with it exposure to a range of life experiences that are likely to impact significantly upon sexual health (Brooks-Gunn and Paikoff 1997; Savin-Williams and Diamond 2004). Moreover, the second decade of life involves rapid development of many aspects of sexuality including ways of thinking about sexual preferences and desire, understanding of the self as a sexual being, and actual behaviors. In the teenage years, most adolescents in Western countries become sexually active. Although the broad definition of “sexually active” includes kissing, fondling, oral sex, and a multitude of other sexual behaviors, the term is most often used to refer to vaginal intercourse. Hence, it is easy to locate information on adolescent sexual intercourse – we know a great deal about when it starts, who is involved, what are the correlates, and what changes might ensue after its occurrence. However, the research conducted to answer these questions far outweighs our understanding of other important topics, such as the meaning and context of adolescent sexual behavior, the development of an understanding of sexual desire, the capacity for autonomous sexual decision making, the meaning of sex within adolescents’ couple relationships, and the pros and cons of refraining from sexual intercourse until later in life.

Surveys that provide us with knowledge of who and how many are doing “it” are numerous. A quick search of one major source of research information, PsycInfo, yields over 600 studies published in just the past 2.5 years (January 2007 to July 2009). Many of these studies provide up-to-date age-, gender-, and racial/ethnic-specific rates of vaginal intercourse. Additionally, a new direction has been reporting rates of other sexual activities, such as oral sex.

To understand both the limits and the extent of knowledge on adolescent sexual behavior, it is useful

to begin by considering the underlying purpose for conducting research in the area. The core concern is the promotion of the health and well-being of young people, but the perspectives that direct the particular focus within each study are more diverse and fall into four general categories. First, some researchers begin with a problem orientation and draw from multiple theories that point toward individual and social influences on multiple risky behaviors, including sexual intercourse, sexual partnering, inconsistent condom or contraceptive use, binge drinking, aggressive behavior, school nonattendance, and others. Such theories often focus on many levels of potential influence from individual characteristics to social institutions that might assist young people to reduce their risky behaviors by providing alternative interests and goals (e.g., school) or promoting social bonds (e.g., good family relationships, having peers that are not engaging in deviant behavior). Justification for referring to sexual behavior as “risky” comes from research showing links between earlier onset of vaginal intercourse (or the accumulation of more partners or inconsistent condom use) and higher rates of unintended pregnancy, sexually transmitted infections, or mental health problems (e.g., depressive symptoms).

Second and very much related to the first perspective, another comes from prevention science or public and population health. In this area, there is a more explicit goal of understanding adolescent behavior to guide interventions that reduce risk – most importantly reducing unprotected sexual intercourse to impact on rates of pregnancy and sexually transmitted infections (STIs). For example, many researchers have the aim of understanding adolescent sexual planning and decision making in order to guide the development of better interventions to assist adolescents to delay sexual intercourse, improve condom use, or limit their number of sexual partners.

A third category of research places more emphasis on normal or typical developmental processes as part of the emergence of sexual behavior, as well as continuing to note the importance of individual dispositions and social environments in their initiation and development. In these investigations, researchers have emphasized the importance of biological unfolding in conjunction with family and/or peer influences. For example, young people who appear more physically mature seem to prompt certain responses from the

social environment, resulting in increased opportunities for romantic and sexual involvement (Graber et al. 1998).

Fourth and finally, research has turned to considering adolescents' emotions and cognitions relevant to sexual behavior. For example, Horne and Zimmer-Gembeck (2005, 2006) have examined sexual subjectivity, defined as sexual body-esteem, perceptions of entitlement to sexual desire and pleasure, and cognitions and emotional reactions to sexual experiences. Others have proposed definitions of positive sexuality that include learning about intimacy, learning about sexual roles and responsibilities, body self-esteem, understanding and adjustment to erotic feelings, and learning about societal standards or sexual expression (Bukowski et al. 1993; Buzwell and Rosenthal 1996) and begun to empirically investigate these aspects of sexuality during adolescence and early adulthood.

Drawing from this extensive literature, three primary topics are addressed in this essay. First, age-related patterns of adolescent sexual behavior are described. Second, a summary is provided of what is known about how individual biology, perceptions, attitudes, and social relationships are associated with early, typical, or delayed onset of sexual behavior. These comments are primarily derived from research using prospective designs to better isolate the impact of earlier behaviors, attitudes, or other factors on the emergence of first sexual behavior. This summary also highlights how the development of sexual behavior may vary as a function of gender and race/ethnicity and notes some new and preliminary findings in this area. Third, sexual behavior is considered along with sexual self-perceptions and positive sexuality in order to draw attention to both the risks and benefits of sexual behavior.

Age-Related Patterns of Sexual Behavior and Progression of Sexual Activity

The majority of young people residing in the USA have first sexual intercourse before leaving secondary school, and this is similar, albeit a bit later, among adolescents in other Western countries. Overall, among adolescents in the USA, a first experience of vaginal intercourse is most common at ages 16 or 17 years; 50–70% of 16- and 17-year-olds report a history of vaginal intercourse, and 70–90% report first sexual intercourse by

age 18. In a recent Canadian survey (Boyce et al. 2006), about 45% of boys and girls in grade 11 reported they had experienced vaginal intercourse, and these are similar to rates in Australia (Skinner et al. 2008) and other non-US Western countries. Hence, in the later teen years, sexual behavior is fairly widespread – even typical, but it is usually less prevalent than alcohol use.

It also is clear that rates of sexual behavior vary from study to study within a country, so that “typical” sexual behavior is difficult to pinpoint. For example, the percentage of US young people who initiate intercourse by the end of grade 8 ranges from as low as 10% to as high as almost 40%. It also is important to note how often young people have intercourse when active; one recent survey (Boyce et al. 2006) found that about 30% of grade 8 students and 15% of grade 11 students reported they had intercourse only one time, and another 30% in each grade group reported they only had intercourse a few times. Most report they had intercourse because they were in love, but a substantial minority (20%) of boys reported they were motivated by curiosity. In summary, there is variability in the timing, frequency, and motivation for sexual activity, but sexuality is important to most adolescents, even though individual trajectories of behavior may differ.

To add to this knowledge, studies of adolescent sexual-intercourse patterns conducted outside of Western countries have become more numerous in recent years, but continue to be quite sparse in number. Nevertheless, data are available and tend to show lower rates of sexual intercourse in the early and middle teen years (ages 13–18) compared with Western populations, with rates as low as 5% in some areas of China, for example (Zabin et al. 2009). In addition, because of the emphasis on vaginal intercourse, most studies have overlooked some of the sexual activity among the 1–15% of adolescents who report same-sex attraction.

Race/ethnicity and gender. The potential impact of race/ethnicity and gender has been taken seriously in the study of adolescent sexual behavior; most researchers recognize the importance of gender and race/ethnicity by examining boys and girls separately, limiting a study to racial/ethnic minority adolescents only, or examining patterns by racial/ethnic group. Although the sexual behavior gap between boys and girls is often perceived as closing, this conclusion is far

from unanimous. Many studies still report that males have their first experiences of intercourse earlier than females. However, most importantly, when gender and race/ethnicity are jointly considered, there is ample evidence to conclude that gender differences are more often found when the proportion of non-Hispanic Black study participants is relatively higher, indicating that it is Black males who are reporting the earliest onset of vaginal intercourse, but the gender gap is narrowing in other racial/ethnic groups.

Regarding racial/ethnic patterns of sexual intercourse, a recent review of the literature (Zimmer-Gembeck and Helfand 2008) concluded that, compared to white adolescents, non-Hispanic Black males, but not females, engage in first sexual intercourse at an earlier age, Asian American adolescents have first intercourse at a later age, and Hispanic and white adolescents are quite similar. For example, collating 10 years of longitudinal studies of US adolescents revealed that a non-Hispanic Black adolescent male was, on average, 2.8 times more likely to initiate first sexual intercourse early (before age 16) compared to white males. These differences are not explained by other demographic factors that differ between racial/ethnic groups, such as socioeconomic status or parental education. This earlier onset of first sex among African American boys seems associated with the greater increase in positive self-concept, which accompanies sexual behavior for them. Yet, this is also a risk as African Americans continue to be more likely to contract STIs and HIV.

Differences by racial/ethnic group among girls are not as striking. Black and white girls may not differ in their average age of first intercourse or rates of early onset, but there may be US regional differences. In particular, non-Hispanic Black girls residing in the southern parts of the US report earlier onset of sexual behavior compared to non-Hispanic white girls.

Sexual activity other than vaginal intercourse and historical changes. In recent years, there has been an increasing focus on understanding sexual activity other than vaginal intercourse and explaining progress from “lighter” to more intimate sexual behavior. In particular, studies show rates of oral sex among teenagers that mimic or are slightly higher than rates of vaginal intercourse (Lindberg et al. 2008). Some have questioned whether oral sex has been traded for vaginal sex in the name of engaging in safer sex. Although the debate

continues, the evidence tends to support the view that oral sex is initiated close to the time of first vaginal intercourse and may not be any more prevalent today compared to in the 1970s or 1980s. Diverging from what is known about vaginal intercourse, however, oral sex is *more* prevalent among higher as compared to lower socioeconomic status groups.

Just as for oral sex, when rates of vaginal intercourse among adolescents are compared to rates in previous generations, the picture is quite positive. More adolescents living in Western countries are cautious about sex and delay first intercourse compared to adolescents growing up in the 1970s or 1980s. Even more positive, rates of having vaginal intercourse without contraceptive fall below 10% in almost all recent large-scale surveys. Adolescents also have more knowledge of and consistent use of condoms than they did in previous decades. What still concerns researchers, practitioners, and policymakers, however, is the higher than desired rates of unintended pregnancy especially in the US and New Zealand, the recent rise in rates of STIs, the belief that early onset of sexual behavior can be emotionally and/or socially detrimental in both the short and the long term, and the concern that sexual behavior will detract from the important educational and vocational goals of adolescents. Some of these concerns are founded in evidence that uncovers the many physical, emotional, social, and financial challenges of an unintended pregnancy, about 10% of adolescents report being pressured to have sex, up to 15% of young people (depending on the region of the US) have first vaginal intercourse before age 13, and there are physical, social, and emotional costs of infections.

Correlates of Adolescent Sexual Behavior

Sexual behavior in adolescence is linked to a complex set of biological, individual, psychological, socioemotional, attitudinal, and environmental phenomena. Fortunately, there have been four reviews published since 2000, which together summarize research since the 1970s (Buhl and Goodson 2007; Kirby 2002; Kotchick et al. 2001; Zimmer-Gembeck and Helfand 2008). Correlates of earlier onset of first vaginal intercourse, include greater accumulation of partners, and/or inconsistent contraceptive use include adolescents’ physical development and status; problem behaviors such as aggression and

alcohol use; school-related behaviors, attitudes, and future aspirations; sex-related attitudes; religious behavior and attitudes; mental health, and family and peer factors. Adolescents who have earlier first vaginal intercourse or more sexual partners report that they experience puberty relatively earlier than their peers, are more aggressive and engage in more substance use, have lower school success and aspirations, have more positive attitudes towards sex, believe there are fewer costs to having sex, believe their peers engage in sexual behavior, are not as engaged in church attendance, have more depressive symptoms, have parents who are not as involved in monitoring their behavior, and have steady romantic partners. Many of these same factors are associated with accumulating more sexual partners during adolescence and inconsistent contraceptive use (e.g., see Zimmer-Gembeck and Collins 2008).

Making this even more complex, when recent longitudinal research is examined closely (Zimmer-Gembeck and Helfand 2008), three issues emerge. First, when studies are organized by age of the participants, the particular strength of associations between a range of variables and sexual behavior changes with stronger associations in studies of early onset of vaginal intercourse (e.g., before age 16) than in studies of sexual behavior between the ages of 16 and 18, and there are some unique correlates of delaying first sex until after age 18. Second, what accounts for sexual behavior at different ages can depend on racial/ethnic group, gender, or both in combination. Third, the factors associated with adolescent sexual behavior are intercorrelated, which suggests complex pathways to sexual intercourse, with some correlates better conceptualized as distal and other as proximal correlates.

Age. Although correlations are not always found in every gender and racial/ethnic group or in every study, problem behaviors and socioemotional problems, such as aggression, substance use, depressive symptoms, and lower school grades are correlated with earlier onset of first vaginal intercourse (before age 16), referred to as “early starters” here. In contrast, it is not as clear that adolescents who have first vaginal intercourse a little later (ages 16–18), referred to as “middle starters,” show this same confluence of problems. Other research also shows that adolescents who are middle starters, compared to early starters, engage in less sexual risk behavior, including having a lower number of different sexual partners and being more likely to use condoms

and other contraception consistently, when compared to those who have first sexual intercourse earlier (Siebenbruner et al. 2007). This does not mean that middle starters do not engage in some problem behaviors; they are more likely to report alcohol use than those who delay first sex until after age 18, but middle starters do not seem to have the same school performance problems or lowered educational aspirations that are found among adolescents who have first intercourse earlier. There is also some evidence of positive functioning among middle starters; these young people report more connections to school and have more positive relationships with their peers than those who had first sexual intercourse either earlier or later.

Early and middle starters have many things in common, as well. The common features of these two groups show that adolescent sexual behavior comes with or is part of multiple other developmental tasks of adolescence, such as developing close friendships outside the family, establishing romantic relationships, and developing the capacity for intimate relationships, and this seems to be the case regardless of whether sexual behavior is initiated in early or middle adolescence. In particular, when compared to those who delay first sexual intercourse until after age 18, early and middle starters can each be identified by their greater physical maturity, greater involvement in dating behavior, more permissive attitudes toward sexual behavior, and, when general (not domain specific) measures of self-esteem are used, similar levels of self-esteem. They also have elevated perceptions that their friends are having sex and are more supportive of this behavior, have a greater likelihood of living in families without two biological parents, and report being less monitored by their parents.

Two groups of adolescents who report vaginal intercourse before age 18. Multiple theories of the development of adolescent behavior and the above summary of findings converge on the notion that there may be two groups of adolescents who are sexually active in the later teen years, which can be demarcated by some different developmental antecedents and correlates. This makes it likely that these two groups of sexually active adolescents may appear similar in adolescence, but they have experienced different combinations of individual and environmental experiences that partially account for or covary with their current sexual behaviors. One group includes teenagers with certain dispositional traits marked by unconventionality and

lack of social bonds to family, school, or other social institutions. A second group includes teenagers who have certain biological characteristics (e.g., earlier maturation, particular hormonal levels or patterns), some problem behavior at a level that is more common during adolescence (e.g., experimentation with alcohol, other minor delinquent acts) and, because popularity with peers has been associated with earlier dating (Zimmer-Gembeck et al. 2004), peer group success.

One study supports this notion of two different developmental pathways to sexual behavior during adolescence (Siebenbruner et al. 2007). In this study, higher levels of and more significant deviant behaviors, as well as involvement in dating, marked a pathway to the most high-risk sexual behavior at age 16. The second pathway to sexual behavior in adolescence was more normative and included responsible, lower-risk sexual behavior during adolescence (i.e., limiting the number of sexual partners and using contraception consistently). Adolescents who were sexually active by age 16, but were more responsible than other sexually active youth, did not have negative family and school profiles prior to age 12. Yet, in early adolescence, these young people were relatively more physically mature looking and were more likely to become involved in steady dating relationships. These teenagers also engaged in other, milder problem behavior in adolescence (but not before), and did not engage in illicit drug use to the degree of high sexual risk-takers.

Delaying sexual behavior. The minority of US adolescents who delay sexual intercourse until after age 18 may be best identified by other factors when compared to those that predict first sexual intercourse before age 18. Although few studies follow participants beyond age 18, Asian race/ethnicity, religion, family disapproval of sexual behavior, and social anxiety seem to play roles in delaying. In particular, Asian Americans (and adolescents in Asian countries) are much more likely to delay first vaginal intercourse until after age 18 than other racial/ethnic groups living in Western countries. In addition, regardless of racial/ethnic group, girls who delay express more commitment to religious beliefs, have a friendship group that has similar commitments, and have families who communicate clear disapproval of adolescent sexual behavior and values that do not support this behavior. Boys who delay the onset of sexual intercourse have some of these same characteristics, but also may be more socially

anxious. Given the nature of adolescent dating interactions and dating gender roles, boys who are anxious or shy may be limited in their interactions with the other sex, dating and sexual behavior, and have restricted opportunities for these experiences, as well as being more isolated from social contagion by peers.

Delaying first sex can be challenging for adolescents. Those who delay report increasing pressure to have sex as they get older, and about 25% of 15- to 19-year-old virgins engage in oral but not vaginal sex. Adolescents who delay also report lower peer esteem in high school, but often maintain higher family and school esteem.

Race/ethnicity and gender as moderators. As described earlier, sexual behavior patterns do show some differences when racial/ethnic groups or males and females are compared. Taking this to another level of analysis, there is also evidence that the correlates of sexual behavior may differ between racial/ethnic or gender groups (i.e., be moderated by race/ethnicity or gender). In particular, family processes, school attitudes, religion, and parent education may be differently associated with sexual behavior depending on the racial/ethnic or gender group under consideration. Parenting practices, such as monitoring and involvement, are more important correlates of delaying sexual behavior for nonwhite, especially Black and Hispanic, adolescents compared to white adolescents. School attitudes and educational aspirations are not associated with sexual behavior among males, especially Black males, but females who have first vaginal intercourse earlier report less positive attitudes toward school and have lower aspirations. Regarding religion and parent education, delaying sexual intercourse may be more closely linked to religious behavior and attitudes among nonwhite girls, but religion plays a weaker role among other girls and boys, and higher parent-education level accompanies greater delay in onset of sexual behavior among white girls but not among other girls and boys.

Distal and proximal correlates. The many correlates of adolescent sexual intercourse should be considered as sets of distal and more proximal correlates. For example, family status (e.g., 2-parents in the home, education of parents) and processes (e.g., parental warmth, involvement, monitoring, and neglect) are often correlated with adolescent sexual behavior, but these associations rarely emerge when dating behavior,

deviant peers, or adolescent problem behavior are considered at the same time. This suggests that family factors are not unimportant to sexual behavior, but that family factors may be more distal correlates of sexual behavior via the influence of family status and processes on adolescents' peer relationships and individual behaviors and attitudes. Hence, families may influence sexual behavior via their influence on adolescents' involvement with their peers, their use of alcohol, their attitudes and perceptions of sexual behavior, and their socioemotional functioning. Similarly, early temperamental characteristics (such as sociability) and pubertal development are more distal correlates linked to sexual behavior via dating and other behaviors and attitudes (Zimmer-Gembeck et al. 2004).

Risks and Benefits of Sexual Behavior

Sexual and related intimate interactions can be some of the most important and rewarding experiences in life. As it is among adults, it is no secret that adolescents think about sex and/or intimacy frequently. Hormones contribute to adolescents' growing appreciation of both pleasure and risk taking. Hence, it just makes sense that adolescents have desires and want to experience the benefits of sexual behavior, but they also need the time to develop the cognitive and emotional capacity to balance this against the risks. Such acknowledgment of the risks and the benefits of sexual behavior has sparked one recent major transition in the field of adolescent sexual behavior and sexuality involving a call to focus on the "broader landscape of adolescent sexuality in our culture" (Russell and Consolacion 2003, p. 499) and consider the complexities of adolescent sexuality (Diamond 2006). For example, researchers have conducted investigations of sexual attraction and behavior (Russell and Consolacion 2003), sexual self-perceptions and development (Horne and Zimmer-Gembeck 2005, 2006), and sexual desire (Tolman and Szalacha 1999). Horne and Zimmer-Gembeck (2005, 2006) examined the development of sexual subjectivity, defined as sexual body-esteem, perceptions of entitlement to sexual desire and pleasure, and the ability to engage in sexual self-reflection to benefit from experience. Others have proposed definitions of positive sexuality that include learning about intimacy, learning about sexual roles and responsibilities, body self-esteem, understanding

and adjustment to erotic feelings, and learning about societal standards or sexual expression (Bukowski et al. 1993; Buzwell and Rosenthal 1996), and begun to empirically investigate these aspects of sexuality during adolescence and early adulthood. Such studies and others (Brady and Halpern-Felsher 2008; Skinner et al. 2008) show that sexual behavior *and* increasing maturity accompanies improvements in adolescents ability to reflect on their capacity to make autonomous decisions about abstaining or not abstaining from future sexual behavior, helps them to be more selective about and feel more control over their behaviors, and assists them to feel more positive about their own sexual feelings and desires.

Conclusion

Adolescence is a period of new experiences and significant change and acquisition of skills. Sexual behavior is one of these new experiences that can contribute to development of the capacity for intimacy, care for another, empathy, and autonomous decision making. It involves a complex interplay of individual biological, emotional, cognitive, and behavioral factors combined with the many levels of social forces that are important during this particular phase of life. As with much of the study of adolescent behavior, mapping the rates of behavior and focusing on risks and problems have received the most attention, and it is known that sexual behavior is not without risks especially when it starts too early or is accompanied by lack of control, choice, and pressure. However, sexuality includes a complicated set of behaviors, emotions, cognitions, and actions that overlap with the other major developmental tasks of adolescence. It can be a place where intimacy, identity, and autonomy converge. Hence, sexual behavior can provide a context where adolescents and emerging adults test their capacities, identify their beliefs, and come to understand their values. Balancing the benefits of such experiences, while reducing the risk, is the challenge that often begins in adolescence and requires support across multiple societal levels – from the family and schools all the way up to the community and broad policies related to sexual behavior and health.

Cross-References

- ▶ [Kissing](#)
- ▶ [Sexual Trajectories](#)
- ▶ [Virginity Loss](#)

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Sexual Expression Rights

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Adolescent sexuality contributes to one of the most contentious areas of jurisprudence seeking to address concerns about adolescents' inappropriate expressions. As with other areas of adolescents' rights, this area involves considerable limits and those limits take different forms depending on contextual differences. The different contexts in which expressions are made – such as public expressions and expressions made in custodial contexts (namely, educational institutions) – lead to different analyses but they reveal strikingly similar outcomes in the manner the legal system regulates expressions. Indeed, this area of law tends to treat adolescents as de facto children, an approach that grants adults considerable control over adolescents' sexual expressions.

One of the most important limits on adolescents' sexual expression comes in the form of limits placed on child pornography. Child pornography receives little First Amendment protection, which means that states can use its laws to prohibit or otherwise curtail it. The leading case in this area is *New York v. Ferber* (1982). Ferber was the owner of an adult bookstore in Manhattan and had sold to an undercover police officer two films depicting boys masturbating. Ferber was charged with violating a New York law that forbade the sale of any performance depicting sexual conduct of children under the age of 16. That case is known for permitting the regulation of child pornography. The Court already had ruled, in *Miller v. California* (1973), that materials deemed obscene can be regulated and that "obscene" meant that, taken as a whole and applying contemporary community standards, the materials lack serious scientific, literary, artistic, or political value, are patently offensive, and aimed at prurient interests. The Supreme Court in *Ferber* found that child pornography, however, may be banned without first being deemed obscene under *Miller*. The Court offered several reasons for deeming child pornography obscene: The prevention of child sexual exploitation was a very compelling state interest; the distribution of child pornography related to sexual abuse; selling child pornography serves as incentive to produce it, and thus exploit children; and the artistic value of visual depictions of children was negligible, and negligible artistic value. *Ferber*, then, stands for the now well-accepted position that states may curb the creation and distribution of images of youth.

In addition to allowing the prohibition of child pornography, however, the case incidentally involved the rights of minors to express their sexuality. *Ferber* also stands for adolescents' limited rights in that they may not be obscene and may not be involved in expressions that would be deemed indecent if they were adults. *Ferber* had held not only that society may limit materials harmful to minors but also that society must limit materials derived from minors. Indeed, it was the involvement of minors in the production of the materials that provided the Court with its strongest rationale for limiting the expression. This view was again affirmed in the Court's rejection of a federal law banning "virtual" child pornography (adults depicted as children) (*Ashcroft v. Free Speech Coalition*, 2002). These cases reiterate

that offending speech can be limited if it involves the expressions of minors.

In addition to cases allowing censorship of adolescents' expressions deemed obscene because adolescents rather than adults express them, important cases address adolescents expressing sexual language that some may deem to be inappropriate and thus subject to censorship. The two leading cases in this area involve public schools. In the first case, *Bethel School District No. 403 v. Fraser* (1986), Matthew Fraser, a high school honor student, delivered a nominating speech on behalf of a classmate at a school-sponsored assembly. To communicate the qualities of his candidate, Fraser used crude, if humorous, sexual innuendos. School officials found his use of language unacceptable and, following school policy that prohibited the use of obscene, profane language or gestures, suspended him for a few days and kept him from speaking at his graduation as scheduled. The Supreme Court ruled that the First Amendment did not protect students' use of vulgar and offensive language in public discourse. The Court upheld the punishment and emphasized the need for judicial deference to educational institutions given their importance in inculcating manners of civility. The Court deferred to the school authorities' conclusory determination that Fraser's speech seriously disrupted the school's educational activities and that schools may suppress speech that does not directly inculcate such lessons. The *Fraser* case embraced the need for judicial deference to the authority and expertise of school officials and made it permissible for adults' opinions, rather than those of students, to control whether students may express themselves in these contexts.

The second leading case in this area, *Hazelwood School District v. Kuhlmeier* (1988), involved the extent to which school officials could exercise control over the content of an official high school newspaper produced as part of a school journalism class. Following the accepted practice in the Hazelwood School District, the journalism teacher submitted printer proofs of the forthcoming edition of the school newspaper to the principal for review prior to publication. Without providing the student writers with any notice or opportunity to respond, the principal directed deletion of two articles (one dealing with teen pregnancy and another with teen experiences with parental divorce) from the newspaper because they were deemed inappropriate,

personal, sensitive, and unsuitable. In finding for the school, the Court created a distinction between school-sponsored and incidental expression, and held that a school may regulate speech which a reasonable person would deem to be school sponsored. The Court granted school officials sweeping authority to censor expression in school-sponsored activities. The Court did so by extending *Fraser's* deference to school authorities' regulation of student speech by making a distinction between tolerating and promoting student speech. According to the Court, the First Amendment requires schools to tolerate personal student speech that happens to occur on the school premises but is unrelated to the curriculum. On the other hand, if student speech activity is curriculum related, it might be perceived by students, staff, and outsiders as having the school's sanction. As a consequence, schools have the authority to regulate (or even prohibit) such speech.

The Supreme Court permits considerable limitations of minors' expressions relating to sexual activity and sexuality. The Court broadly prohibits child pornography, which limits visual, sexual depictions involving minors. When minors express sexuality verbally, they also can be quite limited if they express in the contexts in which they most likely find themselves: homes or schools. The Court's approach stresses the doctrine of *parens patriae*, deference to school officials, and minimal constitutional protection for student speech made in contexts that can be construed as within a school's educational mission. Adolescents essentially possess the same minimal rights in schools as they do in their own homes; adults determine the limits of adolescents' expressions. These limitations are of growing significance given the increasing extent to which adolescents' actions conducted off school grounds can be limited by school officials (see *Morse v. Frederick*, 2007), a limitation similar to the broad powers parents have to limit what their children can do or say.

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Sexual Harassment

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Although sexual harassment is commonly considered a problem plaguing women in the workplace, sexual harassment is actually much more common among adolescent peers (AAUW 2001). Research indicates that peer sexual harassment is pervasive and problematic around the globe including in the USA, Canada, Sweden, South Africa, Israel, and Brazil, among others (AAUW 2001; Attar-Schwartz 2009; DeSouza and Ribeiro 2005; Fineran et al. 2003; Pepler et al. 2006; Witkowska and Kjellberg 2005). Much of this research indicates that peer sexual harassment is associated with negative consequences for teens such as depression, anxiety, lower school performance, and body image disturbances (Duffy et al. 2004; Lindberg et al. 2007; Nadeem and Graham 2005). Therefore, it is imperative for researchers to examine the nature of peer sexual harassment and reduce victimization rates to improve the quality of life for adolescents worldwide. This essay explores the research on peer sexual harassment in adolescence.

Scope of the Problem

In their pathbreaking study, the American Association of University Women (AAUW) defined peer sexual harassment victimization as any "unwanted or unwelcome sexual behavior that interferes with one's life" (AAUW 2001). They identified 14 different behaviors that constitute peer sexual harassment victimization, which include both physical and verbal sexual behaviors such as being called gay or lesbian and having clothes pulled off or down. According to this definition, as many as 81% of students between grades 8 and 11 have experienced some form of peer sexual harassment in their school lives (AAUW 2001). The most common sexually harassing behavior is being the victim of sexual comments, jokes, gestures, or looks (AAUW 2001; Petersen and Hyde 2009). The least common behavior was being spied on while dressing or showering (AAUW 2001). Verbal forms of sexual harassment (e.g., hearing a sexual joke) are more prevalent than

physical sexual harassment (e.g., having clothes pulled off or down).

Research on peer sexual harassment in adolescence indicates no gender difference in overall victimization incidence (AAUW 2001). However, girls are more commonly victims of frequent and severe sexual harassment than boys are (Hand and Sanchez 2000). Gender differences also emerge when a distinction is made between same-gender and cross-gender harassment (Craig et al. 2001; McMasters et al. 2002; Petersen and Hyde 2009). Studies indicate that there is no gender difference in victimization incidence for cross-gender harassment; that is, girls are just as likely to harass boys as boys are to harass girls. However, boys are more likely to harass other boys than girls are to harass other girls (Craig et al. 2001; McMasters et al. 2002; Pelligrini 2002; Petersen and Hyde 2009). This finding indicates that same-gender and cross-gender sexual harassment victimization are distinct from one another and should be studied as separate phenomena.

Although boys and girls are equally likely to report peer sexual harassment, girls are more likely to be upset by it (AAUW 2001). Seventy percent of girls, but only 24% of boys, report being upset by peer sexual harassment victimization (AAUW 2001). A meta-analytic review of research on gender differences in perceptions of sexual harassment indicated that girls and women considered a larger range of sexual behaviors to be upsetting than boys and men did ($d = 0.30$, Rotundo et al. 2001). For both adults and adolescents, this gender difference was even larger when the perpetrator was the victim's peer ($d = 0.43$). Sexual harassment perpetrated by peers is often more ambiguous than harassment perpetrated by someone with more power such as in workplace harassment or harassment by teachers because interactions are more casual and may include discussions about sexuality that are not harassing. When harassment is ambiguous, such as peer sexual harassment victimization, girls were more likely than boys to interpret the behavior as harassing (Rotundo et al. 2001).

Issues of strength and power likely contribute to gender differences in perceptions of sexual harassment. Late adolescent boys are, on average, physically stronger and larger than girls are (Marshall and Tanner 1969, 1970), and regardless of their size, boys typically report more interpersonal power than girls do (Sheets and Braver 1999). Therefore, girls are likely to be more

fearful of harassment because boys are stronger and more powerful. For example, boys are likely to feel flattered by sexually harassing behaviors, particularly when perpetrated by girls (AAUW 2001; Duffy et al. 2004). However, girls are likely to be fearful or feel dirty as a consequence of peer sexual harassment (AAUW 2001; Duffy et al. 2004). In fact, one study found that sexual harassment perpetrated by boys was more upsetting than sexual harassment perpetrated by girls, regardless of the gender of the victim (McMasters et al. 2002). In addition, girls are more commonly victims of rape and sexual assault than boys are (Anderson 2007). Therefore it is not surprising that peer sexual harassment is particularly upsetting for girls.

Developmental Patterns

Students report sexual harassment victimization at a very early age, with 38% of high school students reporting that they were sexually harassed before sixth grade (AAUW 2001). Alarming, victimization increases throughout middle school and into high school and then drops off again in college (Craig et al. 2001; Goldstein et al. 2007; McMasters et al. 2002; Petersen and Hyde 2009). The explanations for this developmental pattern in peer sexual harassment victimization are reviewed here.

As adolescents begin to experience the changes of pubertal development, they have an increased interest in sexuality. Because youth have little experience expressing sexual attraction, they may do so in inappropriate ways (Petersen and Hyde 2009). Sexual teasing in the form of peer sexual harassment may allow youth to express their romantic attraction without the risk of being rejected. Therefore, sexual harassment, particularly cross-gender harassment, may increase through early adolescence as youth experiment with ways of expressing attraction. As they become more experienced, most teens develop more mature ways of expressing attraction that does not include sexual harassment (Petersen and Hyde 2009).

This increase in victimization across adolescence may also be a product of changes in peer relationships during the transition from grade school to middle school and from middle school to high school. Changes in peer social structure often accompany these transitions as youth establish power hierarchies among unfamiliar peers in their new schools (Pelligrini 2001). Friendship hierarchies become increasingly important

from early to middle adolescence and youth may use peer victimization to establish dominance (Pelligrini and Long 2002). Peer sexual harassment may increase as adolescents express dominance over their peers in an attempt to develop a hierarchy in their social relationships.

Victims of Peer Sexual Harassment

It is important to identify adolescents who are often targets of sexual harassment so that these victims may be protected from future harassment. Therefore, much research has focused on the predictors of sexual harassment victimization. Research and theory suggest that pubertal status, perceived power, school climate, and peer groups are predictors of peer sexual harassment victimization.

Pubertal Status

Youth with more advanced pubertal status are more likely than their less-advanced peers to be victims of peer sexual harassment (Craig et al. 2001; Goldstein et al. 2007; McMasters et al. 2002; Petersen and Hyde 2009). As adolescents enter puberty and develop secondary sex characteristics such as larger breasts and wide hips in girls and wide shoulders and height in boys, their peers may respond with sexual interest. These secondary sex characteristics might signal to teens that these adolescents are sexually ready and thus peers may tease them with sexual harassment.

Although multiple studies document a correlation between pubertal status and peer sexual harassment victimization (Craig et al. 2001; Nadeem and Graham 2005; McMasters et al. 2002; Petersen and Hyde 2009), it is not clear whether the association applies across gender and harassment type. For example, some studies have found that girls, but not boys, with advanced pubertal status were more likely to be victims of sexual harassment than their less-advanced peers (Goldstein et al. 2007; Stattin and Magnusson 1990), whereas others found the correlation for both genders (Craig et al. 2001; McMasters et al. 2002). The results of studies that distinguished between same-gender and cross-gender harassment have not been consistent. One study found that youth with advanced pubertal status were more likely to be victims of cross-gender harassment, but not same-gender harassment (McMasters et al. 2002), whereas another found the correlation for both same- and cross-gender

harassment (Craig et al. 2001), a third study found a relationship between advanced pubertal development for same-gender harassment, but not cross-gender harassment (Petersen and Hyde 2009). Although more research must be done to determine the relationship between advanced pubertal status and different types of harassment, it is clear that youth with advanced pubertal status are more commonly victims of sexual harassment than their peers are.

There are multiple possible explanations for why adolescents may target physically advanced peers for sexual harassment. First, Craig et al. (2001) proposed that youth with advanced pubertal status are more conspicuous than their less-advanced peers, and therefore, they may receive more attention from their peers through sexual harassment. Second, youth who are advanced in development may surround themselves with an older or more deviant peer group who may find more situations to be sexual and express their sexuality by harassing their younger associates (Magnusson et al. 1985; Goldstein et al. 2007). Third, youth with advanced pubertal status are more commonly perpetrators of peer harassment (Schreck et al. 2007). Adolescents who are perpetrators may be more likely to be victims of harassment than their peers (AAUW 2001; Fineran and Bennett 1999; McMasters et al. 2002).

Power

Bullying and other forms of victimization often target low-power youth. The perpetrator is motivated to gain social status and express dominance over the victim (Cillessen and Rose 2005; Pelligrini and Long 2002). For example, children who are low in power are more likely to be bullied than their high-power peers (Coleman and Byrd 2003). However, in contrast to research on other forms of victimization, research on sexual harassment has found that youth with *high* perceived power were more likely to be victims of harassment than youth with *low* power (Petersen and Hyde 2009). In fact, youth with high perceived power at all grades were more likely to be victims of ninth grade cross-gender harassment than their peers (Petersen and Hyde 2009). Powerful adolescents have increased influence among their peers and thus are likely objects of romantic interest. Adolescents might use sexually harassing behaviors to gain the attention of their powerful, cross-gender peers. For example, powerful youth

may be told a sexual joke or left sexual messages intended to attract romantic attention rather than cause emotional distress. An interaction of power and gender in ninth grade indicated that girls in particular may be more likely to harass their powerful male peers than less-powerful boys. Girls are attracted to powerful boys who gain status through aggression and dominance (Bukowski et al. 2000; Pelligrini and Bartini 2001). Therefore, cross-gender harassment may be bidirectional. Boys who sexually harass girls may be harassed in return by girls who find this dominance attractive. Other research, which indicates that perpetrators are often also victims, supports this bidirectional effect (AAUW 2001; Fineran and Bennett 1999; McMasters et al. 2002).

School Climate

Both male and female teachers report that they disapprove of peer sexual harassment (Stone and Couch 2004). Teachers report that they almost always notice peer sexual harassment, intervene as soon as they are able, and punish perpetrators (Stone and Couch 2004). However, other research suggests that these teacher reports may be inaccurate, perhaps because teachers do not notice many incidences of harassment (Hand and Sanchez 2000). The majority of students report that teachers do not intervene to stop peer sexual harassment even though the majority of harassment occurs in public places such as school hallways and in classrooms (AAUW 2001).

Only 7% of students report peer sexual harassment to their teachers (AAUW 2001). Girls in particular may be unlikely to report sexual harassment because they fear that teachers will not believe them, or even blame and punish them (Ormerod et al. 2008). This type of passive tolerance of sexual harassment leads to more sexual harassment in the schools (Ormerod et al. 2008). In fact, girls who report that their schools have a tolerant attitude toward sexual harassment, where perpetrators are rarely punished and sexual harassment goes largely unnoticed, are not only more likely to experience sexual harassment, but are also more likely to report negative consequences as a result (Ormerod et al. 2008).

Peer Group

Peers become increasingly important to youth as they enter adolescence. Although adolescents benefit

socially from a strong group of friends, deviant peer groups may lead to aggressive behavior such as sexual harassment. Teens are more likely to be harassed by their friends or acquaintances than by a stranger or dating partner (Fineran and Bennett 1999). Therefore, adolescents who spend time with aggressive friends or older friends are more likely to be harassed than their peers (Magnusson et al. 1985; Goldstein et al. 2007). These peer groups may use sexual harassment to form a dominance hierarchy, or they may just consider sexual harassment a part of teen culture.

In contrast, other research indicates that a positive peer group may buffer the effects of peer sexual harassment. For example, sexual minorities who are victims of peer sexual harassment are less likely to report depression and externalizing symptoms if they have supportive friends (Williams et al. 2005). Therefore, although a deviant peer group might increase sexual harassment victimization, a supportive peer group may buffer against the negative consequences of sexual harassment.

Perpetrators of Peer Sexual Harassment

Much less is known about the perpetrators of peer sexual harassment than about the victims. One study indicated that the majority of boys (66%) and girls (57%) admitted that they had sexually harassed someone in their school at least once (AAUW 2001). Boys are more likely than girls to be the perpetrators of sexual harassment (AAUW 2001; McMasters et al. 2002; Petersen and Hyde 2009). Eighty-six percent of girl victims report that sexual harassment was perpetrated by a boy acting alone and 57% report that they were victimized by a group of boys (AAUW 2001). Only 10% of girls report harassment perpetrated by a single girl, and 3% report harassment from a group of girls (AAUW 2001).

Some research suggest that perpetrators of sexual harassment may not know that their actions are inappropriate. According to one study, 25% of perpetrators thought the victim would like the behavior and an additional 20% of youth said they did it to get a date with the victim (AAUW 2001). Social skills training may help these perpetrators to identify appropriate ways of flirting and showing romantic interest in a way that is not offensive or unwanted.

As noted earlier, perpetrators of peer sexual harassment are also likely to be victims of harassment. Of the teens who admitted sexual harassment in the AAUW study (2001), 94% said that they had also been victims of sexual harassment. Perhaps adolescents use sexual harassment as a defense against further sexual harassment, or perhaps the dynamics of some peer groups are such that sexual harassment is so prevalent that teens are both perpetrators and victims.

Since very little research has been done to identify the perpetrators of peer harassment, researchers may look to studies on workplace sexual harassment in adulthood to determine variables that may be associated with perpetrator frequency. Research on workplace harassment suggests that endorsement of traditional gender-role values is related to the likelihood to sexually harass (Pryor 1987). Perhaps boys who hold traditional gender-role beliefs in high school are more likely than their egalitarian peers to sexually harass girls (Fineran and Bennett 1999).

Some researchers suggest that the media is at fault for peer sexual harassment perpetration (e.g., Brown and L'Engle 2009; Montemurro 2003). One content analysis reported that many television programs portray sexually harassing behaviors in a positive light, trivializing it with humor (Montemurro 2003). This portrayal of sexual harassment in the media may lead adolescents to think that sexual harassment is typical and harmless. For example, one study found that boys, but not girls, who reported watching three or more hours of television per day had more accepting attitudes toward sexual harassment than boys who watched fewer than 3 h of television each day (Strouse et al. 1994). This research suggests that reducing adolescents' exposure to sexualized media may help reduce sexual harassment victimization in schools.

Consequences of Peer Sexual Harassment

Research indicates that reactions to peer sexual harassment victimization vary greatly and range from feeling flattered to feeling symptoms similar to posttraumatic stress disorder (Duffy et al. 2004). Although peer sexual harassment is most likely to cause negative consequences when the harassment occurs repeatedly, a single incidence of peer harassment may cause significant distress for the victim (Duffy et al. 2004). Negative consequences of sexual harassment may be

classified into two categories: educational and psychological consequences.

Educational Consequences

Teens who are victims of frequent or intense sexual harassment are often unwilling to face their harasser at school. They are more likely than youth who are not harassed to report not wanting to go to school, cutting class, and think about changing schools (AAUW 2001). Persistent and intense sexual harassment also affects teens' ability to concentrate at school, probably because victims are worried about their next encounter with their harasser. Adolescents who are sexually harassed report not talking as much in class, making lower grades on school assignments, finding it hard to study, and even doubting whether they will be able to graduate (AAUW 2001; Duffy et al. 2004). In particular, being the victim of sexual rumors, sexual jokes, comments, gestures, and looks, or sexual pictures, messages, or notes increases negative educational consequences (Duffy et al. 2004). Reducing the rates of sexual harassment, particularly for girls, may increase students' academic performance in addition to increasing psychological well-being.

Psychological Consequences

A broad range of psychological consequences are correlated with sexual harassment victimization. These consequences typically include internalizing behaviors such as depression, anxiety, low self-esteem, and body dissatisfaction. Research suggests that youth who are victims of sexual harassment are more likely than their non-harassed peers to report symptoms of depression such as depressed mood, reduced appetite, loss of interest and pleasure, and sleep disturbances (Nadeem and Graham 2005). Peer sexual harassment may also increase anxiety for adolescent victims. For example, victims of sexual harassment may report symptoms similar to post-traumatic stress disorder such as reexperiencing the event and purposefully avoiding situations and people who remind them of the event (Murdoch et al. 2006). Adolescents who are victims of peer sexual harassment also report a lower sense of global self worth than those who are not victimized (Nadeem and Graham). Even children as young as those in third, fourth, and fifth grades who reported being victims of sexual harassment reported lower levels of self-esteem than their non-harassed peers (Murnen and Smolak 2000).

Peer sexual harassment focuses negative attention on the victim's body, which may decrease body esteem. Youth, particularly girls, who report peer sexual harassment victimization are more likely to want an ideal body and feel more shame for their own body than their peers do (Lindberg et al. 2007). Even elementary school girls who have been sexually harassed report lower body esteem than their non-harassed peers (Murnen and Smolak 2000). As girls develop a decreased sense of body esteem, they are likely to try to alter their body shape by engaging in disordered eating behaviors such as bulimia and anorexia nervosa. Although sexual harassment has been associated with disordered eating among women in the workplace, no research has examined this relationship in adolescents (Harned 2000; Harned and Fitzgerald 2002).

Intervention Programs

Intervention programs for peer sexual harassment in the schools are in their infancy and long-term results are not yet available. However, intervention programs for peer sexual harassment may benefit from knowledge about successful interventions to reduce bullying and other forms of victimization. Intervention programs for bullying have had mixed results. Although some programs have been very successful in reducing bullying (Olweus 1993), others have not been successful, and may have actually increased the rates of bullying (Roland 2000). A meta-analysis of 16 intervention programs concluded that the majority of intervention program had no effect (Merrell et al. 2008). The key to a successful program seems to be a "whole school" approach (Olweus 1993). This approach includes educational materials and interventions with teachers, school principals, bullies, victims, and parents to teach social skills, appropriate behavior for peer interactions and anger expression, warning signs for identifying bullies and victims, and how to identify the consequences of bullying. The whole school approach involves follow-up sessions and assessment of procedures throughout the intervention. Interventions that pass out materials to teachers or school principals and do not follow-up with them are not likely to significantly reduce bullying (Roland 2000).

The Expect Respect program was an intervention program designed to reduce the rates of bullying and

sexual harassment among fifth graders in six elementary schools (Meraviglia et al. 2003). This program used the whole school approach and included education for students, teachers, school administrators, and parents to recognize bullying and sexual harassment, minimize its occurrence, and help the victims cope. When compared with control schools, schools in the intervention program were better able to recognize sexual harassment after the intervention, but were not better at recognizing bullying. This indicates that intervention programs for sexual harassment might be even more effective than bullying interventions. Future research should examine whether interventions such as these can reduce the prevalence of sexual harassment in the schools.

Prevention of sexual harassment may be more effective than intervention programs for victims. Students should be taught to recognize and avoid sexual harassment before it becomes a problem. They should be taught appropriate ways of expressing sexual attraction and cautioned that sexual harassment may occur both within and across genders. Teachers should also be taught to recognize sexual harassment, to avoid blaming the victim, and to implement consequences for inappropriate behaviors.

Future Directions

Research on peer sexual harassment has a number of limitations. First, most samples have been primarily White and middle class. Only a few studies have examined the role of ethnicity in peer sexual harassment victimization and they have indeed found that patterns of sexual harassment victimization differ as a function of ethnicity (AAUW 2001; Goldstein et al. 2007; Nadeem and Graham 2005). For example, African American boys are more likely to be sexually harassed than White or Hispanic boys, but there are no ethnic-racial differences for victimization among girls (AAUW 2001). In one study, African American women reported that sometimes it is hard to separate harassment based on race and gender that creates a type of racialized sexual harassment (Buchanan and Ormerod 2002). This suggests that the specific behaviors that constitute peer sexual harassment victimization and the meaning of these behaviors may be different for ethnic minorities and those with low socioeconomic status. Additionally, sexual harassment may be different when it is

perpetrated within or across races. For example, in one study, African American women reported being more upset by harassment perpetrated by White men than by African American men (Wood et al. 2009). Future research should include participants from all ethnographic groups in order to determine the predictors and consequences of peer sexual harassment for all people and include forms of racialized sexual harassment in sexual harassment measures.

Research on sexual harassment among sexual minorities is also scarce. Sexual minorities are at particular risk of experiencing sexual harassment victimization. One study reports that sexual harassment victimization is more commonly reported by sexual minority high school students than by heterosexual students regardless of gender (Williams et al. 2005). Increased rates of victimization are also more likely to lead to internalizing and externalizing symptoms for sexual minorities. Future research on peer sexual harassment should include sexual minorities and identify which types of sexual harassment are targeted toward them. Reducing sexual harassment victimization targeted toward sexual minorities may help reduce depression and externalizing behaviors in this population.

The field of sexual harassment research could also benefit from more careful consideration of the measures. All studies reviewed here have used youths' self-reports of behaviors. One of the advantages of self-report measures in sexual harassment research is that measurement typically uses a series of behaviors rather than asking students whether they have ever been victims of sexual harassment. If research used the term "sexual harassment," responses might be distorted by the respondent's lack of knowledge of the definition of sexual harassment or unwillingness to acknowledge the self as a victim. Instead, researchers typically ask whether specific behaviors have occurred, such as "has anyone ever made sexual comments, jokes, gestures of looks toward you?" and "has anyone ever called you gay or lesbian" (AAUW 2001), which should lead to optimal accuracy of self-reports. However, self-reports may still be biased. No studies have attempted to directly observe these behaviors or use others' reports of peer sexual harassment victimization. Research on other forms of peer victimization such as bullying often relies on peer and teacher nomination to

identify students who are frequent victims of harassment. Although students are likely the best reporters of their own experiences, they may be unwilling to admit that they were victimized. Including peer nominations in peer sexual harassment research in combination with self-reports would strengthen this field of study.

The majority of sexual harassment research to date has focused on predictors and consequences of harassment victimization. Future research should identify the perpetrators of sexual harassment. Models used by research in workplace sexual harassment (Pryor 1987), bullying, and other forms of victimization (Olweus 1993) may provide insight about the characteristics of perpetrators to be applied to research on the study of peer sexual harassment in adolescence. Identifying characteristics of perpetrators is an essential step to reducing the prevalence of peer sexual harassment.

Finally, additional research must be done on intervention programs for peer sexual harassment. Research indicates that this problem is pervasive and may have severe negative consequences. Intervention programs should be a priority to help prevent and reduce the incidence of harassment, support the victims, and teach teachers and parents observational skills and victim sensitivity. Research on peer sexual harassment has been growing rapidly over the past few decades and the application of this research to reduce sexual harassment in the schools is arguably the most important future direction for this field of study.

Conclusions

Peer sexual harassment is a pervasive and a difficult problem for adolescents and for the adults responsible for guiding them. From the research reviewed here, it is clear that there is a spectacular diversity in the behaviors that fall into the category of peer sexual harassment. Moreover, the meaning of the behavior to the victim and to the perpetrator may differ considerably and the meaning of a behavior may vary from one victim to the next. What flatters one student might frighten the next. Even when the perpetrator's intentions are harmless, the target of the harassment may be distressed by this unwanted attention and it may cause negative psychological and educational consequences for the victim. Regardless of the perpetrator's intentions, negative perceptions of harassment by the victim are associated with a variety of negative outcomes

ranging from embarrassment to a severe drop in self-esteem or depression (AAUW 2001; Nadeem and Graham 2005). The alarming increase in sexual harassment during adolescence requires more research to expand on existing knowledge and identify interventions to prevent and reduce rates of peer sexual harassment in the schools.

Cross-References

► Sexism

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Sexual Health

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Overview

Adolescent sexuality is usually equated with risk and danger. However, from a developmental perspective, becoming a sexual self, negotiating relationships that involve sexuality, engaging with social contexts and institutions that bring sexuality to the fore are normative features of adolescence. Sexual health provides an alternative to the risk-only model of adolescent sexuality. This essay provides an expansive discussion of what sexuality is and a model of adolescent sexual health. The analysis reframes an approach that focuses exclusively on preventing or diminishing threats or challenges to sexual health with another approach that develops an individual-in-context perspective: individual, interpersonal, social, and sociocultural dimensions of sexuality in adolescence. The model further explains the importance of considering young people's social locations in general, and the social meanings of gender as it intersects with race/ethnicity, class, and sexual orientation in particular. From personal history to public policy, adolescent sexual health as a multidimensional and unavoidable dimension of young people's lives is discussed.

Introduction

Because American society is simultaneously scandalized and obsessed by adolescent sexuality, it is rarely conceived of beyond the scope of risk. Like a car accident, society is squeamish even as it is preoccupied with fears and fascination about the sexual risks that adolescents might be taking. Adolescent sexuality is thought of and treated as a pathology or disease, reduced to or never expanded beyond sexual behavior that can be prevented.

But sexual behavior is only one dimension of sexuality, albeit the one that can have visible consequences for some teens (Jewell et al. 2000). Sexuality is in fact far more than a set of behaviors that may or may not lead to pregnancy and/or sexually transmitted diseases.

It is a complicated package of thoughts, desires, or attractions and feelings, identities, relationships, and behaviors; sexuality is an interplay of the mind, body, and soul. Sexuality is a basic human right (Correa and Pechesky 1994), and sexuality is a fundamental part of a person's humanity (World Association for Sexual Health 2008). Over the course of adolescence, young people go through processes of understanding, exploring, and making sense of their maturing sexuality, which involves their physical, emotional, moral, intellectual, and relational development (Planned Parenthood Federation of America Inc. 2001; Tolman 1999). In short, sexuality happens in adolescence, it is not pathological or a disease to be avoided or eliminated. And it is not simply, solely, or necessarily contingent upon or expressed through behavior (Diamond and Savin-Williams 2009). Broken hearts, identity questions, powerful desires, and joyful relationships can all be part of sexuality development in adolescence.

Sexual health, or healthy sexuality, then, provides a useful way to think about adolescent sexuality. In the fast-growing tradition of positive youth development (Amodeo and Collins 2007), considering what facilitates development, resilience and thriving as young people move through adolescence into early or emerging adulthood is recognized as a more comprehensive and productive approach. Rather than simply ameliorating risks associated with sexuality – what to avoid – healthy sexuality shifts the perspective toward how to support adolescents' negotiation and experience of sexuality (Ehrhardt 1996). The 1995 National Commission on Adolescent Sexual Health (SIECUS 1995) consensus statement from 50 national organizations and 35 professional organizations, including the American Psychological Association and the Society for Adolescent Medicine, includes as part of sexual health the abilities (a) to develop and maintain meaningful personal relationships; (b) to appreciate one's own body; (c) to interact with both genders in interactive and appropriate ways; and (d) to express affection, love, and intimacy in ways consistent with one's own values. Achieving sexual health requires psychological, physical, societal, cultural, educational, emotional, and spiritual factors.

Diminishing sexual risk, then, is part of rather than definitive of healthy sexuality; learning to avoid and protect oneself from unwanted pregnancy, sexually transmitted disease, and HIV/AIDS are one dimension.

However, healthy sexuality provides a much more expansive conception. Over the course of the adolescent years, the development of healthy sexuality in this society includes: becoming knowledgeable and comfortable with one's sexuality; learning to apprehend and respect one's own feelings (emotional, sexual) and those of others; gaining viable sexual knowledge and learning to communicate with partners, adults, and peers; gaining access to resources for sexual safety and health; developing a sense of empowerment to make active choices in and about sexual situations; establishing a sense of entitlement to physical and emotional dimensions of connection, desire, and pleasure, as well as freedom from sexual violation; and acquiring experience, insight, and/or information about romantic and sexual relationships.

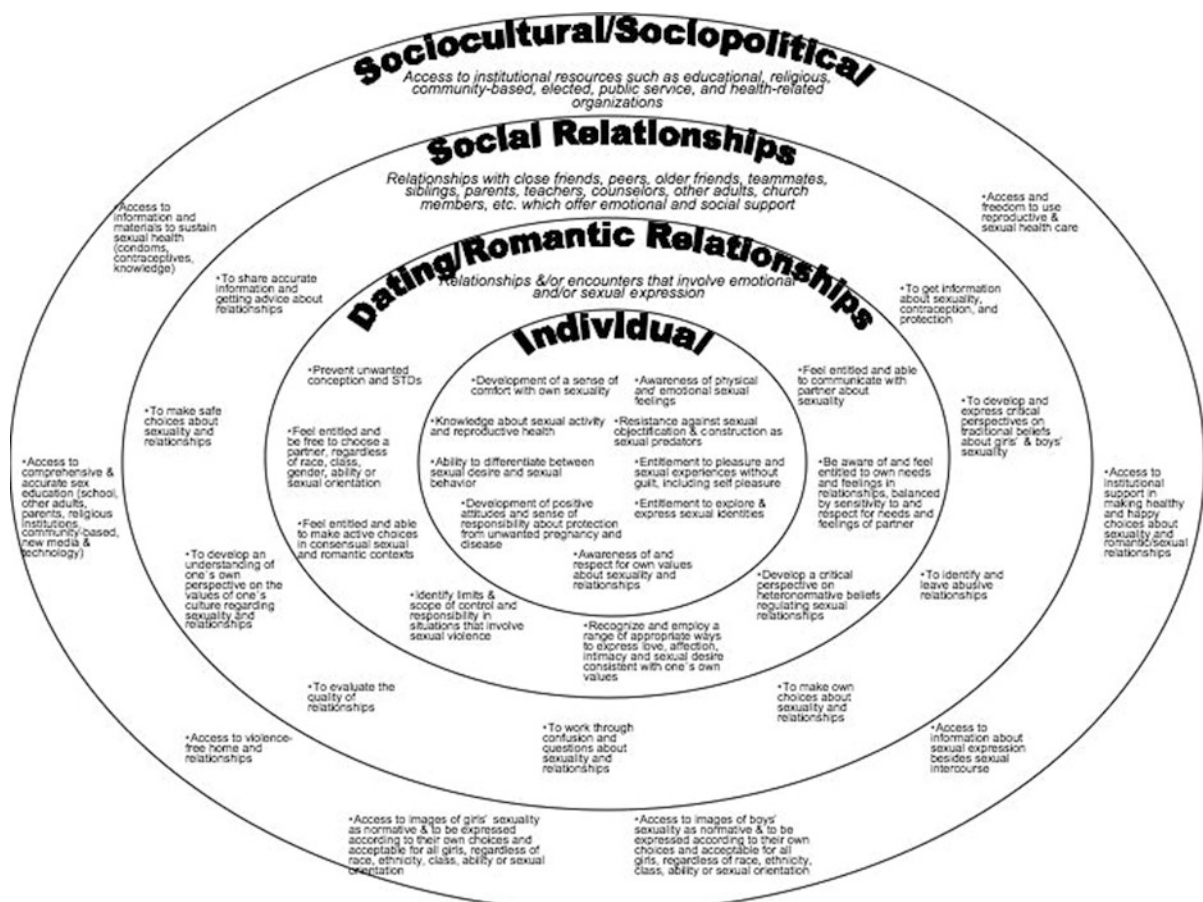
A conception of sexual health shifts questions and concerns: What are the threats to adolescents' sexual and reproductive health, sexual choices, sexual identities, sexual safety, sexual subjectivity, or the sense of oneself as a sexual person? It also changes the central issue: Rather than an exclusive focus on preventing risky sex, how can healthy sexuality and its development be supported for adolescents? Answering these questions requires challenging the assumption that sexuality is hardwired, genetically or physically determined, and simply unfolding according to a predetermined and natural course (Tolman and Diamond 2001). Current research and theory understand sexuality as the product of constant interplay between the body, including anatomy, physiology, hormones, the brain, and the society or social contexts in which the body develops. Sexuality does not emerge fully formed; rather than nature vs. nurture, the physical and the social work together to "produce" the many dimensions of sexuality. While individual histories will always bring variability into all adolescents' experiences of sexuality, the body does not develop or "unfold" in a predetermined vacuum. Thus, the new questions that a conception of healthy sexuality raises means not just focusing on the individual adolescent but recognizing the multiple, critical contexts in which he or she is developing into a sexual person: relationships (romantic, peer, family), geography (neighborhoods, multicultural communities), state institutions (school, religion, law), structural differences and disparities (gender, health care, resources, race/class/ethnicity, immigrant status), and increasingly complex social

norms about teens and about sex, technologies, and media (Collins et al. 2009; McClelland and Fine 2008; Tolman 2006; Russell 2005; Welsh et al. 2005).

This ecological model highlights how adolescent sexual health can be understood as a person-in-contexts phenomenon (Bronfenbrenner 1979). At the center of the circle in Fig. 1 are the individual and the dimensions of sexuality that adhere to her: the next concentric circle highlights interpersonal relationships; proximate social contexts follows, all contextualized by the sociocultural/sociopolitical dimensions of sexual health. Each of these interrelated contexts informs the other, constituting and highlighting how sexual health for adolescents is multidimensional. Thus, threats to adolescent sexual health range from the intrapersonal to the sociopolitical. This conception of adolescent sexual health makes visible the complexity of sexuality, as well as the levels of challenge that individual

adolescents negotiate. This model also underscores how sexuality comes into being by individuals, in their individual bodies and psyches and personal histories and experiences, informed by and interacting within relationships and meanings, as well as institutions and social policies within which they live and develop. The lines between these nested characteristics of sexual health should be seen as permeable, with interplay assumed between and among these levels, like a complex play that requires each character to exist but interact together to create the whole that is greater than its parts.

Sexuality is at its very core relational (Sprecher and Regan 2000). In particular, healthy sexuality for teens is most often predicated on having trustworthy, reliable adults in their lives on whom they can rely to find information, ask questions, and turn to in the inevitable times of challenges and of curiosity. Thus,



Sexual Health. Fig. 1 Model of adolescent sexual health (Revised from Tolman 1999)

adolescents' ability to develop healthy sexuality rests in part on adults' capacity to recognize, acknowledge, and provide resources for what adolescents are negotiating. The specter of adult anxiety is among the greatest threats to young people's healthy sexuality. Ultimately, garnering resources to handle both the risks and the pleasures that are part and parcel of sexuality across the lifespan is the "normative" task of adolescence (Tolman and McClelland 2011).

In some sense, "adolescent sexuality" is a misnomer, suggesting a monolithic construct that is the same for all teens (Fine 1988). First, adolescence is comprised of very distinct periods of development (Collins 2009); late adolescents, who are completing high school (approximately ages 18–21), are in all dimensions of their development (cognitive, moral, emotional, social, physical) far different than early adolescents. More recent research in this field has addressed the intertwining physiological and psychological processes involved in developing as a sexual person at various developmental moments over the course of an adolescent's life. Tolman (2002) argued for the importance of conceptually expanding what has been called sexual development into the broader, more comprehensive construct of "sexuality development."

With an understanding of sexuality as "constituted" by meanings that are culturally available, the ways that adolescents whose lived experiences and realities are shaped by specific systems of meaning shed light on what threats to healthy sexuality are for them. Because of these and individual differences, there is no set or proscriptive "pathway" for the development of healthy sexuality or uniformity in the challenges young people face as they negotiate their personal, interpersonal, social, and societal landscapes (Hensel et al. 2008; Fine and McClelland 2007; Tolman 2002).

Gender is a key example of this interplay. Gender is more than, and in some cases not related to, biological sex; rather, it is a social construct, consisting of social norms, beliefs, and practices that are associated with masculinity and femininity, often assumed to be inextricably linked to male and female bodies (Fausto-Sterling 2000). Gender as social rather than hardwired explains the variability and changes over time, history, and culture that characterize male and female human behavior. Rather than just identifying what have been called "gender differences" in sexuality, such as different rates of behavior for girls and boys,

gender is a critical dimension of how sexuality is experienced and understood by adolescents. Therefore, threats to sexual health are gendered (Tolman 1999). For instance, while girls struggle with embodiment and awareness of their own sexual feelings, boys struggle with feeling able to realize, recognize, and act upon their emotions and wishes for relationship. Avoiding sexually transmitted diseases is a shared outcome for healthy sexuality, but what is involved is different for male and female teens: for girls, it may be negotiating with a partner about condom use in the context of power differences in any given context, while for boys it may be lacking access to condoms in a situation where he is expected to provide them.

Equally important is an intersectional perspective on gender, that is, how race, class, and/or sexual orientation (structural or societal differences that create disparities and inequities) interact with gender to produce specific threats to sexual health (Crenshaw 1995). A Black middle-class lesbian may have to deal with the specific contours of homophobia in a community setting that is often a refuge for African American teens, the church (Cohen 2010), while a poor White heterosexual male might feel few options for establishing his masculinity and engage "trash talk" about a group of girls with his male peers, thereby threatening his much-needed emotional connection with his disapproving girlfriend (Tolman et al. 2003). Rather than seeing particular populations simply as sets of individual adolescents making poor decisions, disparities in sexual health can be redressed by understanding how contexts and social forces play out for different individuals and constitute differential threats to sexual health for different populations of young people.

The next part of this essay will provide some of the specific challenges to sexual health. To do so, it examines the challenges posed at each level of Fig. 1. When examining these levels, it is critical to keep in mind that the specific contours of challenges and possibilities for any individual and for populations of adolescents will be shaped by their social and cultural locations, as well as their personal histories.

Intrapersonal: Development of the Sexual Self

Becoming a sexual actor has been an acknowledged task of adolescence (Adelson 1980), but prior to the 1990s was implicitly meant as part of male adolescent

development. The emergence of the term “sexuality development” (as opposed to sexual development) is both an example and a product of these changes (Tolman 2002, 2006). Originally with a focus on documenting physiological stages, more recent research in this field has addressed the physiological and psychological processes involved in developing a sexual self, including various developmental moments over the course of an adolescent’s life that help to generate what one comes to understand as their sexual self. Seen through this lens, the development of sexuality includes research on: pubertal development, body image and its relationship to sexuality, gender and sexual identity development, sexual self concept and subjectivity, and motivations for engaging in positive and developmentally appropriate sexual experiences. Taken together, these dimensions of the self provide guidelines for understanding how young people physiologically and psychologically mature into adulthood with a healthy sexual self – meaning that individuals have positive associations with their physical body, their own experience of sexual desire, feelings of attraction toward potential partners, and a sense of agency in sexual decision making.

Tolman’s research (2002) on adolescent girls’ experiences of sexual desire identified a complicated landscape of social, material, and personal dilemmas that characterized girls’ diverse experiences negotiating their sexuality. She found three distinct dilemmas and a variety of ways for resolving them, including “silent bodies” (dissociation from embodied feelings), resisting or hiding their sexual desire, or refusing to comply with the norm that girls are not supposed to feel desire, have sexual feelings, and deal with the consequences. In particular, this very small group of girls refused to accept the double standard, fought back against negative labels (“slut”) for themselves and their friends, and felt entitled to protect themselves from pregnancy and disease. Girls as well as boys develop a sexual self concept, which can include a sense of agency (entitlement to act on one’s own feelings) and subjectivity (experiencing oneself as a sexual person entitled to their embodied feelings and choices, Horne and Zimmer-Gembeck 2005, 2006; O’Sullivan et al. 2006). Researchers working with these concepts have investigated the relationships between sexual identity formation, sexual decision making, and sexual behaviors and outcomes.

Sexual identity development has become a much more prominent area of research, as society recognizes the variability in people’s sexual attractions, behaviors, and identification with communities. The process of coming out – of self-recognition and informing people in one’s life, parents, peers, teachers, community members of one’s attractions to and desire for attachment to same-gendered partners – is now accepted as normative (Boxer et al. 1999). In fact, difficulties in developing an “integrated LGB identity” can lead to poor psychological adjustment and sexual risk taking (Rosario et al. 2011). More recently, research on sexual orientation development for the cohort born in the 1990s has raised questions about how this process is historically and culturally situated and not “writ in stone” and may be very distinct for males and females (Diamond 2008; Savin-Williams 2005). And some young women who identify as lesbian or bisexual can change how they identify themselves, including refusing any of the available labels, over time (Diamond 2008). Rather than categorizing an adolescent as a “gay teen” or “young lesbian,” “sexual minority youth” or “queer identities” describe an extremely diverse group who may shift into and out of a gay, lesbian, bisexual, or no specific sexual identity, may be actively questioning their identity as an identity, may engage in same-sex sexual activities without any identification, and/or may report same-sex attractions without any same-sex behavior or identity (Cohler and Hammack 2007).

Interpersonal: Romantic and Sexual Relationships

The phrase “hooking up” is a kind of moving target for describing adolescent behavior. While often assumed to mean having sexual intercourse out of the context of a committed or even any relationship, it has a panoply of meanings, from getting together, to making out, to engaging in intercourse, with a stranger, a friend, or a romantic partner. A new concern, especially for girls, is expressing sexuality without a relational “net” (Shalit 2007). While there is a lot of public discussion (and distress about) adolescents “hooking up,” the evidence suggests that the most common context in which adolescents experience sexuality is still a boyfriend/girlfriend/romantic relationship (Kaestle and Halpern 2005; Manning et al. 2006). This concern about the interpersonal contexts in which young people express

sexuality suggests an implicit social contract about what is an expected or appropriate context in which adolescents might express sexuality: “monogamous-enough” relationships (Tolman and McClelland 2011). Adolescents themselves hold a wide range of opinions about when and under what circumstances it is appropriate or meaningful to engage in different sexual behaviors and are often very thoughtful about making these choices carefully, considering the resources they do and do not have. Unfortunately, it is still not uncommon for young women in particular to consume alcohol and then engage in sexual activity that they may or may not really want (O’Donnell et al. 2010), and for young men to proceed with sexual “opportunities” about which they may feel ambivalent or not ready or not interested, because of the pressure to prove their masculinity to their peers and to themselves through sex (Tolman et al. 2003).

Dating and sexual violence are also threats to sexual health among young people (Cauffman et al. 2000; Halpern et al. 2001). With the availability of pornography on the Internet for adolescents, porn has been found to inflate or create vulnerability to engaging in or experiencing unwanted sex (Bonino et al. 2006). The construct of “everyday” victimization and/or violation (Tolman 2000) of girls by boys is one specific context which is so pervasive as to be normative (but not normal) and threatens as well as constitutes danger (Shute et al. 2008). Shortcomings in the research, including that girls are not investigated as sexual aggressors and boys who report experiences of bullying are not asked to report the gender of the aggressor, leave the question of whether it is boys’ sexual aggression toward boys and/or the possibility of girls’ sexual aggression unanswered.

Romantic and sexual relationships in adolescence can also be positive not just “danger zones,” although most research studies negative outcomes. For instance, intimacy in adolescent romantic relationships has been found to be a possible “positive motivation” for sexual behavior. Ott et al. (2006) evaluated adolescents’ goals for intimacy, sexual pleasure, and social status within a romantic relationship, as well as their expectations that sex would lead to these goals. Among 9th graders, they found that intimacy was valued the most, then status, then pleasure. Girls valued intimacy significantly more and pleasure significantly less than boys, while those with more sexual experience valued both

intimacy and pleasure more than those who were sexually inexperienced.

There is almost no research on adolescent masturbation practices, so most of what is known about adolescent sexual behavior occurs in relational contexts. In fact, sexual behavior is a perfect example of the individual-in-context; while identifying how much and which sexual behaviors individual experience, the experience of sexual behavior, and the negotiation of it, is profoundly interpersonal (Gagnon and Simon 1973). Sexual health from a behavioral perspective includes choosing safe sexual behaviors and/or diminishing the risk of risky ones (condom use), and also knowing and enacting sexual choice, requiring individual self-awareness and also a sense of entitlement to make and enact sexual choices. The interpersonal context highlights how power relations are central to understanding these factors in adolescent sexual behavior: differences in gender, age, socioeconomic status, and sexual experience can motivate sexual behavior that may not be entirely wanted (Diamond and Savin-Williams 2009).

In recent years, a more normative perspective on adolescent sexuality and its development is reflected in researchers approaching sexual behavior not solely in terms of risk but also in terms of how these behaviors are interrelated and what expected trajectories of behavior might be (Hensel et al. 2008). At the beginning of the decade, there was concern that girls may have been providing oral sex to boys as a way to “stay abstinent,” that is, avoid having intercourse (Remez 2000). However, this pattern has not been found. The shift in regards to oral sex is less about prevalence and more about expectations within repertoires, with oral sex most frequently immediately preceding heterosexual intercourse. Some research indicates that oral sex is less of a “choice” behavior and more of an expected behavior, especially fellatio (Kaestle 2009; Burns et al. *in press*). Gender inequities in relationships can lead girls to engage in sexual behavior they do not want due to threats or fears of losing a partner or for perceived expectations of what behaviors peers have experienced (Lescano et al. 2009).

Social Relationships: Family and Friends

The role of families in adolescent sexual health is very significant. Three key factors are the role of maternal beliefs and attitudes on adolescent sexual decision

making, the overall quality of parental relationships on subsequent sexual outcomes, and communication styles when talking with teens about sex. Various studies have found that maternal disapproval of sexual activity was associated with delayed onset of intercourse (Sieving et al. 2006), decreased likelihood of sexually transmitted disease infection (Ford et al. 2005), and increased birth control use (Jaccard et al. 2000). Very little is known specifically about fathers. Some ethnic/racial differences have been identified. One recent study found that African American adolescents reported receiving the most parental communication and Asian American boys reported the least (Epstein and Ward 2008). Kim (2009) found that Asian adolescents often date without parent knowledge, date longer, delay intercourse until college, and enter monogamous relationships with less prior relational experience than other peers. Recent immigration and levels of acculturation are also factors in sexual behavior (Raffaelli and Ontai 2001).

As adolescents develop, there is an increasing salience of peers. One important question is the relative importance of parents vs. peers in relation to sexual attitudes, behavior, and decision making. Current research suggests that parents and families continue to remain important even as peers become a more significant factor in adolescents' lives. O'Sullivan and her colleagues (O'Sullivan et al. 2001) found in a study of how African American and Latina mothers communicated with their daughters about sex that because antagonistic relationships often developed around this sensitive material, teen girls may need sex education from sources other than their families.

The role of peers in socializing young people in sexual norms, attitudes, and behaviors is considered an effect of an assumed normative developmental process of adolescents' shift away from families and toward peers, yet the types and range of peer influence are not well understood. In fact, peers have been found to be a negative influence on different types of risky behaviors, including smoking, alcohol and drug consumption, and sex (Maxwell 2002a, b). In particular, older males with younger female partners have a negative impact. Gowen et al. (2004) found that girls with older boyfriends were more likely to believe that guys are sexually driven, that sex mostly "just happens," that having sex is a sign of maturity. Peer networks, or interlocking webs of friends and relationships, have

been shown to influence sexuality development via other factors. It is often perceptions of peer sexual experience rather than knowledge about it that is influential in teen sexual decision making (Santelli et al. 2004).

One very significant study examined the effect of social networks to track the impact of virginity pledges – a public affirmation by a young person that he or she promises to abstain from sex until marriage that became popular in the conservative movement demanding sexual abstinence in adolescence (see below). Evaluating the effect of these pledges on the likelihood to transition to first sexual intercourse, they found that, initially, those who pledged abstinence were more likely to delay first intercourse. However, when they took the specifics of social group contexts into account, they found that pledging delayed intercourse only in contexts where there were some, but not too many, pledgers. Their interpretation was that the pledge worked in contexts where group membership constituted an identity in the particular school context. Thus, to be effective, it had to be pervasive enough to constitute group membership, but not so pervasive that it is no longer a distinguishing characteristic (Bearman and Bruckner 2001). Importantly, in a subsequent study they found that so-called promise-breakers, pledgers who did not in fact wait until marriage for sex, were less likely than their peers to use contraception at first intercourse and just as likely, over time, to contract an STI (Brückner and Bearman 2005).

Sociopolitical/Sociocultural: Media and Institutions

The media has proliferated into a cornucopia of possibilities for young people today: innumerable network and cable television channels, the Internet providing access to everything from YouTube to Facebook to vehicles for downloading a plethora of images, music and concomitant videos, video games, and movies. With the deregulation of many of these outlets in the 1980s, and emergence of others that pose vexing dilemmas about regulation, sexual images targeting and to which young people have (not always intentional) access have intensified at a geometric rate (American Psychological Association 2007). The relationship between seeing representations of sex and sexuality and impact on behavior and attitudes is

hard to untangle in research. There is a “chicken or egg” phenomenon at play that makes causal relationships extraordinarily difficult to determine: Are young people exposed to sexual media that may make them become sexual or are more sexual young people drawn to more sexual media? Given that caveat, it is clear that the media is a major factor in young people’s healthy sexuality development.

For instance, researchers have found that media that convey traditional gender roles are associated with endorsement of more traditional perspectives regarding male and female sexuality (Ward 2003; Kim et al. 2007; Rivadeneyra and Lebo 2008; Ward et al. 2005). They have found associations of nonbehavioral negative sexual outcomes (endorsement of coercion in heterosexual relationships, negative attitudes about sex and the potential for mutuality in sexual relationships) with media images reflecting scripts in traditional gendered relational practices. Brown and colleagues developed the concept of the sexual media diet as part of a media “identity toolkit” that adolescents utilized to explore the self; they suggest that media can serve as a kind of sexual “super peer” (Brown et al. 2005). The presence of parents is one of the few moderating factors in associations between viewing sexual media and sexual attitudes and to some extent behavior; however, as children become adolescents, they are much less likely to consume media with their parents (Schooler et al. 2006).

Media is also a useful resource that can support young people’s sexuality development (Bay-Cheng 2001; Bay-Cheng et al. 2009; Ward and Friedman 2006). While the Internet is often portrayed as a dangerous arena of sexual predators and pervasive “sexting” (sending revealing pictures by text that can be posted on the Internet), actual analyses of online environments show how adolescents use it to search out peers, ask questions about sexual topics, and construct sexual identities (Suzuki and Calzo 2004). In one study of teen chat rooms, Subrahmanyam et al. (2004) found that online spaces provided safer environments than the teenage participants found elsewhere in their lives in which they learned to exchange information with peers and to explore their emerging sexuality.

Religion can be both protective for and threatening to adolescent sexual health (Rostosky et al. 2003), including religious identification, religious practices, and the role of religious communities as buffers against

such sexual outcomes as age of sexual initiation, psychological well-being, and use of birth control. For instance, while greater religiosity has been associated with fewer sexual partners, it has also been found to predict lower rates of condom use (Manlove et al. 2008). These results indicate that while religious identification may protect against initiating sexual activity, it may disable or undermine safe sex practices among young people who become or are already sexually active (Zaleski and Schiaffino 2000). These protective and challenging qualities of religion have been found to differ by gender and race (Rostosky et al. 2003).

At the turn of the century, federal legislation tied funding for sex education to mandates for abstinence-only programs, even as research showed that these programs were not effective and in some cases harmful (Fields 2008; Kirby 2002b). Though no longer exclusionary of more comprehensive sex education and now required to be medically accurate, the legacy of a decade of frequently “fear-based” abstinence-only sex education lingers, with many young people lacking basic factual information about their sexual health. Kirby (2002a) found that some sex education programs had strong evidence that they delayed sex, increased condom or contraceptive use, or reduced teen pregnancy, including sex and HIV education curricula with specified characteristics, one-on-one clinician–patient interventions, and several service learning programs. Johnson et al. (2003) found that the more effective interventions were characterized by providing more condom and HIV information and skills training than the comparison groups and by actually providing condoms to participants. Where adolescent sexuality is acknowledged by condom availability in schools, it may be more possible to support adolescent sexual health. However, these studies fail to include indicators of sexual health, focusing exclusively on eliminating or reducing risk. With the change in the political climate making it possible to recognize sexuality development as a normative dimension of adolescence, new programs and research that is grounded in supporting young people in this aspect of their development are likely to become available. As McClelland and Fine (2008) have noted, increasing the body of knowledge that provides nuanced information about how sexuality develops in adolescence will provide the fuel to expand how society talks about and represents young people’s sexuality and also public policies, such as sex

education, aimed at “managing” adolescent sexuality development.

Conclusion

Adolescent sexual health offers a kind of map for recognizing the expectation and reality that the development of sexuality is part of adolescence. This model of sexual health both articulates and calls attention to how sexuality is so much more than whether or not adolescents are engaging in specific behaviors. Understanding the many complexities, challenges, and possibilities for sexual health in terms of how individuals develop in expanding contexts – interpersonal and social relationships and sociopolitical/sociocultural contexts – opens up the category of “adolescent sexuality” and represents the many ways that sexuality is indeed connected to everything else that adolescents are experiencing as they develop. Recognizing that threats to sexual health are anchored in the particulars of young people’s social locations, and both the meanings and resources that therefore accrue to or are denied to them, enables parents, families, peers, teachers, health-care providers, youth workers, and communities to provide a wide array of supports to enable young people to emerge from adolescence as sexually healthy adults.

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Sexual Minority Youth

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Overview

The study of sexual minority youth identity has been shaped within three narratives of the meaning of same-sex desire over the course of the twentieth and early twenty-first centuries. Following an initial narrative of *sickness*, early research appropriated a model of homosexuality as abnormal or deviant, based on cultural conceptions of same-sex desire, the use of primarily clinical samples, and the dominance of psychoanalytic theories of sexuality. Youth with same-sex desire were pathologized in this initial line of research, which was dominant until the 1980s. Social and political activism of the 1960s, coupled with growing evidence of the dubious link between homosexuality and mental illness, culminated in the official removal of homosexuality as a diagnosable mental illness from the *Diagnostic and Statistical Manual* (DSM) of the American Psychiatric Association in 1973. Subsequently, a *species* narrative emerged in the literature that positioned individuals with same-sex desire as a unique minority subpopulation. The vast majority of empirical research with same-sex attracted adolescents emerged within the framework of this narrative, which itself was rooted in the identity-based claims of the gay civil rights movement. Studies of same-sex attracted adolescents began to flourish in the 1980s and then increased exponentially in the 1990s. Initial studies sought to chart

identity development trajectories for sexual minorities but relied primarily on retrospective accounts of white gay men presenting with clinical concerns, primarily in the USA and other Western nations. A third narrative, derived primarily from the queer theory movement within gender and cultural studies, has begun to characterize some work on same-sex attracted youth. Following what we call a *subject* script, this work more critically interrogates the meaning that individuals make of the received taxonomy of gender and sexual identity. Hence, this research disrupts notions of an essential sexual minority identity and instead challenges the larger interpretive framework within which individuals make meaning of desire.

This essay reviews and analyzes literature relating to sexual minority youth by providing a historical lens through which to view knowledge produced about their identity. This history of the field highlights debates about the focus of study (e.g., risk vs. resilience) and the nature of the population to study (e.g., self-identified or not). The essay concludes with a call for empirical research that is historically informed and attends to the meanings individuals make of sexual desire in a given cultural and political context.

The Sexual Minority as Deviant: The Sickness Script

The first generation of scholarship on what is now referred to as *sexual minority identity* identified same-sex attraction and behavior as deviant and indicative of a clinical syndrome. The term *homosexuality* emerged in the late nineteenth century in Europe to describe a pattern of desire and behavior primarily directed toward members of the same sex. Interestingly, the conception of homosexuality as a form of mental illness was intended to challenge the notion of homosexuality as a form of deviance under conscious control, thus suggesting a *medical* rather than a *legal* response to same-sex desire (Brennan and Hegarty 2009; Bullough and Bullough 1997).

The sickness narrative that framed early research on same-sex attraction assumed an idea of “normativity” with regard to sex and gender and hence viewed homosexuality as indicative of *inversion* (e.g., Ellis 1925). Adolescents did not represent a population of study in this area until the 1930s and 1940s. Studies conducted in this era uncritically appropriated

a sickness narrative of same-sex attraction, suggesting its link to “character disturbances” (Horney 1935), “delinquency” (Valentine 1943), and a disturbance in normal psychosexual development (Bender and Paster 1941). Research conducted in this era thus assumed a presupposed normative order with regard to gender and sexual behavior, as well as human development in general.

The view of homosexuality as deviant and indicative of psychopathology was dealt a major blow in the mid-twentieth century by the publication of the famous Kinsey report on sexuality among men in the USA (Kinsey et al. 1948). The report revealed that homosexuality in some form was common among a substantial number of US men at some point in their lives. Kinsey and his colleagues argued that the common occurrence of homosexuality suggested that it could not be considered “abnormal,” as it appeared to be within the normal range of human behavior. In spite of the challenge to the sickness narrative brought by the Kinsey report and its widespread popularity in the USA, research on homosexuality in adolescence continued to be framed within the interpretive lens of sickness. This association was maintained at least in part by the reliance on institutionalized and/or clinical samples of adolescents (e.g., Ward 1958), thus suggesting a likely spurious link between same-sex desire and deviant behavior.

The sickness narrative was dealt a second blow in the 1950s with the pioneering work of Evelyn Hooker. Hooker responded directly to the problem of sampling same-sex attracted individuals from criminal or psychiatric institutions by recruiting two samples of men (self-identified homosexual and self-identified heterosexual) without psychopathology. She administered a standard battery of personality assessment to both groups of men and provided them to expert analysts to determine which subjects were homosexual and which were heterosexual. The expert judges were unable to distinguish the profiles of the men. These findings led Hooker (1957) to argue that “homosexuality as a clinical entity does not exist” (p. 30).

Research on same-sex attracted youth continued to promulgate a vision of homosexuality as mental disturbance in the 1960s – a decade that witnessed the growth of a civil rights movement for equality based on race, gender, and sexual identity. In part, the sustenance of the sickness narrative was connected to interpretations

of psychoanalytic theory that remained hegemonic in US psychiatry and clinical psychology at the time (e.g., Bieber et al. 1962; see Friedman 2002). Growing cultural, political, and intellectual momentum against this narrative in the late 1960s and early 1970s culminated in the decision in 1973 to remove homosexuality as a diagnosable mental illness from the DSM. This watershed historic moment opened up the space within scientific discourse for a revision of the guiding sickness narrative of same-sex attraction.

From Pathology to Identity: The Species Script

The removal of homosexuality from the DSM in 1973 allowed the scientific rhetoric to meet what had become the narrative of a community of same-sex attracted individuals seeking political and cultural recognition. This narrative, which can be called a *species* narrative after Foucault (1978) and, more recently, Savin-Williams (2005), centered on the idea of same-sex attraction as a normative form of diversity and indicative of a particular *category* of minority identity, akin to race, ethnicity, and the like. With this narrative shift, the political and scientific context of research on youth with same-sex desire changed dramatically. The analytic lens shifted from adolescent homosexuality as deviant to the social and psychological consequences of stigma among youth who identify as non-heterosexual (e.g., Hetrick and Martin 1987). Models of counseling and identity development emerged in the 1970s (e.g., Brown 1975; Cass 1979; Jones 1978; Troiden 1979). Scholarship in this period reflected the narrative shift from pathology to identity, creating a corpus of knowledge on the same-sex attracted individual.

The majority of research produced in the 1980s and 1990s focused on the adjustment difficulties of sexual minority youth, including self-esteem and parental disclosure (Savin-Williams 1989), depression (e.g., Safren and Heimberg 1999), suicide risk (e.g., Garofalo et al. 1999; Remafedi et al. 1991), sexual risk behavior in the time of AIDS (e.g., Remafedi 1994), and problem behaviors in general (e.g., Rotheram-Borus et al. 1995). A major emphasis on the consequences of victimization and bullying also emerged at this time (e.g., Hershberger and D'Augelli 1995; Pilkington and D'Augelli 1995). These studies revealed the social and psychological struggles of non-heterosexual youth to

develop healthy and meaningful identities in the midst of continued societal stigma.

Though studies in this period documented important developmental issues for same-sex attracted youth, they have been criticized for methodological problems related to sampling and measurement, as well as conceptual problems related to a view of sexual minority identity as an essential trait. Regarding issues of sampling and methodology, Savin-Williams (2001, 2005) suggested that the emphasis on risk and pathology among same-sex attracted youth is problematic because it is based on a limited sample of youth who identify as lesbian, gay, or bisexual. He argued that researchers have constructed a narrative of gay adolescence based on samples of a particular group of self-identified sexual minority youth in the USA. Because youth who do not present with clinical concerns or do not identify as gay are excluded from such studies, we know little about resilience and diversity among the larger population of same-sex attracted adolescents. Savin-Williams (2005) argued that youth in the early twenty-first century are less socially or psychologically troubled by same-sex desire compared with prior generations and that, due to conceptual and methodological limitations, researchers have failed to accurately portray the successful development of most youth with same-sex desire.

The second critique of this line of research on same-sex attracted youth centers on the assumption of sexual minority identity as an essential trait of the person rather than as a historical response to cultural limitations imposed upon desire. Researchers assuming a cultural or life-course approach to youth in this period began to challenge an essentialist stance (e.g., Boxer and Cohler 1989; Herdt and Boxer 1993), even as they suggested the globalization of a sexual minority identity (Herdt 1989). These researchers called in particular for more empirical work beyond the USA and greater use of prospective longitudinal methods, as opposed to the common reliance on retrospective accounts at the time.

The period of research on sexual minority identity that relied upon a *species* narrative thus viewed same-sex attraction as indicative of a particular category of person, appropriating a similar framework from the sickness narrative (though importantly depathologizing desire). The majority of studies with youth assessed sexual identity by presenting respondents with

a predefined set of identity labels (e.g., gay, lesbian, bisexual), limiting the ability of youth to describe their identities freely and excluding youth whose senses of self do not map onto the received taxonomy of sexual identity.

Problematizing Identity: The Subject Script

Beginning in the 1990s, a third narrative began to guide research on sexual minority identity and same-sex attracted youth. This narrative can be referred to as a *subject* script, following Foucault's (1982) use of the term:

- ▶ There are two meanings of the word "subject": subject to someone else by control and dependence; and tied to his own identity by a conscience or self-knowledge. Both meanings suggest a form of power which subjugates and makes subject to. (Foucault 1982, p. 781)

This notion of subjectivity speaks to the growing recognition of sexual taxonomies as both confining and psychologically comforting. The subject narrative of sexual identity can be linked to the emergence of queer theory in the humanities and cultural studies (e.g., Butler 1990; de Lauretis 1991). Scholarship in queer theory has challenged the idea of gender and sexual categories as timeless and "natural." As Hostetler and Herdt (1998) note, the term *queer* is intended to promote a more open, multiperspectival space from which to contest heteronormativity.

A key theme of empirical social science research following the subject script involves direct access to the voices of individuals who actively engage with a matrix of gender and sexual identity. Thus, work that follows this narrative relies more often on qualitative methods to gain access to the way in which individuals negotiate taxonomies of identity. This approach can be directly linked to the labeling of queer theory as such, given that de Lauretis (1991) was motivated by her own recognition that the term *queer* (a highly pejorative term in the twentieth century) was being reclaimed and used among youth (Halperin 1995).

Beyond the humanities, queer theory and the subject narrative initially had the most influence on studies in the field of education (e.g., Leck 1993; Lewis and Karin 1994; Rodriguez 1998). Concurrent with the growth of Gay-Straight Alliances (GSAs) in high

schools in the USA, scholars began to recognize that youth were charting their own trajectories and were engaging with gender and sexual taxonomies in ways that challenged the species narrative of gay, lesbian, and bisexual identity. In a major essay titled "Queer in America: Citizenship for Sexual Minority Youth," Stephen Russell (2002) suggested that youth were creating their own settings in which to "explore their identities, develop community, and create social change" (p. 258). These settings included the GSA and online communities.

The infiltration of queer theory and a subject script into social science research on sexual minority youth created a major controversy in the field centered on the continued relevance of a sexual minority identity label for same-sex attracted youth. The assumption of a gay, lesbian, or bisexual identity label was critical to the political movements for social equality that led to the cultural transformation in views of homosexuality in the USA and Europe in the mid to late twentieth century (Gamson 1995). Scholars have suggested that a new generation of youth might inhabit a "post-gay" political context in which being attracted to members of the same sex is less of a social stigma (e.g., Savin-Williams 2005). This issue remains controversial in the study of sexual minority youth because some have suggested that claims of a "post-gay" era interrupt political movements for sexual liberation (Warner 1999). In addition, survey studies suggest that a sexual minority label continues to be significant for the majority of youth with same-sex desire (Russell et al. 2009a).

Reconciling Scripts: The Idea of Narrative Engagement

The historical analysis presented thus far suggests a linear account of narrative development with regard to same-sex attraction from the late nineteenth to early twenty-first centuries. However, recent research on the narratives of same-sex attracted youth challenges such an account. Rather, research suggests that contemporary youth have access to all three of these master narratives of sexual identity and appropriate various aspects of each.

Following the publication of Savin-Williams' (2005) book, which challenged the dominance of the species narrative of gay adolescence, Cohler and Hammack (2007) argued that youth with same-sex

desire engage with at least two competing master narratives as they form their identities. They suggested that youth have access to the redemptive narrative of *struggle and success* constructed by a species script. This narrative reflects the classic coming-out storyline which emerged in the mid-twentieth century to challenge prior notions of homosexuality as sickness. By coming out, the same-sex attracted individual could find meaning and community in solidarity with others. Assumption of a sexual minority identity label is key to this narrative identity development process.

A narrative of struggle and success does not, however, represent the only discourse on sexual identity to which contemporary youth are exposed. Cohler and Hammack (2007) argued that youth actively engage with an *emancipation* narrative which challenges the received sexual and gender identity taxonomy, constructing new forms of identity at a time in which the essential basis of a sexual minority identity is a matter of interrogation. Thus, Cohler and Hammack (2007) sought to reconcile prior formulations of “gay adolescence” with recent claims of a “post-gay” context for same-sex attracted youth.

Integrating ideas about narrative identity development with a life-course perspective, Hammack and Cohler (2009) further developed the theoretical idea of *narrative engagement*, suggesting that human development can be conceived as a process of engagement with multiple discourses on identity, themselves a legacy of history in a given cultural and political setting. These ideas have begun to be demonstrated empirically with studies of contemporary same-sex attracted youth and adults. For example, Hammack et al. (2009) conducted intensive life-story interviews with same-sex attracted youth. In an interpretive analysis of their life stories, they found evidence for the engagement with both the classic narrative of struggle and success and the emancipation or “post-gay” narrative among contemporary youth. Westrate and McLean (2010) examined cultural and personal memories among same-sex attracted individuals from multiple cohorts. Their findings revealed the way in which master narratives of sexual identity over the course of the twentieth century impact the ability of individuals to generate particular kinds of memories. For example, younger participants generated more personal memories unrelated to sexuality compared with older participants, whose memories focused on political events

(e.g., the Stonewall Inn riots) or events directly related to sexuality. They concluded that the nature of narrative identity development for sexual minorities has shifted over time, with less of a focus on political events among contemporary youth.

Regardless of whether studies assume a narrative approach, there is an increasing emphasis on *contextualizing* the development and experience of youth, which reflects a deeper concern for social and political settings. A special issue of the *Journal of Youth and Adolescence* was published in 2009 on this topic, with particular attention to the way in which particular features of the school context impact adjustment and development (Birkett et al. 2009; Chesir-Teran and Hughes 2009; Kosciw et al. 2009). These studies document the way in which heterosexism remains pervasive in schools, but the emergence of gay-straight alliances in high schools in the USA has provided a setting for youth empowerment in the context of social stigma (Russell 2002; Russell et al. 2009b). Empirical research has thus increasingly focused on issues of context in the experience and development of same-sex attracted youth, examining settings such as institutions.

Gaps in Knowledge

The account of sexual minority identity constructed above is intended to increase sensitivity to issues of history and culture in the study of same-sex attracted adolescents. Unfortunately, the primary gaps in knowledge are linked to the tendency toward ahistoric, decontextualized approaches that rely upon samples almost exclusively studied in the USA. This tendency reveals four key gaps in our current knowledge of sexual minority identity in adolescence. Gaps in knowledge of sexual minority youth identity center on (1) lack of attention to cultural and historical forces that shape sexual identity trajectories, (2) reliance on an ontogenetic view of sexual minority identity development rooted primarily in retrospective reports of white gay-identifying men in the USA, (3) uncritical “naturalization” of sexual minority identity categories that results in a narrow view of diversity in sexual development, and (4) lack of sufficient attention on transgender youth.

The lack of attention to cultural and historical forces that influence sexual identity trajectories has resulted in a monolithic, ahistorical account of sexual minority identity formation. Scholars have

increasingly embraced a more contextualist account of sexual identity development (e.g., Hostetler and Herdt 1998), recognizing that the nature and meaning of sexual identity categories varies across time and place. A view of the life course as socially and historically situated allows scholars to better conceive of the context dependence of sexual identity development (Hammack 2005). Empirical studies that examine contextual variations in the meaning of sexual desire, behavior, and identity are extremely uncommon but needed to address this gap in knowledge. In addition, systematic analysis of generational differences is needed to better elaborate the historical contingency of sexual identity development. In a multi-cohort sample in Canada, Westrate and McLean (2010) discovered that contemporary youth narrate more self-defining memories that are *personal* in nature, relative to members of an older cohort who narrate more self-defining memories that are *political* in nature. Studies such as this reveal the link among politics, social history, and personal meaning-making.

Although the cultural grounding of sexual identity negotiation is increasingly recognized, the research on cross-cultural variation in adolescent sexuality is becoming rapidly outdated. Gay (1985) documented the existence of mummy–baby relationships between schoolgirls in Lesotho in southern Africa. These erotic friendships were formed between an older “mother” and a younger “child” and involved hugging, kissing, and sexual relations. Herdt (1982) examined the sexual culture of the Sambia in Papua New Guinea. He found that age-structured homoerotic relations and ritual insemination were thought vital to an adolescent male’s transition into adulthood. More recent research on same-sex relations across cultures has focused on adults, leaving adolescent experiences of same-sex sexual desire, behavior, and identity virtually unexplored.

The reliance on retrospective self-reports of white gay-identifying men in the USA has produced a narrow picture of the developmental trajectories of sexual minority youth. The identity acquisition models derived from these data have measured progress in terms of movement along a US white male continuum (Savin-Williams 2005). Recent research has attempted to expand this restricted rendering of identity development processes. Savin-Williams and Diamond (2000) found that males and females in the USA tend to display different sequencing and context of various

sexual identity milestones, such as first same-sex attractions, first same-sex sexual contact, and self-labeling. Dubé and Savin-Williams (1999) found that African American, Latino, Asian American/Pacific Islander, and white gay males varied with respect to the timing and sequencing of identity milestones, disclosure to family members, and opposite-sex romantic and sexual relationships. Empirical research that considers diversity in sexual identity trajectories among youth is extremely uncommon.

It is important to recognize the variable timing of sexual identity milestones across social groups. However, it is unclear whether the milestones have equivalent meanings or manifestations across groups. For example, “coming out” may not have the same significance or even describe the same event for one individual as it does for the next. That is, the meaning of disclosure is likely contingent upon a number of factors, and researchers must move beyond the simple mapping of milestones to examine the context-dependent social meanings with which they are endowed. More important, the focus on reified social groups leaves many intersections unexplored. The meaning an individual makes of sexual identity may be inflected in unique ways depending on gender, racial, ethnic, class, religious, political, family, and community affiliations (see Cole 2009). There is need for exploration of sexual identity as a complex set of subjectivities constantly renegotiated throughout an individual’s life (Hostetler and Herdt 1998).

An *essentialist* view of sexual orientation has treated sexual identity categories (homosexual, gay, lesbian, bisexual) as mere reflections of natural, biologically rooted human kinds (Hammack 2005). By framing social phenomena as the inevitable outcome of natural characteristics, naturalization reifies social identity categories (Reicher and Hopkins 2001). The reification of sexual minority identity categories has constructed group differences, most notably those between the categories of “homosexual” and “heterosexual,” as essential and biological. The naturalization of the gay-straight dichotomy (as well as the male–female dichotomy) has fostered the conceptualization of sexual minority youth as a separate “species” (Savin-Williams 2005), one that is characterized by emotional distress and mental health problems.

Although many scholars have attempted to dismantle the gay-straight dichotomy and deconstruct

essentialized sexual identity categories, this area of theory and empirical research remains underdeveloped, particularly in the study of adolescence. Conceptualizations of sexual identities as dynamic and fluid (Diamond 2005, 2008) and the intersection of crosscutting identifications along several axes of social difference (Valocchi 2005) support the conclusion that sexual identities cannot be fully captured by a single identity category such as “homosexual” or “heterosexual.” Recent research on adolescent females in the USA has suggested that their experiences especially fail to be captured by static, reified sexual identity labels. Diamond (2005) has questioned the usefulness of the lesbian/bisexual/heterosexual classification scheme in light of the marked sexual fluidity displayed by many young women. Building upon these findings, Thompson and Morgan (2008) have postulated the existence of an additional category – mostly straight – thereby challenging the categorical nature of traditional sexual identity labels. Prospective, longitudinal data on the experiences of adolescents over time and across cultural settings are needed to further interrogate the meaning youth make of sexual desire, behavior, and identity.

The final major gap in the literature concerns the study of transgender youth. *Transgender* typically refers to an individual whose internalized sense of gender identity does not match anatomy. *Male-to-female* (MTF) transgender individuals possess primary sex characteristics associated with being male (e.g., penis and testicles) but identify as a woman. *Female-to-male* (FTM) transgender individuals possess primary sex characteristics associated with being female (e.g., breasts, vagina) but identify as male. These individuals often undergo hormonal treatments and sex reassignment surgery. *Transgender* identity (sometimes also called *transsexualism*) is not to be confused with *transvestitism*, which refers to a sexual fetish by which individuals become aroused when wearing the clothing of the opposite sex. (Individuals who practice transvestitism do not typically report a desire to identify as the opposite sex.)

Empirical study of transgender youth is extremely rare, in spite of the growing number of youth who are assuming a transgender identity. Though distinct from sexual identity in the sense that transgender identification is concerned with *gender* identity, transgender individuals are part of the larger community of sexual

minorities and are included in social services and political organizing with individuals who identify as lesbian, gay, bisexual, or queer. Studies that have focused explicitly on the experience and development of transgender youth have revealed the vulnerability of this population (Grossman and D’Augelli 2006, 2007), as well as their distinct experiences relative to lesbian, gay, and bisexual youth (McGuire et al. 2010). Unfortunately, though, very little empirical research focuses primarily on transgender youth, revealing a major gap in the literature.

Summary

Empirical study of youth with same-sex desire has shifted from the consideration of homosexuality as deviant or pathological in most of the twentieth century to the idea of same-sex attracted youth as a distinct subpopulation of youth. Following the institutional depathologization of homosexuality in 1973, a new wave of research emerged on sexual minority youth, particularly in the 1980s and 1990s. The majority of this research documented the challenges and struggles of development for sexual minority youth, including risk for depression, suicide, and victimization. The focus of this work has become increasingly controversial as scholars recognize the challenges of population and measurement in the context of a shifting historical and political setting for sexual identity development (Cohler and Hammack 2007; Savin-Williams 2001, 2008). Evidence suggests that, in spite of these controversies, sexual minority youth continue to struggle with social stigma (e.g., Almeida et al. 2009) and to benefit from the assumption of a sexual minority label (e.g., Russell et al. 2009a). It may be best to conceptualize contemporary adolescents as exposed to multiple discourses on the nature and meaning of sexual desire and identity, thus recognizing the narrative complexity that has emerged over the last century in the USA (Hammack and Cohler 2009).

In the study of sexual minority identity among adolescents, there is a need for systematic empirical inquiry that considers cultural and historical forces, challenges essentialized notions of sexual identity, and considers populations beyond the USA. In addition, there is a need to expand the study of sexual minority youth to include transgender youth and document their unique experience and development. Such inquiry would address critical gaps in our knowledge

of diversity in sexual desire, behavior, and identity among the world's youth.

Cross-References

- ▶ [Coming Out as Lesbian, Gay, Bisexual and Transgender](#)
- ▶ [Coming Out Process](#)
- ▶ [Transgender Youth](#)

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Sexual Orientation and Identity Labels

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Traditionally, sexual orientation and identity referred to the preferred adult sexual behavior of a person; it specifically referred to heterosexuality, homosexuality, or bisexuality. Historically typical sexual identity labels (“gay,” “lesbian,” and “bisexual”) also relate to adolescents, even though researchers tended to not view adolescents as mature enough to be able to identify themselves appropriately and that their sexual orientation was likely to change as they reached adulthood. New understandings of sexual identities emphasize the potential for fluidity and diversity in labels and meanings associated with sexual identities (Horner 2007). Research also reveals that adolescents increasingly are resisting sexual identity labels (Savin-Williams 2008). Despite that fluidity and increasing resistance, recent large-scale research (Russell et al. 2009) reveals that historically typical sexual identity labels are endorsed

by the majority (71%) of nonheterosexual adolescents, with others reporting that they are “questioning” (13%) their sexual identities, or that they are “queer” (5%), or that they have their own labels that describe ambivalence or resistance to sexual identity labels, or fluidity in sexual identities (9%).

Cross-References

- ▶ [Bisexuality](#)
- ▶ [Compulsory Heterosexuality](#)
- ▶ [Transgender Youth](#)

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Sexual Trajectories

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Overview

This essay starts by defining “sexual trajectory” as an age-graded set of various new sexual experiences based on three key dimensions: sequence of new experiences, duration, and timing. Empirical knowledge of each of these key dimensions is described. In addition, a typology of (the early stages of) sexual trajectories will be identified, based on these three key dimensions. Subsequently, the essay will present associations between these sexual trajectory types and demographic characteristics, such as sex, ethnic background, and educational level. It also will try to answer the question of which sexual trajectories are most beneficial, due to

relationships with subjective evaluations and recent sexual risks. Most of the findings in this essay are based on a representative Dutch population study of adolescents' sexual health behavior. This study provided evidence that not all adolescents follow a progressive sexual trajectory from less intimate (e.g., kissing) to more intimate behavior (e.g., sexual intercourse). Immigrant groups and lower educated youth are more likely to follow a nonlinear trajectory. A progressive trajectory has been associated with a higher likelihood of consistent contraceptive use with the most recent partner and, for girls, with a lower likelihood of having unprotected anal intercourse with the last partner. To explain this finding, it is suggested that some adolescents reporting a nonlinear trajectory have insufficient knowledge and skills (such as being aware of their own sexual likes and dislikes, and being able to protect their boundaries) to gradually progress from less to more sexually intimate behavior. To the extent that this interpretation is correct, it is plausible that these limitations are fairly stable over time and that the likelihood of some sexual risks were therefore higher for individuals following a nonlinear sexual trajectory.

Investigating Sexual Trajectories

Although sexual development is a lifelong process, there is no other life stage where it is more striking than adolescence. In Western countries, most young people have not yet kissed at the start of adolescence, whereas by the end of this period, the majority has engaged in sexual intercourse (De Graaf et al. 2005; Mosher et al. 2005). Understanding the beginning of sexual development involves investigating adolescents' sexual trajectories.

The *sexual trajectory* is an age-graded set of various new sexual experiences. Most prior research on sexual development has been restricted to first sexual intercourse, an important turning point in the sexual trajectory. The sexual trajectory, however, also encompasses other forms of sexual behavior, such as kissing and manual stimulation of the genitals. New experiences with these forms of sexual behavior offer opportunities for adolescents to learn about their sexual likes and dislikes, in order to be better prepared for subsequent sexual experiences. A comprehensive description of various trajectories creates the possibility to investigate potential risks of certain trajectories and potential

risk groups. According to Hagestad (1996), who investigated trajectories in aging and illness processes, a full description of trajectories encompasses three key dimensions: (1) sequence (i.e., the order of the various experiences), (2) timing (i.e., the age of various first sexual experiences), and (3) duration (i.e., the time it takes to go through the various steps).

Sequence of Sexual Trajectories

Many studies of sexual milestones show that the most common sequence in sexual trajectories is a progression from less to more sexually intimate behavior (e.g., from kissing to intercourse). A number of studies based this conclusion on the average ages or frequency distributions of first sexual experiences (Brugman et al. 1995; Feldman et al. 1999; Rosenthal and Smith 1997). Other studies demonstrated that individuals who had engaged in sexual behavior higher on a scale from less to more sexually intimate behavior, in general, also experienced all behaviors lower on the scale (Guttman scale) or had a greater probability than null to have experienced these “lower level” behaviors (Mokken scale) (Brook et al. 1994; Cowart-Steckler 1984; Hansen et al. 1992; Jakobsen 1997; Lam et al. 2002).

Both frequency distributions and Guttman or Mokken scale analyses provide no insight into individual variation of patterns of sexual trajectories. Even if the majority of adolescents follow a progressive trajectory, one could imagine some individuals engage in more sexually intimate behaviors (e.g., sexual intercourse) without having experienced (all of) the less intimate ones (e.g., fondling and petting). According to qualitative research (Thompson 1990), some adolescents are rushing into sexual intercourse with almost no sexual preliminaries.

De Graaf et al. (2009) assessed Dutch 12- to 24-year-olds' ages of first experiences with kissing, petting while dressed, petting while undressed, and sexual intercourse (vaginal and anal). Based on these ages, all participants received a code representing the sequence of their first sexual experiences. This method provides insight into the percentage of individuals who abandon the well-known progressive trajectory. About three-quarters of the participants reported a linear progression from less to more sexually intimate experiences. Eighteen percent reported a “nonlinear” trajectory, having more sexually intimate before less sexually

intimate experiences. Nine percent of participants could not be categorized as either progressive or nonlinear, because all new sexual experiences occurred within a single year.

Timing of Sexual Experiences

The measurement of timing encounters several difficulties. For one thing, the age of various new sexual experiences is usually measured in years. When someone reports that he was 13 years of age when he kissed for the first time, he thus could have been just 13 or almost 14 or somewhere in between. In addition, especially in younger samples, not everybody has experience with all forms of sexual behavior. Consequently, information about the timing of these new experiences is still missing for a substantial subgroup. The mean age of first sexual experiences is, therefore, not a very good descriptive measure for the timing of sexual experiences. The mean of the reported ages will be an underestimate of the real age of first experiences, because it can only be calculated for sexually active participants, whose timing was relatively early. The median age (i.e., the age at which half of participants had had a particular experience) is, therefore, more accurate. Furthermore, as stated earlier, timing is most often measured with regard to first sexual intercourse. Information of the timing of other forms of sexual behavior is scarce.

Table 1 shows median ages of first experiences with various forms of sexual behavior in a Dutch representative sample aged 12–24. At age 13.5, half of Dutch adolescents have experienced (French) kissing. About 2 years later, 50% has experienced petting while dressed. Another 1.5 years later, half of young people also engaged in petting without their clothes on. Shortly after their 17th birthday, 50% of adolescents have had their first experience with sexual intercourse.

The timing of first sexual experiences differs according to the year and country in which a study is conducted. In countries where early marriage is the norm (for example, in South Asia and some parts of Africa), women tend to have sex earlier. In Latin America and in some countries of the middle east and southeast Asia, median ages of first sexual intercourse are higher for women. For men, links between age at first intercourse and age at marriage are, in general, less strong. Historical trends in the timing of first intercourse vary with region and gender. In some

Sexual Trajectories. Table 1 Experience with and timing of various forms of sexual behavior

	12–14 (%)	15–17 (%)	18–20 (%)	21–24 (%)	Median age first experience
Masturbation	30	61	81	85	15,4
Kissing	52	79	92	96	13,5
Petting while dressed	23	66	89	95	15,5
Mutual masturbation	13	53	83	91	16,6
Petting while naked	8	46	78	88	16,9
Vaginal intercourse	7	42	76	88	17,1
Oral sex	9	42	77	88	17,0
Anal sex	2	8	16	28	

Western countries, sexual activity before age 15 became more common recently. In some countries in Africa and South Asia, a trend toward later marriage corresponds with a trend toward later sex in females (Wellings et al. 2006).

Duration of Sexual Trajectory

In general, it takes some time to progress from kissing to sexual intercourse. Rademakers and Straver (1986) described the process of constructing the sexual trajectory based on in-depth interviews. They concluded that, in general, adolescents play an active role in the arrangement of their first sexual experiences. At the start of the sexual trajectory, most adolescents engage in the least sexually intimate behaviors because these are consistent with their own needs. They experiment with these behaviors for a while, investigate their own thoughts and feelings about them, and gradually move on to other forms of sexual behavior when merely kissing or petting is no longer satisfactory. In the Netherlands, it takes about 2.6 years to complete the whole sexual trajectory. In an American sample, the same duration was found for white, and Latino adolescents, but sexual trajectories of Asian and African-Americans progressed quicker (respectively 2.3 and 1.6 years between first kiss and first sexual intercourse) (Feldman et al. 1999).

A Typology of Sexual Trajectories

De Graaf and her colleagues (2009) distinguished a typology in sexual trajectories, using a cluster analysis on the three key dimensions of trajectories: sequence of new behaviors, timing, and duration. Cluster analysis is an exploratory analytic tool, which aims to

sort participants into groups, so that the degree of association is strong between participants in the same group and weak between participants in different groups (Nooij 1995). This cluster analyses revealed two sexual trajectory subtypes: the type that follows the well-documented progression from kissing to petting when dressed and undressed to sexual intercourse, and the type that follows a different path (having either more sexually intimate before less sexually intimate experiences or having all new sexual experiences within a single year). Nonlinear trajectories start earlier and progress quicker than progressive trajectories.

To explain why some adolescents follow a nontypical trajectory, different interpretations could be put forward. Possibly, these adolescents lack the skills required for arranging the sexual trajectory in a gradual, progressive manner. Adolescents who derail the progressive trajectory could be less aware of their own wishes and needs, less able to communicate these to a partner, or less able to refuse unwanted sexual experiences. Due to these insufficient skills, they could be prematurely persuaded into more sexually intimate behavior, or, on the contrary, not able to find a willing partner when they themselves are ready for a new sexual experience (Baumeister 2000). It cannot be ruled out, however, that the nonlinear sexual trajectory was consistent with some adolescents' own sexual wishes and needs. Furthermore, it is possible that some adolescents deliberately engage in sexual interactions not consistent with their own sexual needs, for example, to gain self-confidence, to please a partner, to impress their peer-group, or to rebel against their parents (Feldman et al. 1999). Whatever be the explanation for following a nonlinear sexual

trajectory, doing so potentially leaves adolescents with limited learning opportunities before moving on to sexual behaviors that make higher demands on one's emotional, social, and planning skills.

Sexual Trajectories in Different Population Groups

A number of studies investigated differences between certain population groups on key dimensions of sexual trajectories. The majority of these studies focus on either timing of first sexual intercourse or the sequence of various new sexual experiences. The timing of sexual trajectories appeared to be earlier for females, people with certain immigrant backgrounds, and lower educated youth (de Graaf et al. 2005; Feldman et al. 1999; Mosher et al. 2005).

The sequence of new sexual behaviors also seems to differ between population groups. The progressive trajectory seems to be especially common in white adolescents: they are more likely to follow the steps of this sexual trajectory than adolescents from other ethnic backgrounds. Non-whites tend to skip some steps of the progressive sexual trajectory or progress in a different manner to sexual intercourse (Hansen et al. 1992; Smith and Udry 1985). De Graaf and her colleagues (2009) confirmed the finding that a progressive sexual trajectory is more common in some ethnic groups than in others, and also found differences between higher and lower educated groups. Table 2 shows the percentage of males and females, different ethnic groups, and higher and lower educated

youth, which followed a progressive trajectory, in a representative Dutch sample.

Although the majority of all population groups followed a progressive trajectory, nonlinear trajectories were more common among young people whose parents were born in Morocco, Turkey, Surinam, or the Dutch Antilles (the four largest immigrant groups in the Netherlands) compared to native Dutch youth. The same was true for lower educated youth compared to the higher educated group. As stated earlier, this could be a result of different sexual desires, but also of less opportunities and skills to fulfill these sexual desires within these population groups. Differences in parental guidance associated with income level (Dutch Bureau of Statistics), and lower levels of sexual knowledge, communication, and positive attitudes with regard to sexuality could all potentially affect the development of these insufficient skills and opportunities (de Graaf et al. 2005; Van Ginneken et al. 2004). The likelihood of following a nonlinear sexual trajectory was nearly equal for males and females.

Which Sexual Trajectories Are Most Beneficial?

Information about which sexual trajectories are typical or expectable does not address the question what is healthy or beneficial. In order to understand these last issues, it is important to know whether some trajectory types are evaluated more negatively or entail more sexual risks (e.g., unintended pregnancy, sexually transmitted infections (STIs), or sexual coercion) than others. There are indications that early sexual

Sexual Trajectories. Table 2 Progressive sexual trajectories within population groups

	N	%	OR	95% CI	p
Males	1,209	73	1.00		
Females	1,358	76	1.20	1.00–1.43	ns
Dutch	2,292	77	1.00		
Moroccan	77	52	0.32	0.20–0.50	<0.01
Turkish	94	54	0.35	0.23–0.53	<0.01
Surinamese	147	57	0.39	0.28–0.55	<0.01
Antillean	127	61	0.45	0.31–0.66	<0.01
Lower educated	1,726	72	1.00		
Higher educated	831	81	1.65	1.35–2.02	<0.01

experiences (before age 14) are potentially more harmful than sexual experiences at older ages. An early sexual debut is more often the result of persuasion or coercion, and also more often unprotected, than among older adolescents (De Graaf et al. 2005; Dickson et al. 1998). Furthermore, having sex at an early age is associated with certain long-term negative sexual health outcomes (Davis and Lay-Yee 1999; Greenberg et al. 1992; Sandfort et al. 2008). Additionally, it has been argued that gradual development or moving from one new sexual experience to another at one's own pace is related to more healthy outcomes (Petersen et al. 1995; van Zessen 1995; Vanwesenbeeck 1997).

De Graaf and colleagues investigated the subjective evaluation of progressive and nonlinear trajectories.

Table 3 shows that females who followed a deviant sexual trajectory are more likely to report that their first sexual experiences came too soon. Both males and females who followed a deviant sexual trajectory are more likely to describe their first sexual experiences as going too far and less likely to describe the first experiences as pleasant.

In addition, Table 4 shows an association between the course of the sexual trajectory and recent efforts to protect against unwanted pregnancy. Individuals who followed a nonlinear trajectory in the earliest stages of their sexual histories more often had vaginal intercourse without contraception with their last partner, although they reported no desire to conceive a child. This association was stronger for females than for

Sexual Trajectories. Table 3 Subjective evaluation of progressive and nonlinear trajectories (%)

	Males				Females			
	N	Nonlinear	Progressive	<i>p</i>	N	Nonlinear	Progressive	<i>p</i>
Too late	282	25	23	ns	68	4	5	0.015
Exactly the right time	891	71	76		1,163	83	88	
Too soon	26	3	2		116	13	7	
Not far enough	128	13	10	0.023	14	2	1	0.000
Exactly far enough	1,043	84	88		1,248	87	94	
Too far	28	4	2		86	11	5	
Positive evaluation	1,117	88	95	0.000	1,113	77	85	0.000
Neutral evaluation	76	12	5		212	19	15	
Negative evaluation	4	1	0		19	4	1	

Sexual Trajectories. Table 4 Association between sexual trajectory type and recent sexual risks

	N	Progressive (%)	Nonlinear (%)	OR ^a	95% CI	<i>p</i>
<i>Males</i>						
Intercourse without contraception	1,192	20	28	0.73	0.53–99	0.047
Vaginal intercourse without a condom	1,218	65	59	1.17	0.88–56	ns
Anal intercourse without a condom	1,189	12	14	0.90	0.61–1.33	ns
<i>Females</i>						
Intercourse without contraception	1,304	21	34	0.58	0.43–79	0.001
Vaginal intercourse without a condom	1,311	81	77	0.82	0.58–1.16	ns
Anal intercourse without a condom	1,324	13	23	0.51	0.37–72	0.000

^aOR corrected for age, ethnic background, and educational level

males, indicating that pregnancy prevention may still be perceived as the responsibility of the female. To the extent that the earlier hypothesis regarding insufficient knowledge, skills, and learning opportunities in the nonlinear trajectory type is correct, it could be suggested that these same limitations have an effect on contraceptive behavior in the most recent sexual interactions.

Furthermore, females whose sexual trajectory developed in a progressive way were less likely to have practiced unprotected anal intercourse with the last partner. This could be explained in terms of a higher prevalence of anal intercourse with the last partner among these females. Anal intercourse is not a common form of sexual behavior in heterosexual relationships. There is evidence that, especially for females, engaging in anal intercourse is more often a result of persuasion than engaging in vaginal intercourse (de Graaf et al. 2005). It is possible that females in the nonlinear trajectory group were more easily persuaded to have anal intercourse than females following a progressive trajectory.

Future Research Directions

The description of sexual trajectory types was based on reported ages of first new experiences in years, making it impossible to determine the exact sequence of two experiences if these happened within 1 year. Fortunately, only 9% of the sample had to be categorized as an “unknown sequence” and cluster analyses showed that this trajectory did not differ strongly from the linear trajectory, with regard to timing and duration. Nevertheless, future studies should use more sensitive measurements of sexual trajectories, for example, by asking respondents themselves to put their experiences in the order in which they first occurred.

In addition, longitudinal studies of sexual trajectories are currently missing. The conclusions in this essay on links between sexual trajectories and sexual risk behavior are also based on a cross-sectional study, making it hard to draw conclusions about developmental sequence. The ages of first sexual experiences were measured retrospectively and, therefore, could be distorted by memory or social acceptability biases. Longitudinal studies could shed light on the factors that cause adolescents to follow the progressive trajectory or to follow a different path. These studies could test whether the hypothesis regarding insufficient

knowledge, skills, and learning opportunities in the nonlinear trajectory type is correct, or other explanations are more suitable. If limited skills and knowledge appear to be most determinative, it is of interest what causes these limited skills and knowledge to develop in the first place. In short, there is a need for longitudinal investigations of sexual trajectories and their causes and consequences. The possible relationship of sexual trajectories with long-term sexual risks, together with the emotional, medical, and financial costs of these risks, makes a comprehensive understanding of sexual trajectories important.

Cross-References

► [Sexual Debut](#)

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Sexual Victimization

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Overview

Relative to adults, adolescent girls experience disproportionately high rates of sexual victimization. Such experiences have the potential to disrupt healthy sexual, emotional, and social development. This essay reviews the current scientific knowledge of adolescent sexual victimization, including the factors that place adolescents at risk, as well as the factors that make adolescence a uniquely vulnerable time in human development. Directions for future research and prevention are also discussed.

Sexual victimization refers to being the recipient of a sexually aggressive act, including unwanted or forced sexual contact (e.g., touching, kissing), verbally coerced intercourse, and attempted or completed rape (Koss et al. 1987). Rape is the most serious form of sexual assault and has been legally defined as involving penetration (oral, vaginal, or anal) due to use of force or threat of force, lack of consent, or inability to consent due to age, intoxication, or mental status. Sexual victimization can occur at any age; however, existing data indicate that adolescents are at particularly high risk of experiencing sexual assault, relative to adults. According to data from the U. S. Bureau of Justice Statistics (2000), adolescents between the ages of 12–17 years experience 33% of all reported sexual assaults and 34% of reported rapes. Females experience disproportionately more sexual aggression than males during adolescence, comprising 91% of victims in the 12–17 year age range.

Experiencing sexual aggression, particularly rape, can have serious consequences including trauma symptoms, depression, substance abuse, and revictimization (Greene and Navarro 1998; Howard and Wang 2005; Kilpatrick et al. 2003). A history of forced intercourse among adolescents also has been associated with experiencing physical dating violence, although it is unclear as to whether the forced sex took place within the violent relationship (Basile et al. 2006).

Unfortunately, there is a dearth of longitudinal studies to document the timing, duration, and intensity of these effects and their implications for adult development. Nonetheless, the high rates of adolescent sexual victimization and the potential for such experiences to disrupt healthy development point to the need for more research on the antecedents and consequences of adolescent sexual victimization, and ultimately to its prevention. A greater understanding of how to promote resilience among sexually assaulted teens is needed as well.

This essay reviews the current scientific knowledge of adolescent sexual victimization, including the factors that place adolescents at risk, as well as the factors that make adolescence a uniquely vulnerable time in human development. Because the preponderance of adolescent victims are females, much of the research on adolescent sexual assault focuses on female victimization and male perpetration. Thus, this essay will largely focus on female victims and male perpetrators, with the acknowledgment that males can also be sexually victimized and that their experiences are no less significant or traumatic. Readers should refer to other sources for further information pertaining to male victimization, as there are notable differences in sexual victimization experiences among males and females that are beyond the scope of this essay. Future directions for research on male victimization will be discussed at the conclusion of this essay.

Adolescence as a Time of Unique Vulnerability

Despite the prevalence of sexual assault perpetrated against adolescent females, adolescent sexual victimization has rarely been a specific focus of research and the factors that make adolescence a time of unique sexual risk are not well understood. Traditionally, research on sexual assault has focused on either the sexual victimization of children or of young adults. In part, this may be an artifact of two different research traditions and measures. For example, research on childhood sexual abuse has examined unwanted experiences occurring before the age of 14, 15, 16, 17, or 18 (depending on the study), and often restricts the perpetrator to someone 5 or more years older than the victim (see Roodman and Clum 2001 for a review). Victimization from similar aged peers may be excluded.

On the other hand, there is a tradition of research dating from Mary Koss's landmark study of college women in the 1980s that used the Sexual Experiences Survey (SES; Koss and Oros 1982; Koss, et al. 1987) to assess experiences from age 14 to the present. The SES is a behaviorally specific measure of unwanted sexual experiences including unwanted sexual contact and verbal sexual coercion as well as rape and attempted rape experiences, since the age 14. Use of behaviorally specific items (e.g., "Have you ever had sexual intercourse when you did not want to because a man threatened or used some degree of physical force to make you?") allowed for the assessment of experiences of unwanted sex without using emotionally charged labels, such as rape. The rationale for starting at age 14 was not explicitly stated; however, it is reasonable to assume that this age was selected to capture sexual aggression occurring within early dating and sexual experiences. The unwanted sexual experiences of adolescents tend to be more similar to those of adults than those of children. That is, incidents of adolescent sexual victimization are less likely than CSA to involve power differentials between the victim and perpetrator (e.g., victimization from same age peer vs. authority figure). Furthermore, whereas children are viewed as being sexually innocent, adolescents may be victimized in contexts that imply some sexual interest or involvement between the victim and perpetrator, such as after kissing someone at a party.

Much of the research on sexual victimization has focused on college or community samples of young adult women. Some studies have considered adolescent experiences separately (e.g., Gidycz et al. 1995); however, more often, experiences occurring in adolescence are typically considered together with experiences occurring at older ages. Research on young adult samples has provided valuable insights into the factors that contribute to the sexual victimization of young adult women (e.g., Abbey 2002; Testa and Livingston 2009). However, recent research focusing specifically on adolescent sexual victimization (e.g., Livingston et al. 2007; Young et al. 2008) suggests that adolescent victimization experiences differ from those of young adults in meaningful ways, largely due to the social, lifestyle, and developmental differences between young adult women and adolescent girls. Furthermore, because adolescents are just beginning to form sexual, relational, and individual identities that will shape their

adult lives, victimization at this critical period of development may have the potential to disrupt an individual's life course.

For these reasons, sexual victimization occurring during adolescence should be regarded as distinct from adult sexual victimization. In support of this position, there is evidence indicating that adolescent and adult victimization experiences differ in terms of perpetrators and contexts. For example, adolescents tend to be victimized by acquaintances whereas adult women are most often victimized by a long-term relationship partner (Tjaden and Thoennes 2000). Adolescent victimization incidents involving romantic partners are more likely to occur within shorter duration relationships than those reported by adults. Adolescents are also more likely than adults to be victimized at a party or social gathering and are less likely than adults to experience verbal sexual coercion, since verbal coercion most often occurs within the context of established relationships (Livingston et al. 2004, 2007). These findings point to qualitative contextual differences in sexual victimization experiences among adolescents compared to adults; whether there are differences in the type or severity of consequences associated with victimization at different developmental periods remains to be determined.

A Framework for Understanding Adolescent Vulnerability

Adolescent vulnerability has been explained in part by Lifestyle/Routine Activities theories. Lifestyle/Routine Activities theories suggest that victimization occurs as a result of lifestyle factors (i.e., demographics, family structure) and activities that converge so as to create a risky situation where an individual is in the presence of a motivated offender, with no available parental or societal protections (e.g., Lauritsen et al. 1992; Mustaine and Tewksbury 2002). During adolescence, teens spend increasing time outside of the home and away from parental supervision. Although it is developmentally appropriate, this newly found independence can also increase exposure to potential aggressors in contexts where there is little or no guardianship. The concept of "target congruence" is central to Lifestyle/Routine Activities theories. That is, the individual who is the target of aggression possesses some characteristic (e.g., beauty, sex appeal) that is

attractive to the aggressor, and is also perceived as having limited capacity to resist or deter victimization (Finkelhor and Asdigian 1996). Adolescents are high in "target congruence" in that they are viewed as being physically and sexually attractive, inexperienced, naïve, and physically and socially powerless (Livingston et al. 2007). There are at least three developmental factors that bear on the lifestyle/routine activities of adolescents: (a) the development of a sexual identity, (b) social sensitivity, and (c) propensity towards risk behavior.

Development of sexual identity. The development of a sexual identity and the exploration of romantic attachments are important developmental tasks of adolescence. Mastery of these tasks involves experimentation with sex and relationships. Adolescent sexual experimentation often occurs in unsupervised social contexts that are explicitly or implicitly sexual in nature (e.g., dates or parties). While some sexual experimentation is normal and healthy during adolescence, lack of experience with dating and sex makes it difficult for both boys and girls to determine what behavior is normal and acceptable in sexual interactions and what constitutes consensual and nonconsensual sexual activity (Ageton 1983). Adolescent girls may misinterpret a male's flirtatious behavior or fail to recognize cues that he will become sexually aggressive. Sexual signals inherent in a situation may be apparent to an adult, but an inexperienced adolescent girl may not recognize situations in which a male will make a sexual advance or may not know how to handle that advance when it happens. For example, adult women are likely to recognize that there is a sexual connotation to being invited into a bedroom by a male. In contrast, an adolescent girl who is interacting with a boy she likes at a party may believe that he is inviting her into a bedroom so that they can speak privately, without awareness of the sexual expectation. Once in a sexual situation, teens may be ill-equipped to establish limits with their partners or to manage advances that go beyond their limits. Imbalances in physical size, strength, or social status also may make it difficult for girls to refuse unwanted advances from aggressive males.

Social sensitivity. During adolescence, teens develop a heightened sensitivity to social information, particularly perceived peer approval (Steinberg 2008). This

social sensitivity can play a role in sexual decision making. In a recent focus group study of adolescent girls' perspectives on heterosexual interactions, girls revealed that concerns about peer acceptance play a significant role in their sexual decision making (Bay-Cheng et al. [in press](#)). Girls in this study were preoccupied with the impact that being sexually active (or abstinent) would have on their reputation and popularity. They struggled to manage their own sexual agency within a social context that often harshly ranks girls on a continuum from "prude" to "slut." Furthermore, the focus group participants also discussed their uncertainties about strategies to utilize when thwarting unwanted sexual advances from a male they know without hurting his feelings; jeopardizing their relationship with him, particularly if he is popular; or being ostracized by peers.

Participation in risk behavior. Recent advances in neuroscience indicate that adolescents have a developmental propensity toward risk taking (Steinberg 2008). Because some risk behaviors such as drinking or drug use are illegal or unsanctioned, they typically take place in contexts that are unsupervised, isolated, and include substance using peers (Small and Kerns 1993; Warshaw 1988). These contexts, such as parties or social gatherings, are also often imbued with expectations about sexual experimentation. The isolated or unsanctioned nature of these situations often result in heightened vulnerability to sexual aggression and other negative outcomes because adolescents refrain from seeking help for fear of getting in trouble or they lack transportation or other means of escape from a risky situation (Gover 2004; Livingston et al. 2007).

Having multiple sexual partners and consuming alcohol are the risk behaviors that reliably emerge as strong predictors of adolescent sexual victimization (e.g., Champion et al. 2004; Maxwell et al. 2003). Having multiple dating or sexual partners puts adolescents at risk by increasing the likelihood of encountering a sexually aggressive male. Teens are particularly sensitive to social norms, and girls who are perceived as having more partners than others are viewed as being "easy," regardless of whether they actually have done anything sexual (Bay-Cheng et al. [in press](#)). Girls who are labeled as sexually permissive, whether or not the label is accurate, may be at greater

risk for being perceived as an easy target for sexual gratification.

Alcohol use is common among adolescents but because it is illegal, it often occurs in illicit situations involving little adult supervision. Jackson et al. (2000) found that half of the adolescent females in their sample who reported having an unwanted sexual experience were victimized at parties, with 27% of these girls attributing the incident to their alcohol or drug use. Alcohol consumption can interfere with risk perception, particularly in situations where there also is a potential for positive outcomes, such as establishing a romantic relationship (Murphy et al. 1998; Testa et al. 2000). Adolescents' inexperience with alcohol use can also contribute to overconsumption, with a substantial proportion of rapes occurring when the victim is passed out or incapacitated (Mohler-Kuo et al. 2004; Testa and Livingston 2009). Even if a girl does not drink to the point of intoxication, she may indirectly increase the likelihood of encountering an unwanted sexual advance if she is perceived as being more sexually available by virtue of having any alcohol or being in a drinking context (George et al. 1988).

Sociocultural factors. Beyond routine activities in the everyday lives of adolescents, larger social and cultural norms regarding adolescent sexuality play a role in perpetuating the sexual victimization of adolescents. Although it is developmentally appropriate for adolescents to feel sexual arousal and curiosity, many adolescents are given little guidance on how to cope with these feelings or how to explore their curiosity in a safe, consensual way. Traditional views and stereotypes of sexuality hold that boys are sexually voracious, unable to control their raging hormones, and hence not responsible for acting on their sexual impulses (Gavey 2005). In contrast, girls are charged with being sexual gatekeepers, whose job is to appease the male's sexual desire without going too far, sexually. There is no place in this script for girls' needs or desires; girls play defense, they are not sexual agents. Girls who express desire or initiate sexual activity are seen as being licentious and out of control. Agreeing to any sexual activity is tantamount to agreeing to all sexual activities (Tolman and Higgins 1996). To make matters worse, adolescent girls receive conflicting messages about their sexuality. While they are charged with the responsibility of remaining the chaste gatekeepers, they are

also expected to present in a highly sexualized manner to appeal to males. Sexualized clothing, magazines, music, and images are marketed toward younger and younger girls. Rather than empower girls, these images further objectify them. By dressing and behaving in a sexualized manner, girls may be misperceived as being sexually available and appropriate targets for sexual advances (American Psychological Association, Task Force on the Sexualization of Girls 2007).

These cultural views and norms serve to disempower adolescent girls from being sexual agents, able to negotiate with partners to set mutually agreeable boundaries and protections in sexual interactions. Traditional sexuality education programs do little to dispel traditional views and inequities. Students are given facts about pregnancy and sexually transmitted diseases, but no information on how to establish healthy sexual behaviors, beyond directives to either abstain or use condoms. Sexual aggression is typically not addressed. Because the male sex drive is seen as being uncontrollable, boys are not taught how to cope with their sexual feelings or how to negotiate mutually satisfactory sexual encounters; instead, girls are held accountable for failing to thwart boys' actions. Unfortunately, when sexual victimization occurs within the context of any sexual involvement (e.g., consensual kissing), adolescent girls are often blamed, or feel that they are to blame, for the incident. Following an unwanted sexual experience perpetrated by an acquaintance, many girls struggle with self-doubt, wondering what they had done to bring on the assault (Tolman and Higgins 1996). Self-doubt, guilt, and concerns about social ostracism can inhibit girls from seeking assistance subsequent to an assault, potentially putting them at risk for depression.

Summary. Adolescent vulnerability to sexual assault is increased through a combination of developmental, lifestyle, and societal factors. Increased interest in sex, need for social approval, biologically driven propensity toward risk taking, and increased opportunities for unsupervised social activities conspire to make this a uniquely vulnerable time of life for adolescents, particularly adolescent girls. Cultural scripts that render adolescent girls culpable for irresponsible and aggressive male sexual advances, while simultaneously charging them to appear as sexually pleasing objects of male desire, further contribute to

the sexual victimization of adolescent girls. Lack of guidance for teens of both genders on how to negotiate safe, desired, consensual sexual interactions further perpetuate adolescent vulnerability to sexual assault.

Where Do We Go from Here?

Increasing knowledge of adolescent vulnerability to sexual assault raises the question of how to reduce these risks among our nation's youth. While the urge to shield teens from engaging in risk behaviors that could render them vulnerable is tempting, this strategy would be virtually impossible to enforce and would ultimately prove to be developmentally debilitating for healthy teenage maturation. Adolescence is a period when healthy development involves separation from parents and social expansion beyond the confines of home and family. In this transitory period between childhood and adulthood, teens need guidance as they learn how to build successful interpersonal relationships, including romantic partnerships that will enable them to successfully transition into adulthood. As their social worlds become less family centered and more peer centered, teens are increasingly influenced by their peers and their desires to forge romantic relationships. The development of an individual identity, including a sexual identity is a normal developmental task. So how can adults facilitate adolescents' healthy and developmentally necessary transitions into adulthood, while minimizing the risk of victimization or other negative consequences? In other words, how can we reduce the risks of sexual assault for teens, while enhancing their resilience?

Research consistently indicates that parental monitoring of teens is a powerful protective factor against several different risk behaviors, including substance use and dating victimization (Leadbeater et al. 2008; Windle et al. 2008). The goal of effective monitoring is to open the lines of communication between teenager and parents so that parents can be well informed of their teenager's whereabouts, activities, and peer relationships. One important protective facet of monitoring is the establishment of reasonable limits on teen behavior, such as setting a curfew that limits exposure to risks while still allowing the teen much-needed freedom. Open communication and a healthy rapport between parents and teens about sexual behaviors empower adolescents to make independent and

personal decisions about their own sexual development. These discussions can be ideal opportunities for parents to help teens contemplate their own sexual limits and prepare themselves for mature discussions with sexual partners prior to engagement in heated sexual interactions with romantic partners. The development of these skills through active parental engagements with teens may ultimately reduce misperception of sexual intent that can contribute to victimization. Helping teens learn to navigate sexual interactions more effectively and confidently also may reduce their need to rely on substances, such as alcohol and drugs, to facilitate social and sexual encounters.

There have been several different types of interventions targeting reductions in rape and sexual dating violence among high school students. Many of these programs attempt to increase awareness and change attitudes about rape (e.g., Fay and Medway 2006; Lowe et al. 2007); however, there is no evidence that such programs actually serve to reduce incidence of rape. Unfortunately, cognitive changes in understandings of violence or rape typically do not translate into lasting behavioral changes, making it unlikely that interventions targeting attitudes or beliefs about rape will be efficacious in reducing sexual assault risk (e.g., Foshee et al. 2000). Interventions that target communication, conflict resolution, and promotion of healthy lifestyles have yielded promising results (e.g., Wolfe et al. 2003). However, prevention of sexual assault among adolescents is still in the early stages and to date, there has been no systematic review of rape prevention programs targeting adolescents. More systematic efforts to study prevention of adolescent sexual victimization are sorely needed.

Directions for Future Research

As outlined in much of this essay, recent advances in the study of adolescent sexual victimization have provided insights into the factors that contribute to adolescent vulnerability; however, much remains to be learned about the factors that promote resiliency. To this end, more longitudinal research is needed to understand the interrelated individual and social factors associated with vulnerability differences among teenagers. For example, very little is known about what protective factors help the majority of young girls who are exposed to risks (e.g., those who drink alcohol at parties) without being victimized.

Likewise, little is known about the individual and social factors that help some teenage victims of sexual assault avoid further assaults while other girls are vulnerable to sexual revictimization across their life span. In other words, are there factors to predict which teens move from an unwanted sexual experience toward more healthy sexuality while others get revictimized?

Because females are statistically more likely to experience sexual assault perpetrated by a male, less is known about the experiences of adolescent male sexual assault survivors or the sexual victimization experiences of sexual minorities (e.g., gay men, lesbians, bisexual men and women, queer, questioning). Prevalence rates of male sexual assault are difficult to determine and many incidents go unreported due to cultural perceptions of sexual assaults as only male-to-female events. In addition, the same items used to assess female sexual victimization may have different meanings for men, or differ in severity, thereby making prevalence figures hard to interpret or compare. Furthermore, given differences in cultural and gendered norms regarding sexual behavior, different theories may be needed to understand the sexual victimization of adolescent males. Male sexual assault victims are likely to experience many of the same negative consequences as female victims, although these consequences may be more severe as a result of negative social reactions toward male sexual assault victims (for a review, see Davies, 2002). Furthermore, a growing body of research suggests that the prevalence and consequences of sexual assault also may vary by sexual identity (Balsam et al. 2005; Heidt et al. 2005), with sexual minorities at greater risk than heterosexuals for experiencing sexual assault (e.g., for a review, see Waldner-Haugrud 1999; Hequembourg et al. 2008). Adolescent sexual minority youth may be particularly vulnerable to violence in the context of same-sex romantic relationships, although less is known specifically about sexual aggression in these relationships (Halpern et al. 2004). Given the infancy of this area of research, many of the reasons for gender and sexual identity differences in the risks and consequences of sexual assault among sexual minorities are not well understood. Future research in this area is necessary to aid in the refinement of intervention and prevention efforts targeting both men and women with a variety of sexual orientations who may be at risk for sexual

assault across the life span, particularly in the developmentally unique phase of adolescence.

Cross-References

- [Date Rape](#)
- [Rape](#)

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Sexuality Education

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Overview

High rates of teen pregnancy, childbearing and sexually transmitted infections (STI) are important problems in the United States. Sex and STI/HIV education programs, especially programs in schools, have been proffered as a partial solution. In addition, many adolescents want additional information about sexuality more generally and about relationships. In the United States and especially internationally, there is a growing movement supporting adolescents' right to accurate and balanced information about sexuality that is relevant to their lives and can help them make better decisions about relationships and sexual behavior. This essay examines issues relating to the need for these programs, the controversies surrounding them, and the effects of programs. It demonstrates that comprehensive sex and STI/HIV education programs that emphasize abstaining from sex as the safest choice and encourage the use of condoms or other forms of contraception for those who do have sex do not increase sexual behavior as some people fear, but instead sometimes delay sex, reduce the frequency of sex, or reduce number of sexual partners. In addition, many of them also increase condom use, increase contraceptive use and decrease unprotected sex. Thus, they can have a modest impact on reducing unintended pregnancies and STIs. Programs that effectively reduce sexual risk behavior often incorporate a common set of characteristics. Nearly all programs with these characteristics are effective at changing behavior.

Pregnancy and STI Rates

Although the pregnancy and birth rates declined by about a third in the USA between 1991 and 2005 (Guttmacher Institute 2010), the USA still has one of the highest teen pregnancy rates of any Western industrialized nation. In 2006, among all females aged 15–19, about 72 per 1,000 became pregnant (Guttmacher Institute 2010). The rate is higher for African-Americans (126 per 1,000) and Hispanics (127 per 1,000) than for whites (61 per 1,000). All told, about

30% of girls in the USA become pregnant before they reach the age of 20 (National Campaign to Prevent Teen Pregnancy 2006). Most of these pregnancies (82%) are unintended (Finer and Henshaw 2006). Consistent with the very high US teen pregnancy rate is its very high teen birth rate (42 births per 1,000 15–19-year-old females in 2006) (Martin et al. 2009).

These teen pregnancies and births generally have negative consequences for those involved, especially when the girls in question are under 18 years of age (Hoffman 2006). Girls in this group are less likely to complete high school or attend college and are more likely to have large families and to be single parents. They work as much as women who delay childbearing for several years, but their earnings must provide for a larger number of children (Hoffman 2006; Maynard 1997). Compared with children born to mothers over age 18, their children have less supportive and stimulating home environments, lower cognitive development, worse educational outcomes, higher rates of behavior problems, higher rates of incarceration (if male), and higher rates of adolescent childbearing themselves (Hoffman 2006; Maynard 1997).

Teen sexual activity also leads to high rates of STI. STI rates in the USA are among the highest in the western industrialized world (Institute of Medicine 1997). For example, among sexually experienced young women ages 14 to 19, 38% had an STI (Forhan et al. 2009). This means that nearly 4 million cases of STI occur annually among teens (Kaiser Family Foundation and American Social Health Association 1998). The rates of STI are typically much higher for African-American teens and slightly higher for Hispanic teens than they are for white teens.

These high rates of teen pregnancy and STI are caused by teens having unprotected sex. On average, almost 13 years elapse between the age at which adolescents become fertile (about 12.6 years for girls and 14.0 years for boys) (Alan Guttmacher Institute 2002) and the age at which they marry (about 25.3 years for girls and 27.1 years for boys) (U.S. Census Bureau 2004). This creates a long period during which young people need to avoid unintended premarital pregnancy and STI, either through abstinence from sex or the use of condoms or other forms of contraception.

The proportion of teens who have ever had sexual intercourse increases steadily with age. For example, across the USA in 2005, 33% of ninth graders and

65% of twelfth graders reported ever having had sexual intercourse (Centers for Disease Control and Prevention 2008). Although most sexually experienced teenagers report that they use contraception, especially condoms and oral contraceptives, at least some of the time (Suellentrop 2006), many teenagers, like adults, do not use contraceptives correctly and consistently and thereby expose themselves to risks of pregnancy or STI (Chandra et al. 2005).

Accordingly, many schools, youth-serving organizations, and adolescent reproductive health professionals have developed and implemented a wide variety of education programs to reduce unintended pregnancy and STI among young people. Some of these programs are based on a written curriculum and are implemented with groups of young people. These programs are particularly well designed to be implemented both in schools, where they can potentially reach large numbers of youth, and in clinic and community settings, where they can reach other youth, including potentially higher-risk youth who have dropped out of school. Typically, these programs strive to delay the initiation of sex, increase the return to abstinence, reduce the number of sexual partners, or increase condom or other contraceptive use.

Controversy

In the USA, there is very strong support for sex education in schools. For example, in 2003, a poll of a representative sample of US adults found that 90% thought sex education should be part of the school curriculum, and only 7% thought sex education should not be offered in schools (National Public Radio, Kaiser Family Foundation, and Kennedy School of Government 2004). However, there is also an intense and sometimes passionate debate about what should be covered in sex education programs, especially school-based programs. Proponents of abstinence programs argue that only abstinence allows youth to avoid the risks of unwanted pregnancy and STI and that discussing condoms or other forms of contraception will provide a confusing message to young people and will hasten and increase sexual behavior. Many proponents of abstinence programs believe that only the failure rates of condoms and other methods of contraception should be discussed. In contrast, proponents of comprehensive sex education programs argue that, because comprehensive programs emphasize abstinence

and also encourage the use of condoms and contraception for those youth who do initiate sex, comprehensive programs can both delay adolescents' initiation of sex and increase their condom or other contraceptive use. According to a poll conducted in 2005, 82% of adults support comprehensive sex education that teaches students about both abstinence and other methods of preventing pregnancy and STIs (Bleakley et al. 2006).

Increasingly in the USA and especially elsewhere in the world, both young people and adults claim that adolescents have the right to comprehensive, accurate information about sexuality. For example, the American Public Health Association has adopted a policy supporting comprehensive sex and HIV education. Similarly, a general comment on the Convention on the Right of the Child provides support for comprehensive sex education internationally (Committee on the Rights of the Child 2003). It states:

- "...children should have the right to access adequate information related to HIV/AIDS prevention and care, through formal channels (e.g., through educational opportunities)..."
- States must "refrain from censoring, withholding or intentionally misrepresenting health-related information, including sexual education and information."
- "States must ensure that children have the ability to acquire the knowledge and skills to protect themselves and others as they begin to express their sexuality."

Still, controversy marks efforts to implement these programs.

Impact of Sex and STI/HIV Education Programs

Given both the goals of many sex and STI/HIV education programs and the controversy surrounding these programs, it is particularly important to examine their impact on sexual behavior. In Table 1 are the results of all studies meeting several criteria relating to the effectiveness of sex or STI/HIV education programs. The program had to be a curriculum-based comprehensive sex or STI/HIV education program that focused primarily on sexual behavior and that targeted adolescents of middle-school or high-school age in the USA or young adults up to age 24 elsewhere in the world.

In addition, the research had to have a sample size of at least 100 and include a reasonably strong experimental or quasi-experimental design with well-matched intervention and comparison groups and both pretest and posttest data collection. The research also had to measure program impact on one or more sexual behaviors (i.e., initiation of sex, frequency of sex, number of sexual partners, use of condoms or contraception), composite measures of sexual risk (such as frequency of unprotected sex), pregnancy rates, birth rates, or STI rates. Finally, the study had to have been completed or published in 1990 or thereafter. To be as inclusive as possible, studies were not limited to those published in peer-reviewed journals, but most were.

Studies meeting these criteria were coded according to whether or not they had a significant impact on each sexual behavior specified above for either the entire sample or an important subsample (e.g., males or females or sexually experienced or inexperienced youth). The methods for identifying and coding these studies are described more fully elsewhere (UNESCO 2009).

Eighty-seven studies of comprehensive curriculum-based programs were found that met these criteria (UNESCO 2009). Forty-seven of them were completed in the USA. Seventy percent were implemented in schools and the remainder were implemented in community or clinic settings. Because of concerns both in the USA and worldwide about HIV transmission, the programs emphasized STI/HIV prevention more frequently than pregnancy prevention, but many covered both. Many of the programs were very modest, lasting less than 30 h or even 15 h.

Impact on behaviors. Some comprehensive sex education programs were effective in all regions of the world. In general, such programs were more effective in the USA and in developing countries than in other developed countries, such as Western Europe.

These studies demonstrate very clearly that a substantial percentage of comprehensive sex and STI/HIV education programs significantly decreased one or more types of sexual behavior and that such programs did not increase sexual behavior, as some people have feared (Table 1). More specifically, of those studies that measured impact on one or more sexual behaviors, 37% delayed the initiation of sex, 31% decreased the frequency of sex (which includes returning to abstinence), and 44% reduced the number

Sexuality Education. Table 1 Comprehensive sex and STI/HIV education programs: Number of studies reporting effects on different sexual behaviors and outcomes

	United States (N = 47)	Other developed countries (N = 11)	Developing countries (N = 29)	All countries (N = 87)	
Initiation of sex					
Delayed initiation	15	2	6	23	37%
Had no significant impact	17	7	16	40	63%
Hastened initiation	0	0	0	0	0%
Frequency of sex					
Decreased frequency	6	0	4	10	31%
Had no significant impact	15	1	5	21	66%
Increased frequency	0	1	0	1	3%
Number of sexual partners					
Decreased number	11	0	5	16	44%
Had no significant impact	12	0	8	20	56%
Increased number	0	0	0	0	0%
Use of condoms					
Increased use	14	2	7	22	40%
Had no significant impact	17	4	14	35	60%
Decreased use	0	0	0	0	0%
Use of contraception					
Increased use	4	1	1	5	40%
Had no significant impact	4	1	3	9	53%
Decreased use	1	0	0	1	7%
Sexual risk-taking					
Reduced risk	15	0	1	16	53%
Had no significant impact	9	1	3	13	43%
Increase risk	0	0	1	1	3%

of sexual partners. In contrast, none of them hastened the initiation of sex, only one increased the frequency of sex, and none increased the number of sexual partners. Given the large number of coefficients observed for impact on sexual behavior, the increase found with the one program is slightly less than would have been expected by chance.

Of the studies that measured the use of condoms and other forms of contraception, 40% reported an increase in condom use, and 40%, an increase in contraceptive use. Recognizing that STI/HIV transmission

and pregnancy can be reduced either by reducing sexual activity or by increasing condom or contraceptive use, some studies developed composite measures of sexual activity and condom use, such as “frequency of unprotected sex” or “number of unprotected sexual partners.” These measures are strongly related to STI/HIV transmission and pregnancy. Programs were effective at reducing these measuring of unprotected sex – with 53% having a positive impact.

Overall, these studies strongly indicate that the programs were far more likely to have a positive impact on

behavior than a negative impact. Across all 87 studies, two-thirds had a significant positive impact on one or more of the relevant sexual behaviors or outcomes and more than one-quarter had a positive impact on two or more behaviors. For example, *Becoming a Responsible Teen* increased abstinence, reduced the number of sexual partners, increased condom use, and reduced unprotected sex (St. Lawrence et al. 1995). Similarly, the *Safer Choices* intervention delayed the initiation of sex among Hispanic youth and increased both condom and contraceptive use among both boys and girls of all races/ethnicities (Coyle et al. 2001; Kirby et al. 2004). More generally, these studies indicate that it is possible both to reduce sexual behavior and to increase condom or contraceptive use.

In contrast, only 4% had a significant negative impact on one or more of these behaviors or outcomes and none had a negative impact on two or more behaviors. As noted above, given the large number of coefficients observed (about eight per study), this is less than the percent expected by chance.

A formal meta-analysis of comprehensive sex education programs in the USA found that they reduced pregnancy rate by 11% and STI rate by 31% (The Community Guide 2010). These estimates are based on rather small samples of studies ($N = 11$ and $N = 8$, respectively) and thus should be treated with caution. Nevertheless, in combination with the other evidence presented above, they suggest that very modest comprehensive sex education programs can reduce adolescent sexual risk behavior and actually reduce teen pregnancy and STI rates.

Robustness of findings. The findings on the programs examined were remarkably robust. The different programs were effective in different communities and cultures throughout the USA. They were effective, for example, with youth in low- and middle-income communities in both rural and urban areas, and they were effective in school, clinic, and community settings. The programs were also effective with both younger and older youth and with both males and females. (It is encouraging that programs increased reported condom use, even among females who had less direct control over condom use.) Not every program was effective with every group, but one or more programs was effective with each of these groups.

Robustness was also demonstrated in replication studies. A critically important question is whether or

not a program that has been found to be effective when designed, implemented, and evaluated by a well-funded and highly skilled research team will subsequently be effective when implemented by others in different communities. Four curricula have been evaluated two or more times, and those studies demonstrated that the curricula continued to be effective when implemented with fidelity by others in different communities (Kirby 2007). Programs were less likely to remain effective if they (1) were shortened considerably, (2) omitted activities that focus on increasing condom use, or (3) were designed for and evaluated in community settings but were subsequently implemented in classroom settings.

Impact of programs on risk and protective factors that affect sexual risk behaviors. Although the summary above provides strong evidence that a majority of the programs had an impact on sexual risk behaviors, it does not specify *how or why* they did. Those questions can be informed by examining what impact the programs had on the risk and protective factors they attempted to modify in order to change behavior. Of the studies that measured impact on the following risk and protective factors, about half or more found a statistically significant impact:

- Knowledge about HIV and STI
- Methods of preventing STI/HIV and pregnancy
- Perceived risk of HIV or STI
- Values and attitudes regarding sexual topics (e.g., abstinence and condoms)
- Self-efficacy to refuse sex, to obtain and use condoms, and to avoid risk
- Motivation to avoid sex or restrict the number of sex partners
- Intention to use a condom
- Intention to avoid risk
- Communication with partner
- Communication with parents
- Avoiding places that could lead to sex

The evidence is strong that many programs had positive effects on relevant knowledge, awareness of risk, values and attitudes, self-efficacy, and intentions – the very factors specified by many psychosocial theories as being the determinants of behavior. Furthermore, all these factors have been demonstrated empirically to be related to their respective sexual behaviors (Kirby and Lepore 2007).

Thus, it appears highly likely that changes in these factors contributed to the changes in sexual risk-taking behaviors.

Common characteristics of effective curriculum-based programs. An in-depth coding of the effective curricula and a smaller number of ineffective curricula led to the identification of 17 common characteristics of effective programs. The methods used to identify these characteristics are discussed in Kirby et al. (2006). The 17 characteristics of effective curricula describe their development, content, and implementation. The large majority of the effective programs reviewed here incorporated most of these 17 characteristics and programs that incorporated these characteristics were much more likely to change behavior positively than were programs that did not incorporate these characteristics.

The 17 characteristics are presented in Table 2. A tool to assess whether or not curricula incorporate these characteristics has also been developed and is available in both English and Spanish (Kirby et al. 2007, 2009).

The teams of people who developed the effective curricula appeared to create logic models when they designed their curricula. That is, they specified (1) the health goals they wished to achieve (e.g., reductions in teen pregnancy or STI), (2) the behaviors they wanted to change in order to achieve these health goals, (3) the risk and protective factors that have a causal impact on these behaviors, and (4) activities that would improve those risk and protective factors.

As noted above, the health goals most commonly targeted the reduction of STI/HIV transmission, and less commonly included pregnancy prevention. Those that targeted STI/HIV commonly focused on not having sex or using condoms. Less frequently, they focused on having fewer partners, even though number of sexual partners and concurrent sexual partners can greatly affect STI transmission. Programs that targeted pregnancy prevention appropriately focused on not having sex and using contraception.

Programs that were effective consistently gave a clear message about these behaviors, most commonly, some version of the following: "You should always avoid unprotected sex. Not having sex is the safest and best choice. If you have sex, always use condoms to protect against pregnancy and STI." Some new sex education programs encourage the

dual use of both condoms and female methods of contraception.

The curriculum developers often used health and sociopsychological theories (e.g., social cognitive theory, the theory of reasoned action, the theory of planned behavior, the health belief model, and other theories) to identify the important mediating factors (e.g., knowledge, attitudes, perception of peer norms, self-efficacy, and intentions), which in turn affect behavior. Sometimes they also used instructional theory to determine what types of activities produce positive change in these mediating factors.

Effective curricula incorporated multiple activities designed to improve each of the important mediating factors. These activities, geared to the students' gender, age, and level of sexual experience, got youth actively involved and helped them personalize the information. They included, for example, games to increase students' knowledge, role-playing exercises to improve their skills to say no to sex or to insist on using condoms or contraception, anonymous voting activities about what sexual behaviors are right for them (e.g., abstinence or having sex with protection) to change perception of peer norms, and condom demonstrations to increase skills to use condoms correctly. Some activities also had youth describe the characteristics of the situations that might lead to unintended, unwanted, or unprotected sex and then had them describe strategies for avoiding these situations or getting out of them. If programs were implemented in schools, then they were typically quite long (e.g., eleven or more sessions) in order to include enough activities to change the mediating factors and behavior. In order to implement these activities, effective programs, especially school-based programs, provided training to the educators, and implemented virtually all the activities.

Discussion

The evidence for the positive impact on behavior of comprehensive sex and STI/HIV education programs for adolescents is quite strong and encouraging. Two-thirds of the programs that emphasized both abstinence and condoms/contraception had a significant positive impact on behavior. Many either delayed or reduced sexual activity or increased condom or contraceptive use or both. The evidence is also strong that

Sexuality Education. Table 2 The 17 characteristics of effective sex and STI/HIV education programs

The Process of developing the curriculum	The contents of the curriculum itself	The process of implementing the curriculum
1. Involved multiple people with different backgrounds in theory, research, and sex and STI/HIV education to develop the curriculum 2. Assessed relevant needs and assets of target group 3. Used a logic model approach to develop the curriculum that specified the health goals, the behaviors affecting those health goals, the risk and protective factors affecting those behaviors, and the activities addressing those risk and protective factors 4. Designed activities consistent with community values and available resources (e.g., staff time, staff skills, facility space, and supplies) 5. Pilot-tested the program	<i>Curriculum Goals and Objectives</i>	14. Secured at least minimal support from appropriate authorities such as departments of health or education, school districts, or community organizations 15. Selected educators with desired characteristics (whenever possible), trained them, and provided monitoring, supervision, and support 16. If needed, implemented activities to recruit and retain youth and overcome barriers to their involvement (e.g., publicized the program, offered food, or obtained consent) 17. Implemented virtually all activities with reasonable fidelity
	6. Focused on clear health goals – the prevention of STI/HIV and/or pregnancy 7. Focused narrowly on specific behaviors leading to these health goals (e.g., abstaining from sex or using condoms or other contraceptives), gave clear messages about these behaviors, and addressed situations that might lead to them and how to avoid them 8. Addressed multiple sexual psychosocial risk and protective factors affecting sexual behavior (e.g., knowledge, perceived risks, values, attitudes, perceived norms, and self-efficacy)	
	<i>Activities and Teaching Methodologies</i>	
	9. Created a safe social environment for youth to participate 10. Included multiple activities to change each of the targeted risk and protective factors 11. Employed instructionally sound teaching methods that actively involved the participants, that helped participants personalize the information, and that were designed to change each group of risk and protective factors 12. Employed activities, instructional methods, and behavioral messages that were appropriate to the youths' culture, developmental age, and sexual experience 13. Covered topics in a logical sequence	

these programs did not have negative effects. In particular, they did not hasten or increase sexual behavior, as some people have feared they might. These studies clearly demonstrate that it is possible both to delay sex and to increase use of condoms or other forms of contraception with the same programs. In other words, a dual emphasis on abstinence and on use of protection for those who do have sex is not confusing to young people; rather it is realistic and effective.

Despite this evidence for the success of many programs, there are important limitations to both the 87 studies and this review of them. For example, few studies described their respective programs adequately, none examined programs for youth engaging in same-sex behavior, and many had methodological limitations.

Given the strong evidence that comprehensive programs emphasizing both abstinence and use of

condoms and contraception can change behavior in positive ways, perhaps the single most promising strategy for policy-makers and educators is to implement such programs with strong evidence that they have been shown to be effective with adolescent populations similar to those being targeted. That is currently being done with the large federal teen pregnancy prevention initiative funded by the new Office for Adolescent Health. It is providing hundreds of millions of dollars to implement comprehensive sex education programs that have been demonstrated to be effective.

The second most promising strategy is to select and implement widely programs that incorporate the 17 key characteristics of programs that have been effective with populations similar to those being targeted. Programs with these characteristics are also more likely to change behavior. If implemented broadly with fidelity, these and other programs with evidence of success can contribute to further reductions in teen pregnancy and STI in this country. They can also address young people's rights to accurate information about sexuality.

Cross-References

- ▶ [Abstinence Education](#)
- ▶ [Condom Use](#)
- ▶ [Emergency Contraception](#)
- ▶ [Sexuality Education Sources](#)

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Sexuality Education Sources

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The common place of sexual activity during adolescence indicates the inherent importance of adolescent sexuality education. Despite its importance, sexuality education, especially its content, tends to attract considerable controversy. That controversy stems from the assumption that education about sexuality comes from formal sources, either schools or parents, and the need to determine who should control what adolescents learn about sexuality. Yet, the reality is that sexuality education comes from numerous social sources, and the realistic control of those sources varies considerably depending on the source. Adolescents draw information about sexuality from much more than schools and parents; they also notably obtain considerable knowledge about sexuality from the media, health professionals, and their peers (including their sexual partners). Although adolescents receive information from a variety of sources, research that asks adolescents about their preferred sources of sexuality education reports that parents actually are the preferred source, followed by schools and peers (Somers and Surmann 2004). Research has yet to study the wide variety of sources as closely as one would expect (e.g., there is essentially no systematic research on what youth learn

from health professionals). Still, existing research does reveal the importance of considering the sources of sexuality education and their effect on adolescents' sexual attitudes and behaviors.

School-based sexuality education remains controversial, not only because of issues involving its content but also because of issues regarding its effectiveness and whether it should be taught in schools at all. Despite efforts to remove sexuality education from schools, research does reveal pressure to address sexuality in the school curriculum; and it also reveals pressures to teach it in certain ways. In one study, for example, 46% of teachers noted pressure from the community, parents, or school administrators as a problem in the teaching of sexuality information (Landry et al. 2000). This is not to say that these groups do not wish to have sexuality education taught in schools. The major issue that arises involves what should be taught. Mounting evidence reveals, for example, that parents support programs in public schools, and that the majority would support comprehensive programs (as opposed to those that are purely abstinence-based) (see Eisenberg et al. 2008). Other large surveys report support for comprehensive sexuality education across several subgroup characteristics: race or ethnicity, age, education, household income, religious affiliation, religious service attendance, and ideological leaning (Constantine et al. 2007). Researchers in this area tend to conclude that the vast majority of parents support comprehensive sexuality education, and that resistance tends to come from small but highly vocal groups.

Research has long shown that school-based programs can result in well-documented positive effects on sexual knowledge (Melchert and Burnett 1990). Regrettably, research on adolescents' attitude and behavior change due to school-based education programs is generally less clear and some studies find no influence at all. It is clear that sexuality education can be effective in changing attitudes and actions, but much depends on the nature of the programs and their implementation. Our best evidence indicates that comprehensive sexuality education effectively promotes sexual health (Eisenberg et al. 2008).

Whether formal sexuality education programs are implemented at all often rests on the belief that programs will encourage sexual activity, as well as some beliefs that they will not protect youth from sexual risks. Research has found no relationship between

school-based sexuality education and the onset of sexual activity (Wellings et al. 1995). One prominent study has reported, however, that learning later from any source and less learning from schools about sexual topics predicts more frequent sexual activity (Somers and Surmann 2005). The effect of school-based sexuality education on adolescent contraceptive use is also unclear, with some research showing positive effects and others finding no influence at all. These findings reveal the complexity of understanding the influence of formal sexuality education, a complexity highlighted by research indicating demographic differences in the effectiveness of school-based education (Somers and Surmann 2005).

Arguably, a major reason for the conflicting findings is that what constitutes sexuality education varies considerably (Levesque 2000a). Content matters. For example, a large, nationally representative survey of 15–19-year-olds compared the sexual health risks of adolescents who received abstinence-only and comprehensive sexuality education to those of adolescents who received no formal sexuality education (Kohler et al. 2008). They found that adolescents who received comprehensive sexuality education were significantly less likely to report teen pregnancy than those who received no formal sexuality education, whereas there was no significant effect of abstinence-only education. Abstinence-only education did not reduce the likelihood of engaging in vaginal intercourse, but comprehensive sexuality education was marginally associated with a lower likelihood of reporting having engaged in vaginal intercourse. Neither abstinence-only nor comprehensive sexuality education significantly reduced the likelihood of reported STD diagnoses. Another group of researchers using the same data base reported that receiving any sexuality education was associated with not having had sexual intercourse among males and postponing sexual intercourse until age 15 among both males and females (Mueller et al. 2008). The study further reported that sexuality education was found to be particularly important for subgroups that are traditionally at high risk for early initiation of sex and for contracting sexually transmitted diseases. This last group of researchers essentially reports that any sexuality education is better than none; but the findings are complicated in that it would be important not to lump all programs together in efforts to

determine relative effectiveness. The findings in this area certainly are complex, but existing research does tend to support the view that formal sexuality education programs do not encourage sexual activity and do protect youth against some of the risks attendant to sexual activity.

Given the frequently touted belief that parents should be the primary sources of sexuality education for their children, it is remarkable that research has not examined the nature (content and timing) and effectiveness of this form of education. Research has not really examined effectiveness with the general exception that it is assumed that parents provide sexuality education. The bulk of research in this area has focused mainly on sexual communication; the content of that communication tends to have been ignored. Still, relative to school-based education, parental sexual communication has long been shown to have a more direct impact on adolescent behavior (Fisher 1986; Warren and Neer 1986; Somers and Gleason 2001). The research on adolescents' attitudes and behavior does show a positive relationship with parent–child communication (Fisher 1986; Miller and Fox 1987; Leland and Barth 1993; Whitaker and Miller 2000). However, at least in early adolescence, parental communication about sexuality is more likely with mothers and more limited with fathers (DiIorio et al. 1999), despite fathers' being more influential on sexual behavior (Dittus et al. 1997). Adolescents who discuss sex with their mothers before peers or teachers are more likely to use contraception (Miller et al. 1998), but females are more strongly influenced by discussion with their mothers than are males (Ballard and Morris 1998). The relative influence of parents, however, remains somewhat limited by timing. Parents often initiate sexuality communication *after* their child has engaged in sexual activity, including sexual intercourse (Lindberg et al. 2000; Somers and Paulson 2000). The research on sexual communication with parents would benefit from distinguishing the nature of the parent–child relationship and overall communication patterns, since there likely are biasing effects between communications relating to sexual activity and other supportive communications. Still, parents may have a strong impact of adolescents' sexuality education, but the influence may not be as effective as hoped due to, again, implementation

(when parents communicate with their children and what they do talk about), and the impact may be due to other characteristics of the overall parent-child relationships.

Research has well established that peers highly influence adolescents' sexual behavior (Levesque 2000b). Given that influence, it is clear that peers play a large role in the sexuality education of adolescents. Although the role may be direct, research has focused more on indirect effects. For example, adolescents report higher levels of sexual activity when they perceive sexual activity among their friends (Brooks-Gunn and Furstenberg 1989) and older siblings (Rodgers and Rowe 1988; East et al. 1993), though same-aged peers appear more influential than older peers (Ballard and Morris 1998). As expected, the influence of peers is affected by the dispositions of adolescents themselves. Adolescents with clearer notions of their values and intentions have been found to make better decisions (Miller et al. 1998); but adolescents consistently report clearer personal sexual values when more sexuality education occurs from adults rather than peers and media (Somers and Surmann 2005). The best evidence that we have does tend to show that leaving sexuality education to peers may lead to more sexual activity. For example, Somers and Gleason (2001) found that more education from non-sibling family members and less education in schools linked to more frequent sexual behavior in adolescents. The sources of learning make a difference.

The media's impact on adolescent sexuality also remains a powerful source of sexuality education for adolescents, albeit a largely informal source. The media's effects tend to be framed negatively and much research does reveal that the media often do not present responsible models as it exposes adolescents to sexual scripts and values contrary to those of their parents and broader society. There is no doubt that adolescents live with a sexualized media, and much of it can be negative in the sense that it portrays less than responsible sexual activity and values for youth. Despite the focus on negative aspects, the media can play a positive role in educating youth about sexuality, as revealed by effective public announcements regarding sexual health and relationships (Levesque 2007). That positive role, however, currently appears outweighed by the majority of images that shape adolescents' views of sexuality. It is

true that media literacy programs, including those that are peer-led, have promise as part of a sexuality education programs in that they may provide adolescents with a cognitive framework necessary to understand and resist the influence of media on their decision making concerning sexual activity (Pinkleton et al. 2008). The media, then, can play both positive and negative roles in shaping adolescents' sexual attitudes and behaviors; and it serves as a good example of the need for sexuality education programs (be they in schools or in homes) to include a focus on broad social influences that influence adolescent sexuality.

As noted earlier, the timing of education may well be as significant as its source. That point deserves emphasis. Adolescent sexual knowledge is contributed to by a number of sources at various times. This variation gains significance to the extent that early sexual activity is associated with more risky sexual behavior (Seidman et al. 1994) and literature suggests that adolescents are often educated too late (Somers and Paulson 2000). These findings are often used to support changes in how and when schools offer sexuality education. Although efforts to educate about sexuality are often resisted, early (prepubertal) and developmentally appropriate sexuality education in schools could be significant given that some studies have found early school-based education about key behavioral topics (intercourse, oral sex) relates to less sexual behavior in adolescence and generally relates to typically desired outcomes (Somers and Surmann 2005). Other research also has reported that earlier education appears not related to earlier or more frequent sexual behavior (Somers and Eaves 2002). Regardless of these findings, timing is likely to remain an important issue given the difficulties of implementing programs for older adolescents, let alone younger ones. This is further complicated by research, as noted above, that parents, when they do address sexuality with their children, tend not to begin until their children already have engaged in sexual activity.

The impact of sexuality education on sexual attitudes and behavior points to a need for more research on the appropriate timing and on how to develop the best sources of sexuality education. Research does suggest that adults in adolescents' lives, and not peers and media, may be more successful in helping adolescents develop clear values and intentions. That conclusion is

of significance because even though adolescents receive sexual information from a variety of sources, those sources are not necessarily effective in shaping their development in ways that would lead to positive outcomes. Given the sexual risks adolescents continue to take, as well as the social and individual costs of those risks, it is clear that current sources of sexuality education continue to fail youths and society (see also Levesque 2000a, b). Research on the sources of sexuality education reveals a pressing need for reform in the manner in which adolescents receive, learn, and use information relating to their sexual development and their intimate relationships.

Cross-References

► Sexuality Education

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Sexually Violent Predators

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Legally, sexually violent predators are individuals who have been convicted of or charged with the crime of sexual violence and who suffer from a mental abnormality or personality disorder that makes them likely to engage in predatory acts of sexual violence (Levesque 2006). Typically, the label of sexually violent predator brings with it more severe legal sanctions, either through the criminal or civil justice systems. Much controversy now surrounds the use of sex offender labels and the general response to adolescents deemed sex offenders (see Dicaldo 2009). Despite continued controversies, researchers routinely identify a small subset of sexually abusive youth who are more dangerous, more coercive (e.g., use threats of bodily injury or weapons), or are predatory and sexually violent toward strangers or casual acquaintances (Miccio-Fonseca, and Rasmussen 2009). The challenge remains in properly identifying, distinguishing, and responding to this subgroup of offenders.

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Shame and Guilt

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Adolescence traditionally is seen as a time of great emotional change and development. Experiencing and adjusting to a variety of complex emotions is one of the hallmarks of adolescent development. Two such complex emotions are guilt and shame. Guilt and shame, along with pride, are often categorized under the umbrella term “self-conscious emotions” as they relate to one’s sense of self and understanding of reactions to one’s behavior. Researchers regularly use the terms guilt and shame interchangeably in a variety of contexts. However, a growing body of literature recognizes the distinctive character of these emotions (Tangney and Dearing 2002; Walter and Burnaford 2006). In addition, research continues to explore how these factors contribute to adolescent adjustment as well as adult outcomes. That research leads us to conclude that shame and guilt play important roles in adolescent development, that we have much to learn, but that we already have made important progress.

Guilt and shame are different emotions. Guilt is a negative feeling of responsibility or remorse for having done something that may have emotionally or physically troubled another person (Hoffman 1998). Guilt is thought to be related to a focus on an action and a desire to repair (Walter and Burnaford 2006). Guilt seems to be more focused on feeling remorseful about the act one performed, rather than feeling remorseful about one’s self. Shame, on the other hand, is more self-focused than guilt, and there is an accompanying desire to hide. It is considered to be a painful feeling of having done or experienced something disgraceful or inappropriate. Shamed people often feel exposed, powerless, and worthless (Hoffman 1998; Tangney and Dearing 2002) signifying a focus on self that is not included in feelings of guilt. Given these differences, it is not surprising that research seeks to understand the roots of these emotions as well as what types of outcomes that they might produce.

While the specific factors influencing adolescents’ experience of emotions remain contested, a developing

body of research seeks to understand the role of key factors in fostering and shaping adolescents' experiences of guilt and shame. Research suggests that parents' emotional style (Tangney and Dearing 2002), parenting practices and discipline styles (Hoffman 1998), and overall family climate may influence the development of shame or guilt in adolescents (Walter and Burnaford 2006). In addition, of course, individual experiences also may influence the development of shame and guilt, with guilt having been linked to experiences of interpersonal violence, such that, for example, guilt over acts of commission or omission (behaviors the adolescent performed or failed to perform during the event or to prevent it) associates highly with PTSD severity (Kletter et al. 2009). Despite this progress in examining the roots and nature of these complex emotions, however, much remains to be investigated.

Research also suggests that age and gender are associated with experiences of shame and guilt. Gender differences in guilt tend to be inconsistent during childhood, decrease at the onset of adolescence, and then increase in late adolescence (Bybee 1998). In adolescence and adulthood, however, females generally have stronger feelings of guilt and shame than do males (Bybee 1998; Walter and Burnaford 2006). As Bybee (1998) explains, girls' experiences of guilt may be intensified by the adolescent girl's proclivity for rumination as well as by a society that often holds girls to higher standards of behavior and looks. The transition into adolescence also places girls as particularly vulnerable to experiences of shame. This is particularly the case given that adolescence is a pivotal time for both physical and cognitive changes. Physically, girls experience dramatic bodily changes, and they experience those changes as their cognitive development enables heightened capacities for self-evaluation and social comparison. These changes render girls especially prone to engage in negative self-evaluations and help account for what researchers view as normative increase in experiences of shame among girls as they enter adolescence (De Rubeis and Hollenstein 2009). Although some of these changes have yet to be deemed as similarly affecting boys, it does seem that both sexes experience these complex emotions and that they may influence them differently.

Research reveals that these emotions may lead to different outcomes. Shame, for example, may have adverse effects on relationships and mental health. It

may lead to an excessive focus on the self and decreased feelings of empathy. In fact, adolescents who feel shame may believe that others are judging them as "bad" or unpraiseworthy, and, as a result, may seek to escape others' painful judgments by aggressing against them. This outcome has been supported by research indicating that adolescents who experience shame seek to defend themselves against shameful feelings by acting in a hostile and aggressive manner toward others (Heaven et al. 2009). Other recent research reveals that shame relates to depressive symptoms, as well as to various other forms of psychopathology such as anxiety and eating disorders (De Rubeis and Hollenstein 2009). Again, however, important sex differences do seem to be at work, with girls tending to experience more depressive symptoms and eating disorders and boys engaging more in some forms of aggression. The extent to which these gender differences are pronounced during adolescence underscores the significance of the need to understand the complex emotions that may underlie them.

The transition into and out of adolescence constitutes a pivotal time period for the onset of shame and guilt. As we have seen, this developmental period in the life course appears to influence the cognitions and relationships that enable experiences of shame and guilt. Experiences of shame and guilt do play a normative role during adolescence. They also, however, may be the foundation of psychopathology in later life. Given the above findings, it is clear that this relatively new area of research gains increasing significance as we can see the role of complex emotions in shaping adolescents' experiences and development.

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Sibling Influences

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Overview

Research on children's and early adolescents' time use indicates that siblings are fixtures in each other's lives. Given their ubiquity, it is surprising that the ways in which brothers and sisters influence each other's development have been neglected in comparison to processes of parent and peer influence. An emerging body of work, however, documents that siblings are indeed important and can influence one another in a variety of ways. The goals of this essay are to review the main pathways through which siblings influence each other's development. Specifically, we highlight two avenues through which siblings influence each other: (a) directly – through observation and daily interactions with one another, as well as modeling and differentiation processes; and (b) indirectly – by virtue of their impact on the larger family system, including differential parenting.

Direct Sibling Influences

Sibling interactions and social-cognitive development. Because of the amount of time they spend together and the emotional intensity of the relationship, scholars have pointed to the sibling relationship as an important context for youths' social-cognitive development. Much of the work on sibling relationships has focused on how interactions with brothers and sisters provide youth with opportunities to learn new skills and behaviors. For example, a number of studies have highlighted that conflict situations between siblings

provide unique opportunities for social and emotional development, as siblings are sensitive to each other's reactions, behaviors, and emotions (for a review see Brody 1998). Consistent with this notion, constructive conflict between siblings is related to a variety of positive skills, including perspective taking, turn taking, negotiation, persuasion, and compromise. Importantly, these experiences have implications that extend beyond the sibling relationship and are related to later social competence and emotional understanding as well as peer relationship qualities (e.g., Stormshak et al. 1996). Not all sibling conflicts, however, are related to positive outcomes. Destructive sibling conflicts (i.e., aggressive conflicts that persist for longer periods of time) in childhood are related to detrimental outcomes including concurrent and later deviancy, substance use, and internalizing problems (e.g., Bank et al. 2004). Other aspects of sibling relationships are also related to youth's adjustment. For example, in adolescence, warm and intimate sibling relationships have been connected to increased social competence and close friendships (Brody and Murry 2001). Taken together, these findings indicate that interactions provide siblings with important and unique opportunities for socialization.

Given their age and social standing, the literature on sibling interactions has focused on the ways in which older brothers and sisters influence their younger siblings' behaviors and competencies. As we will see in following pages, this tradition has been maintained in much of the work on sibling similarities and differences. As such, investigating the ways in which younger siblings influence their older brothers and sisters represents an important area for future exploration.

Social learning and sibling similarities. Social learning processes, including modeling and reinforcement, are frequently posited mechanisms for explaining why brothers and sisters are often similar in their attitudes, skills, and behaviors. In general, social learning theories suggest that youth acquire new behaviors, attitudes, and beliefs through observation and social reinforcement (e.g., Bandura 1977). Within the family context, siblings are thought to be salient models because they possess three characteristics of effective models: (a) they are perceived as powerful or high in status; (b) they are warm and nurturing; and (c) they are similar to the observer. Given their age, more advanced skills and abilities, as well as their roles as leaders,

caretakers, and sources of advice and support, older siblings are thought to be especially powerful models and, therefore, are more likely to be imitated by younger siblings than vice versa.

With social learning theories as their basis, a number of studies have documented sibling similarities in risky and deviant domains, such as aggressive behavior as well as alcohol and substance use. With respect to aggressive and deviant behaviors, research has documented that siblings influence each other's behavior through modeling and reinforcement processes. For example, observational research by Patterson (1986) found support for a "sibling-trainer hypothesis" in which older siblings act as models for and train younger siblings to be increasingly antisocial, which ultimately leads to behavioral similarity. With respect to alcohol and substance use, a body of work suggests that older sibling substance use consistently predicts younger sibling use, above and beyond the shared contributions of parents' use and parenting (e.g., McGue et al. 1996). In fact, before actually engaging in substance use themselves, adolescents may develop outcome expectancies for alcohol and drug use based on the experiences of older siblings. And, in many cases, these expectancies are positive, such that alcohol and substance use is associated with outcomes such as peer acceptance and popularity. Research on adolescents' risky behaviors also suggests that older siblings may further the social learning processes by providing the material and settings in which siblings can engage in shared antisocial behaviors, as well as a network of potential friends who can act as models and partners for new behaviors (e.g., Rowe and Gulley 1992).

A number of studies suggest that modeling processes are moderated by the personal qualities of the siblings. The tenet of model similarity means that observational learning may vary as a function of the sibling dyad constellation, with older and same gender siblings more likely to serve as models than younger and opposite-sex siblings. Siblings close in age may be imitated due to their similarity, but a larger age gap between siblings also may invest an older sibling with power and high status and thereby promote modeling. Sibling relationship qualities also may make a difference, such that siblings with close relationships are more likely to treat one another as models. Many findings are consistent with these observational

learning principles, with the strongest evidence of modeling found in younger siblings modeling their older (higher status) siblings and in sibling pairs who are the same sex, closer in age, and with whom they have warmer relationships.

Sibling deidentification and sibling differences. Despite evidence that siblings often share many similarities, research and theory also highlights that siblings are often quite different in their personal qualities, interests, and activities. Although sibling differences may arise because of non-shared genes and non-shared parenting, they may also be the result of sibling deidentification processes. Rooted in psychoanalytic traditions which emphasize rivalry and competition between siblings as key aspects of development, sibling deidentification refers to the tendency for siblings to consciously or unconsciously choose different niches, develop different personal qualities, and define themselves as different from one another in order to reduce competition, protect themselves from social comparisons, and garner a share of parental love and affection. Toward the end of reducing competition and rivalry, differentiation is thought to promote more harmonious relationships between siblings, marked by less rivalry and conflict as well as greater warmth. And, in direct contrast to social learning postulations, sibling deidentification processes are posited to operate more strongly when siblings are more objectively similar, such as when they are close in age and share the same sex.

In general, research on the operation of sibling deidentification is limited because it is thought to operate, at least in part, unconsciously. Evidence for deidentification, however, has been found in areas such as personality, interests and activities, and adjustment. For example, consistent with the notion that deidentification processes operate more strongly when siblings are more objectively similar, initial work by Schachter and colleagues (1976) revealed that consecutively born siblings (i.e., firstborn and secondborn; secondborn and thirdborn) were more different in terms of their personality and temperamental qualities than were jump pairs (i.e., firstborns and thirdborns), and differentiation between siblings was most evident in same gender sibling dyads.

Unfortunately, much of the early work on sibling influence processes, including research on deidentification and social learning (with some exceptions),

has failed to actually measure the influence dynamics. That is, inferences about the operation of deidentification or modeling processes have been based on patterns of associations between siblings' personal qualities and behaviors (i.e., positive associations equate to modeling, negative or no associations equate to deidentification). To address this problem, more recently, researchers have tried to measure sibling influence processes in creative ways. For example, Whiteman et al. (2007) asked adolescent siblings to rate how often they tried to be alike and different from one another across four domains: athletics, arts, academics, and conduct. Adopting a person-centered approach, Whiteman and colleagues discovered that 43% of secondborn siblings reported influence dynamics consistent with modeling/social learning (trying to be like and not trying to be different across all four domains), whereas 27% of secondborns' reports were characterized by differentiation dynamics (trying to be different and not trying to be like their sibling across all four domains); the remaining 30% dyads reported low levels of both influence processes. Notably, youths' ratings of sibling influence were related to similarities and differences in siblings' activities and behaviors in predicted ways: Reports of modeling were linked to greater similarities between siblings' activities, grades, and risky behaviors, whereas reports of differentiation were related to patterns of dissimilarity between siblings' activities and behaviors.

Current findings on the links between differentiation and other sibling relationship qualities are also mixed. Although some work reveals that differentiation dynamics are more prevalent in same-sex sibling dyads, other work fails to consistently reveal this link. And although sibling differentiation is thought to reduce rivalry and competition, thereby increasing harmony, few studies have actually studied this relationship. One study found that siblings who became more different in their relationships with their parents over time also became more positive in their relationships with one another (Feinberg et al. 2003). Whiteman et al. (2003), however, revealed that siblings' reports of differentiation were linked to greater conflict and less warmth between siblings. It could be that youths' conscious reports of differentiation are linked to relationship qualities differently than more unconscious processes; however, more work is needed to understand the correlates of sibling differentiation processes.

Indirect Sibling Influences

Although brothers and sisters can influence one another directly, they can also influence each other indirectly by virtue of their impact on the family system. As we outline below, siblings can influence each other's relationships, behaviors, and adjustment by: (a) influencing parents' expectations about child development and parenting behaviors; (b) taxing parent and family resources; and (c) providing a referent for parents' differential treatment.

Parental expectations and parenting behaviors. Conventional wisdom about parenthood suggests that parents learn through practice and experience, and as such their experiences with older children should have implications for their expectations and parenting strategies with younger children. Consistent with this notion, several studies have shown that parents' experiences with earlier-born children are related to their expectations for and behaviors toward later-born offspring. For example, Whiteman and Buchanan (2002) found that experienced mothers (i.e., those who had parented an adolescent previously) generally had more positive expectations and fewer negative expectations regarding their later-born adolescents' behaviors than did inexperienced parents (i.e., parents who had not yet parented an adolescent). Furthermore, the nature of mothers' experiences with earlier-born children predicted similar expectations for later-born offspring behavior during adolescence. That is, more positive experiences with earlier-borns were related to more positive expectations about later-borns' behaviors, whereas more negative experiences with older offspring predicted more negative expectations about later-borns. In fact, this latter pattern highlights that not all of what parents learn from prior experience is positive. East (1998), for example, discovered that a teenage daughter's pregnancy and subsequent childbearing led parents to question their parental efficacy and lower their expectations regarding later-born children's behaviors.

In addition to influencing parents' expectations about behavior, research highlights that older siblings can also indirectly influence parents' rearing strategies and relationships with their younger siblings. For example, using longitudinal data, Whiteman et al. (2003) found that when comparing parents' experiences with first- and secondborn offspring at the same age (e.g., when both children were 13 or 15), parents exhibited more effective parenting strategies (as indexed by

greater knowledge regarding secondborns' everyday activities) and achieved more harmonious relationships (as indexed by lower rates of conflict) with secondborn offspring. In short, findings like these highlight how families work as systems, as one sibling's experiences reverberate throughout the entire family. However, we still know very little about what parents learn from experience and research on siblings provides a useful framework for future work in this area.

Taxing family resources. Siblings may also influence the experiences and adjustment of their brothers and sisters by taxing parents' emotional and financial resources more generally. Grounded in the assumption that siblings have to compete for their parents' resources, a body of work on family size and birth order suggests that sibship size is negatively related to outcomes such as intellectual functioning, academic achievement, and occupational attainment. For example, youth with more siblings tend to show poorer intellectual functioning and academic achievement as compared to youth with fewer siblings (e.g., Downey 1995). In general, findings like these are attributed to the idea that youth in larger families spend more time in intellectually diluted environments (e.g., less one-on-one time with parents, financial resources spread throughout the family as opposed to invested in only one or two children), and therefore perform more poorly on indices of intellectual development and academic achievement. Given that earlier-born children spend more time with parents when resources are less diluted (e.g., fewer children present, especially for firstborns) and the fact that they may be called to support their younger brothers and sisters school efforts, earlier-borns tend to fare better across various domains of academic performance as compared to later-borns. It is important to note, however, that most studies examine family size and birth-order differences between families (i.e., comparing firstborns from one family with secondborns from another family) rather than within families (i.e., comparing first- and secondborns from the same family). By studying mean differences between rather than within families, "real" birth-order differences that occur within families may be misestimated. Thus, most research that has examined sibship size and birth order, as they are related to sibling differences, is limited.

Parents' differential treatment. Despite social norms in Western culture that call for parents to treat their

children equally, differential treatment of siblings is common. Parents recognize differences between their children in behavior, personality, and needs and often cite children's personal characteristics as motivation for treating their offspring differently. And youth are keenly aware of the ways in which their parents treat them as compared to their brothers and sisters. In fact, some have suggested that youth use how they are treated in comparison to their siblings as barometer, which indicates the extent to which they are loved and accepted by parents. Not surprisingly, a growing body of evidence suggests that parental differential treatment (PDT) is linked to less positive sibling relationships as well as adjustment problems among those who perceive themselves as disfavored during adolescence.

An important line of study shows, however, that the context in which differential treatment occurs makes a difference for its adjustment implications. For example, PDT is only associated with maladjustment when the quality of that child's relationship with his or her parents is negative (Feinberg and Hetherington 2001). Differential treatment may also have different implications depending upon the domain in which it occurs. Specifically, perceptions of more negative treatment and less warmth from parents is linked to poorer relational and adjustment outcomes. Youths' perceptions of fairness and equity also help explain the links between PDT and outcomes. That is, siblings who view differential treatment as fair tend to have more positive sibling relationships and fewer adjustment problems (Kowal and Kramer 1997). Like parents, youth may view differences in age, personality, and special needs as legitimate reasons for differential treatment. It is important, however, that parents help youth understand why they may be treated differently to help protect them from potential negative aspects of social comparison.

Conclusion

Research documents that siblings influence each other as well as the entire family system in a variety of ways. More work is needed, however, to gain a more comprehensive understanding of how these multiple and sometimes competing processes influence brothers' and sisters' personal qualities, behaviors, and relationships. For example, much of the research on sibling influence has invoked modeling and deidentification processes as post hoc explanations for observed patterns of similarity and differences between siblings.

More attention needs to be paid specifically to the nature and correlates of these influence processes, with an eye to how they may even operate in concert with another. Furthermore, greater focus needs to be placed on how processes of sibling influence are shaped by the larger family environment. Sibling relationships operate within a larger family system, and it is important to understand how parents' beliefs, expectations, and values are related to sibling socialization and adjustment. Yet, it is equally important to understand that parents' emotional, behavioral, and material resources are influenced by their children's characteristics and experiences, and therefore examine how parenting strategies and relationships vary across children in the same family.

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Sibling Maltreatment

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Overview

Sibling maltreatment is the most common form of family violence. It is widely experienced in sibling dyads with adolescents filling roles as both perpetrators and victims, yet it is underreported by families and poorly understood by family scientists interested in adolescent development. Advancements in the field are hindered by the fact that many assume sibling rivalry, conflict, and aggression are normal. Researchers who study sibling maltreatment struggle with complicated methodological issues associated with working with families, a plethora of definitions and terms, and informants who may be understandably uncooperative. Nevertheless, investigators have found several individual and family risk factors that are closely linked to sibling violence and have documented harmful consequences for both the perpetrator and victims of these interactions. More research needs to be conducted to understand physical, psychological, and sexual abuse in sibling relations and to lay a ground work for effective prevention programming.

Rate of Sibling Maltreatment

Sibling relationships are among the longest lasting relationships, serving as a significant socialization context.

Some siblings possess fond memories of warm and supportive interactions; however, most siblings report experiencing ridicule, cruelty, or bullying in their sibling interactions. Sibling relationships, therefore, may have the dubious distinctions of not only being the longest, but also the most debilitating and destructive relationship. Although sibling maltreatment has been understudied, a small number of researchers have shown that it is pervasive. For example, a nationwide study of family violence found that the occurrence of sibling violence is higher than either parent abuse of a child or intimate partner violence in that approximately 40–85% of children committed acts of violence against siblings (Straus et al. 1980). In confirming the contention that sibling violence is the most common form of intrafamily violence, 88% of male junior high school students and 94% of the females reported being a victim of sibling violence, and 85% of the males and 96% of the females reported perpetration of sibling violence during the previous year (Roscoe et al. 1987). Similarly, as many as 60% of high school students reported being either a victim or perpetrator of physical violence during the preceding 12 months (Goodwin and Roscoe 1990). In a national study of violence in 8,145 American families, approximately 80% of children aged 3–17 perpetrated some form of sibling violence (Straus and Gelles 1990). In a retrospective study, 48% of undergraduates reported being physically victimized by siblings and 41% reported being physically aggressive toward siblings during childhood (Hardy 2001). In a related vein, homicides between siblings comprised 9.4% of all family related homicides in 33 counties across the US in 1988 (Dawson and Langan 1994).

Despite its high incidence and recurrent patterns, sibling maltreatment remains largely underreported by the public and overlooked and underestimated by social scientists and public policy agencies. There are several reasons for neglect of this issue. First, many parents tend to view negative sibling interactions as part of the inevitable or even normal process of growing up. Parents often assume children will outgrow rivalry and these experiences are considered as a relevant training ground for learning how to manage conflict and resolve disputes with others outside of the family (DesKeseredy and Ellis 1997; Gelles and Cornell 1985; Kurst-Swanger and Petcosky 2003; Straus et al. 1980; Wiehe 1997). Second, parents are not aware of

every act of violence between their children (Hines and Malley-Morrison 2005; Straus et al. 1980). Finally, there are many kinds of sibling relationships, including full biological siblings, half siblings, step and adoptive siblings, which complicates sampling strategies and this, coupled with the need to sample multiple family members, increases the difficulty of doing sound research on sibling violence.

Definitions of Sibling Maltreatment

Another limitation associated with this line of research is that there has been much confusion regarding the terminology of sibling maltreatment. Sibling conflict, rivalry, aggression, violence, assault, and abuse are a few of the descriptors commonly employed. The lack of a clear legal definition pertaining to protection of victimized siblings from abusing siblings contributes to the confusion (Stock 1993). Furthermore, the enactment and intentions associated with maltreatment change as children develop. This suggests a need for a conceptualization that is sensitive to maturational differences. Finally, there is no clear consensus among researchers about the severity, frequency, or duration of associated behaviors that would qualify as maltreatment or abuse. However, a few researchers call attention to distinctions among hostile aspects of sibling relationships. For example, Caffaro and Conn-Caffaro (1998) make a distinction between sibling rivalry and sibling assault. Although sibling rivalry arises from conflicts over tangible or intangible resources, it may help siblings explore different niches and learn how to manage interpersonal conflict effectively. Sibling assault, however, involves repeated and escalating patterns of aggressive behavior among siblings where offenders are clearly distinguishable from victims and parents do not actively mediate. These authors further argue that severity can be gauged in terms of potential harm to the victim. Although there are inconsistent operationalizations, like other forms of intrafamilial abuse, there is agreement that sibling maltreatment can be classified into three categories: physical, psychological, and sexual.

Physical Abuse

Physical abuse between siblings ranges from deliberately causing physical harm to another sibling to causing death. The physical injury may be inflicted by shoving, hitting, slapping, pinching, scratching,

kicking, biting, and hair pulling (Caffaro & Conn-Caffaro 1998; Kurst-Swanger and Petcosky 2003; Wiehe 2000). The perpetrating sibling may also jump out on to the victimized sibling, hurl him/her out on to the floor, and take him/her down (Kurst-Swanger and Petcosky 2003). Physical abuse can become more dangerous with the improper use of objects (e.g., broom handles, rubber hoses, brushes, coat hangers, belts, sticks, baseball bats, etc.) or weapons (e.g., knives, razor blades, scissors, BB guns, etc.) for intimidation and inflicting harm and pain (Kurst-Swanger and Petcosky 2003; Wiehe 2000). The most prevalent types of physical abuse by siblings are shoving, pushing or pulling, or hitting with a fist or an object (Button and Gealt 2010; Goodwin and Roscoe 1990). Some victims reported tickling as the most torturous form of physical abuse, and others reported that their siblings attempted to smother them with a pillow, increasing the risk of suffocation (Wiehe 2000).

Physical abuse tends to steadily decline with age, suggesting that adolescents become cognitively and verbally competent and grow out of such behaviors (Goodwin and Roscoe 1990; Straus and Gelles 1990). Along with the dissipation over time, the events instigating physical abuse change. For example, early to mid-adolescents clash over more tangible issues such as physical boundaries, whereas mid- to late adolescents fight over more abstract issues such as social responsibilities and obligations (Kiselica and Morrill-Richards 2007).

Psychological Abuse

Psychological abuse includes the following behaviors: continuously teasing, ridiculing, belittling, insulting, intimidating, scorning, or threatening the other member of the sibling dyad. Also included are behaviors that force the sibling to perform unwanted tasks, or that deliberately spoil or threaten to spoil sibling's relationship with others (Crick and Grotpeter 1995; Wiehe 1997). It also includes destroying possessions and mistreating pets (Wiehe 1997). Although there has been some confusion in the use of the terms, psychological abuse, emotional abuse, and relational aggression all tap similar core features of the same phenomenon.

In contrast to physical abuse which leaves physical evidence in many cases, psychological abuse among siblings, which leaves no visible damage, is extremely difficult to identify. Partly because of this reason,

psychological abuse among siblings has been understudied; yet, it is even more common than other forms of sibling abuse (Crick et al. 2001; Kurst-Swanger and Petcosky 2003; Wiehe 1997). Although psychological abuse has mainly been studied in the peer context instead of the sibling context under the name of relational or indirect aggression, adolescent sibling interaction is found to be a pertinent social context for breeding psychological abuse (Updegraff et al. 2005; Yu and Gamble 2008b). Although females are more likely than males to engage in psychological abuse in the context of peers in general (e.g., Crick et al. 1999), it has been speculated that psychological abuse among siblings is more pervasive than among peers (Stauffacher and DeHart 2006). This may be partly because male adolescents are less likely to behave in gender-stereotyped ways in the sibling context than in the peer context (Stauffacher and DeHart 2006).

Sexual Abuse

Sibling incest includes any sexual behavior between siblings that is developmentally inappropriate (Caffaro and Conn-Caffaro 1998). Sibling incest may encompass attempts to initiate sexual intercourse, oral-genital contact, or any other forms of coerced sexual activity, with or without physical force, threats of force, or coercion (Caffaro and Conn-Caffaro 1998). Noncontact sibling incest may encompass behavior that aims to arouse a sibling sexually, including sexual references into conversation, indecent exposure, taking pornographic pictures of the sibling, or forcing a sibling to view pornographic material (Wiehe 1996).

Older brothers are offenders and younger sisters are victims in the vast majority of cases of sibling incest (Caffaro and Conn-Caffaro 1998). Sibling incest offenders, whose mean age is 15 years, are generally older and stronger than sibling incest victims, whose mean age of onset of the abuse is 9 years (DeJong 1989; O'Brien 1991). Some researchers suggest that sibling incest is likely to occur five times more frequently than parent-child incest (Canavan et al. 1992; Cole 1982; Smith and Israel 1987). It is reasoned that even if parents discover sibling incest, they are unlikely to deliver their children to the appropriate authorities or clinics due to the shame and guilt they experience (Caffaro and Conn-Caffaro 1998; Kurst-Swanger and Petcosky 2003; Wiehe 1997). Also, adolescents who seek to sexually exploit their siblings are likely to

succeed, no matter how vigilant and wary the parents are (Caffaro and Conn-Caffaro 1998).

Causes/Correlates of Sibling Maltreatment

Like other forms of intrafamilial abuse, sibling maltreatment is multiply determined by individual, familial, and demographic characteristics. Thus, each of these factors is explored in the following sections to understand why maltreatment occurs between siblings.

Individual Psychological Factors

An offender's abusive behavior may be motivated by an internal need, such as the desire to have power and control over their victims who are younger and weaker siblings (Caffaro and Conn-Caffaro 1998). Sibling offenders often tend to have deficits characterized by impulsivity, aggressiveness, and lack of empathy and socio-emotional maturity (Caffaro and Conn-Caffaro 1998). From a blockage theory perspective, poor social skills and social adjustment prevent people from fulfilling their social and emotional needs through positive, prosocial interactions with peers, thereby leaving their needs unsatisfied and results in the display of severely impaired social interactions with a vulnerable sibling (Finkelhor 1984). Indeed, the theory was empirically supported in finding that sibling incest offenders were more likely than nonchild offenders to have poor peer relationships and few friends (O'Brien 1991).

Victims of sibling maltreatment may share some common individual risk factors, although they have no responsibility for being abused. They may lack supportive relationships with family and friends and thus tend to overly depend upon their abusive sibling (Caffaro and Conn-Caffaro 1998; Kurst-Swanger and Petcosky 2003). Difficult temperament or intellectual or physical disability are identified as a possible risk factor among victimized siblings (Kurst-Swanger and Petcosky 2003).

Familial Factors

Consistent with the tenets of social learning theory, it has been argued that many sibling offenders who witness negative exchanges in the family learn vicariously that violence is an appropriate way of resolving interpersonal conflict and thus are likely to recreate abusive acts toward their vulnerable siblings (Caffaro and Conn-Caffaro 1998; Kurst-Swanger and Petcosky

2003; Straus et al. 1980). Social learning theory is also a widely accepted explanation for the intergenerational transmission of violence through direct reinforcement and parental modeling as a mode of solving conflict (Gelles and Cornell 1985; Straus et al. 1980). Indeed, aversive and violent interactions between parents were found to increase aggressive and hostile sibling conflict (Hoffman et al. 2005; Stocker and Youngblade 1999; Yu and Gamble 2008a). Parent-child discord is also linked to increases in sibling conflict (Hoffman, et al. 2005; Yu and Gamble 2009).

Each individual family member is embedded in a family system and they operate in an interrelated and interdependent way; therefore, quality of relationships and interaction patterns of a family subsystem (e.g., spouse) are likely to have a substantial impact on other family subsystems (e.g., sibling), the other members of the family, or the entire family unit (Minuchin 1988). From this perspective, the overall family environment is strongly influential in shaping sibling maltreatment (Hardy 2001; Kurst-Swanger and Petcosky 2003; Steinmetz 1981). A cohesive and protective family environment helps adolescents to handle stressful situations and to resolve conflict with others in a more socially acceptable way (Davies and Cummings 1994). Empirically, it was found that a cohesive family environment and maternal positive expressiveness toward their adolescent children were significantly and negatively associated with both younger and older sibling's physical and psychological abuse within the family (Yu and Gamble 2008b). In a similar vein, a chaotic and argumentative home environment and heightened marital conflict were significantly higher among adolescent sibling-incest offenders than among nonsibling offenders (Worling 1995).

Parental psychological unavailability or the lack of appropriate parental supervision or intervention allows abusive behavior between siblings to occur and even to be reinforced (Caffaro and Conn-Caffaro 1998; Kiselica and Morrill-Richards 2007; Kurst-Swanger and Petcosky 2003; Rudd and Herzberger 1999; Whipple and Finton 1995). When parents do not closely monitor sibling interactions or do not intervene in violent sibling acts, power becomes more unequally distributed across siblings and abusive behavior escalates (Caffaro and Conn-Caffaro 1998; Kurst-Swanger and Petcosky 2003). Quite possibly, sibling maltreatment may be a reflection of parents who are overburdened

with their own problems such as financial, mental, and physical stresses and marital conflict, and thus have little or no energy to monitor, discipline, or intervene in their children's abusive interactions with siblings (Kiselica and Morrill-Richards 2007; Hardy 2001; Wiehe 1997).

Parental differential treatment of siblings is thought to be a source of sibling conflict and abuse because of children's feelings of superiority/inferiority, self-esteem, or parental support/lack of parental support (Caffaro and Conn-Caffaro 1998; Updegraff et al. 2005). Parental differential treatment may contribute more strongly to sibling maltreatment if adolescents perceive it as unfair or unreasonable (Kowal and Kramer 1997; McHale et al. 2000). Although differential treatment was linked to younger sibling's experiences of psychological abuse (Updegraff et al. 2005), it was not significantly associated with older sibling's psychological abuse (Updegraff et al. 2005), or with either older and younger sibling's physical and psychological abuse (Yu and Gamble 2008b). Because little research has explored the association between differential treatment and sibling maltreatment during adolescence, firm conclusions should be reserved until researchers employ diverse assessments of differential treatment in domains such as paternal and maternal discipline, favoritism, and involvement.

It has been argued that some facets of parental psychological control of their children, such as threatening withdrawal of love, possessiveness of relationships, and instilling feelings of guilt, resemble those of psychological abuse (Nelson and Crick 2002). Parental psychological control is therefore likely to contribute to children's learning how to abuse others psychologically in the family context. Although very little is known about the association between psychologically controlling parenting and psychological abuse among siblings, it was recently found that adolescent children's perceptions of maternal psychological control were positively associated with their physical and psychological abuse of siblings (Yu and Gamble 2008b).

Demographic Factors

Previous research has identified demographic factors, such as age, age spacing, gender composition, and family size, which are likely to be consequential to abusive sibling interactions. However, the results of studies regarding associations between each of these

demographic variables and sibling maltreatment have in general been mixed and inconclusive. As pointed out earlier, there is general agreement across studies that age is inversely related to incidence rates of physical abuse among siblings (Eriksen and Jensen 2009; Goodwin and Roscoe 1990; Straus and Gelles 1990), although some studies show that age is positively associated with frequency and severity of physical abuse (e.g., Hardy 2001). There is still a paucity of information on the impact of age on psychological and sexual abuse. Similarly, little research has examined how age gaps between siblings are linked to psychological and sexual abuse between siblings, although it was reported that psychological abuse is more commonly found among narrowly spaced adolescent siblings (Noland et al. 2004). The majority of research on school age children indicates that closely spaced sibling dyads exhibit higher rates of physical violence because of similar developmental stages, capabilities, and interests (Dunn and McGuire 1992). In contrast, widely spaced sibling dyads may engage in less physical conflict because of a clearly established power structure or the hierarchical distance between siblings (Newman 1996). This seems to hold true for adolescent sibling pairs (Noland et al. 2004), although it remains for future research to inquire directly about the link between age differences and physical abuse, as well as psychological and sexual abuse.

Studies suggest that gender or gender composition of sibling dyads are central for understanding sibling maltreatment. It was found that brothers perpetrate a higher rate of physical violence toward their siblings, and older brother–younger sister dyads are at greatest risk of physical violence (Graham-Bermann et al. 1994; Simonelli et al. 2002). However, other researchers report few or no significant gender differences in physical abuse between siblings (Goodwin and Roscoe 1990; Kettrey and Emery 2006), or across four different gender composition of sibling dyads (i.e., male–male, male–female, female–male, and female–female) (Yu and Gamble 2008b). Gender effects may be most evident when percentages of male children increase in families as opposed to the mere presence of a male (Eriksen and Jensen 2009). While less research has been conducted on the association between gender and psychological abuse among siblings, there is a general consensus that gender or gender composition alone does not explain the amount and nature of

psychological abuse among adolescent siblings (Stauffacher and DeHart 2006; Updegraff et al. 2005; Yu and Gamble 2008b). As discussed earlier, adolescents feel less pressure to conform to gender stereotypes in the sibling context than in the peer context; thus, it appears that psychological abuse among siblings does not vary by gender (Stauffacher and DeHart 2006; Yu and Gamble 2008b). The overall picture of sexual abuse between siblings seems to be clearer than other forms of sibling maltreatment. That is, in these cases, it is older brothers who molest younger sisters (Caffaro and Conn-Caffaro 1998; Lodico et al. 1996; Worling 1995).

Although some research shows no direct link between sibship size and sibling maltreatment (Hardy 2001; Noland et al. 2004), very little evidence has been forthcoming. In addition, there is a paucity of research regarding the ways in which birth order, adjacent or jump pairs, or full, step/half, adoptive, or foster sibling status may augment or diminish sibling maltreatment. Evidently, much more research is required to ascertain how much of each of these demographic variables is operating in different forms of sibling maltreatment.

Consequences of Sibling Maltreatment

Research on sibling violence has demonstrated that both victims and perpetrators of sibling maltreatment are at greater risk for developing behavioral, emotional, and social problems. For example, victimization of sibling physical abuse is significantly related to a greater risk of substance abuse, delinquency, and aggression (Button and Gealt 2010). In the same fashion, physical abuse between siblings during middle childhood is predictive of delinquency and antisocial behavior during adolescence (Bank et al. 1996; Stocker et al. 2002). Perpetrating physical and psychological violence against siblings during adolescence is positively linked to perpetrating violence against dating partners during adulthood (Noland et al. 2004). Physical, psychological, and sexual abuse by siblings is also positively associated with the same kind of perpetration and victimization of dating violence among college students (Simonelli et al. 2002).

Although a dearth of research exists on the deleterious effects of sibling sexual abuse on victims, the research revealed that almost half (47%) of the female victims of sibling incest had never married and those who married were more likely to experience physical

abuse from their partner (Russell 1986). Similarly, many female survivors of sibling incest were raped or battered during adulthood (Briere and Runtz 1988; Russell 1986). Victims of sibling sexual abuse are also likely to run away from home and stay in abusive relationships throughout their lifespans (Widom and Ames 1994), or report higher levels of sexual activity in young adulthood (Finkelhor 1980).

In addition to the influences on externalizing problems and interpersonal relationship with others, younger siblings' perpetration and victimization of physical abuse are significantly linked to their own internalizing symptoms, whereas older siblings' perpetration and victimization of psychological abuse are significantly linked to their own internalizing symptoms (Yu and Gamble 2008b). Similarly, sibling conflict during middle childhood is predictive of anxiety and depressed mood during early adolescence (Stocker et al. 2002), whereas victimization by a sibling's psychological abuse during childhood and adolescence predicts feelings of anxiety during young adulthood (Graham-Bermann et al. 1994; Mackey et al. 2010).

Measures and Measurement Issues

Issues related to measurement are essential to any study attempting to pinpoint characteristics of sibling maltreatment in a valid and reliable way. Albeit relatively a few in number, there are some commonly used instruments for measuring sibling maltreatment within families: the Conflict Tactics Scale (CTS; Straus 1979), the CTS 2 (revised CTS; Straus et al. 1995), the Scale of Negative Family Interactions (Simonelli et al. 2002), and the Sexual Experiences Survey (Koss and Gidycz 1985). In particular, the Sibling Abuse Interview (Caffaro and Conn-Caffaro 1998) is a comprehensive tool for assessing sibling maltreatment, including incest. It is comprised of a series of questions for each member of the family and sibling/parental subsystems. In addition to these instruments, thorough observations or qualitative methods would augment the validity and reliability of sibling maltreatment during adolescence.

There are some issues to be carefully considered in the assessment of sibling maltreatment. Both sibling victims and perpetrators are often reluctant to divulge, they can be uncooperative, and they are likely to minimize their traumatic experiences due to feelings of guilt, embarrassment, and fear of reprisal and punishment; therefore, it is essential for researchers to keep

these issues in the back of their mind. As is widely known, single informants are less useful, yet this methodological strategy is still dominant in sibling maltreatment research. Thus, researchers studying sibling maltreatment should strive in every possible way to gather information from multiple reporters to yield richer and more informative data. However, this poses another challenge to researchers because of potential discrepancies between informants' reports. That is, older siblings and younger siblings do not necessarily agree with each other about the nature of maltreatment, but rather are likely to perceive the same events quite differently. Parents are also unlikely to witness or be aware of all incidents among children and may provide incomplete information. The lack of concordance between siblings, between parents and children, or between fathers and mothers with regard to reports of sibling maltreatment should be carefully evaluated using a more sophisticated approach such as structural equation modeling, multilevel modeling, and latent growth curve modeling.

Future Directions

As indicated in the previous section, sibling researchers would benefit from employing recent advancements in statistical analysis (e.g., multilevel modeling, latent growth curve modeling, and applications of dyadic data analysis or social relations model) relying on data from a multiple informants to more accurately and precisely understand sibling maltreatment during adolescence. These methodological innovations have opened up promising new avenues of sibling maltreatment research. For example, given the fact that each sibling is nested within a dyad and a family, these methodologies can effectively capture each sibling's repeated measures of perpetration and victimization of abuse nested within a dyad within a family over time using a different trajectory (i.e., straight or curved line).

Sibling researchers have largely ignored differences across ethnic groups and as a result, a dearth of information exists in regards to ethnic differences in patterns of sibling maltreatment. In a related vein, no attention has been accorded to a cultural framework for understanding sibling maltreatment across different ethnic groups. Recently, researchers have begun to carefully investigate the impact of cultural values on parenting and marital relationships (Yu et al. 2008), on adolescents' strategies for resolving conflicts with

siblings (Killoren et al. 2008), or the role of cultural values as a moderator between sibling relationships and social and emotional adjustment among young children (Gamble and Modry-Mandell 2008). The evidence from these studies clearly indicates that cultural values indeed play such a central role in sibling and family relationships, children's adjustment, and each family member's way of understanding of family events and interactional patterns. However, these unique cultural values have never been explored empirically in the literature on adolescent sibling maltreatment. Therefore, one clear avenue for future research is to carefully evaluate sibling maltreatment during adolescence across different ethnic groups and how cultural values uniquely contribute to the patterns of and each of the family member's perceptions of and willingness to disclose sibling maltreatment by conducting cross-cultural research.

Finally, family systems and social learning theory perspectives have helped to fruitfully guide research to focus on characteristics of families associated with learning to commit violence and its escalation in sibling dyads. There is a growing need to continue these inquiries and take a closer look at those parenting patterns that may be related to heightened levels of abuse, thereby potentially producing information on means to reduce these coercive behaviors and enhance the positive aspects of sibling relations. To date, investigators have described this phenomenon and its consequences for both siblings, yet there is little in the empirical findings that would suggest how one might proceed to design empirically based prevention efforts. It is our belief, that given its prevalence and harmful developmental effects, sibling violence deserves closer scrutiny with the goal of assisting parents in eliminating this aspect of sibling relationships.

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Sibling Rivalry

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Sibling rivalry involves intense and highly emotional competition between siblings, and often is deemed as stemming from competition for love, attention, and approval of parents. Researchers note that children live in a comparative environment that easily leads to competition for resources within families and that it is normal for children to compete for limited resources within families (Kiselica and Morrill-Richards 2007). The way in which parents address rivalry and conflict in competitive environments has important effects, including whether there may be aggression and violence between siblings as well as with other family members (see Yu and Gamble 2008).

Cross-References

► [Sibling Influences](#)

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Sleep Deprivation

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Sleep deprivation is the lack of an appropriate amount of sleep. Although the term is often used loosely to mean a general lack of sleep, it also can constitute a sleep disorder (see Johnson et al. 2006). Lack of sleep associates with a variety of negative outcomes, such as reports of fatigue, reduced energy, and headaches as well as with potentially more serious symptoms such as depression, anger, conduct problems, substance use, and suicidal thoughts and behaviors (see Roberts et al. 2009). Generally, the average basal level of amount of sleep needed for healthy adolescent development is 9 h (Carskadon et al. 2004). There is consensus that adolescents routinely fail to obtain adequate nocturnal sleep; studies reveal that one quarter to one fifth of adolescents suffer from insufficient sleep, which is defined as 6 h or less (Roberts et al. 2009). There also is consensus that the transition from childhood to adolescence results in increased rates of sleep deprivation. Those increased rates are due to a mixture of contextual events but also due to substantial biological (hormonal and neurological) and psychosocial changes in sleep and circadian regulation due to pubertal development that can lead to dramatic alterations in sleep patterns (Dahl and Lewin 2002). Thus, the impact of sleep deprivation is broad, its incidence is high, and much of it relates to developmental changes. Yet, the negative effects of sleep deprivation and adolescents' experience of sleep deprivation have not resulted in much effort to address it systematically. Calls for reforming, for example, the times that daily routines begin, such as school, have gone unheeded. Efforts to address adolescents' lack of sleep continue to focus on parent education, bedtime routines, and sleep schedules rather on changing social demands that could better address known developmental changes occurring during adolescence (see Buckhalt et al. 2009).

Cross-References

► [Sleep Disturbances](#)

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Sleep Disturbances

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Overview

Adolescence is a time of transition between childhood and adulthood marked by physiological, social, and psychological changes. It is also a period of development that is characterized by excessive daytime sleepiness and difficulties waking in the morning. There is mounting evidence that adolescents in the United States are chronically sleep deprived. Approximately 45.7% of adolescents report daytime sleepiness at least once per week (Pagel et al. 2007). Although the primary cause of excessive daytime sleepiness in adolescents can be accounted for by insufficient sleep, a number of extrinsic and intrinsic factors also contribute to these symptoms in adolescents. This essay reviews the amount of sleep adolescents need, common causes of insufficient sleep, and consequences of disturbed sleep. Finally, the evaluation of sleep disorders in this population is described.

Sleep Needs for Adolescents

Several studies of sleep needs have demonstrated that adolescents require more than 9 h of sleep per night and some require additional sleep during the day (Carskadon et al. 1980; Carskadon and Acebo 2002). Within the context of a residential summer camp, adolescents were placed on a fixed 10-h sleep schedule and permitted to sleep as much as they wanted. Results showed that well-rested adolescents need an average of 9.25 h of sleep per night; sleep needs at night did not change from ages 10 to 17; and during mid-puberty, adolescents have an increased tendency to sleep during the day even when they obtained sufficient sleep at night. Despite the amount of sleep adolescents need, the average adolescent obtains much less. For example, the National Sleep Foundation conducted a national survey of adolescents in high school and found that this population reported spending an average of 7.5 h in bed and getting an average of 7.2 h of sleep per night (National Sleep Foundation 2006).

Causes of Daytime Sleepiness

Insufficient Sleep

The most common cause of daytime sleepiness in adolescents is insufficient sleep. As previously described, adolescents need an average of 9.25 h of sleep per night and typically obtain an average of only 7.2 h. At the conclusion of five typical school nights, an average adolescent will be lacking more than 10 h of required sleep. Clinically, an adolescent with insufficient sleep will report a late bedtime on school nights, early wake time on school days, and significant oversleep on weekend mornings (i.e., sleeping greater than 2 h on weekend mornings compared to weekday mornings). Insufficient sleep can result from the interaction of external factors (e.g., academic and social obligations, poor sleep hygiene) and internal factors (e.g., puberty, primary sleep disorders).

Extrinsic Factors

Academics, Extracurricular Activities, and Employment. Academic obligations, participation in extracurricular activities, and time devoted to employment can influence sleep patterns of adolescents and may result in later bedtimes. Approximately 13% of high school students report that their school night bedtime is dictated by the time they finish their homework and those

students in more academically challenging programs were more likely to sleep less (Carskadon 1990). In the same study, nearly 20% of participants reported spending at least 20 h/week in extracurricular activities and those students reported significantly less total sleep time and significantly later bedtimes. A final major influence on sleep patterns is the amount of hours adolescents work for pay. Those students who work 20 h or more per week report later bedtimes, less total sleep time, and are at increased risk for falling asleep at school or oversleeping (Carskadon 1990).

School Start Times. As students move from elementary to middle to high school, the start times typically get earlier. As a result, adolescents are required to wake earlier to get to school on time. When the start of the school day is delayed 1 h, one study found that adolescent bedtimes do not change, yet students obtain 45–60 min more sleep per school night (Wahlstrom 2002). Over a five-night period, these students may obtain 3.5–5 h more sleep. These delayed school start times were also associated with higher attendance rates, higher matriculation rates, and better grades (Wahlstrom 2002). In contrast, adolescents attending schools with early start times tend to have more irregular sleep schedules and increased daytime sleepiness (Wolfson et al. 2007).

Socializing. As peers become more central in the day-to-day lives of adolescents, socializing with peers, in particular in the evening, can result in later bedtimes and decreased total sleep time. Adolescents tend to have more freedom and a desire to stay up late at night to engage in social activities, with 10.9% reporting “socializing” is a factor that influences school night bedtimes and 40% reporting these demands as the primary factor that accounts for weekend bedtimes (Carskadon 1990). In addition to going out with friends or attending school functioning, the increase in online social networking and texting also likely contribute to late night peer interactions, and decreased total sleep time.

Sleep Hygiene. Poor sleep habits (also called inadequate sleep hygiene), including sleep routines, sleep environment, and caffeine use, often delay sleep onset and can contribute to insufficient sleep. It is important for adolescents to maintain a consistent sleep schedule, limit the consumption of caffeinated beverages in the afternoon and evening, and refrain from the use of technology items for 30–60 min prior to bedtime.

Adolescents typically have different sleep schedules on weekdays than weekends. Self-report data indicate that 88% of adolescents go to bed later on nonschool nights compared to school nights (National Sleep Foundation 2006). Further, adolescents may attempt to “catch up” on sleep by sleeping later on nonschool days. Specifically, the average wake time in one national survey was 6:30 a.m. on school days; however, the average wake time ranged from 9 a.m. to 10 a.m. on nonschool days, with 37% of adolescents reporting significant oversleep (National Sleep Foundation 2006). These inconsistencies in sleep schedules can further perpetuate difficulties falling asleep on school nights.

Caffeine is considered the most commonly used psychoactive substance (Nehlig and Boyett 2000) and is consumed daily to combat sleepiness by approximately 75% of adolescents (National Sleep Foundation 2006). The half-life of caffeine varies by individuals, but averages around 5 h in healthy adults. As a result, adolescents should avoid consuming products that contain caffeine, in the late afternoon and evening including sodas, energy drinks, coffee, and ice tea.

Adolescents have an increasingly heavy reliance on *technology items* (including television, computer, and cellular phone) to connect with the rest of the world. On average, adolescents in sixth grade have more than two technology items in their bedroom, while adolescents in 12th grade have approximately four (Zimmerman 2008). The use of technology items at night has been associated with decreased sleep duration (Carskadon et al. 1998). Recent studies have found computer use in males and cellular phone use in females is associated with less sleep time, irregular sleep schedules, and daytime sleepiness (Punamaki et al. 2007). Both genders have reported using an average of four technology items after 9 p.m. (Calamaro et al. 2009) and instant messaging (44%), surfing the Internet (44%), or talking on the phone (40%) in the hour before bed (National Sleep Foundation 2006). Although not yet studied, adolescents who do not turn their cell phones off at bedtime are also likely to have their sleep disrupted by text messages received during the night.

Intrinsic Factors

As children enter puberty and move into the adolescent developmental period, several normal biological

changes occur that also affect an adolescents' internal clock and quality of sleep, including the timing of melatonin secretion. Melatonin is a hormone that precipitates sleep and is secreted by the pineal gland when exposed to darkness. During puberty, melatonin is released 2–3 h later than school-aged children, resulting in a shifted circadian rhythm. This phase shift makes it difficult for adolescents to fall asleep early (e.g., prior to 11 pm). Combined with early school start times, this phase shift also makes it very difficult for adolescents to wake in the morning, since in essence their circadian rhythm suggests that they are still asleep (Carskadon et al. 1997).

Also with normative development, slow-wave sleep decreases with age (Mindell et al. 1999). Specifically by the end of this developmental stage, adolescents typically achieve 40% less slow-wave sleep compared to school-aged children (Carskadon et al. 1980). This reduction in restorative sleep also contributes to increased daytime sleepiness.

Primary Sleep Disorders

Insufficient sleep caused by inadequate sleep hygiene is the most common cause of daytime sleepiness in adolescents. But, several primary sleep disorders may contribute to daytime sleepiness in this population. These are important to consider.

Circadian Rhythm Disorder, Delayed Sleep Phase Type. Circadian rhythm disorder, delayed sleep phase type (or delayed sleep phase syndrome, DSPS) is a circadian rhythm sleep disorder reported in approximately 7–16% of adolescents (American Academy of Sleep Medicine 2005). DSPS is characterized by a persistent delay in bedtime and wake time, by at least 2 h, which interferes with activities of daily living. A typical patient complains of difficulty falling asleep at a desired time and difficulty waking at an appropriate time to meet extrinsic demands (e.g., attending school); however, once asleep, overall sleep quality is normal (American Academy of Sleep Medicine 2005). If allowed to go to bed at the time that coincides with their circadian rhythm (e.g., 3 a.m.), adolescents with DSPS can easily fall asleep. In contrast, attempts to fall asleep at an earlier time are often frustrating, and can result in prolonged sleep latency that may progress into a secondary conditioned insomnia. When the discrepancy between the desired bedtime and actual bedtime is less than 3 h, treatment involves the patient attempting

to fall asleep at their current bedtime and gradually moving the bedtime earlier in 15-min increments every few days. Limiting daytime naps and increasing natural light exposure in the morning are also commonly recommended (Mundey et al. 2005). When the discrepancy is greater than 3 h, chronotherapy (also called phase delay) is an effective treatment (Czeisler et al. 1981) and involves moving the bedtime and wake time forward in 2–3 h intervals until the adolescent achieves the desired sleep schedule (e.g., day 1: 4 a.m. to 12 p.m., day 2: 7 a.m. to 3 p.m., day 3: 10 a.m. to 6 p.m., etc.). Regardless of treatment, the patient must commit to maintaining a strict and consistent bedtime and wake time on both weekdays and weekends, as even one night of a delayed bedtime may cause DSPS to return.

Insomnia. Insomnia is a subjective complaint involving difficulty falling asleep, staying asleep through the night, and/or early morning sleep termination (e.g., 4 a.m.). It is estimated that 25–34% of adolescents report symptoms of insomnia (Ohayon et al. 2000; Roberts et al. 2002), with one study finding that 10.7% of adolescents aged 10–13 years met full criteria for insomnia (Johnson et al. 2006). Insomnia is likely the result of a combination of risk factors (genetic vulnerability, psychiatric condition), precipitating factors (acute stress, current illness), and perpetuating factors (poor sleep habits, maladaptive beliefs and attitudes about sleep, and caffeine use). Assessment for insomnia includes a medical history to evaluate other possible causes of sleep difficulties, such as obstructive sleep apnea, restless legs syndrome, psychiatric disorders, and alcohol and/or drug use. A sleep diary can be used to reveal potential maladaptive bedtime activities and behaviors. Cognitive-behavioral therapy for insomnia (CBT-I) includes a combination of non-pharmacological treatments, including sleep restriction, stimulus control, cognitive restructuring, and relaxation strategies (Edinger and Means 2005). CBT-I is an effective treatment for insomnia in adults (Morgenthaler et al. 2006). However, more research is needed about the effectiveness of CBT-I in adolescents. There are no Food and Drug Administration (FDA)-approved medications approved for the treatment of sleep problems in adolescents, including insomnia. Only one study has examined the use of zolpidem as a treatment for insomnia in youth with attention-deficit/hyperactivity disorder (ADHD) (Blumer et al.

2009). However, results indicated that zolpidem was not effective in this population. Thus, behavioral interventions remain the preferred treatment approach.

Sleep-Disordered Breathing. Sleep-disordered breathing is a continuum that ranges from primary snoring to obstructive sleep apnea (OSA). Although primary snoring is common and occurs in approximately 3–16% of adolescents, it is not associated with oxygen desaturation or arousals and is generally considered benign (Kotagal and Pianosi 2006). In contrast, OSA is prevalent in about 2–4% of adolescents. OSA is characterized by partial upper airway obstruction during thoracic and abdominal respiratory effort that causes airflow to decrease or stop, thus leading to repeated hypoxia and frequent arousals during sleep. Adolescents with OSA typically report loud snoring, mouth breathing, restless sleep, bed wetting, and daytime sleepiness; however, an overnight polysomnography (PSG) is needed for diagnosis.

The increase in youth with obesity has also resulted in an increased risk for OSA in adolescents (Redline et al. 1999). Untreated OSA impacts many aspects of health and development, including quality of life, cardiovascular functioning, and a decrease in metabolism (Friedlander et al. 2003; Kotagal and Pianosi 2006). Although adenotonsillectomy is the most common treatment for OSA in children, weight loss and continuous positive airway pressure (CPAP) are likely needed for obese adolescents (Gozal and Kheirandish-Gozal 2008).

Restless Legs Syndrome. Restless legs syndrome (RLS) is a clinical diagnosis based on a cluster of self-reported symptoms. Affecting approximately 2% of adolescents (Picchetti et al. 2007), RLS is commonly underdiagnosed in this population (Mindell and Owens 2003). The criteria for a clinical diagnosis of RLS in adolescents (age 13 and older) are the same as for adults and include: (1) an urge to move the legs that is accompanied or caused by uncomfortable and unpleasant sensations in the legs; (2) the urge to move or unpleasant sensations begin or worsen during periods of rest and inactivity; (3) the urge to move or unpleasant sensations are partially or totally relieved by movement, including walking or stretching, at least as long as the activity continues; and (4) the urge to move or unpleasant sensations are worse in the evening or night than during the day (American Academy of Sleep Medicine 2005). These symptoms can make it difficult for adolescents to get comfortable

enough to fall asleep. Approximately two-third of adolescents with RLS may have low levels of serum ferritin and can benefit from supplemental iron therapy (Allen et al. 2003; Silber et al. 2004).

Periodic Limb Movement Disorder. Periodic limb movement disorder (PLMD) is characterized by periodic episodes of repetitive limb movements during sleep that are often associated with a partial arousal or an awakening. Unlike RLS, a PSG is required to diagnose PLMD. Diagnostic criteria for adolescents are the same as adults and include: (1) polysomnography shows a period leg movement index of 5 or more per hour of sleep, (2) a clinical sleep disturbance, and (3) the leg movements cannot be accounted for by sleep-disordered breathing or medication effect (American Academy of Sleep Medicine 2005). Although explicit symptoms of daytime sleepiness are relatively uncommon, adolescents with PLMD typically complain of restlessness during sleep, nighttime arousals, periodic limb movements, and daytime behavior problems. The prevalence of PLMD in the pediatric population is unknown; however, several studies have shown that PLMD may occur in approximately 25% of adolescents diagnosed with ADHD, and approximately 20% of patients with PLMD also have RLS (Mindell and Owens 2003). Treatment for PLMD is similar to treatment for RLS in that iron supplements are often utilized if serum ferritin levels are low. Although >90% of adult patients experience some relief of symptoms with medication (Mindell and Owens 2003), no empirical studies have been conducted to determine the efficacy of specific medications in children and adolescents.

Narcolepsy. Narcolepsy is a neurological disorder that is primarily characterized by excessive daytime sleepiness; however, additional symptoms typically include irresistible sleepiness or spontaneous “naps” during the day, a loss of muscle tone following intense emotional experiences (cataplexy), and vivid dreams (hypnagogic hallucinations) and/or temporary paralysis during sleep onset or during the transition from sleep to wake (American Academy of Sleep Medicine 2005). This disorder occurs in 1 in 2,000 Americans (Kotagal and Pianosi 2006) and one-third of patients describe symptoms present prior to the age of 15 (Ohayon et al. 2005). Assessment for narcolepsy includes a PSG with a multiple sleep latency test (MSLT). Treatment for narcolepsy typically involves medications, such as stimulant medications

and modafinil for daytime sleepiness (Ivanenko et al. 2003) and anticholinergic medications for cataplexy (Littner et al. 2001). Non-pharmacological strategies are also commonly utilized, and may include recommendations for improving sleep hygiene and implementing scheduled daytime naps.

Consequences of Disturbed Sleep

Academic Performance

With 28% of American high school students report falling asleep in school at least once per week and 14% report chronic tardiness to school as a result of oversleeping (American Academy of Sleep Medicine 2005), disturbed sleep can have a significant impact on academic performance. Adolescents who report less sleep, irregular sleep, or significant oversleep on nonschool days are more likely to have poor grades (Wolfson and Carskadon 1998). Conversely, better school performance is associated with longer sleep duration, fewer nighttime arousals, less napping, and less oversleep on nonschool days (National Sleep Foundation 2006; Wolfson et al. 2007). Sleep disturbances can also interfere with the consolidation of memory that occurs during sleep and can negatively affect the ability to store and process information (Curcio et al. 2006).

Mood Disorders

Sleep quality and duration have been linked to psychological health and symptoms of depression and anxiety in adolescents. It is thought that the ability to successfully self-regulate emotions may partly depend on having adequate personal resources, including sufficient sleep (Baumeister 2002). Self-reported high degrees of daytime sleepiness are correlated with higher scores on measures of depression and anxiety (Moore et al. 2009). Similarly, an average sleep duration of less than 6 h per night and the shifting of bedtimes by more than 2 h between school nights and nonschool nights is associated with significantly more depressive symptoms (Wolfson et al. 2007), and symptoms of insomnia have been correlated with symptoms of anxiety (Morrison et al. 1992). It is important to note that a bidirectional relationship may exist between sleep disturbance and mood disorders, as symptoms of mood disorders may disrupt sleep and disrupted sleep can increase symptoms of mood disorders.

Medical Issues

During the previous 20–30 years, pediatric obesity has tripled (Ogden et al. 2006), while adolescent sleep duration has declined (Iglowstein et al. 2003). One study found that insufficient nocturnal sleep was associated with increased daytime napping and significantly predicted total food cravings, an eating behavior that can potentially lead to obesity (Landis et al. 2009). Similarly, cross-sectional research has demonstrated that shortened sleep duration is a significant predictor of overweight in subsequent years (Hart and Jelalian 2008). Epidemiological research has yet to demonstrate a causal relationship between obesity and shortened sleep duration. In addition, the understanding of the role of sleep in the regulation of appetite remains very limited.

Shortened sleep duration may also predispose adolescents to increased risk for other medical disorders. In adults, shortened sleep duration is associated with the development of risk factors for insulin resistance, impaired glucose tolerance, and hypertension (Gottlieb et al. 2005, 2006). Although less documented in adolescents, insufficient sleep has been found to be associated with higher fasting insulin, peak insulin, and insulin resistance independent of weight status in this population (Flint et al. 2007).

Risk-Taking Behaviors

Increases in risk-taking behaviors, including drowsy driving and substance use, are also related to insufficient sleep. Adolescents and young adults are most likely to be involved in crashes caused by falling asleep while driving and it is estimated that individuals younger than 25 years of age were involved in 55% of all of these types of crashes (Millman 2005; Pack et al. 1995). Drowsy driving is common in adolescents, as 15% report engaging in this activity at least once per week, and appears to increase in frequency as adolescents age with 62% of 11th graders and 68% of 12th graders reporting drowsy driving within the last year (National Sleep Foundation 2006). In addition to the “acute” effects of insufficient sleep causing the driver to fall asleep, “chronic” effects of sleep deprivation can interfere with an adolescents’ ability to learn the knowledge and skills necessary to engage in safe driving practices (Groeger et al. 2004).

Sleep disturbance in adolescents has also been associated with increased substance use, specifically use of

cigarettes, alcohol, and any illicit drugs (Johnson and Breslau 2001). One study found that adolescents who obtained the least amount of sleep on school nights and reported the largest difference between school-night and nonschool-night bedtimes also reported higher levels of risk-taking behavior, specifically alcohol use (O’Brien and Mindell 2005). In the same study, reports of increased daytime sleepiness and later weekend bedtimes were associated with increased tobacco, alcohol, and marijuana use, and an increase in sexual behavior.

Assessment of Sleep in Adolescents

Clinical History

A detailed clinical sleep history includes questions regarding (1) the presenting complaint, (2) sleep routines (bedtime routine, sleep onset associations, sleep environment), (3) sleep schedule (bedtime, wake time, naps, weekday vs. weekend sleep), (4) nocturnal behaviors (night wakings, quality of breathing), and (5) daytime behaviors (daytime sleepiness, fatigue, school functioning). The medical history should include a discussion of current and past medical conditions, psychiatric conditions, hospitalizations, surgeries, medications, and childhood development, as each of these may have a direct or indirect impact on sleep quantity and quality. Psychosocial factors that may influence sleep should also be queried, including significant life events like the death of a loved one, change in school, or parental divorce.

Sleep Diary

Typically completed over a period of 2 weeks, a sleep diary documents sleep patterns and includes information on bedtime, sleep onset latency (how long to fall asleep), timing and duration of night wakings, wake time, length and duration of daytime naps, and total sleep time. Sleep diaries should be completed each day, providing the clinician with a prospective picture of the patient’s sleep patterns. Along with diagnosing sleep disorders in adolescents, sleep diaries can foster feelings of independence and ownership of sleep behaviors, in particular when used during treatment for insomnia, delayed sleep phase syndrome, or poor sleep hygiene.

Actigraphy

Actigraphy provides a reliable and valid estimate of sleep patterns over a 1- to 2-week period in the

adolescent's natural sleep environment (Johnson et al. 2007; Sadeh and Acebo 2002). This wristwatch-sized device has an accelerometer that uses motion to determine when the adolescent is awake or asleep. It provides a valid estimate of total sleep time and has the benefit of collecting information on sleep patterns over weekday and weekend nights.

Polysomnography and Multiple Sleep Latency Test

Unlike actigraphy, polysomnography (PSG) is a diagnostic tool that is typically conducted in a sleep laboratory on one night. It is widely considered the gold standard for identifying sleep architecture and detailing breathing, body movements, and arousals during sleep (Sheldon 2005). Overnight PSG is used to diagnose OSA and PLMD and is commonly ordered for the following indications: sleep-disordered breathing, to titrate for CPAP or BiPAP, abnormal limb movements during sleep, atypical parasomnias, and/or unexplained daytime sleepiness.

The multiple sleep latency test (MSLT) is an objective study of daytime sleepiness used to diagnose narcolepsy. Following an overnight PSG, patients are given four or five 20-min nap opportunities at 2-h intervals. A short sleep onset latency (time it takes the adolescent to fall asleep) and the presence of REM during naps are considered for a diagnosis of narcolepsy (American Academy of Sleep Medicine 2005). However, these are also seen with significant sleep deprivation, thus it is important to ensure the adolescent is obtaining sufficient sleep for at least 1 week prior to the MSLT.

Conclusion

Adolescents who have long been seen as moody, grumpy, or lazy may actually be chronically sleep deprived. Although the average adolescent needs 9.25 h of sleep per night, they obtain on average only 7.2 h. Insufficient sleep is the most common cause of excessive daytime sleepiness in adolescents, and result from an interaction of extrinsic and intrinsic factors. The consequences of insufficient sleep may be severe and hamper many aspects of development, including academic performance, mood disorders, risk-taking behaviors, obesity, and other medical complications. The management of sleep disorders in this population involves (1) diagnosing and treating any underlying physiological sleep disruptors, and (2) increasing total sleep time through

the improvement of sleep hygiene and maintenance of a consistent sleep schedule. Habits and patterns of behavior developed during adolescence may persist into adulthood. As a result, the diagnosis and treatment of sleep disorders in adolescents is necessary to promote optimal well-being during this critical period of development.

Cross-References

► [Sleep Deprivation](#)

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Smart Drugs

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Smart drugs are cognitive-enhancing drugs that influence a wide range of factors relating to thinking, such as memory, understanding, alertness, and cognition. Formally, smart drugs are known as Nootropics. Nootropics are a heterogeneous group of compounds of diverse chemical composition and biological function that are alleged to facilitate learning and memory or overcome natural or induced cognitive impairments (see Malik et al. 2007). Much of the research in this area has focused on memory impairment, especially memory decline, which typically begins after the age of 30. That research reveals that memory enhancers and treatments for age-related memory decline are quite suggestive and, for some drugs, highly persuasive (for reviews, see McDaniel et al. 2002; Malik et al. 2007). That research is supplemented by studies examining

a wide variety of effects that drugs, including non-prescriptive ones, do have on cognitive activity. For example, several drugs can positively influence even incredibly complex human brain disorders such as depression and anxiety (Gerlai 2003). The potential of smart drugs continues to increase dramatically, which has led to increasing concern about the potential negative effects of these drugs on individuals and society as a whole (see Rose 2002).

Concern about smart drugs, sometimes called memory enhancers, has grown rapidly as off-label and nonprescription drugs increasingly are used by healthy individuals for the purposes of enhancement rather than treatment (Cakic 2009). For example, it is now suggested that there is an increase in “academic doping” by university and high school students, that there is, for example, a widespread nonmedical use of psychostimulants such as methylphenidate across universities for the purposes of enhancing concentration (McCabe et al. 2005). The use of these drugs is increasing as some medications currently available to patients with memory disorders have been shown to increase performances in healthy people, and drugs designed for psychiatric disorders can enhance certain mental functions (Lanni et al. 2008). Where these trends will continue remains to be seen, but popular media has played increasing attention to it, which has helped to fuel the use of enhancers (Cakic 2009).

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Social Brain

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Overview

Social cognition is the collection of cognitive processes used to understand and interact with others, and the term “social brain” refers to the set of brain regions that carry out these social cognitive processes. Certain social cognitive abilities continue to develop during adolescence. These include face processing, mental state attribution, and the response to peer influence and social rejection. Adolescent social cognitive development is paralleled by a shift in functional brain activity within social brain regions. Concurrently, structural neuroimaging studies show protracted development within parts of the social brain in adolescence. Together, these cognitive neuroscience findings may contribute to the understanding of social psychology evidence for a key shift in self-consciousness and the importance of peer relationships in adolescence. This essay will present a summary of findings from functional imaging studies of the social brain in adolescence and concurrent social cognitive development, along with an overview of the prominent theoretical models of these findings. Relationships with structural neuroimaging research will be briefly touched upon. Bringing together these fields – social neuroscience, social cognition, and the study of brain development – will enhance our understanding of how the social brain develops during adolescence.

The Social Brain in Adolescence

Humans are inherently social. A large proportion of the human brain is involved in understanding and interacting with other people. The collection of brain regions involved in social cognition is referred to as the “social brain.” Noninvasive methods for assessing correlates of brain activity, including functional magnetic

resonance imaging (fMRI) and electroencephalography (EEG), show that components of the social brain undergo functional development during adolescence (Blakemore 2008). fMRI studies assess neural activity indirectly but with relatively high spatial resolution, by measuring local changes in blood flow that occur in response to the metabolic demands of synaptic activity. EEG, which has relatively low spatial resolution, measures neural activity on a millisecond timescale via electrodes positioned on the scalp. Together, developmental fMRI and EEG studies show evidence for continuing development during adolescence of the neural correlates of face processing, mental state attribution, and the response to social rejection. Behavioral studies show evidence that these and additional social cognitive abilities, such as the ability to resist peer influence, continue to develop during adolescence. Concurrently, structural MRI studies show protracted development during adolescence in the volume and composition of gray and white matter, including within the social brain.

The Social Brain: Definition

The social brain is defined as the complex network of brain regions that enable us to recognize other social agents, infer their mental states (intentions, beliefs, and desires), perceive their enduring dispositions and their actions, and respond to them – communicatively, behaviorally, and emotionally. Over the past two decades, research has begun to shed light on how social brain regions enable the diverse set of cognitive functions that allow humans to interact. Key social brain regions include the fusiform face area (FFA), the posterior superior temporal sulcus (pSTS), the temporo-parietal junction (TPJ), the anterior temporal cortex (ATC), the anterior rostral medial prefrontal cortex (arMPFC), the anterior cingulate cortex (ACC), and the amygdala. The social brain is composed of a number of partially discrete, specialized neural systems. These systems show some overlap with brain regions involved in nonsocial functions, such as perception, emotion, and the executive functions (Frith and Frith 2010). Due to the complexity of social brain systems, this essay will be limited to a number of key components that have been studied in adolescence using fMRI, EEG and empirical cognitive tasks. In the following section, evidence will be summarized from developmental studies looking at: (a) face processing,

(b) mentalizing, (c) peer influence, and (d) social rejection.

The Social Brain in Adolescence: Evidence from Cognitive Neuroscience

Face Processing

A fundamental requirement for social cognition is the ability to recognize conspecifics (other members of one's species), using visual, auditory, and other cues. Humans seem to be equipped with the ability to visually detect faces at birth: neonates prefer to look at photographs and cartoons of faces than at other objects, or at inverted faces. This early face recognition ability probably relies on subcortical structures. fMRI studies in adults show that later face recognition relies on additional cortical areas such as the FFA, which is important for perceiving invariant aspects of faces (e.g., identity), and the pSTS, which responds to dynamic or changeable aspects of faces (e.g., eye gaze, emotion expressions). Developmental fMRI studies show that these neural components of face processing ability are functionally present in adolescence. However, there may be protracted development in the extent of regional specialization and integration in face-processing networks. Evidence for this notion is provided by EEG studies, which show continuing development in the millisecond time-sequence of face processing components. For example, the early "P1" component at ~90 ms (thought to reflect automatic visual processing) and the "N170" component at 140–190 ms (which is enhanced during face vs. object processing) shift during adolescence toward an adult pattern. This shift is thought to correspond to findings from behavioral studies that show continuing development during adolescence in face processing tasks, for example, delayed recognition of unfamiliar faces.

Another component of face processing, and one that is vital for social interactions, is the ability to read emotion in faces. Functional imaging studies show that the brain's response to facial displays of emotion develops throughout adolescence (for a review, see Blakemore 2008). This processing relies on face-sensitive brain regions described above (FFA, pSTS), and in addition recruits the amygdala, which is important for reflexive and unconscious emotional processing, and the arMPFC and bordering ACC,

which participate in high-level social cognitive processes such as mentalizing (e.g., inferring beliefs or desires). In addition, cognitive control-related regions of the prefrontal cortex (PFC) are recruited during emotional self-regulation. Developmental fMRI studies show that passive viewing of emotional (e.g., angry, fearful) relative to neutral faces results in increased activity within parts of PFC in adolescents, relative to both children and adults. One study reported an age-related increase between 8 and 15 years in activity within lateral and superior PFC, and another study showed greater activation of the ACC in adolescents (aged 9–17 years) relative to adults (aged 25–36 years). Heightened adolescent PFC activity may reflect development in the emotional or regulatory response to emotionally evocative face stimuli, as shown in a number of behavioral studies. EEG studies in children and adolescents show nonlinear development of the N170 response to emotional faces. The N170 initially decreases in amplitude during childhood (up to the age of 10), and then reverses between 10 and 13 years, steadily increasing in amplitude during the remainder of adolescence. The N170 has been linked to face processing expertise, and behavioral studies show continuing improvement in facial emotion recognition during adolescence.

There is evidence that the development of face processing may be influenced by puberty. Puberty onset occurs around 10–13 years, which is the age of N170 reversal described above; furthermore, behavioral studies have shown that face processing is perturbed around the onset of puberty: Studies of facial identity and emotion recognition have shown a temporary decline in performance around puberty onset (age 11 in girls, 12 in boys), and relatively poorer performance on facial identity recognition in mid-puberty relative to pre-/post-puberty groups matched for age (see Blakemore 2008). Further research is needed to explore this possible relationship and its neurobiological mechanisms.

Mentalizing

Another aspect of social cognition, which enables us to understand others and predict their future actions, is the ability to work out a conspecific's mental state – for example, their intentions, beliefs, or desires. This ability is known as “theory of mind” or “mentalizing.” A large number of functional imaging studies in adults

have shown evidence for the involvement in mentalizing of a circumscribed set of brain regions comprising the pSTS, TPJ, ATC, and arMPFC (Frith and Frith 2003). Recently, a number of fMRI studies have investigated the development during adolescence of the functional brain correlates of mentalizing. These studies have used a wide variety of mentalizing tasks – involving the spontaneous attribution of mental states to animated shapes, reflecting on one’s intentions to carry out certain actions, thinking about the preferences and dispositions of oneself or a fictitious story character, and judging the sincerity or sarcasm of another person’s communicative intentions. Despite the variety of mentalizing tasks used, fMRI studies have consistently shown an age-related decrease in activity within arMPFC during mentalizing relative to control tasks, during adolescence (Blakemore 2008). Conversely, activity within posterior and temporal components of the mentalizing system – the pSTS, TPJ, or ATC – shows the opposite developmental pattern, depending on the task involved. Given the purported role of arMPFC in representing mental states, the age-related decrease in arMPFC activity may correspond to the development of mentalizing proficiency. Alternatively, or in addition, this change in activity may reflect emerging functional specialization, or a change in neuro-haemodynamic coupling, with effects on fMRI signal. Evidence from a recent fMRI study that investigated functional connectivity has shown that the shift in arMPFC response during adolescence is accompanied by a shift in task-dependent interactions with the pSTS and TPJ. This suggests that adolescent development in mentalizing-related fMRI signal is accompanied by a change in functionally relevant interactions within the neural network as a whole.

The development of mentalizing proficiency up to the age of five has been studied extensively and is well characterized (e.g., Frith and Frith 2003) but, until recently, very little was known about the development of mentalizing beyond early childhood and into adolescence. However, evidence from social psychology studies shows substantial changes in social competence and social behavior during adolescence, and this is hypothesized to rely on a more sophisticated manner of thinking about and relating to other people – including understanding their mental states. Recent social cognition studies have begun to provide evidence in support of this hypothesis. One study investigated

the development during adolescence of emotional perspective-taking, which is the ability to infer the feelings of others or “step into their shoes.” The results showed a decrease during adolescence in the reaction time difference between taking one’s own versus another person’s perspective. A study by Dumontheil et al. (2010) used a novel mentalizing task, in which participants aged 7–28 years were instructed to sequentially move objects between a set of shelves arranged in a grid, as instructed by a “Director.” The Director could see the contents of only some of the shelves, and therefore correct interpretation of the Director’s instructions required participants to take into account the Director’s visual perspective, and use this mental state information online in a communicative situation. Results showed continuing development during adolescence in performance on visual perspective (mentalizing) relative to rule-based (executive) control trials. Whether this development in performance is related to the age-related decrease in arMPFC activity during adolescence is a matter for future study.

Behavioral economic paradigms have proven effective in investigating the use of mental state information to guide strategic social behavior, including during functional neuroimaging. In these paradigms, which include the Ultimatum Game and the Trust Game, participants engage in structured competitive/cooperative interactions in which the aim is to win money. A number of fMRI studies in adults have shown task-related activity within the brain’s reward system (e.g., nucleus accumbens) during these games, consistent with the desire to win monetary rewards, as well as within mentalizing regions such as pSTS, TPJ, arMPFC, and ACC, thought to relate to the processing of the others’ actions and intentions during the game. These games are beginning to be investigated developmentally using fMRI. Of interest, behavioral studies using these games show that the tendency to strategically use mental state information to win money continues to develop in adolescence. For example, one study has shown that the tendency to make a generous offer of money is increasingly modulated by the perceived power of one’s co-player to punish a selfish offer, between the ages of 9 and 18 years (Güroğlu et al. 2009). This stands in contrast to evidence that the tendency to act upon basic, inflexible social principles, such as fairness and reciprocity

(e.g., reciprocating generous offers of money), is present from a relatively early age (6–9 years).

Peer Influence

Another aspect of social cognition, and one that is particularly relevant to adolescence, is the tendency to be influenced by other people (particularly peers). Peer influence can affect one's actions, beliefs, and emotions. Brain regions such as the STS (including pSTS), which is involved in the perception of actions, may be important for this social function, as are parts of the frontal cortex involved in motor control and the ability to “mirror” actions (e.g., premotor cortex, inferior frontal gyrus). Cognitive control and decision-related regions of PFC (e.g., dorsolateral PFC) are thought to be involved in the decision to mirror, or to resist mirroring actions. Recent developmental functional and structural MRI studies have shown correlates, within these brain regions, of the ability to resist peer influence. For example, an fMRI study investigated the functional correlates of a self-report measure of resistance to peer influence (RPI) in pre-adolescent (10-year old) children. Previously, this measure of RPI has been shown to increase linearly across childhood and adolescence, stabilizing between ages 14 and 18. During fMRI scanning, groups of high-RPI and low-RPI children viewed clips of angry hand and face gestures. The fMRI results showed that children with low RPI exhibited greater activity during observation of angry gestures within right dorsal premotor cortex and left dorsolateral PFC. However, children characterized by high RPI showed stronger functional connectivity between brain regions underlying action perception (e.g., STS) and decision making (e.g., lateral PFC, premotor cortex). A recent structural MRI study in adolescents (age 12–18) used the same RPI measure to show a relationship between self-reported RPI and inter-regional correlations in gray matter thickness in lateral prefrontal and premotor cortex (Paus et al. 2008).

Peer influence is of particular interest with regards adolescence because epidemiological, social psychology, and behavioral studies show that adolescents are particularly prone to making risky decisions (e.g., Burnett et al. 2010). It has been suggested that one factor contributing to this tendency is heightened susceptibility to socio-emotional context, during adolescence relative to adulthood. A recent experimental

study investigated the influence of social context on risk-taking behavior. In this study, adolescents (age 13–16), youths (age 18–22), and adults (age 24+) played a car driving simulation game, in which there were opportunities to act in a cautious or risky manner (e.g., stop vs. speed through a traffic signal). Crucially, the game was played alone or in the presence of two peers. As predicted, adolescents took many more risks when driving in the presence of peers, compared to when they were alone. In contrast, levels of risk-taking in adults did not differ between the social and solitary conditions (youths showed an intermediate effect). The results of this study are consistent with the age-related increase in RPI scores described above.

Social Rejection

Social psychology studies have shown that adolescents (particularly female adolescents) are more sensitive to being excluded from a social interaction by peers than are adults or younger children. One recent study (Sebastian et al. 2010) investigated this effect experimentally, using a computerized ball-tossing paradigm (named Cyberball). In this game, participants are told that they are playing a ball-tossing game over the internet with other players, whereas in fact the actions of the other players are programmed in advance. This means that participants can be systematically included, or excluded, by the other players. In female adolescents aged 11–15, self-reported mood following social rejection was significantly lower than in female adults. Additionally, levels of anxiety were disproportionately increased following social rejection in the younger adolescent (aged 11–13) compared with the adult group. These results suggest that increased sensitivity to social rejection in adolescents occurs in an experimental context, in the absence of external factors such as school environment, participants' existing social status among peers, or the potential for negative consequences arising from the rejection episode.

Neuroimaging studies are beginning to explore the neural bases of this effect. Using the Cyberball paradigm described above with fMRI, Masten et al. (2009) scanned male and female adolescents aged 12–13. In addition to a number of brain areas consistently activated during this task in adults (insula, ventrolateral PFC), adolescents also activated a number of regions involved in negative affect (subgenual cingulate

cortex) and reward (ventral striatum). In contrast, adolescents did not activate the dorsal ACC, a region that has been associated with levels of distress reported during social exclusion in adults. However, adolescents and adults need to be compared within the same study in order to ascertain the extent to which these differences reflect hypersensitivity to social rejection in adolescence. Another study used an internet chat-room paradigm to investigate neural responses to anticipated peer evaluation in male and female participants aged 9–17. Results showed that in females (but not in males) there was an age-related increase in activation within regions involved in affective processing (nucleus accumbens, hypothalamus, hippocampus, and insula), but no differences within the ACC or other social brain regions. Similarly, in a study in which adults (age 19–25) as well as adolescents (age 12–17) were scanned with fMRI while undergoing a social rejection manipulation, there were age-related increases in rejection-related activity within emotion processing and emotion regulation regions (striatum, subgenual cingulate cortex, orbitofrontal cortex, lateral PFC). This perhaps implies that the crucial difference in these social rejection tasks relates to emotional self-regulation, not to specifically social cognition ability. However, in naturalistic school or social contexts, it is probable that an individual adolescent's skill in interpreting mental states will interact with their reaction to, or risk of, social rejection. In summary, fMRI studies of social rejection show age differences in neural activity that may reflect behaviorally assessed changes in the impact of social rejection on mood, and the ability to self-regulate one's emotional response to peer evaluation and episodes of social rejection.

This review of the developmental neuroimaging literature on social cognition is not exhaustive. However, the evidence reviewed from fMRI and EEG studies suggests continuing development across adolescence in the neural correlates of social cognitive tasks including face processing, mentalizing, peer influence, and social rejection. Concurrently, there are changes in the proficiency of mentalizing and face processing, the ability to resist peer influence, and self-regulation of the emotional response to social rejection and other salient affective social cues. In the following section, these findings are placed in the context of theoretical accounts of neurocognitive development in adolescence.

Theoretical Models of Adolescent Neurocognitive Development

Recently, several models have been proposed to account for behavior associated with cognitive and functional brain development during adolescence. Many of the behaviors included in these models have a socio-emotional dimension, for example, risk-taking in the presence of peers, sensitivity to social rejection, and the increased importance of peers relative to parents during this time. The Social Information Processing Network model (Nelson et al. 2005) is the most explicitly social model, and suggests that significant neuroanatomical remodeling occurs within neural networks specialized for social evaluation and emotion regulation. Remodeling may result in part from the effect of pubertal gonadal steroids on limbic regions, which are densely innervated by gonadal steroid receptors, and partly from the gradual maturation of the prefrontal cortex, which continues into the late teens and early twenties. As well as development within “cognitive” and “affective” neural circuitry, it is also hypothesized that connectivity between these circuits continues to develop. The study of neural connectivity during cognitive tasks is still in its infancy, and it is likely that this will be an important direction for the field of developmental social neuroscience over the next few years.

Also of relevance to social development in adolescence is the “Developmental Mismatch” hypothesis. A number of researchers have noted that adolescents exhibit heightened emotional sensitivity and increased risk-taking, relative to both children and adults. This is suggestive of a nonlinear maturational trajectory for brain networks subserving these processes. It has been hypothesized that the limbic system (including the amygdala and nucleus accumbens) matures earlier in development than does the PFC, with the result that during the time lag between these two systems, individuals are more greatly affected by emotional context when making decisions. The greatest mismatch in the development of these systems is believed to occur during adolescence (Casey et al. 2008). In a variant of this model, Steinberg (2008) suggests that remodeling of the dopamine system during adolescence increases the salience of social rewards such as peer approval, while gonadal steroid release is suggested to lead to an increasing sensitivity to social stimuli, via effects on oxytocin receptors. Neuroanatomical evidence

(discussed in more detail below) provides support for developmental mismatch models, with more protracted development occurring in regions typically defined as regulatory (such as PFC) than in limbic regions (Casey et al. 2008).

Neuroanatomical Development

Over the past decade, MRI studies have shown continuing development during adolescence in the structure of the brain. Two main age-associated changes, before and during adolescence, have been described using structural MRI methods. First, cortical gray matter density changes in a nonlinear and region-specific manner. This is thought to reflect regional changes in synaptic density, and/or intracortical myelination. Second, white matter density increases linearly across the cortex, and this is accompanied by an increase in white matter integrity as shown using diffusion MRI. These white matter changes are thought to reflect axonal myelination and increased axonal caliber.

Of interest for adolescent social brain development, these neuroanatomical changes continue to occur during adolescence within brain regions involved in higher cognitive functions, including social cognition and emotion regulation. In contrast, basic sensory regions of the brain, and perhaps some limbic regions, mature earlier in development. An early study by Jay Giedd and colleagues showed that gray matter density in the frontal lobe follows an inverted-U shaped pattern, with its peak around puberty onset (age 11 in girls and 12 in boys). This is followed by an extended sequence of gray matter thinning during the remainder of adolescence. In the temporal lobe, gray matter density peaks toward the end of adolescence, on average 16–17 years. More recent studies, including those from Philip Shaw and others, have shown evidence for distinct developmental trajectories of gray matter change within subregions of each cortical lobe. In the frontal lobe, precentral (motor) gray matter peaks prior to adolescence, whereas dorsolateral PFC and parts of MPFC attain peak gray matter volume later, at around puberty onset or beyond. This may correspond to behavioral trajectories of motor control versus higher-level cognition. In the temporal lobe, regions implicated in social cognition, such as the superior temporal lobe, attain peak gray matter density relatively later (~14 years) than more middle and inferior temporal lobe regions (~11–12 years).

The functional relevance of these findings for social brain development is only beginning to be understood. It has been suggested that the relatively protracted neuroanatomical development within prefrontal-regulatory regions, relative to earlier-maturing limbic regions, may underlie adolescent profiles of social-emotional responding and risk-taking (see section “Theoretical Models of Adolescent Neurocognitive Development”). Progressive myelination or increasing axonal caliber during adolescence, thought to underlie the MRI changes in white matter density, may result in enhanced functional integration within brain networks for social cognition – for example, within the mentalizing system (section “Mentalizing”), and in networks for social perception and peer influence (section “Peer Influence”). Functional neuroimaging studies of adolescent brain development should consider functional integration and functional connectivity, in addition to age differences in regional activation. Developmental investigations in nonsocial domains of cognition – for example, inhibitory control – have shown suggestive evidence for relationships between structural and functional brain measures as well as relationships to cognitive development.

Conclusion

Functional neuroimaging studies have shown that the social brain – the complex collection of brain regions used to understand and interact with others – continues to develop during the adolescent years. Using a number of social cognition tasks, changes in functional brain activity have been shown to occur alongside emerging social cognitive proficiency and neuroanatomical development. Face processing studies show nonlinear changes in neural components thought to reflect emerging expertise in facial identity and emotion processing. EEG studies show a peak in N170 amplitude, and fMRI studies show greater activity within parts of PFC, during adolescence relative to both younger and older ages. This is paralleled by behavioral studies showing a disruption in face processing at the start of adolescence, around the onset of puberty. fMRI studies of mentalizing in adolescents and adults consistently show an age-related decrease in activity within the arMPFC, a region involved in representing and reflecting upon mental states such as intentions, beliefs, and desires. This change in functional activity occurs alongside improvements in mentalizing proficiency.

Studies of peer influence and social rejection have shown changes in functional brain activity within social cognition, affective and cognitive control-related brain regions.

Understanding functional development of the social brain, and elucidating how this is related to concurrent changes in social cognitive ability, structural brain development, and puberty, will increase our understanding of social behavior during adolescence. Knowledge of typical adolescent brain development may contribute to a better understanding of the rise in vulnerability to certain psychiatric illnesses that occurs in adolescence, including social anxiety and depression. Development of the social brain may expose the adolescent individual to certain vulnerabilities presented in an adverse social and emotional environment, but at the same time may present a unique window of opportunity for social and self-development.

Cross-References

- ▶ [Brain Maturation](#)
- ▶ [Theory of Mind](#)

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Social Capital Theory for Youth Studies

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Introduction

Social capital plays a fundamental role in the well-being of children and youth (CY) and is the pivotal concept of social capital theory. Until recent decades, CY researchers, program administrators, government officials, and funders have neglected to recognize the crucial relationship between social capital and well-being. Since the 1980s, however, an increasing number of CY researchers have examined social capital, though few use social capital theory (SCT) to ground their studies and programs. Although the theory is still in the developmental stage, research and community programs, both suggest that social capital is a key factor in the well-being of CY. To understand the current state of the theory in CY studies, we need to examine the history of SCT and outline the theory's main tenets. To improve the understanding of CY well-being, it would be useful, if not necessary, to view well-being through the SCT lens. Such an approach would make it possible to best advise, evaluate, and develop valid, efficient, and effective CY programs.

What Is Social Capital and Why Is It Important?

Social capital (SC) refers to the intangible product of an individual's relationships with others. It is what is produced within relationships between people. Many scholars have come to define it as feelings of

trust, respect, and loyalty. However, SC is not restricted to these feelings in that it can include many other feelings that bond people together, such as love and commitment.

Social capital is essential to the development of well-being, because personal well-being – regardless of how it is defined – is contingent on the individual and the groups to which the individual belongs. Acquiring social capital is a complex matter that will be discussed later, but put succinctly, social capital is acquired through the interaction between an individual's unique characteristics and those of other group members. Social capital is unique to the individual, and therefore different people have varying degrees of social capital. For each individual, the development of social capital starts with innate or socially programmed characteristics (such as being gregarious, extroverted, etc.). These individual characteristics help each person actualize resources held within a group or by another individual in the group. Actualizing resources also depends on the other member(s) of the group and the efficiency (or deficiency) of structural (who is in the group) and functional (how group members function) social resources. In addition, all the groups to which an individual belongs are interconnected, and therefore an individual's social capital is not merely the additive combination of social capital from each group – 1 (e.g., family), 2 (e.g., school), and 3 (e.g., community organization) – but rather an individual's social capital is the synergetic transformation of social resources held in all of the groups to which he or she belongs. Social capital is not stagnant, but can change rapidly, depending on group membership (because changes in group member(s) can affect the individual). The examination of SC requires researchers/program officers to examine people/groups within their social environment. The conceptualization and operationalization of social capital is not easy, though its examination is essential if we want to uncover why well-being discrepancies exist.

History of the Concept

Social capital is not a new concept, but rather an idea that has been central to the development of self and community, probably since the beginning of human civilization. Throughout the world, orally transmitted stories (mythologies) that have been told for millennia

remind individuals of the ancient teachings of the formation, reliance, and trust that are held within groups, specifically, the family, or the larger society. Within written language, there are numerous examples of social thinkers using the idea of social capital as a foundation of their writing. Although they do not use the term “social capital,” such social thinkers as Marcus Aurelius (1964), Aristotle (1953), and their teachers and followers relied heavily on ideas associated with it. Aurelius, in *Meditations*, discussed the vital aspects of life, somewhat of a philosophical combination of the books of *Proverbs* and *Ecclesiastes*. Much of what he wrote hinges on the social ties that people have within their community. In his words, a person needs “to keep his mind from straying to paths incompatible with to those of an intellectual and social being” (Book 3, Paragraph 7) and to “avoid forming opinions that are in variance with Nature and with the Constitution of a reasonable being” (Book 3, Paragraph 9). These two quotations exemplify how Aurelius discussed of what is required to belong to a positive, healthy group and thereby enhance one's own well-being. Aristotle, in contrast, devoted enough writing to develop a book solely on “ethics,” which sociologists refer to as values – a key factor in the development of social capital. In his work *Ethics*, Aristotle discussed how individuals can form and be a part of strong groups (such as friendships and society). In Books 8 and 9, types of friendships are discussed, as is “Grounds of Friendship.” All well-known religious leaders (also social thinkers) have discussed similar issues that directly crosscut the present understanding of social capital – Buddha, Jesus of Nazareth, and Mohamed to name just a few.

If mythology, social thinkers, and religious leaders have talked about social capital for thousands of years and deemed it fundamental for individuals' well-being, why has it taken so long for researchers to incorporate this elementary concept into their work? Much of this stagnation is rooted in the positivistic foundations of the social sciences. Since the social revolutions of the mid-twentieth century, social research has broadened its epistemological and ontological underpinnings, and most social researchers would now agree that non-tangible concepts, such as social capital, are important if not vital to understand disparities in well-being. In addition, the area of child and youth studies emerged during this period. And while scholars

of the mid-twentieth century were the first to recognize the period of “childhood” and the importance of studying children and youth, this research was adult-centered. Consequently, the people that were being studied did not have a voice. It has only been since the late 1980s that the field of childhood and youth has blossomed, giving agency to these individuals. These factors alone, however, do not explain why social capital is not used more broadly in CY studies or to guide programs/policies.

CY studies is an expansive field, fragmented by discipline and nation. In the 1980s, scholarly discussion surrounding social capital was relatively limited (to the USA), as was collaboration. The concept of social capital has been largely limited to Coleman’s (1987, 1988, 1990), and to a lesser extent, Bourdieu’s (1986) and Putnam’s (1999) formulations. As an educator, academic, applied researcher, and advocate for social change, Coleman was largely devoted to bettering the lives of CY, especially those who were disadvantaged. Coleman’s writings on SC have been pivotal not only in CY studies, but also among scholars who examine SC. Coleman made great strides to introduce SC and a general social theory into mainstream CY studies and programs, but by today’s standards, Coleman’s understanding of well-being and SC is outdated and has limited applicability. The conceptual and theoretical development of social capital stagnated with Coleman’s death in 1995.

Over the past decade, fragmentation within the field of CY studies has declined because of technological innovations. With the current widespread usage of the Internet, CY researchers, and program administrators have become increasingly aware of SC and the theory. Free-access Internet journals, conference proceedings, working papers, and manuscripts published on research-based Web sites, in addition to the availability of online abstracts and pay-per-use articles, have led to a substantial increase in the dialogue about social capital. Internet-based communication has also enabled scholars and administrators alike to engage in open (international) dialogue and to collaborate at a limited financial cost. Technology has created an abundance of social capital within the community that advocates the use of SCT, thereby allowing for a more rapid theoretical development.

Despite advances that have been made in the field, an over-reliance of Coleman’s use of social capital still

exists. More researchers are adopting a reflexive approach to SC and the theory, but most still limit their theoretical underpinnings to Coleman’s work, while others exclusively follow Coleman’s work, and still others use only the concept of social capital with limited theoretical reflection. This has serious consequences on measurement, analysis, and decision making, and thus affects the applicability of the results for program development and review. For example, because Coleman examined the influence of adult-centered groups (i.e., the family and school) on CY’s well-being, how researchers conceptualize and operationalize social capital will necessarily be limited if they strictly follow Coleman’s ideas. In addition, while Coleman discussed the role of family and school social capital in understanding achievement disparities among CY, other competing groups, such as peers, the workplace, counter cultures, and so forth, tend not to be examined/discussed. Because social capital forms in a number of groups – not only family and school – all potential groups need to be accounted for, at the very least in the research’s theoretical component. Lastly it is important to address the fact that Coleman’s work, as is the case with much research during his time, did not account for the role of power in explaining social capital and its relationship with well-being.

The concept of social capital has been integrated into many disciplines and theories, and while helpful, its utility is partial because most researchers do not use the theory surrounding the concept. This is particularly worrisome, not only for the development of theory, but also because governments and agencies have been using the concept of social capital to direct programs since the 1990s. In times when government funding of social research and social programs for children and families have been cut back or completely cut, it is crucial that scholars and researchers provide advice based on sound, well-constructed theory.

This historical overview has conveyed not only why SCT is underdeveloped, but also why it has stagnated. Over the past decade the theory – as it pertains to CY studies – has made great progress. Now that the premises of the theory have been defined, researchers from all around the world are testing the theory, which is indicative of an international merging of scholarly ideas, as well as the unprecedented international communication between those in both the applied and academic fields. This is what is needed for the

development of a valid theory that speaks to many nations and peoples.

Social Capital Theory

As I have discussed elsewhere (Bassani 2007), SCT has five main dimensions: social capital is but one form of capital, social capital influences well-being, resources must be transformed into capital, the formation of social capital is complex, and mezzo group dynamics need to be considered.

Social Capital Is But One Form of Capital

It is widely recognized that five main forms of capitals influence CY well-being: social, financial (income), human (education and skills), cultural (cultural knowledge, abilities, and experiences), and physical (material goods). SCT maintains that SC is the highest form of capital, and therefore it is central to all aspects of CY well-being.

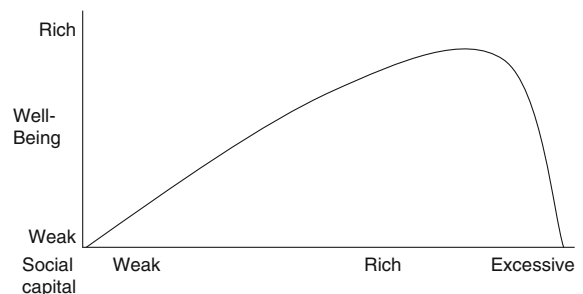
Social Capital Influences Well-Being

Two aspects of social capital's influence on well-being need to be acknowledged.

Direct and Indirect Influences. SC has both direct and indirect influences on well-being. The direct influence of SC is noted throughout the literature, and traditionally, it has been the only (directional) influence that scholars have recognized. Until recently (Bassani 2007, 2008, 2009), the indirect influence of SC has not been considered. Due to the very nature of SC, however, it has an essential role in transforming other resources into capital. Consequentially, SC indirectly influences well-being through the formation (or mobilization) of other forms of capital. Social capital mobilizes (a parent's, teacher's, peer's, etc.) human, financial, cultural, and physical resources into capital. The stagnation of SCT's development and poor theoretical conceptualization in both academia and the private sectors are the culprits of this lapse in understanding. I am currently testing this aspect of the theory with representative national samples, as well as samples from marginalized (immigrant) groups (Bassani forthcoming). More research is needed to further test this tenet.

Direction of Relationship. Social capital appears to have a curvilinear influence on well-being. Coleman

(1990) originally argued that social capital positively influences well-being, but since then, research has repeatedly illustrated that when social capital becomes too strong, it negatively influences well-being (Ream 2003). Ream identifies this as the "downside" of social capital. Rather than the one-way, linear trajectory that SC has traditionally been viewed as having, SC should be envisioned on a continuum that instead has a curvilinear relationship with well-being. Figure 1 illustrates this relationship, with social capital on the x axis and well-being on the y axis. On the one end, there is an extremely limited amount of social capital, which produces a negative influence on well-being. In the middle-to-upper range, social capital increases and consequentially has a progressively positive influence on well-being. Lastly, on the far end, social capital becomes too strong within a group and, as a result, has a negative influence on well-being. In this latter case, the ties between people in the group are too intense, and, as a result, the group becomes "closed." Group membership becomes the sole identity for people in this group, and as a result of this excessive, unhealthy closure, social capital in other groups wanes or is nullified. Excessive closure tends to occur within marginalized groups, such as immigrant and/or ethnic minority groups (Ream 2003) and gangs (Deuchar 2009). (Group closure will be discussed in further detail in the context of the fourth dimension.) This relationship was only recently noted in the literature by scholars who examine samples of marginalized youth. Since the vast majority of CY and SC researchers use representative samples, this curvilinear relationship was not noticed because of the combination of the nature of representative samples and statistical laws



Social Capital Theory for Youth Studies. Fig. 1 The curvilinear relationship between social capital and well-being

(that regress relationships to the mean). Much work is needed that specifically examines an array of marginalized CY (and adults), and nonlinear analyses need to be conducted to further test this newly recognized tenet.

Resources Must Be Transformed into Capital

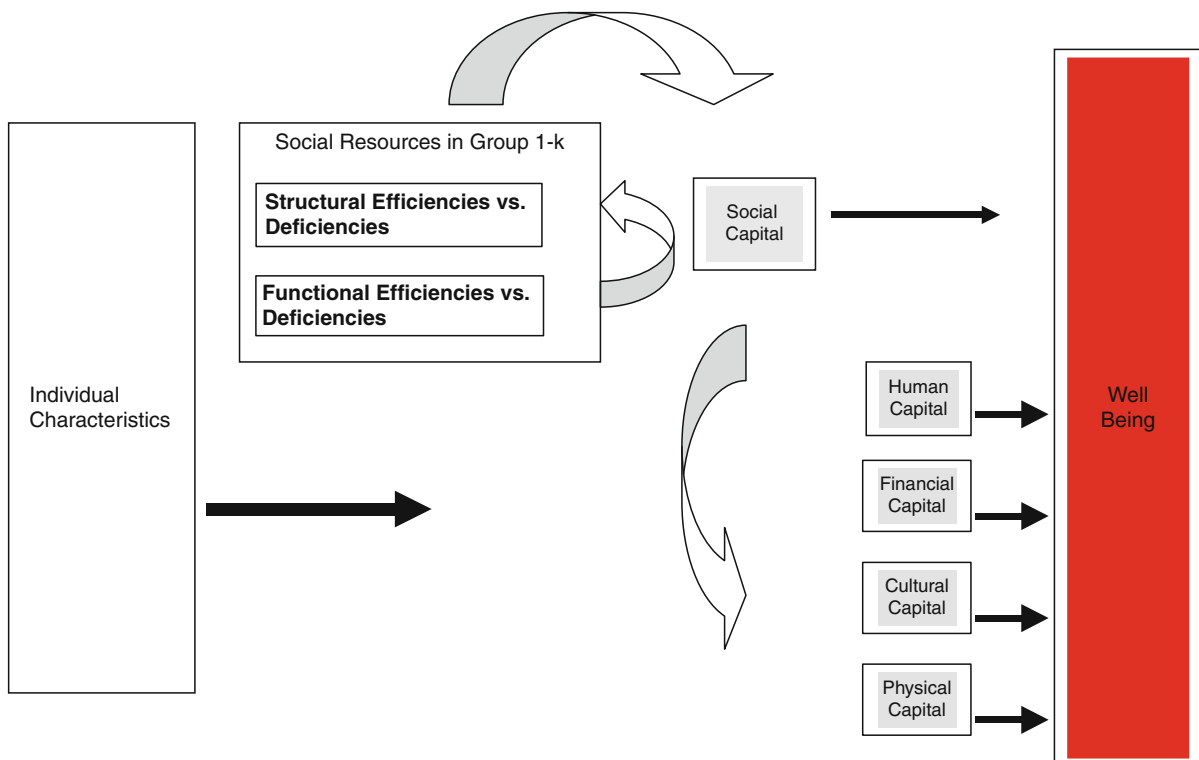
Capital is a product of an actualized resource. Resources become stable only when they are transformed into capital. Marx became most well-known for his discussion of this transformation two centuries ago, though this is an aspect of the theory that is often overlooked. As a result, conceptualizing and operationalizing social capital has been problematic at times, which has affected the concept's explanatory power. This in turn has negatively influenced the researchers' (and consequentially program makers') ability to fully appreciate the complexity of SC and its influence on well-being.

As Fig. 2 illustrates, the synthesis of structural and functional social resources transforms human,

financial, cultural, and physical resources into capital. This means that SC plays an instrumental role in the creation of all capital. To expand briefly, all other resources, such as parental education, can be mobilized only after social capital has been developed. A limited amount of (or a void in) social capital held between a child and his or her parent(s) necessarily influences the creation and utility of human capital (the actualization of the parent's human resources).

The Formation of Social Capital Is Complex

The formation of social capital begins with the individual, with one's own innate or socially programmed characteristics (such as being gregarious, extroverted, etc.). Although the literature tends to omit any discussion of the influence of individual characteristics in the formation of social capital, they play a fundamental role in its development, because such characteristics influence functional social resource efficiencies. These individual characteristics help an individual to actualize resources held within a group or by another



Social Capital Theory for Youth Studies. Fig. 2 Formation of social capital and its influence on well-being

individual in the group. Within a group, social capital is formed by the melding of structural social resources (SSRs) and functional social resources (FSRs). This section discusses the formation of social capital in one group; however, it is essential to recognize that all of the groups to which an individual belongs are interconnected, and therefore an individual's social capital is not merely an arithmetical combination of social capital from each group – 1 (e.g., family), 2 (e.g., school), and 3 (e.g., community organization) – but rather a synergetic transformation of social resources held in all groups. To simplify the discussion, the next section will address the interconnectedness of groups.

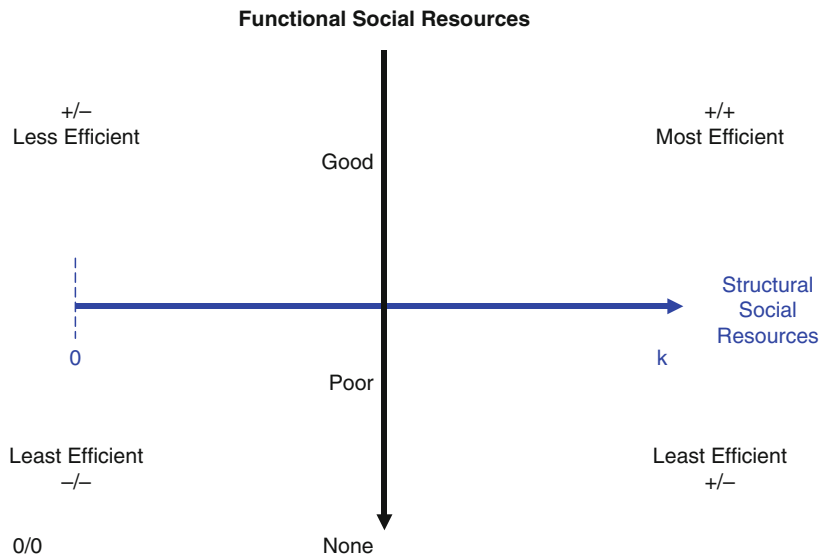
Four interlinked factors work to create SC in a group: efficiencies and deficiencies in the group, the group's structural and functional resources, the individual member's values, and closure of the group. These factors all concern group dynamics, because SC is created in a group even though it is unique to each individual and utilized by the individual. Without a healthy combination of these four factors, the development of social capital is thwarted.

Efficiency and Deficiency of Resources in the Group

Social resources become capital when structural and functional group efficiencies outweigh structural and functional deficiencies. Efficiencies and deficiencies are not static and the scale on which they are weighed is not absolute; as such, there is no uniform definition of an efficient or deficient resource. Efficiencies should be thought of as “healthy” resources that help social capital develop, while “deficiencies” should be thought of as “unhealthy” or “absent” resources that hinder or completely restrict the development of social capital.

Structural and Functional Social Resources

Structural and functional social resources go hand in hand with resource efficiency/deficiency in the creation of social capital. A structural social resource (SSR) is defined as who is in the group, while a functional social resource (FSR) is defined as the relationship between individuals in the group. Figure 3 illustrates the simplified relationship between SSRs and FSRs. The four



Social Capital Theory for Youth Studies. Fig. 3 Relationship between structural social resources and functional social resources. Note: Coleman (1987) first discussed the dichotomy between SSR and FSR, though his perspective was limited since it only considered the family and school (religious schools) groups. Recently, Lin (2001) expands on these concepts. While Lin's work is pivotal in the development of SCT in general, her discussions are adult-centered and are largely generic in terms of discipline

quadrants in Fig. 3 illustrate high efficiency (top-right quadrant), moderate efficiency (top-left quadrant), and deficiency (bottom two quadrants). As shown in Fig. 3 (in the top-right quadrant), when structural and functional resources are most efficient – that is to say, the SSRs are numerous and the FSRs are strong – social capital is rich. Weaker social capital may also be created when SSRs or FSRs have deficiencies. The top-left quadrant of Fig. 3 reveals that the creation of SC is hindered by structural deficiencies despite strong FSRs. SSRs are the foundation from which SC is built. Without SSRs, it is impossible to have any FSRs and thus SC. The dotted blue line in Fig. 3 illustrates this notion. FSRs, however, are quintessential in the formation of SC because they have the power to moderate SSR deficiencies. In a single-parent family, for example, SC may or may not be weaker than that found in the two-parent family. When FSRs are constant between the two family types, the two-parent family will have richer social capital. When FSRs are stronger in the single-parent family than the combined FSR in the two-parent family, however, the one-parent family will have more SC, despite the SSR deficiency.

In the bottom quadrant of Fig. 3, SSR and FSR deficiencies are present. A limited amount of SC is created in such circumstances. In the far-left quadrant, no social capital can be created: This is indicative of a group that has disintegrated, such as a parent that has become absent after a divorce or separation. The remainder of this portion of Fig. 3 illustrates the consequence of poor FSRs and SSRs. The bottom-right quadrant illustrates that weak SC is created via limited FSRs, despite the larger number of SSRs. An in-depth discussion of the relationship between SFRs and FSRs may be found elsewhere (Bassani 2007, forthcoming).

When assessing SSR and FSR deficiencies (and efficiencies), resource depletion must be considered. Most groups (i.e., family, school and recreation, and peer – virtual or real – groups) have leaders. In adult-centered groups, adults tend to hold the power over CY and therefore are the leaders. In families, parents tend to be the leaders; in schools and recreational groups, teachers/coaches are the leaders. In youth-centered groups, however, age is not always a determinant of leadership because power is gauged differently in these groups and is based on popularity (which could

be the result of physical and/or socially accrued characteristics). When the ratio of CY to leader(s) increases, *resource depletion* occurs, which leads SC to decline or to be thwarted. When there is one parent in a family and numerous CY, parent–child interaction (FSR) is limited and thus social capital is apt to be weaker than in a family that has a larger ratio of CY to adults. Similarly, as the ratio of students to adults (teachers/volunteers/assistants) in a classroom increases, the amount of teacher–child interaction declines and so too does the social capital that can be formed in the classroom.

Functional social resources between CY in non-CY-centered groups (such as the family, schools, and recreation and work groups) may act to counter resource depletion. Within the family, bonds between siblings can work to increase SC in the family. In this group, siblings can create additional SC between one another, which works to increase the SC found in the family. Acting as pseudo-parents, (older) siblings may be able to meet some of the other (younger) siblings' needs. In the case of nonfamily groups, a planned (such as a buddy system) or even an unplanned contingency plan (students helping their friends) that bonds CY together may have a similar effect to that found in the family between siblings.

One last point needs to be addressed concerning FSR and SSR: the density hierarchy that Coleman (1987, 1988) first theorized. Coleman postulated that social capital was the richest among groups that were biologically related. Specifically, he argued that SC was strongest in biological families (compared to step-families). This perspective is highly flawed, because it is a combination of SSR and the magnitude of FSR that factors into one's wealth or depravity of SC. Although FSR may appear to be stronger between biological parents and their CY, FSR (and thus social capital) may be stronger between step-parents and CY or even within groups that compete with family group (such as peer groups) for primary status. This competition will be addressed further when mezzo group dynamics are discussed.

Values

Individuals' values play a fundamental role in the creation of social capital. Individuals that share the same

values with a particular group will develop a richer supply of social capital because FSR tend to be stronger in such groups. Shared values strengthen FSR and lead to an increase in the group's closure (boundaries), thus yielding richer social capital.

Culture and values are highly interrelated. I use the term "culture" loosely to convey whether the individual belongs to the majority culture (dominant society), (any of a number of) minority culture(s) (subdominant groups in society), or a combination of the two. Typically these two general groups have been viewed as separate distinct entities, though it is theoretically important to recognize that marginalized groups belong to both minority and majority groups. The relationship between culture and values is not as clear-cut as was once believed. Scholars need to consider all of the groups that the CY belongs to and how the values and culture associated within each group interact between groups. Many researchers that use SC and SCT pay little attention to culture. This is a major critique of SCT (Morrow 1999; Ream 2003), because issues of "power" have not traditionally been incorporated into the paradigm. Even when "culture" is integrated, however, it tends to be synonymous with "ethnicity", and more specifically, with a marginalized ethnic minority group (Bankston and Caldas 1998; Caldas and Bankston 1998; Portes and MacLeod 1999; Ream 2003; Zhou and Bankston 2000). Although ethnicity is an important factor that needs consideration when examining the well-being of CY, ethnicity is but one example of the majority–minority power divide. Other divisions (based on gender, sexuality, ability, etc.) are also relevant to address when examining CY. For example, CY are more likely than adults to belong to a subculture, which, by definition, is a group of people that share a distinct set of cultural beliefs and thus behaviors that differ from dominant society. And in fact, being a child or youth necessarily places individuals in a distinct subculture, because these individuals tend to hold a very different point of view from adults in society. With the exception of CY researchers who examine gang behaviors (i.e., Deuchar 2009), few if any others consider the influence that the CY's subculture has on well-being. Much work is needed in this area to improve the understanding of values and their relationship with social capital.

Closure

A group's closure is the last factor that must be considered when delineating the formation of social capital. Closure represents the (invisible) boundaries that hold a group together. Closure ranges from weak to excessive, as does social capital. Groups that have weak closure have weak social capital and are apt to disband, while groups that have excessively strong closure (and social capital) become fully "closed," disassociating themselves from other groups, which might include larger society. Both extremes of closure have detrimental effects on the development of social capital. As discussed in a previous section, social capital has a curvilinear influence on well-being, because both weak and excessively strong social capitals have a negative influence on an individual (Fig. 1). Groups that have many SSRs and efficient FSRs produce healthy closure, which enables the development of rich social capital.

Mezzo Group Dynamics Need to Be Considered

The last dimension of SCT concerns mezzo group dynamics. In the previous pages, discussion has focused on a single group, such as the family, school, peers, or work, to simplify discussion of the theory. In reality, one cannot separate the groups to which CY belong, because there is not only a natural overlap between groups (because individuals overlap, or bridge, groups), but also a synergy between groups in the formation of social capital. SCT recognizes that examining the individual requires also examining the groups to which they belong. For this reason, group structure and functioning are key to the theory, and thus to understanding well-being.

Primary and Secondary Groups. To begin, groups can be divided into primary and secondary groups on the basis of their importance for socialization and the development of social capital. Social capital tends to be richest in the primary group, though social capital from secondary groups can also be strong (but not as strong as that developed in the primary group). All individuals are socialized in a primary group, which for most people is the family. People are then introduced into a variety of secondary groups (including, but not limited to school, the dominant and subdominant community, peer, work, leisure, virtual). As CY get older,

secondary groups vie for primacy between one another and with the primary group. This means that there is a hierarchy of importance among secondary groups. This hierarchy is not stagnant, because it changes based on the CY's age and individual values. In some instances, a leading secondary group can usurp the primary group, and as a result, the primary and secondary statuses of these groups are exchanged. In such situations, group closure within the newly appointed primary group may be excessively strong, which creates an overall disadvantage for the individual, because social capital is either partially or wholly restricted in secondary groups.

Bridging. Bridging, which is key to the development of social capital (Coleman 1987; 1988; 1990), occurs when an individual belongs to two groups; because of the individual the two groups are “bridged” or linked together. At least three issues related to bridging need to be considered. First, groups are bridged together by individuals. This means that a person who is a member of a family and school bridges the family and school together. Second, the more common the bridging between groups, the stronger are the bridges. In other words, the more people in one (primary or secondary) group who also belong to a shared second (secondary) group, the stronger the linkage between the groups. Strong bridging is crucial to the development of rich social capital, because it increases the commonality among group members. Structural and functional social resource efficiencies abound in such situations, leading to the development of richer social capital in *both* groups. This last aspect is the third element concerning *mezzo* group dynamics – the possibility of heightened SFR and FSR efficiencies. The more commonalities (bridging) between group members, the stronger the shared values and time spent together. Such individuals are more likely to have higher FSR efficiencies compared to group members who do not have as many shared bridges. This issue is crucial, since heightened FSR efficiencies lead to richer social capital.

To review, groups comprise individuals and have a unique structure and functioning that is contingent on group members. Social capital formed in each group is interdependent. The amalgamation of one's social capital can have one of three effects on the individual. When two or more (bridged) groups have high social capital a booster effect occurs, enhancing the CY's well-

being. When two or more (bridged) groups have low social capital, a double-jeopardy effect occurs, detracting from the CY's well-being. In other situations, when a CY belongs to a group in which exposure to SC is heightened, this can work to mitigate the negative influence from low SC in another group(s). These three basic relationships represent the spectrum of SC's influence on CY.

Dynamics. One last point worth mentioning is that group dynamics are just that – dynamic – and therefore they should not be viewed as stagnant. Group dynamics are constantly changing, which in turn influences the social resources and thus SC available to CY in any given group. Both the structure and functioning of a group changes in two situations: (1) when membership changes, and (2) when the resources that group members bring into the group change. In other words, groups change when the lives of group members (and the capital that they hold within other groups) change. Individual changes, such as changes in family structural and/or functional social resources (the family's social capital) can have a profound influence on the group, and consequentially the development of social capital in that group. Group dynamics and the synergy that creates a CY's SC make it necessary to optimally rely on longitudinal research when examining SC and CY well-being. Since the vast majority of research that examines the role of SC on CY well-being analyzes cross-sectional data, much research needs to be done that examines longitudinal panel data. Internationally, since the late 1990s, researchers have witnessed an increased sharing of (government) datasets. This, coupled with the widespread usage of multilevel modeling, means that longitudinal examinations of CY well-being need to be the highest priority if SCT is to be used widely by practitioners who deal directly with CY in their communities.

Conclusion

Social capital has a tremendous influence on CY's well-being. It is not merely a concept, but the core concept of social capital theory. The theory is powerful and can help researchers, policymakers, and program leaders cultivate the well-being of CY. Until recently, the theory has been used in a limited capacity, and therefore its utility has been largely restricted. With technological advances and the widespread accessibility of the

Internet, much conversation about the concept and theory has occurred over the past decade. This has without a doubt aided the theory's development and has led to a wider usage of the theory among those that are interested in CY's well-being. Still, much more analytical testing needs to be done to strengthen the theory.

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Social Cognition

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Social cognition refers to mental operations that underlie social interactions. These mental operations are those involving higher cognitive function that enable individuals to understand social situations by interpreting the social cues of others and considering appropriate responses to those cues (Staub and Eisenberg 1991). The modern study of social cognition seeks to understand how individuals represent the structure and content of social knowledge and how that knowledge translates into action (see Mascolo and Margolis 2004). Arguably the area of adolescent development that has involved social cognitive frameworks has been youth violence and aggression, e.g., social information-processing models seek to account for individual differences in youth's behavior by describing cognitive steps involved in processing information in a social situation (Fite et al. 2008). Social cognition paradigms, however, increasingly reach a wide variety of social aspects of adolescent development, as exemplified by recent research examining adolescents' social cognitions regarding sexual identity and sexual rights (Horn et al. 2008).

Cross-References

► [Social Reasoning](#)

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Social Competence

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Overview

Social competence is vitally important for adolescents. Social difficulties experienced during youth, such as rejection by peers, predict significant difficulties later in life, including dropping out of school, criminality, and psychological disorders (Parker and Asher 1987). Concurrently, poor social functioning has been implicated in the maintenance of a number of psychological problems, including internalizing difficulties such as depression (e.g., Rudolph et al. 2000) and externalizing symptoms such as aggressive behavior (e.g., Dodge et al. 1985; Gaffney and McFall 1981). These associations lend urgency to the development of valid theoretical and measurement models of youth social competence. This essay outlines current thinking concerning definitions of this construct and the types of factors associated with variability in social competence. Measures of social competence are placed within this theoretical framework, and implications for intervention are discussed briefly.

Definitions and Theoretical Models of Youth Social Competence

A large body of work has been devoted to operationalizing and measuring youth social competence (see Ladd 2005 for review). Although there is significant heterogeneity in definitions of social competence (Dodge 1985), there is increasing consensus that the construct reflects effectiveness in interpersonal interactions (see Rose-Krasnor 1997). Moreover, theorists have identified four sources of variability in interpersonal effectiveness: (1) individual, (2) behavior, (3) situation (i.e., the interpersonal circumstances in which behavior is embedded), and (4) judge (i.e., who is evaluating the behavior; see Dirks et al. 2007a). To date, researchers have focused primarily on the first two factors. Clearly, characteristics of *individuals* will

contribute to their social success. Researchers have identified a variety of individual- or child-level variables that are associated with social competence, such as having a sense of humor (Masten 1986). At the extreme end of this approach are trait models of social competence, which locate interpersonal effectiveness entirely within the individual (e.g., Vaughn et al. 2000). In other words, competence is a property of youth, who each possess this trait to a lesser or greater extent. This approach is appealing, perhaps to developmental psychologists in particular, as it provides a unifying construct that can be assessed across the life span. On the other hand, trait approaches to competence have been challenged both theoretically and clinically. Theoretically, McFall (1982) noted that the logic underlying this approach is circular: people behave competently because they are competent, but they are deemed competent because they behave competently. Clinically, localizing competence entirely within youth is problematic because it does not suggest targets for intervention. Once individuals who are struggling socially have been identified, how can clinicians help them to achieve social success?

One way to solve this problem is to examine the *behaviors* in which youth are engaging. Social behaviors are another source of variability in youth social competence, and social-skills models of competence equate behaviors and social competence (see McFall 1982). Numerous studies have examined social behaviors associated with good and problematic outcomes in the peer group (see Ladd 2005). For example, in general, aggressive and avoidant behaviors are associated with rejection by peers, whereas sociable actions are associated with peer acceptance (see Newcomb et al. 1993). Within a social-skills approach to competence, youth who engage in “good” behaviors, would be seen as competent, whereas youth engaging in “problematic” behaviors would be seen as incompetent.

The challenge associated with locating competence exclusively in social behaviors becomes apparent almost immediately: How do investigators decide which behaviors are competent? Different researchers have suggested different criteria that might form the basis of these evaluations. As described earlier, some people have argued that interpersonal effectiveness is the benchmark for competence (see Rose-Krasnor 1997). Others have posited more specific criteria, such as meeting a goal (e.g., Erdley and Asher 1999).

Although there is variability among researchers concerning how these judgments should be formed, there is a general agreement that social competence is an evaluative construct (see Dirks et al. 2007a). This idea of competence as an evaluation is reflected in McFall's (1982) definition of competence, which states that the construct of social competence "reflects somebody's judgment, on the basis of certain criteria, that a person's performance on some task is adequate" (McFall 1982, p. 13).

This definition of competence implicates the four sources of variability described previously: individual, behavior, situation, and judge. Despite their acknowledged theoretical importance, far less empirical work has examined situation- and judge-level factors. Social *situations* can affect behavior in at least two ways. First, they will influence the type of behaviors in which a person engages. Different situations will press for different actions; in general, youth should, and do, respond differently when they are shoved by a peer than when a peer says hello to them (see Shoda et al. 1994). Even within a relatively homogeneous class of situations, youth behavior shows marked specificity. For example, youth are significantly more likely to report that they would use physical aggression in response to physical provocation by a peer, compared to relational and verbal provocation (Dirks et al. 2007b). Second, not only will situations affect the behaviors that youth enact, but the social context of a behavior will likely also influence the perceived competence of that action. For example, peers evaluate children who have hit someone who hit or pushed them first more positively than they do children who have used physical aggression unprovoked (Willis and Foster 1990). Such data hint that the same behavior, enacted in two different situations, may be perceived as more or less competent.

The other key feature that will influence judgments of competence is the identity of the person making them, or the *judge*. If competence is a judgment, then it is possible that the perceived competence of an action will vary depending upon who is evaluating. Very few empirical studies have examined this issue. Although inter-rater discrepancies in evaluations of youth social competence have been well-documented (see Renk and Phares 2004), the methodology of these studies does not allow for conclusions about the judge specificity of the perceived competence of specific behaviors.

In general, these studies have assessed the extent to which peers, parents, and teachers agree about (1) the competence of a target child; or (2) the extent to which a target child engages in behaviors that are pre-judged to be competent (e.g., prosocial behaviors) or incompetent (e.g., aggression). In other words, they have assessed the extent to which there is agreement about *whether* a youth is liked or *what* a youth is like (see Parker and Asher 1987).

Such investigations leave unanswered the question of the extent to which important people in the social environment concur about the competence of specific behaviors. For example, do peers, parents, and teachers agree that physical aggression is an incompetent action? Work with adolescents suggests they may not. For example, one study found that in a sample of lower-income high school students, aggressive-disruptive behavior was associated positively with perceived popularity (Luthar and McMahon 1996). This finding suggests that at least some peers may view aggression as an appropriate and effective interpersonal strategy. Teachers, however, likely will not. Engaging in physical and verbal aggression are common reasons students are suspended from school (Mendez and Knoff 2003), suggesting disapproval of such behaviors among educators.

A recent study did in fact find significant differences between early adolescents' and teachers' judgments of the effectiveness of different responses to physical, verbal, and relational provocation by a peer (Dirks et al. 2010). In this study, youth and their teachers were presented with a number of possible responses to scenarios involving peer provocation, including physical, verbal, and relational aggression (i.e., damaging or threatening the aggressor's social relationships), seeking an explanation for the provocation, telling the aggressor that his/her actions are unacceptable, and telling an adult. Participants rated how well each response would "work to solve the problem." As expected, youth evaluated physically, verbally, and relationally aggressive responses to be more effective than did teachers, whereas teachers evaluated responses involving seeking an explanation to be more effective than did youth. Importantly, within the group of youth judges, some aggressive responses were viewed to be as effective as assertive strategies. For both boys and girls, ending one's relationship with the aggressor, a strategy that could be construed as relationally aggressive (e.g.,

Delveaux and Daniels 2000), was deemed to be as effective as seeking an explanation or stating that the aggressor's actions were not acceptable. Furthermore, boys also evaluated physical aggression to be as effective as these strategies.

Illuminating these inter-judge discrepancies in evaluations of behavior may provide insight into the reinforcement contingencies that exist in youth's social environments. Ultimately, such data may aid in the development of more targeted interventions designed to improve youth's social functioning. For example, although physical aggression may be viewed as effective by some peers, the consequences of such actions that will result from adult disapproval can be severe (e.g., suspension or expulsion from school). Furthermore, such actions are likely to cause significant harm and distress to others. This discrepancy between peer support, on the one hand, and the possible negative consequences for individuals themselves, as well as the targets of their behavior, on the other, poses a unique challenge for interventionists. In such situations, it may be helpful for clinicians to work with youth to consider who the most important judge in a given situation is. Alternatively, youth may need assistance crafting responses that are deemed to be acceptable by both peers and adults, and that do not cause harm to others around them.

Measurement of Youth Social Competence

Taken together, the empirical evidence supports increasingly the theoretical supposition that situation- and judge-level factors will play a key role in youth social competence. This more nuanced view of competence is typically not reflected in many of the instruments used to measure this construct. Researchers often assess social competence in one of two ways: sociometric strategies and behavioral approaches (i.e., nominations or rating scales). Sociometric techniques are used to determine how well-liked a child or adolescent is. A number of different approaches are used to obtain this information (see Foster et al. 1993). When working with adolescents, researchers typically use nomination procedures. Students are asked to identify the classmates that they like most and least, and these nominations form the basis of classifications such as popular (receives many liked and few disliked nominations) and rejected (receives many disliked and few liked nominations; Inderbitzen 1994). Sociometric

techniques provide very valuable information concerning individuals' popularity with their peers. The limitations of these approaches have also been widely documented. For example, sociometric analyses assess popularity with respect to a particular reference group, typically classmates at school. Adolescents often have friends in multiple contexts (e.g., at their part-time jobs, in their neighborhood); as such, sociometric procedures may not provide complete information regarding their social functioning (Inderbitzen 1994).

More generally, sociometric measurement indicates whether or not youth are liked (Parker and Asher 1987), but provides no information about what they may be doing to earn this designation (Bierman and Welsh 2000). In other words, these techniques provide data about individuals, but not about their behaviors. To address this limitation, researchers will often assess youth behavior directly. In general, this is done by having peers nominate classmates who fit specific behavioral descriptions (e.g., aggressive, avoidant; Chung and Asher 1996). Alternatively, people knowledgeable about the target individual, such as parents, teachers, or the youths themselves, may be asked to complete behavior rating scales. In general, these types of measures ask informants to rate how often youth engage in a variety of different behaviors. When working with adolescents, it is essential that rating scales assess behaviors that are relevant and important for youth of this age. The types of behaviors required to negotiate successfully the social tasks of this period, which include increased experiences with the opposite sex, as well as establishing autonomy from parents, are different than the interpersonal demands placed on younger children. Given these differences, simple adaptations of measures created for children at other developmental stages are not appropriate. This reasoning led Inderbitzen and Foster (1992) to develop the Teenage Inventory of Social Skills (TISS). This self-report measure of social skills asks youth to rate the extent to which different behavioral descriptions apply to them. Items include "I ask other [kids] to go places with me" and "I laugh at other [kids] when they make mistakes."

The TISS, as well as other rating scales that are used with adolescents, such as the Child Behavior Checklist (CBCL; Achenbach and Rescorla 2001), provide a detailed picture of the types of behaviors in which adolescents are engaging. As such, these assessments

are a valuable source of information about adolescents' social skills. When these data are used to inform conclusions about social competence, however, two challenges emerge. First, in general, rating scales do not provide information about the social circumstances in which behaviors are embedded. Some individual items on a rating scale may include contextual information. For example, the TISS contains items such as "I tell classmates I'm sorry *when* I know I have hurt their feelings" and "I thank other [kids] *when* they have done something nice for me" (italics added). Such situational details, however, are generally lost when researchers sum up across items to form a total score (Wright et al. 2001). In doing so, researchers are treating situational variability as a source of error, rather than as potentially useful information. As a result of both the items included and the methods of scoring, then, behavioral rating scales do not account for the situation specificity of youth social behavior.

Second, this approach to measurement also does not allow for the possibility that the competence of the behaviors assessed may vary as a function of who is judging them. Rating scales assess the frequency with which youth engage in a predetermined set of behaviors. To draw conclusions about social competence from such data requires that judgments be made concerning the effectiveness of a particular action. For example, the conclusion that an adolescent who engages in aggressive behaviors frequently and assertive behaviors infrequently is not competent is predicated on the suppositions that aggressive actions are incompetent and assertive ones are effective. These blanket judgments can be problematic, as the effectiveness of these actions will vary as a function of who is evaluating the behavior. As described previously, aggressive behaviors are viewed as effective by some peers (Dirks et al. 2010). As such, deciding that youth who engage in these behaviors are not competent may be underestimating their social effectiveness with classmates.

Adding to the complexity is the reality that youth social behaviors are very nuanced, and seemingly minor differences may have a major effect on interpersonal success. For example, in a study of how early adolescents respond to provocation by a peer, Dirks et al. (2007b) found that a significant number of participants gave responses combining aggression and assertiveness. For example, many youth generated "hostilely assertive" responses, which combined verbal

aggression and seeking an explanation (e.g., saying "What's your problem?" as opposed to the less aggressive "Why did you do that?"). Previous work has treated such responses as aggressive. In two other studies examining youth responses to a variety of peer-provocation scenarios, the researchers coded responses based on the most aggressive response present (Hughes et al. 2004; Peets et al. 2007). Within this framework, a response combining verbal aggression with an assertive response would be coded only as verbal aggression. Subsequent work has demonstrated that both peers and teachers are sensitive to the difference between a verbally aggressive response and a response that combines verbal aggression and assertiveness, with both groups viewing the latter type of response as significantly more effective (Dirks et al. 2010). Thus, treating such behaviors as aggressive may underestimate youth social competence. Such findings highlight the importance of obtaining judgments of the competence of youth behavior from the relevant people in their social environment.

To summarize briefly, four sources of variability have been implicated in youth social functioning: individual, behavior, situation, and judge. For the most part, measures focus on individual- and behavior-level factors. Failing to capture situation- and judge-level characteristics, however, may result in a picture of youth social functioning that is at best incomplete, and at worst, misleading. Social competence is inherently an evaluation, and as such it is influenced by the conditions under which behaviors are enacted, as well as who is judging those behaviors. By not attending to these contextual and evaluative issues, researchers may be over- or underestimating youth social competence, as it is perceived by the people who are actually in a position to reward or punish their behavior. Furthermore, omission of situation- and judge-level factors may lead to misspecification of variability. For example, youth in lower-income environments are more likely to be targeted aggressively by peers (Dhami et al. 2005), a type of situation that will often press for aggressive responding (Dirks et al. 2007b). In the absence of contextual information, one might conclude that the problem is with the children, when in reality, the issue is that they must manage a greater number of problematic situations.

Recognizing that social competence is a multivariate evaluation influenced by characteristics of individuals, their behavior, and their social context, how best can

researchers manage this complexity so that they may gain insight into the social successes and struggles of adolescents? Several investigators have suggested that social competence can be best understood with respect to key social situations or tasks (see McFall 1982; Rose and Asher 1999). Situation- or task-specific measurement provides at least two noteworthy advantages. If behaviors change as a function of situation, then the most useful and relevant information about social performance will be obtained by determining how youth respond in critical interpersonal contexts. In addition, this approach provides detailed information about when and how youth experience social difficulties. These data provide clinicians with clear targets for intervention.

If behavior is assessed with respect to key situations, it is important that we choose the right interpersonal contexts. Youth will confront an infinite number of social scenarios, but most will not yield interesting information about their social functioning. Goldfried and D’Zurilla (1969) posited that the most important situations are those that are commonly occurring, difficult to manage, and critical (i.e., performing inadequately will have negative consequences). Several research teams have set out to identify such situations in populations of adolescents. In general, all of these investigations have used the behavioral analytic approach (Goldfried and D’Zurilla 1969). Working within this framework, investigators create an inventory of problematic situations by asking members of the population of interest to generate relevant scenarios. Freedman et al. (1978) and Gaffney and McFall (1981) developed what were perhaps the first taxonomies of problematic situations for adolescent boys (Adolescent Problems Inventory, API) and girls (Problem Inventory for Adolescent Girls, PIAG), respectively. Adolescents, as well as individuals who frequently interact with youth (e.g., parents, teachers) were asked to identify problematic situations that are relevant in the lives of teenagers. Situations not deemed by participants to be commonly occurring and difficult were not included in the final inventory. The final taxonomy covered a variety of social contexts, such as school (e.g., “A gym teacher picks on you, makes you do extra push ups”), family relationships (e.g., “Your father gets upset when you ask to borrow the car”), and academics (e.g., “You feel hopelessly lost in a geometry class”).

Employing methods similar to those utilized to create the API and PIAG, Cavell and Kelley (1992,

1994) developed the Checklist of Adolescent Problem Situations (CAPS) and the Measure of Adolescent Social Performance (MASP). On each measure, the final set of items included situations representing a number of different facets of adolescent life, including relationships with peers (e.g., “Friend ignores you,” “You were friendly to someone and now they won’t go away”), siblings (“Sibling borrows something of yours without asking,” “Sibling enjoys teasing you and making you mad,”), and parents (“Parents refuse to discuss a decision they say is final,” “Parents are too busy to take you where you want to go.”) The types of situations most relevant to adolescents change over time, as does researchers’ awareness of the kinds of problematic circumstances that arise in adolescents’ social lives. For these reasons, the CAPS and the MASP capture a number of situations not included in the earlier measures. For example, the CAPS contains several items involving relational aggression. Given the rapid changes that occur in the societal contexts in which adolescent development is embedded, it is important to update situation inventories regularly. For example, the widespread availability of personal computers and the internet has created a new set of challenging interpersonal contexts for adolescents (e.g., cyber-bullying; Ybarra and Mitchell 2004).

One domain not covered in detail by the CAPS and the MASP is relationships with opposite sex peers. Adolescence is marked by a steady transition from the almost exclusively same-sex peer groups of childhood to social networks comprised increasingly of both males and females (Grover et al. 2007). Relationships with members of the opposite sex will present adolescents with new and challenging interactions to manage, such as responding to conflict with a romantic partner and sexual harassment (Grover and Nangle 2003; Wolfe et al. 2001). Such situations were identified in the Measure of Adolescent Heterosocial Competence (MAHC; Grover et al. 2005). The researchers asked 150 adolescents to generate as many “difficult” situations with the opposite sex as they could. The final measure contained 40 situations. A number of different themes were reflected, including dating situations (e.g., asking for a date; turning a date down), initiating a friendship/relationship (e.g., calling someone that you like), and situations involving drugs and alcohol (e.g., physical contact with another person when drinking).

Although these types of situations, as well as those included in the CAPS and the MASP, are relevant for many adolescents, it is important to note that the types of problematic situations adolescents must manage will vary as a function of environmental features. A notable example of this is adolescents living in economically disadvantaged circumstances. These youth may be confronted with a number of situations – such as witnessing violence, being approached by drug dealers, or being asked to join a gang – that might not occur as frequently in more advantaged environments. When there are theoretical reasons to expect that the situations identified as commonly occurring, difficult to manage, and critical may be different for a particular group, it will be necessary to generate a new taxonomy of situations. For this reason, Farrell et al. (1998, 2006) have conducted studies aimed at identifying important situations in the lives of lower-income adolescents. These researchers conducted focus groups with lower-income, urban sixth graders to create the Interpersonal Problem Situation Inventory for Urban Adolescents (IPSIUA; Farrell et al. 1998). Participants in this study did identify situations not brought up in other investigations. For example, conflicts with teachers included having a teacher falsely accuse them or tell lies about them. These urban adolescents also described challenges associated with living with a single parent and concerns about other students bringing weapons to school. Farrell et al. (2006) conducted a similar study with economically disadvantaged seventh and eighth graders, as well as their parents and school personnel. This investigation again highlighted the unique challenges associated with living in urban poverty, and the importance of developing contextually appropriate situation taxonomies.

Situation-based inventories have been used to assess social competence in two ways. It has been suggested that simply knowing how frequently adolescents experience these situations and how difficult they find them to be will predict their social adjustment (e.g., Cavell and Kelley 1994). Adolescents who respond ineffectively to interpersonal situations are more likely to generate new social problems, and as such, will experience challenging situations at a higher rate than their more socially effective peers (see Rudolph et al. 2000). The IPSIUA assesses the frequency with which adolescents experience difficult interpersonal situations, and the CAPS measures both frequency and

adolescents' perceptions of the difficulty of social situations. Both of these measures show significant associations with other indices of social functioning, as well as psychopathology. For example, on the IPSIUA, higher frequency ratings were associated positively with anxiety, violent behavior, and drug use (Farrell et al. 1998). On the CAPS, adolescents who were unpopular (as assessed with sociometric procedures and teacher nominations) perceived situations associated with school and making friends to be more difficult and frequently occurring than did their more popular peers (Cavell and Kelley 1994).

Of course, the most detailed picture of adolescent social functioning will emerge if researchers determine not only how often youth experience situations, and how difficult they perceive these encounters to be, but also how they respond when these challenges befall them, and whether or not these responses are viewed to be effective by relevant judges. Within the behavioral-analytic framework, after situations are identified, members of the population of interest are asked to generate responses to the situations, usually by reporting what they would “say or do” if the situation happened to them. Following this, relevant judges evaluate the competence of different responses. Thus, the final measure allows researchers to assess how youth respond to specific interpersonal challenges, as well as the perceived competence of their chosen social strategies.

The developers of the API, PIAG, MASP, and MAHC all took these steps. For the most part, the researchers relied upon adult “experts” (e.g., psychologists, parents, and teachers) to evaluate the competence of responses. In addition, these measures emphasized agreement among judges when developing items. For example, Freedman et al. (1978) discarded items for which there was significant disagreement among judges regarding the competence of responses. In general, then, researchers have focused on one group of judges, and within this group, treated differences between raters as error.

Recent data suggest, however, that these inter-judge differences in evaluations of competence reflect, at least in part, valuable signal, rather than being attributable entirely to measurement-related noise. As described previously, different groups in youth's lives may have differing opinions about the competence of a given action (Dirks et al. 2010); as such, adolescents' perceived competence will vary systematically depending upon who is providing the ratings. Interestingly,

Gaffney and McFall (1981) obtained ratings of effectiveness from both adults and teenage girls during the development of the PIAG. The results indicated that ratings of effectiveness provided by the adolescents, which reflect social competence as perceived by peers, did not discriminate between delinquent and nondelinquent girls. In other words, delinquent girls were not viewed by their age mates to be less competent than their nondelinquent peers. From an intervention perspective, knowing that adolescent girls with behavior problems struggle more from the perspective of adults than youth is critical. If peers do not perceive behaviors as problematic, or if they identify them as competent, it may be difficult to get youth to stop engaging in these actions, even if they are causing problems with adults.

For this reason, when developing situation-based measures of social competence, it will be useful to identify who the key judges for each situation are, and to maintain their unique perspectives when determining the competence of responses. In doing so, it will be important to base the selection of judges on theoretical grounds. Different judges will be relevant for different situations (e.g., Cavell and Kelley 1992); for example, for situations occurring at school, both peers and teachers are likely in a position to consequence youth behavior. It will also be important to utilize both theoretical and empirical criteria when deciding whether to combine judges' ratings. It seems plausible, theoretically, that teachers would form a homogeneous group: they have similar professional experiences and encounter youth in similar circumstances. Empirical data point to a similar conclusion: teacher ratings of competence show very little variability (Dirks et al. 2010). The evaluations of peers are more disparate, and similar variability is likely to be evident in parent evaluations as well.

When such discrepancies are present among a class of judges, it may be necessary to break the groups down further along theoretically meaningful dimensions. For example, many researchers have noted that societal norms will influence perceptions of competence (see Chen and French 2008), suggesting the importance of considering cultural factors when identifying judges. Relatedly, previous work has also suggested that socioeconomic factors may be associated with both youth and parent perceptions of competence (e.g., Dodge et al. 1994; Luthar and McMahon 1996). Youth and

parents in an urban, economically disadvantaged environment are likely to have very different perceptions of behavioral effectiveness than those living in a more affluent suburban neighborhood. In the case of parents, it may be useful to design a complementary measure that asks parents to evaluate the competence of responses given by their child. For youth, it is the judgments of their own parents (not parents, on average) that are most likely to influence their behavior. Given that it is often possible to obtain data from parents when conducting assessments with youth, it may be feasible to determine youth's competence from the perspective of their own parents.

Conclusion

By developing measures that allow competence to vary as a function of the situations in which youth are acting, as well as who is evaluating their behaviors, researchers will be bringing their assessment strategies in line with their current theoretical understanding of social competence, which emphasizes that competence is an evaluative construct influenced by both situation- and judge-level factors. The recognition that evaluations of competence depend, at least in part, on characteristics of both situations and judges, is likely to pay important dividends for educators and clinicians trying to help youth experiencing social difficulties. For example, it may be important for interventionists to help youth develop strategies that will allow them to manage key social situations effectively (or, at least, in ways not perceived as grossly ineffective) from the perspective of the different groups in their social environment. When negotiating their social worlds, adolescents must consistently solve challenging multi-constraint problems: They must generate solutions to very difficult social circumstances when the key people in their lives will often not agree about the efficacy of their solutions. To the extent that measures of social competence, and ultimately, interventions targeting social competence, capture and address these complexities, researchers and clinicians will be in the best position to help adolescents succeed socially.

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of people being connected with others. Attachment theory, as explained by John Bowlby and others, emphasizes the necessity for social connections at early ages as well as later. Social connectedness is a key aspect of development and an important construct in the understanding of human development.

Social connectedness as a construct is receiving increasing attention across a number of disciplines, and researchers are progressively taking seriously the task of describing and operationalizing what it means to be socially connected as well as determining how these connections affect other spheres of human experience. Despite problems with measurement and definitions of this construct, findings generally show that connection to the social world yields specific outcomes that are positively related to a variety of important end-states. The study of social connection within adolescence is illuminating because young people are caught between two major sources of change: (1) the outside world, i.e., changing expectations and social pressures, training and education as preparation for adult work, evolving social roles, etc., and (2) inside, i.e., changes in their physical and intrapsychic selves. Adolescents' connections to others have been shown to serve a protective function against these stressors, providing stability, anchorage, and a sense of a meaningful place in the world. Nevertheless, much more needs to be known how adolescents come to have (or not have) a sense of connection, and how that sense of connection functions in their lives to protect and nurture their development.

Social Connectedness

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Introduction

Psychology and other fields have long recognized that humans crave social contact with other humans. For example, Eliott Aronson's influential book, *The social animal*, is now in its tenth edition. Maslow's hierarchy of needs denotes "love and belonging needs" in the middle of his pyramid, highlighting the essential need

Definitions of Connectedness

Definitions of connectedness vary across research studies and theoretical models, with different authors highlighting different aspects of this construct. Although there is no consensus at this time concerning a definition of connectedness, two sets of authors have advanced related but somewhat different definitions. Lee and Robbins (1995, 1998), drawing on psychoanalytic self theory, defined social connectedness as "the subjective awareness of being in close relationship with the social world" (p. 338). This conceptualization focuses on the individual's self perceptions and the elected target of connectedness is the social world in general. According to these authors, a sense of social connectedness develops early in life and expands throughout the life span. This dynamic of social

connectedness refers to a global and stable aspect of the self, reflecting wide-ranging beliefs and attitudes about relationships and the general other (Lee et al. 2001).

A second viewpoint enunciated by Barber and colleagues (Barber et al. 2005; Barber and Schluterman 2008), who prefer to use the term *connection* over connectedness due to conceptual confusion concerning what connectedness embodies, has offered a different vision of this construct. For these authors (Barber and Schluterman 2008, p. 213), connection is:

- ▶ “a tie between the child and significant other persons (groups or institutions) that provides a sense of belonging, an absence of aloneness, a perceived bond. Depending on the intimacy of the context, this connection is produced by different levels, degrees, or combinations of consistent, positive, predictable, loving supportive, devoted, and/or affectionate interaction.”

This latter conceptualization focuses explicitly on the relationship tie and defines, in a more specific way, the several targets of connectedness (an individual, a group, or an institution). In addition, Barber et al. (2005) advance some ideas about predictors (antecedents) and products (consequences) of connectedness. Taken together, these two definitions capture the essence of the wide-ranging enquiry that has evolved in research in this domain (see later sub-section entitled “Research linking connectedness to adolescent outcomes”).

The Nature and Importance of Social Connectedness

The emergence of social connectedness as a relevant construct in the study of adolescence has roots in three conceptual shifts taking place in the last 20–30 years. Those shifts involved the recognition of: connectedness as a developmental goal, the importance of different contexts of socialization in adolescence, and the importance of a strengths-based approach to the study of adolescence and youth. This section examines these shifts.

Connectedness as a Developmental Goal

Early research on adolescence relied largely on theories of individual development. These theories, which reflected the Western view of the ideal adult as an independent self, have highlighted the adolescent’s

need for independence, separation, and progressive autonomy (see Harter 1999). Within this perspective, the role of socializing agents, mainly the family, was to foster those characteristics thought to be primary in the individual’s development to become an autonomous and “individuated” person. Recently, however, several scholars have challenged the assumption that autonomy is the primary developmental goal of adolescence. In tune with several theoretical contributions which have emphasized the human need to belong, feel connected, and form interpersonal relationships with others (Baumeister and Leary 1995; Deci and Ryan 2000; Harter 1999), there has emerged in Western literature a growing interest in the importance of adolescents’ engagement with significant others and the social world. Research on family processes was particularly helpful to illuminate this idea. As they get older, adolescents tend to spend less time with parents, get involved in more activities with peers, and increasingly strive for autonomy; on the other hand, they still wish their relationships with families to be close (Feldman and Gehring 1988) and a growing body of research shows that they benefit from a cohesive and supportive family environment in late adolescence and young adulthood. It seems, then, that adolescents fundamentally grapple with the task of individuating from parents/caregivers while also remaining psychologically connected to them. Accordingly, within this line of thought, the role of socializing agents such as the family is to promote *both* autonomy and connectedness. This conceptual shift encompasses two aspects – autonomy and connectedness – once considered polarized goals, but now seen as complementary for adolescent development. Whereas before, autonomy was considered to be the primary goal to be achieved, now a combination of autonomy and connectedness is commonly agreed to be the best trajectory for healthy development (Harter 1999).

This apparent paradox, the balance between autonomy and connectedness, might be usefully explained by attachment theory. John Bowlby postulated the human need to form and maintain bonds with significant others throughout the life span (Bowlby 1979). The presence of reliable and available attachment figures allows the formation of secure attachment (among other aspects, the assurance that one is loved and will be taken care of). According to this viewpoint, it is precisely the security of the attachment bond that

allows the exploration of the outside world. In childhood, this exploration involves discovering and engaging with new toys, games, and other outside stimuli, enduring progressive physical distance from the attachment figure(s), etc. In adolescence, exploration takes on new forms, such as academic interests, activities, new relationships (e.g., friendships with peers), and other aspects that involve navigating the social world beyond the family. Thus, it is expected that teenagers keep connected with and attached to their parents/caregivers throughout adolescence, and it is precisely this connection to their primary context (and not the severing of this link) that invites adventuring in new contexts (Laursen and Collins 2009). Naturally, the bond between adolescents and the family suffers alterations over time: the adolescent simultaneously strives for a sense of independence and mature separateness and renegotiates relationship structures to attain a more mature form of connectedness (Gavazzi and Sabatelli 1990).

Adolescents' Different Contexts of Socialization

While prior to the mid-1980s, research on adolescence was mainly concerned with individual development, afterwards researchers started to pay increased attention to the role of the different contexts to which adolescents belonged, namely family, school, peer group, and, at a broader level, communities and neighborhoods. This shift was greatly influenced by Bronfenbrenner's ecological model (1979), which emphasized that development takes place in a web of interdependent contexts interacting with each other and the individual. Alongside this major contribution, theories of the development of the self have also highlighted how relations with others shape self-representations and how, especially after the transition to adolescence, it is possible to form multiple selves, i.e., different ways of being and relating to others depending on the specific context and nature of relationship (Harter 1999; Neff and Harter 2003). Harter et al. (1998), for instance, found that teenagers saw themselves differently when they were with peers compared to when they were with parents or teachers. The recognition that development is rooted in nested contexts and that individuals might differ in their behaviors, cognitions, and emotions in each of these contexts were among the many contributions that encouraged

a growing body of research on the unique impact of adolescents' connection within each of these contexts (i.e., family, school, peer, and neighborhood/community connectedness) on health, adjustment, and wellbeing outcomes.

Two major conclusions can be drawn from the fast-growing literature on adolescent connectedness. The first points to diversity: adolescents of different ages differ in the number and strength of their connectedness to different contexts (Witherspoon et al. 2009). Experiences of connectedness vary within individuals across settings (i.e., one adolescent might be very well connected to family but not to school, while another might show a strong connection to their community and peers but not to their family, etc.) and across individuals depending on demographic and background characteristics (Witherspoon et al. 2009). The second major conclusion is that adolescents who are connected to key contexts report better adjustment, health, and wellbeing, in that connectedness seems to serve a protective function for adolescent development (Barber and Schluterman 2008).

Strengths-Based Approach to Adolescent Development

An important new development within psychology over the last 20 years is the focus on "positive psychology" (Diener and Seligman 2002; Lyubomirsky et al. 2005) rather than the traditional emphasis on disorder and maladaptation. In line with this trend, the study of adolescence is increasingly embracing a strengths-based approach, which aims to identify protective factors linked to positive developmental outcomes. Connectedness has been identified as one of these protective factors. For instance, some positive youth development theorists (e.g., Lerner et al. 2006) have identified connection (or connectedness) as one of the five main important dimensions of youth development, alongside confidence, competence, character, and caring (i.e., the Five Cs). The positive youth development approach has emphasized the relevance of connectedness and integrated it with other positive processes within the broader rubric of the ecological approach. Whereas, for instance, attachment theory has traditionally focused on important close relationships with family members, authors and researchers in the positive youth development movement have espoused a broader perspective, considering relationships in all

relevant contexts to be important and specifically defending that one's sense of connection with people and institutions within widely disparate contexts (e.g., gangs) is a research avenue worth exploring (Witherspoon et al. 2009).

Major Theorists and Seminal Analyses

Although connectedness is a relatively new term in the literature, authors from a variety of different disciplines have for a long time recognized the importance of individuals building and maintaining positive relationships with others across the life span. Thus, it is possible to find roots of the study of connectedness in adolescence in the contributions of many authors from different disciplines. Next, a selection of three important review papers is presented. Building upon Abraham Maslow's work on the human need of love/belonging, Baumeister and Leary (1995) offered, in their influential paper, a conceptualization of the need to belong as a fundamental human motivation. According to these authors, disconnection is a pressing social problem: individuals who feel disconnected are at risk for social isolation, deficits in belongingness, and lack of meaning and purpose in their lives. Their work has highlighted the importance of connectedness by showing that it is not sufficient that individuals establish non-conflictual relationships: people who feel disconnected are likely to lack support, feel lost and alone, and are at risk for psychological ill-being.

Ten years later, Townsend and McWhirther (2005) wrote a literature review paper specifically about the construct of connectedness, gathering an assortment of scattered information (including references to studies conducted with groups from different cultural backgrounds) and advancing implications for the areas of counseling, assessment, and research. These authors' extensive review concludes that connectedness is an important factor in healthy interpersonal functioning and suggests a developmental approach to this construct in order to examine and develop interventions that promote adaptive connectedness beginning in childhood and throughout the life span. Finally, a third paper by Barber and Schluterman (2008) specifically targeted connectedness (or "connections") in the lives of children and adolescents, recognizing the growing body of evidence that shows connectedness serves a protective function for adolescent health. These authors presented an in-depth review of the

construct of connectedness and how it had been studied in the literature, and provided chief recommendations to future research in the field, namely with regard to its labeling, conceptualization, and measurement.

Research Linking Connectedness to Adolescent Outcomes

As a consequence of a general interest in the topic of connectedness, a body of research linking connectedness to several domains and adolescent psychological and health outcomes has been developing. Following a general trend in adolescence research, the study of negative outcomes (e.g., depression, risk behaviors, etc.) has been more prevalent and, only recently, positive outcomes (e.g., wellbeing, resilience) are starting to receive more attention. In regards to the construct of connectedness, two main streams of research have developed. One perspective considers social connectedness to be a unidimensional construct referring to a *general* sense of connection to the social world. The other perspective considers connectedness to be a distinctly multidimensional construct, encompassing various domains of connectedness, individual domains corresponding to the key contexts in people's lives. Within the first stream, Lee and Robbins (1995, 1998) consider social connectedness as an aspect of the self that reflects subjective awareness of interpersonal closeness of the world. Research using this construct has shown that high social connectedness is a protective factor with regard to psychological symptoms, such as anxiety, depression, self-esteem, and others (Williams and Galliher 2006). For this approach, two concerns emerge: first, despite the effort to distinguish social connectedness from other constructs (such as, for instance, social support), more empirical research is needed to assess its uniqueness as a construct, namely, to distinguish it from general social competence (Williams and Galliher 2006); second, this construct has not yet been seriously studied in adolescent samples, most studies in this stream have predominantly used young adult samples (i.e., university students).

This brings up the second stream of research, broader and more heterogeneous in its scope, including both studies with smaller samples as well as large national-level research projects on adolescent development (e.g., the National Longitudinal Study of Adolescent Health in the USA and the Youth Connectedness Project in New Zealand). Within this stream,

connectedness is assessed in a contextual approach that highlights belonging/connection to different domains. The four domains most commonly studied are family, school, peers, and communities/neighborhoods (Barber and Schluterman 2008). In some studies, connection to the domains of spirituality (Resnick et al. 1993) and, more recently, technology (see Valkenburg and Peter 2009, for a review about research on adolescents' social connectedness and the internet) have also been examined.

The connectedness domain of family has been most researched. For instance, stronger family connectedness has been considered a protective factor against negative outcomes such as poor body image (Fulkerson et al. 2007; Resnick et al. 1993); emotional distress; cigarette, marijuana, and alcohol use; delay in sexual debut (Resnick et al. 1997); and depression (Barber and Olsen 1997). Longitudinal studies, although rarer, also add to the evidence of the protective function of family connectedness. Higher family connectedness has been linked to higher body satisfaction in teenage girls (Crespo et al. 2010), lower risk of suicidal behaviors (Borowsky et al. 2001), and lower depression (Cavanagh 2008) 1 year later.

Studies focusing on the school domain have linked school connectedness to lower levels of suicidal thoughts, cigarette, marijuana, and alcohol use, delay in sexual debut (Resnick et al. 1997); lower levels of stress and higher social confidence (Rice et al. 2008); and lower levels of social rejection and depression (Anderman 2002). In terms of positive outcomes, school connectedness has been also linked to academic achievement (Anderman 2002), positive coping (Cunningham et al. 2004), and life satisfaction (You et al. 2008), among others. Longitudinally, school connectedness has also been demonstrated to be a predictor of lower depression (Bond et al. 2007).

Few studies so far have included more than one domain of connectedness. Resnick et al. (1993), studying a large sample of US adolescents, found that family and school connectedness were the most important protective factors, family playing a more relevant role in internalized disturbed behaviors (which included poor body image, disordered eating, emotional stress, suicidal ideation and attempts, etc.) and school making a difference for acting out behaviors (drug use, school absenteeism, pregnancy, delinquency risk, among others). An Australian study (McGraw et al. 2008)

found that while peer connectedness predicted lower levels of negative affect 1 year later, family and school connectedness did not. Costa et al. (2005) found that although all four domains of connectedness – family, peer, school, and neighborhood – were independently linked to less problem behavior, the family and peer contexts were the most influential for American adolescents, while peer and school were the most influential for Chinese adolescents. Markham et al. (2010), in a systematic literature review on the predictor role of connectedness on adolescent sexual and reproductive health outcomes, found that family and school connectedness demonstrated the ability to delay sexual initiation or protect against early sexual debut; however, there was insufficient evidence to examine the association between these outcomes and peer and community connectedness. Kaminski et al. (2010) found that family connectedness, followed by school connectedness, was the most consistent predictor of lower risk of self-directed violence among adolescents. In this study, peer connectedness was linked to increased risk of self-directed violence, a result that fell below significance when demographic and background variables were controlled.

One major conclusion emerges from research published so far: in terms of the most studied contexts, regardless of how family and school connectedness are defined or measured, they are consistently linked to positive outcomes in health, psychological, social, and academic arenas. Due to their inconsistency and scarcity, results with peer and neighborhood connectedness need to be further investigated.

Measures and Measurement Issues

Following the two themes in connectedness research enunciated above, researchers describe and measure connectedness differently within these two perspectives. Within the unidimensional perspective, Lee and Robbins (1995) have constructed a measure of connectedness named the Social Connectedness Scale, later revised to become the Social Connectedness Scale-R (Lee et al. 2001). This scale is constituted by 20 items, with answer options on a six-point Likert scale ranging from strongly disagree to strongly agree. Some examples of items are “I am able to connect with other people,” “I don't feel I participate with anyone or any group” (reversed scored), and “I feel understood by the people I know.” This scale has shown good

psychometric qualities and has been translated in several languages. It has been considered a useful tool in assessing a global and subjective perception of connectedness to the social world in general. However, this measure is not adequate for research that aims to measure connectedness to different targets in different domains.

The course of the domain-specific approach to the study of connectedness has been much more heterogeneous. Since research on connectedness has its roots in a variety of disciplines, researchers operating within these disciplinary constraints have called on already existing and familiar constructs and scales to measure connectedness. This issue is the main caveat identified by Barber and Schluterman (2008): several related constructs are being used interchangeably with the term “connectedness.” This term, “connectedness,” has been used to cover several distinct conceptual and measurement approaches. In their call for conceptual clarity on connectedness, while defending a more unified line of research, Barber and Schluterman (2008) also state the pressing importance of researchers defining very accurately what their use of connectedness is and how they operationalize the construct in their empirical endeavors. These efforts become even more important when researchers intend to compare the differential impact of each domain of connectedness since there must be a coherent measurement approach within all of them.

Controversies

General or Domain-Specific Connectedness?

Theory and research have shown that both a general sense of connectedness to the social world and connectedness to specific domains are relevant to understanding healthy adolescent positive development. Nevertheless, the majority of the most recent studies have opted for examining the specific domains and analyzing their individual and combined contributions to different outcomes. This path allows a more specific and complex view of the web of connections that link adolescents to their environments; plus, results that can be attributed to different domains are more likely to be translated into policies, facilitating bridges between adolescent research and practice/interventions.

Nature of the Construct of “Connectedness”

Researchers have used the term “connectedness” in various ways. In their critical review, Barber and Schluterman (2008) have identified four distinct ways in which connectedness has been used so far: a measure of the quality of a relationship system, degree of liking an environment or relationship, the possession of feelings or attitude states, and a combination of states and behaviors that precede them. Given that research on connectedness interests researchers embracing different theoretical perspectives, a consensus about which one of these operationalizations should prevail is likely to be difficult to achieve, Barber and Schluterman (2008) suggest that a thorough explanation of the rationale authors adopt should be always included in future research reports.

Locus of Connectedness

When conceptualizing connectedness, the existing literature presents mainly two options: the first focuses on connectedness as the nature, property, or quality of a relationship system (i.e., a dyad such as the parent–child relationship, or a group such as the whole family). An example of the use of this focus would be the item “For my family, spending time together is very important” used by Crespo et al. (2010) in the family connectedness measure of their study. The second locus of connectedness, in contrast, is on the individual and their perceptions of themselves in relation to other persons, groups or institutions. In this case adolescents are asked how much they feel their family understands them and/or cares for them (e.g., Cavanagh 2008; Fulkerson et al. 2007). Two more examples of this focus in different contexts would be “I feel like a real part of my school,” an item from the Psychological Sense of School Membership scale (Goodenow 1993) and “I feel like I belong in my neighborhood” (Witherspoon et al. 2009). The choice of the locus of connectedness is vital as it has consequences for measurement strategies and interpretation of the findings. Although both approaches fall within the realm of adolescents’ self perceptions of connectedness, the formulation of the questions emphasizes different types of perceptions: one to the group as a whole, the other to the self individually. Measures should adopt a consistent perspective throughout all their items; in addition, if the influence of more than one context is to

be compared in the same study, a congruence of locus of connectedness for all the different contexts' measures should also be privileged (see Barber and Schluterman 2008).

Gaps in Knowledge

Longitudinal Research

Studies examining connectedness or connection over time in adolescence are still scarce. Not much is known about: trajectories of different domains of connectedness across time, the reasons why certain adolescents show similar or dissimilar patterns across time, and how these trajectories are linked to positive (or negative) outcomes. It is likely that, for instance, connectedness and some positive outcomes support each other over time (i.e., feeling connected is linked to being better adjusted, that in turn leads to feeling more connected and so on): published empirical studies have yet to include examination of bidirectional findings between connectedness and other variables, which can only be achieved with a longitudinal research design. The Youth Connectedness Project in New Zealand (Jose et al. under review), for instance, has found that a general sense of connectedness was predictive of an improved sense of wellbeing 1 year later but not the other way around, i.e., adolescents' wellbeing did not make them feel more connected 1 year later. On the other hand, when data were examined at the domain level, family connectedness and wellbeing seemed to support each other in a bidirectional relationship.

In addition, very little is known about the factors that predict connectedness over time. Of particular interest would be to examine the transition from childhood to adolescence and identify which factors foster connectedness in different domains.

Longitudinal research will be helpful to disentangle conceptual confusion about antecedents and outcomes of connectedness. This information is crucial in advancing theory development in this field and also to design interventions aiming at fostering connectedness from a developmental perspective.

Interdependence of Multiple Domains of Connectedness

Only recently, researchers have started to include examination of connectedness in multiple contexts in the same study. But simply adding various domains

together is not enough: since connectedness to family, school, peers, and communities and neighborhoods are nested contexts, i.e., influence each other, accounting for the possible interdependence or complementarity of these contexts is crucial in composing a more complex and holistic picture of adolescents' lives (Witherspoon et al. 2009).

Theory and research suggest that feeling connected to multiple contexts is likely to provide greater benefits, embodying the idea that "more is better." However, research shows that adolescents differ in the number and strength of their connections to different contexts (Witherspoon et al. 2009); in addition, data from the social capital perspective reveals that the protective role of different sources/contextes may be function-specific in the sense that what is important for one outcome might not be for another. Thus, more than mere additive effects of the different contexts, it is important to study the joint effects of multiple domains. Some studies have already provided evidence that the particular domain and number of contexts matter. Costa et al. (2005) found that protection in one context attenuated the effect of risk in another context on adolescent problem behavior. Witherspoon et al.'s (2009) study of family, school, and neighborhood contexts identified different constellations of connectedness: some adolescents were connected to all three contexts, some were disconnected from all of them, another group was connected to family and school but not to neighborhood, and another one was connected to neighborhood and school but not to family. In studying the links between these constellations of connectedness and three outcomes (grades, self-esteem, and depression), the authors found a threshold effect in the sense that one connection yielded significantly better results than none. They also noted that benefits beyond two contexts were minimal. Connectedness to multiple contexts was associated with more positive outcomes and, supporting prior research, family and school were found to be the most important contexts. Research advancing Witherspoon's idea of "connecting the dots" of connectedness contexts is, thus, a relevant avenue for future research.

Diversity of Samples: Gender, Age, and Culture

Research so far has found general tendencies for gender, such as adolescent girls feeling less connected to

families and more connected to schools when compared to adolescent boys (e.g., Ohannessian et al. 1995; Waters et al. 2001; McNeely et al. 2002). In regards to age, there seems to be a general trend: during adolescence connectedness to multiple domains tends to decrease (Coley et al. 2008; Feldman and Gehring 1988). More needs to be learned about the role of these demographic variables and, specifically, how they moderate the links between connectedness and adolescent outcomes. Connectedness in adolescence, as in other developmental stages, can only gain meaning within a specific local and historical context. However, only a small amount of research has been conducted with adolescents from minority ethnic backgrounds; even less research has examined connectedness cross-culturally (see Costa et al. 2005, for an exception).

Quality of the Contexts to Which Adolescents Are Connected

So far, based on theory and promising research results, authors have assumed that being connected is a positive dynamic leading to positive outcomes. However, to this point, the precise nature of the domain (context) and target (person, group, or institution) of connectedness has not been taken sufficiently into account. It is possible, for instance, that being connected to a problematic environment (e.g., a gang or a dysfunctional family) might be more harmful than protective (Witherspoon et al. 2009) or might lead to both positive and negative consequences. Future research should examine if adolescents' outcomes are universally positive depending on or regardless of the quality and features of the context to which they are connected. Some inconsistent findings from connections to peers (sometimes found to be protective, other times found to be harmful) could be explained in this new light. The use of qualitative methodology could be particularly useful to address this as well as other research questions: young people's open-ended discourse would be likely to provide in-depth insight about the meanings of connectedness for different groups of adolescents in different contexts.

Summary and Conclusions

This essay has described the construct of social connectedness and its role in adolescent development. Although the topic is of long-standing and enduring interest to many disciplines, recent research has

operationalized this construct in new ways and asked some innovative questions concerning how connectedness is involved in adolescents' lives. The set of extant findings strongly suggests that social connectedness confers multiple benefits to adolescents traversing this challenging period of life. Family connectedness, in particular, seems to be the most important of the multiple domains that have been studied thus far.

Several challenges remain. Among them are increasing the sophistication of research methods and statistical treatment of data in order to capture additive, interactive, and complementary relationships among domains; studying connectedness over time with longitudinal designs; identifying precursors and causes of connectedness during the adolescent period; describing how moderators such as ethnicity, age, and gender affect the connectedness to wellbeing relationship; and characterizing the nature of the target of connectedness sufficiently well in order to disambiguate positive and negative aspects of connectedness. Longitudinal studies of diverse populations that examine multiple connectedness domains with both quantitative and qualitative methods are likely to advance the field in this area.

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Social Control Theory

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One of the major theoretical and empirical developments in developmental criminology (among other related fields) has been the formulation and testing of a life-course theory of informal social control. This approach to understanding why individuals commit crime or other types of problem behavior emphasizes informal vis-à-vis formal social control. The latter form of control focuses on state sanctions as incarceration, policing, surveillance, and other ways a government can enforce conformity. Informal social control theories complement the formal, state control as it emphasizes social bonds between an individual and society and, in brief, suggests that individuals engage in problem behaviors when those bonds are either weak or broken (Hirschi 1969; Sampson and Laub 1993).

The most widely examined conceptualization of informal social control theories is Hirschi's (1969). Hirschi's social control theory states that strong social bonds to conventional social institutions inhibit delinquency and criminal offending. Rather than question why individuals deviate from social norms, social control theory focuses on why individuals conform. At the core of social control theory is the socialization process and the internalization of dominant (traditional) social norms. This approach to understanding social control focuses on key factors, most notably including attachment, commitment, involvement, and belief. During

adolescence, the element of attachment represents a child's close bonds to parents and other important individuals, peers, and school. Commitment represents investment and conviction to conventional values and norms. In other words, "commitment" is one's stake in conformity signified by the amount of potential loss if the law is violated (e.g., reputation, career). Involvement is an indicator of one's interaction and time spent in conventional activities that reinforce prosocial norms (e.g., religion, community, sports). The final element of belief refers to an individual's acceptance of the common conventional value system and is premised on the notion that one is more likely to conform to social norms that one believes in. These factors, and the theory in general, have played an important role in shaping developmental theorists', especially criminologists', understandings of criminal behavior as they argued that the changing features of social bonds might explain desistance from crime (Bushway et al. 2001) and the course of criminal careers (Laub and Sampson 2003) throughout the life course.

Much research does support social control theory's postulations. Strong social bonds do appear to reduce deviant involvement by reducing associations with deviant peers and decreasing susceptibility to negative peers influence (Erickson et al. 2000). Parental attachment and the parent-child relationship appears to be one of the most salient areas in regard to delinquency and parental monitoring is one of the most important dimensions, although the internalization of conventional parental values is also important (Miller et al. 1999). Involvement is thought to reduce delinquency by providing adolescents with motivation for conformity, reducing free time and creating opportunities for attachments to peers and adults (Osgood et al. 1996). But, overly high levels of participation in activities may increase the risk of serious delinquency and risky behavior for young men (Booth et al. 2008). The focus on peers helps to highlight the point that the theory focuses on bonding to groups that follow traditional (dominant) norms; one of the most robust findings in this area is the high association between friends' levels of delinquency (as highlighted by adolescent friendship networks, see Haynie 2001).

Most research on social control theory as it relates to adolescents has involved only males, which makes applicability of social control theory to females not entirely clear. Attachment and commitment to parents,

school and peers are associated with reduced delinquency and deviant involvement for both boys and girls (Dornbusch et al. 2001; Laundra et al. 2002). However, emotional bonds and parental attachment have a larger impact on young female delinquency (Heimer and DeCoster 1999; Huebner and Betts 2002). Attachment to parents appears more important to females (Laundra et al. 2002), and attachment has been found to directly affect substance use for females but not for males (Erickson et al. 2000). Family support appears to be more influential for adolescent females than males for minor delinquency (Mason and Windle 2002) and in the case of violent crime, attachment to parents is a significantly stronger predictor for female than males (Alarid et al. 2000); but some studies have found the converse to be true when dealing with levels of serious delinquency (Booth et al. 2008). Generally, male deviance, on the other hand, appears to be more affected by the actions of friends (Erickson et al. 2000).

Research on social control factors has tended to be narrow, even though it is one of the most-studied aspects of criminological theory. Until quite recently, this area of research has tended to focus on less serious types of delinquency; it also has not focused as much on diverse adolescent populations. But, the theory does appear useful in understanding other important domains of research relating to adolescent development, such as academic achievement (Huebner and Betts 2002), especially as those domains relate to delinquency and other types of problem behaviors.

Cross-References

► [Delinquency](#)

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Social Disorganization Theory

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Overview

Adolescent development takes place within a set of embedded contexts that include both micro- and macro-level systems and their interaction. The social context of individual interactions and experiences determines the degree to which individuals can develop their abilities and realize their potential (Bronfenbrenner 1979). Childhood and adolescence are the periods in which individuals accumulate various developmental assets that shape the content of their later life. Healthy adolescent development requires that

the social context provide opportunities to fulfill physical, intellectual, psychological, and social developmental needs. Unfortunately, for many adolescents, the social context in which they are embedded fails to provide the supports that are essential for their healthy growth and development. Socially disorganized neighborhoods, which are characterized by social and economic disadvantage, offer few of the resources that normally help youth to develop the physical, cognitive, social, and emotional competencies required to engage fully in family and society. Youth growing up in these environments are at risk for a variety of problem behaviors including delinquency and drug use (Coulton et al. 1995; Sampson 1992). This essay highlights the mechanisms by which adolescent social development may be impacted by social disorganization at the neighborhood level.

Social Disorganization Theory and Adolescent Social Development: A Conceptual Model

According to social disorganization theory, neighborhoods characterized by high levels of poverty, single parent households, racial and ethnic heterogeneity, and residential mobility are likely to have higher rates of juvenile delinquency (Bursik and Grasmick 1993; Elliott et al. 1996; Sampson 1997; Shaw and McKay 1942). Since the early 1990s, studies have attempted to explain the social processes or mechanisms through which the neighborhood impacts adolescent development and problem behavior. Reviews of this research reveal two complementary types of neighborhood social processes that fit within the framework of social disorganization theory: (1) social processes generated by formal and informal networks of association and (2) informal social control or collective efficacy (Leventhal and Brooks-Gunn 2003; Sampson et al. 2002). This research suggests that disorganized neighborhoods are more likely to have weak social networks and low levels of collective efficacy or informal social controls. Neighborhoods may also vary according to the opportunities they provide youth for achieving delinquent or conventional goals (Cloward and Ohlin 1960; De Coster et al. 2006; Haynie et al. 2006). Socially disorganized neighborhoods are likely to have a greater presence of delinquent opportunity structures and an absence of conventional opportunity structures.

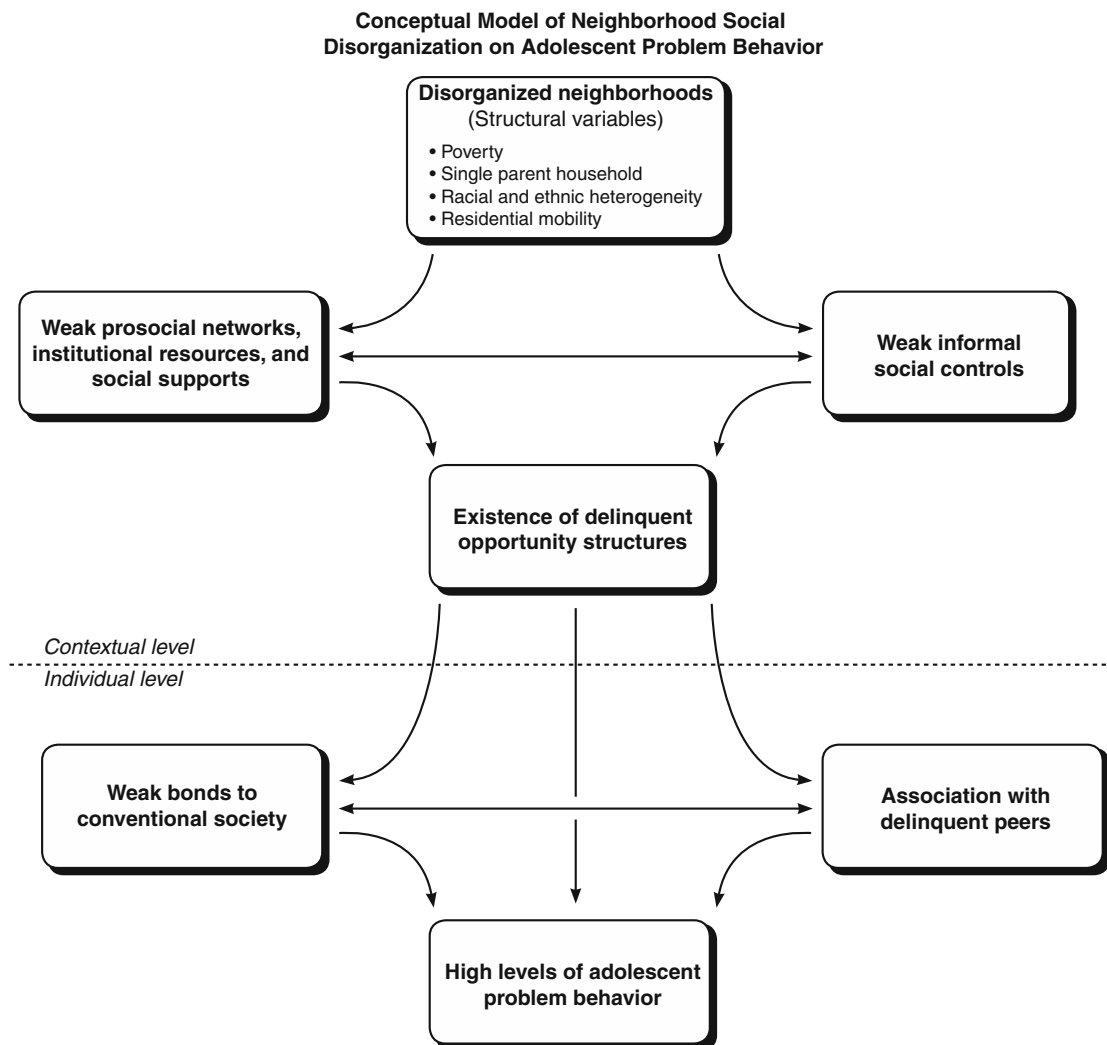
The integrated perspective on adolescent problem behavior developed by Elliott et al. (1979) provides a framework for understanding how socially disorganized neighborhoods may affect adolescent development. According to the integrated perspective, limited opportunities, failure to achieve valued goals, negative labeling experiences, and social disorganization at home and in the community are all experiences that weaken bonds to the conventional social order. However, this condition alone does not necessarily lead to adolescent problem behavior. The actual performance of problem behavior is likely to depend on social reinforcement through a learning structure involving a peer group which models and positively rewards antisocial or delinquent behavior. Therefore, involvement and bonding with a delinquent or antisocial peer group increases the likelihood of sustained problem behavior. Whether or not an adolescent bonds to a delinquent peer group is likely to depend on the strength of his or her prior bonds to conventional norms and groups such as the family and school.

Building on the integrated perspective, the social development model (Hawkins 1996) offers a more in-depth explanation of the social bonding process. The process of social bonding requires the following four factors: (1) perceived opportunities for involvement in activities and interactions with others, (2) a high degree of involvement or interaction with others, (3) possessing the skills to participate in these involvements or interactions, and (4) reinforcement perceived as a consequence of performance in activities and interactions. Therefore, the social bond consists of attachment to others in the social unit, commitment to, or investment in, lines of action consistent with the socializing unit, and belief in the values of the socializing unit (Hirschi 1969). Once developed, the bond has the power to independently influence behavior by creating informal controls on antisocial and promotion and support for conventional behavior. For example, adolescents who are bonded to those who hold healthy beliefs do not want to threaten the bond by behaving in ways that would jeopardize their relationships and are rewarded for health-promoting behavior or action. It is important to note that an individual's behavior may be prosocial or antisocial depending on the predominant norms, values, and behaviors held by those to whom the individual is bonded.

Socially disorganized neighborhoods are likely to lack the prosocial networks, institutional resources, social supports, and informal social controls that are essential for healthy youth development. Consequently, youth growing up in such neighborhoods may develop weakened social bonds to conventional society (Elliott et al. 1979, 2006; Hawkins 1996). Likewise, socially disorganized neighborhoods with low levels of informal social controls may foster the existence of delinquent opportunity structures, while offering few conventional opportunity structures. For youth with weak bonds to conventional society, the social

reinforcement provided by the delinquent peer group increases the likelihood of sustained problem behavior (see Fig. 1 for a visual representation of the conceptual model).

The following text describes the key areas by which the social context of disorganized neighborhoods may impede healthy adolescent social development. These include (1) the availability of educational, recreational and health resources and supports, (2) normative structure, (3) parenting behaviors, and (4) exposure to delinquent opportunity structures. Since each developmental stage is impacted by earlier histories, it is



Social Disorganization Theory. Fig. 1 Conceptual model of neighborhood social disorganization and adolescent problem behavior

important to recognize that adolescents with long-term exposure to neighborhood disadvantage and social disorganization are likely to have worse developmental outcomes.

Differential Exposure to Educational, Recreational, and Health Resources and Supports

During adolescence, youth experience increased direct contact with their neighborhood through involvement in school, youth-serving organizations, and informal neighborhood groups. For young people, the physical features of their neighborhood form the boundaries of their social universe. Youth need their community to provide ongoing opportunities to learn and practice essential skills to be successful in school and life. Unfortunately, high poverty, socially disorganized neighborhoods provide few public resources that support the educational, recreational, and health needs of youth residing in these communities (Kingston et al. 2009; Wilson 1987). For instance, the poorest health services are often found in lower-income, minority, and transient areas (Bronfenbrenner et al. 1984; O'loughlin et al. 1999). Typically, impoverished neighborhoods also lack the presence of safe parks, recreation centers, educational programs, and museums that promote academic success, physical health, and socio-emotional well-being (Leventhal and Brooks-Gunn 2003). Youth residing in more affluent neighborhoods have opportunities that many impoverished youth lack, such as high-quality after-school programs and summer programs, music lessons, sports training, home computers, and special tutoring (Terzian et al. 2009; Williams and Kornblum 1985). Unequal exposure to these opportunities is especially problematic during the summer months when school is not in session. Research shows that approximately two-third of the ninth grade achievement gap between lower and higher income youth can be explained by unequal access to summer learning opportunities during the elementary school years. This may impact their long-term developmental trajectory as low-income youth are less likely to graduate high school or enter college (Alexander et al. 2007).

The resources available in the neighborhood also impact the quality of schooling, the main formal institution responsible for the educational and social development of children. Schools in wealthy areas are more

likely to have the resources to provide high-quality education that will increase students' interests in academic pursuits and impact their chances of future success. In contrast, schools in impoverished neighborhoods are likely to impart a lower quality of education due to their limited resources. These schools are run-down, overcrowded, lack teaching supplies and textbooks, and employ less qualified teachers than more affluent neighborhood schools (Kozol 1991).

There is some evidence that the types of contact and quality of interactions with teachers and other influential adults are less supportive for children residing in impoverished neighborhoods, compared with their more affluent counterparts. For example, considerable research demonstrates that parental involvement increases the effectiveness of schools (Epstein 1987). However, in disorganized neighborhoods characterized by a high number of single parent households, parents may have little time to devote to involvement in their children's schooling. In addition, teachers of poor students are more likely to perceive the school and classroom climate less positively and provide children with fewer learning opportunities and less positive attention (Alexander et al. 1987). As a result of these differential expectations and their accompanying actions, differences in academic achievement between poor and nonpoor children may emerge or become greater (Alexander et al. 1987; Gouldner 1978).

Youth residing in socially disorganized neighborhoods with limited educational, recreational, and health resources and supports are likely to experience impediments to developing strong social bonds with conventional society. Due to their lack of resources and social supports, disorganized neighborhoods provide few opportunities for prosocial involvement, interaction, skill building, and positive reinforcement of behavior. The next section explains how the normative structure of disorganized neighborhoods may also weaken adolescents' social bonds to conventional society.

The Neighborhood Normative Structure and Adolescent Perceptions of Limited Opportunities for Their Future

The normative structures and social relationships that exist within socially disorganized neighborhoods are unlikely to consistently model prosocial behaviors or

support the avoidance of antisocial behaviors. Effective regulation of adolescent behavior requires shared expectations and standards for judging acceptable and unacceptable behavior, as well as mechanisms for rewarding and punishing that behavior. When strong social networks promoting prosocial values exist within a community, youth are provided consistent messages from their parents, teachers, neighbors, and peers regarding appropriate and inappropriate behavior. The structural characteristics of socially disorganized neighborhoods (e.g., poverty, single parent households, racial and ethnic heterogeneity, and residential mobility) hinder communication and decrease the likelihood that residents will share common values. In addition, neighborhoods with a high percentage of single parent households may have fewer adults physically available to provide surveillance for the behavior of their children or other youth in the neighborhood. The lack of adult supervision and conflicting value structures that tend to characterize socially disorganized communities may inhibit normative consensus regarding prosocial values. As a result, youth residing in these neighborhoods may not receive clear and consistent messages concerning what is acceptable or unacceptable behavior.

In addition, the social isolation fostered by urban poverty deprives youth of cultural learning from mainstream social networks (Wilson 1991). Since many adults residing within impoverished neighborhoods have inadequate education and menial employment at best, they may provide poor role models for achieving success through the conventional means of education and work. Youth residing in these areas are often uninformed about how to access potential jobs or educational supports that could provide them with the personal competencies essential for a successful transition to adulthood. Rather than acting as role models for conventional success, adults may promote or model dropping out of school, dealing drugs and petty theft, and a lifestyle of instant gratification.

Adolescents growing up in poverty may recognize the limitations of their circumstances and have little hope for their future. For example, recent research shows youths' perceptions of limited opportunities for their future predicted higher rates of neighborhood-level property offending (Kingston et al. 2009). The fact that youth living in these environments cognitively understand that their schools and communities

are grossly inadequate and that the adult role models in their lives have minimal education and are often unemployed may erode their sense of self-efficacy and hope for the future. As youth from these neighborhoods think about their future options, they can assess the limited likelihood of attaining success through legitimate means such as by going to college or by getting a good job. Research on self-efficacy demonstrates that an individual's beliefs about his or her future success affect behavior (Henderson and Dweck 1990; Skinner 1995). Thus, youth residing in impoverished environments, who feel hopeless about their future, may act in ways that are counterproductive to their healthy development (e.g., engaging in delinquent behavior, abusing illegal substances, and dropping out of school).

Social Disorganization and Parenting Practices

Social disorganization and economic disadvantage may impact an adolescent's prosocial bonds through the quality of parenting practices. While adolescents need parents that provide emotional closeness, positive reinforcement, structure, and predictability, poverty and economic stress may increase parents' tendencies to use coercive discipline, erratically monitor their children's behavior, and ignore their children's dependency needs (Conger et al. 1992; Larzelere and Patterson 1990; McLeod and Shanahan 1993). Simons et al. (1997) found that living in a socially disorganized neighborhood caused parents to focus on the present and to lack planning and organizational skills, which decreased their ability to be effective parents. In addition, parents who are poor are less likely to have formal education or exposure to various sources of information that would increase their knowledge of the emotional needs of children (Mechanic and Hansell 1987). It is hypothesized that parenting behaviors are negatively influenced by the accumulation of damaging life events and conditions that affect adults living in poverty. Parents may be frustrated from the daily stress of their lives and not have sufficient time or energy to meet the needs of their children. Depressed and overwhelmed parents, with their own needs unmet, are unlikely to provide a family environment that supplies the emotional closeness and positive reinforcement that adolescents need (Halpern 1990).

In an attempt to protect their children from the crime and violence that often plagues disorganized

neighborhoods, even the best parents may overly restrict their child's activities and interactions in ways that are detrimental to healthy development (Garbarino 1992). For example, some parents may not allow their children to hang out with friends or travel freely within the neighborhood. While this may keep them safe, it also inhibits their involvement with potentially supportive neighbors and institutions in the neighborhood (Brodsky 1996; Furstenberg 1993). During adolescence, when youth have a developmental need to build social relationships with individuals outside the family, restrictive parents increase the chances of parent–adolescent conflict. Although overly restrictive parents and rebellious youth exist in all neighborhoods, the consequences of the rebellion may be far more detrimental for youth residing in disorganized neighborhoods. For example, in affluent neighborhoods, teenage rebellion may involve experimentation with drugs or minor crime; however, in these communities prosocial supports exist that help prevent these behaviors from becoming a permanent lifestyle. While teenage rebellion in disadvantaged neighborhoods may involve similar types of illegal behaviors, there are few social supports or opportunities in these neighborhoods to preclude these behaviors from becoming a permanent part of the individual's way of life. Thus, teenage rebellion in disorganized neighborhoods may have irrevocable damaging consequences for future adulthood.

Social Disorganization and Delinquent Opportunity Structures

During adolescence, it is a natural developmental tendency for youth to spend greater amounts of time with their peers and to be more concerned about peer acceptance. Peer groups become more structured and organized than they were during earlier developmental periods. Due to the intensification of these peer relationships, the potential for peer influence increases. This influence may be positive or negative, depending on the norms, values, and behaviors exhibited by those peers (Elliott et al. 1985). Ideally, for healthy development, youth are involved with prosocial peers and engage in activities that promote prosocial norms and behaviors. Since the search for a peer group takes place within the context of the meaningful groups available for identification, choosing to join a peer group depends on what groups are available in their

neighborhood. Disorganized neighborhoods that lack the resources to effectively monitor children and provide few sanctions for inappropriate behavior are likely to have a high number of delinquent peer groups available to youth (Cloward and Ohlin 1960; Rankin and Quane 2002; Sampson 1997; Sampson and Groves 1989). Recent studies support this claim by revealing that neighborhood disadvantage influences delinquency by increasing exposure to criminogenic street context (De Coster et al. 2006) and opportunities for involvement with delinquent peer groups (Haynie et al. 2006). Some of the negative influences that may be modeled by the delinquent peer group include substance abuse, early sexual activity, gang membership, and violence. Youth with preexisting weak bonds to family, school, and prosocial norms and activities are most susceptible to recruitment by delinquent peer groups (Elliott et al. 1979). Because social disorganization puts youth at a greater risk for developing weak bonds to conventional society, and delinquent opportunity structures are often available in such neighborhoods, there is an increased likelihood that youth in these circumstances will bond to a delinquent peer group and become involved in delinquent and problem behavior patterns (Cloward and Ohlin 1960; Elliott et al. 1979).

Adolescent Social Development and Cumulative Disadvantage

Since successful adaptation at each stage of youth development is influenced by earlier developmental histories, long-term exposure to disadvantage and neighborhood social disorganization typically results in worse developmental outcomes for youth (Duncan et al. 1994; Korenman et al. 1995; Pagani et al. 1997; Simons et al. 1997). High-risk contexts such as poverty, chronic stress, and child maltreatment may have lasting effects when they damage or impair crucial adaptive systems such as adult–child attachment, intelligence, and self-regulation of emotions and behavior (Masten and Coatsworth 1998). For example, persistent poverty has more adverse effects than transitory poverty on children's cognitive development and school achievement (Duncan et al. 1994; Korenman et al. 1995; Pagani et al. 1997; Smith et al. 1997). Youth living in disadvantaged conditions for long periods of time experience more negative life events and adverse circumstances that may place demands on their coping

resources that are well beyond what they can handle. As a result, exposure to chronic adversity exacts a toll on their mental, physical, and emotional health. This may trigger a cycle of lifelong deficiencies that encompass many contexts of their lives. According to Masten and Coatsworth (1998:216), “Children who enter school with few resources, cognitive difficulties, and self-regulatory problems often have academic problems, get into trouble with teachers, are more likely to be rejected by peers, and are at risk for disengaging from normative school and peer contexts, which sets them up for considerable difficulties.” Since many social problems are significantly clustered and correlated with concentrated poverty and neighborhood social disorganization (Coulton et al. 1995; Sampson 1992), long-term developmental problems are expected to be much more frequent for adolescents who endure life-long exposure to impoverished social environments.

Conclusion

Adolescent development occurs through reciprocal interactions between individuals and their social context. Therefore, youth depend on social institutions including their families, neighborhoods, and schools to support their development. Throughout childhood and adolescence, youth are involved in experiences and processes, which attenuate or reinforce their bonds to the conventional social order. Socially disorganized neighborhoods, with their lack of educational, health, and recreational resources and weak social supports and informal social controls, hinder the formation of strong prosocial bonds in adolescents. Additionally, disorganized neighborhoods, with limited prosocial opportunities and low levels of social control, may foster the existence of delinquent opportunity structures. For youth with weak bonds to conventional society, the social reinforcement provided by the delinquent peer group increases the likelihood of sustained problem behavior. Furthermore, adolescents with long-term exposure to neighborhood disadvantage and social disorganization are likely to have worse developmental outcomes.

Fortunately, by understanding the mechanisms through which neighborhood social disorganization may impact adolescent development, it becomes possible to invest in neighborhood interventions that provide prosocial opportunities and supports to strengthen bonds to conventional society. Effectively

addressing the issue of cumulative disadvantage requires that these interventions begin with early childhood health and education (Heckman 2000) and continue to provide educational and social supports throughout adolescence. Key areas of intervention may include implementing programs such as the Nurse Family Partnership program, which improves children’s health and development and increases their level of school readiness (Eckenrode et al. 2010), quality summer and after-school programs that inspire learning and introduce youth to opportunities outside of their neighborhoods, and matching youth with successful adult role models (American Youth Policy Forum 2006). Targeting such comprehensive interventions to geographic areas of high need may reduce the negative impacts of social disorganization on adolescent development.

Cross-References

► [Delinquency](#)

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Social Exclusion and Subculture

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Overview

The concept of “subculture” has a long intellectual pedigree. Most commentators would trace its origins to the work of the Chicago School of Sociology in the early twentieth century. Qualitative research, particularly participant observation, unearthed the distinctive social worlds – the subcultures – present in the urban milieu of America’s big cities. In youth research, the work of the Centre for Contemporary Cultural Studies (CCCS) at the University of Birmingham in the 1970s gave fresh impetus to subcultural analysis of youth. More recently, theoretically postmodern work, hinging on the concept of “post-subculture,” has challenged the CCCS’s class-based understanding of working-class subcultures.

In contrast, the concept of “social exclusion” has relatively recent origins, in the 1990s, in European political and policy spheres. It has had substantial impact on the field of youth studies in the UK, continental Europe, and Australasia (less so in North America). As with its use by politicians and policy makers, academics often use it as a short-hand phrase for a host of social problems said to beset socially disadvantaged people and places. It has been quickly taken up in youth research to refer to the negative life-situations disadvantaged young people can find themselves in (e.g., of unemployment, poverty, homelessness, lone parenthood, crime, problematic drug use). In more in-depth, critical work, attention is also paid to the

wider social and economic processes whereby young people become socially excluded.

Little empirical research has examined the contemporary relevance of the concept of subculture for young people in situations of social exclusion. This is partly explained by the post-subculturalists’ apparent fixation with the music and stylistic preferences of the more advantaged. Some studies have, however, argued for the continuing relevance of the subcultural approach – particularly to understanding the transitions, lifestyles, identities, and outcomes of socially excluded young people. This essay argues that a critical understanding of subculture remains significant for youth research, particularly in respect of processes of social exclusion.

Subculture Theory

Most commentators would trace the origins of the concept of subculture to the work of the Chicago School of Sociology in the early twentieth century. Qualitative research, particularly participant observation, unearthed the distinctive social worlds – the subcultures – present in the urban milieu of America’s big cities. Much of this work focused on young people and young adults, and had a particular interest in the exotic, the different, and the delinquent. Some criminological research from then until now, in the USA and the UK, has employed notions of subculture in theorizing the crime, deviance, and gangs associated with marginalized young people.

In the mid-1970s, the Centre for Contemporary Cultural Studies (CCCS) at Birmingham developed a particular conception of subculture which was to energize the sociology of youth culture for decades. There have been numerous reviews of the CCCS subculture approach. In short, their approach was one that rejected prevailing views of youth as classless or best understood through the concept of generation. Rather, the working-class location of youth culture was crucial. In their key text, *Resistance Through Rituals* (Hall and Jefferson 1976), the CCCS blended sophisticated neo-Marxist social theory with an attempt to ethnographically grasp the sociological and semiotic meaning of a parade of British, postwar working-class youth subcultural styles, such as the Teds, Mods, and Skinheads. They interpreted subcultures as arising at particular historical moments of social change and offering working-class resistance to the material injustices of working-class subordination. Unable to overcome

real, material problems of being young and working class (e.g., poor schooling and limited career opportunities), youth cultures attempted to resolve these problems on an ideological, symbolic level and to “magically recover” the sense of working-class sense of community and solidarity.

The theoretically ambitious approach of the CCCS – and critiques of it – dominated studies of youth culture in Britain, and elsewhere, for decades. Criticisms leveled at the CCCS have been numerous and included the allegedly poor construction and articulation of theory, the methodological paucity of the ethnographic case studies, and the empirical absences in their accounts of youth subculture (e.g., the theoretical inattention to “ordinary,” apparently nonresistant working-class youth culture; the almost complete absence of young women and youth culture from their account; and the primacy given to white working-class cultural experiences over those of other ethnicities) (see Pilkington 1994).

The Postmodern Turn: “Post-subculture”

Since the 1990s, youth culture research in the UK and elsewhere has taken a postmodern turn leading many researchers to abandon the CCCS subcultural approach. In its place has arisen a “second wave” of British youth culture research (Roberts 2005): “post-subcultural studies” (Muggleton and Weinzierl 2003; Bennett and Kahn-Harris 2004). Studies in this vein have prioritized qualitative research about youth style, dance culture, and music, which tend to celebrate the optimism of stylistic and musical possibility.

A central aim has been to jettison class analysis in favor of new concepts and theories with which to explain contemporary youth cultural identities. Unlike the solid, class-rooted, lasting, and meaningful working-class subcultures theorized in *Resistance Through Rituals*, contemporary youth culture is said to be fleeting, fragmented, and fluid. Stylistic cultural identity has lost its depth of meaning (if it ever possessed this) and now floats around individual lifestyle and consumption choices. Young people move swiftly through a succession of styles, “like tins of soup on a supermarket shelf,” claims Polhemus (1996, p. 143). It is the fragmented and individualized ways in which young people construct their identities that is of key significance, and new concepts, such as “neo-tribes”

(Bennett 2000) and “post-subculturalist” (Muggleton 2000), have mostly replaced the older idea of subculture.

After the relative dormancy of youth culture research in the 1980s, post-subcultural studies have played an important role in rejuvenating the field. Yet, arguably, this body of work also mirrors one of the most serious empirical flaws in the CCCS’s earlier studies in that it was argued that they were preoccupied with the “stylistic art of a few” (Clarke 1982, p. 1). Shildrick and MacDonald (2006) argue that youth culture research should be about more than the stylistic exploits of minority music/dance “scenes” and “neo-tribes” and ought to give greater empirical space to the cultural lives and leisure activities of the “ordinary” majority and, also an apparent major omission, the disadvantaged minority.

More important than this empirical absence is the lack of theoretical attention given to questions of class and other social inequalities in contemporary youth culture. It seems that in their efforts to dump subculture theory, most post-subculturalists have been all too ready to ignore *any* potential influence of class background on youth culture and to *assert* the classlessness of modern youth culture. As Bosé (2003, p. 176) puts it, social class has “become a ‘no-go-area’ in many recent analyses of young people’s expressions of (post)subcultural sociality.” One is rarely told much about the wider economic lives of their research participants (e.g., employment histories, work/education-related identities or income) or their class positions. Scouring studies for evidence about the socioeconomic location of “post-subcultural” young people produces some skimpy suggestions that they are predominantly from middle-class backgrounds. If a case *is* to be made for the declining importance of class, surely this can only be done on the basis of a proper, transparent estimation of the wider, structural influences on young people’s lives?

Youth Culture and Social Divisions: Some Alternative, Recent Studies

In this section, a small number of recent studies are discussed that throw light on the ways in which young people’s cultural identities continue to be “closely intertwined with family histories, gender, place, class, region and locality” (Nayak 2003, p. 320). Unlike post-subcultural theorists, these writers purposefully *have*

attempted to include economically disadvantaged young people in their research, empirically and/or theoretically, and have found – consistently – that contemporary youth culture remains deeply divided. Once one accepts that social divisions still shape youth cultural identities, the postmodern celebration of the fragmented, fleeting, and free-floating nature of contemporary youth culture becomes difficult to sustain.

Hollands has also broadened the field of youth culture research in that, as well as the consumption of city-center nightlife by young adults, he is interested in its production (for instance, by large leisure corporations) and regulation (by local authorities, city councils, and so on) (Hollands 1995, 2002; Chatterton and Hollands 2002). While sensitive to the importance of new forms of social identity in these “new urban playscapes,” he argues that:

- ▶ Despite the existence of some minority patterns of post-modern tribal club cultures, there are clear social demarcations evident in nightlife that arise from both wider social divisions and lifestyle segmentations. . . the disadvantaged, the insecure and the privileged (Hollands 2002, p. 168).

Hollands’ method (i.e., focusing primarily on those who *did* participate in the nightlife of urban centers) meant that his study was able to say a little less about the contemporary leisure and youth culture of those who were largely excluded from it. Bosé (2003) reached similar conclusions to Hollands (this time in respect of Manchester, in the North West of England) and her direct focus on the experiences of “excluded” young black people helps fill out Hollands’ account. Many of her subjects described themselves as part of an “under-class,” pointing out the difficulties of living in “deprived and disadvantaged communities” (Bosé 2003, p. 177). Economic exclusion combined with racism disallowed access to parts of the city’s nightlife and impacted on their youth cultural activities. Bosé concludes that:

- ▶ the “all-dressed-up-and-nowhere-to-go” experience of Saturday evening that Clarke et al. (1976) named [in the CCCS’s *Resistance through Rituals*]. . . is a surprisingly contemporary experience for many black youths. . . A particular problem for young black and Asian men in Manchester is the experience of exclusion from popular cultural venues in the city. . . the persistence

of selective policing and racial exclusion in the leisure spaces of the contemporary city has led local black youth in Manchester to devise various strategies of collective problem solving (2003, p. 174/5).

Nayak’s study (2003) in North East England is one of those few, recent ones that have tried to look both at issues of youth transition and of youth culture in a context of class and ethnic identities. Like Bosé and Hollands, he also concluded that the differentiation of local youth cultural forms could only be understood in relation to local social divisions and the opportunity structures of the postindustrial economy. He uncovered three youth cultural groups: “Real Geordies,” “White Wannabes,” and “Charvers.” The “Real Geordies” were typically white working-class young men, “the salt of the earth natives” (2003, p. 311). The “White Wannabes” were white young people who “wanted to be black” (316) and who thus adopted many of the stylistic attributes associated with black (youth) culture. Finally, there were the “Charvers” who, Nayak argues, inhabited “a different ‘youth-scape’ to that of other North East young people,” one which involved “making different transitions in the post-industrial economy that involved forging different pathways into ‘gang’ and neighbourhood networks” (312).

Studies such as this show that not all young people are able to – or want to – access leisure experiences or create cultural identities in the same way. Processes of class and racial disadvantage, and social and economic exclusion, impact heavily on youth leisure and youth culture.

Youth Transitions, Leisure Careers, and “Street Corner Society”

It has been argued that *youth culture* research has predominantly been concerned with the identities and styles of the middle-class and more socially included and some exceptions to this trend have been noted. The other main branch of youth research, at least in the UK, has been the study of the *transitions* young people make to adulthood: their “school to work,” housing, and family “careers” (Coles 1995). Paradoxically, this body of work has been disproportionately focused on working-class young people and particularly the socially excluded. Gill Jones’ *The Youth Divide* (2002) provides an excellent summary of research of this type. Young people disadvantaged by ethnicity, gender, and

particularly social class make “fast-track” transitions to adulthood, exiting education early, entering the labor market quickly, forming partnerships, households, and becoming parents more speedily than their middle-class peers. The latter make “slow-track” transitions extending their time in further and higher education, delaying entry to the labor market, to parenthood, and to independent living. “Slow-track” transitions are equated with success and social inclusion. “Fast-track” transitions are linked to failure and social exclusion. Thus, those young people who make fast-track transitions are more likely to experience situations said to characterize social exclusion: unemployment, low-quality and insecure jobs, homelessness, poverty, lone parenthood, problematic drug use, and offending.

There still remains something of a divide between youth transitions and youth culture research. Very few studies have attempted to integrate analysis of youth transitions, youth culture, and social exclusion. The Teesside studies, from the North of East England (e.g., Webster et al. 2004; MacDonald and Marsh 2005), were explicitly about youth transitions and social exclusion but did also seek to examine issues of leisure and youth culture. In order to understand through qualitative methods the way young people grew up in poor neighborhoods, so as to better understand social exclusion experientially, they employed a broad concept of transition. The Teesside studies investigated “school to work,” housing, family, and drug-using as criminal careers, as aspects of transition. They also coined the concept of leisure career to describe the reported changes in young people’s free-time activities and shifting peer networks.

The Teesside researchers demonstrate how the overall transitions of young people are shaped by the interactions of experiences within these different careers. A simple example would be that changes in family career (e.g., having a major row with one’s parents) can impact on one’s housing career (e.g., becoming homeless), which can affect one’s school to work career (e.g., losing one’s job). Similarly, the shape, content, and direction of each career can be affected by experiences in the others. Thus, the leisure careers of the informants in these studies were heavily influenced by – and had heavy influence on – the wider transitions they were making. This is one reason why Shildrick and MacDonald (2006) argue for greater integration in

youth studies of research about youth culture and leisure with research about youth transitions.

In MacDonald and Marsh’s (2005) study, virtually the entire sample spent much of their free time out of school during their early teenage years socializing and hanging around in the company of other young men and women in the public spaces of their estates. This “street corner society” was, however, not just a residual, “now for us to do” outcrop of being a teenager with little money on an urban estate. It provided a *normal*, unremarkable but positive opportunity for unsupervised time away from adults, for exploration of youth identities, for romantic relationships, for fun.

Of course, this sort of street youth culture has a long history of negative public reaction (Pearson 1983). “Street corner society” of this sort brings widespread, universal condemnation press, policy commentaries, and local politicians. Describing three socially excluded neighborhoods, Page says “large numbers of unsupervised children and teenagers who gather in groups were a feature of all estates” and that “on all estates, and across all age groups, the biggest single issue identified by respondents was the antisocial behaviour of children and teenagers” (2000, p. 37). A previous study found that adult residents identified crime and young people as the two issues that impacted most negatively upon quality of life and that these problems were perceived as synonymous (Brown 1995). The impulse of respectable adult society to corral and control those engaged in apparently unproductive, street-based leisure – especially working-class young men – has culminated over the past decade in the imposition of “Anti-Social Behaviour Orders” and nighttime street curfews on British youth. For most young people, the leaving of school at 16 years, the gaining of some independent weekly income, getting new, wider friendship groups from jobs, schemes, and college were all allied with the move away from “street corner society” toward mainstream, commercialized leisure typical of working-class young adults in Britain (i.e., the sort enjoyed by most of Hollands’ subjects).

For others, however, their longer-term leisure careers remained tied firmly to neighborhood-based peer groups in which street socializing was the norm. Unlike some of their counterparts from school, these young people – young men in particular – had made

little progress in the labor market and were more likely to be, or have been, involved in criminal and drug-using careers. “Street corner society” was in virtually all cases a necessary but *not* sufficient condition for the establishment of more serious offending and became a fulcrum for the most socially excluded transitions in the studies. Evidence suggests that as far back as the 1800s, street corner socializing was not only widespread among working-class youth, but also served a number of important socioeconomic functions, yet these “corner lads” (and women) are largely absent from post-subcultural studies. Yet these Teesside studies suggest that, for some at least, “street corner society” remains a central element of working-class subcultural identity.

Social Exclusion and the Return of “Subculture”

Some of the recent studies of young people’s cultural identities and leisure practices reviewed in this essay as well as questioning the broader relevance and applicability of postmodern theories of youth culture hint at the continued salience of the concept of subculture. Bosé (2003), for instance, is one of the most explicit about this, saying that earlier work on subculture, and its focus on power relations linked to “race,” class, and exclusion, is still central to understanding the lifestyles and cultures of young people. Hodkinson considers this question in relation to his study of Goths and, although keen to avoid “some of the term’s previous implications,” he suggests that there is enough stability and “cultural substance” among Goths to argue for a “reworked and updated notion of subculture” (2002, p. 9). With a focus on socially excluded young people, MacDonald and colleagues (2001, p. 11) also note that “some of the potential of older criminological and sociological theories of subculture – with their emphasis upon the ways that youth cultures emerge as localised class-based ‘solutions’ to material inequalities – may have been too quickly forgotten.”

In reflecting on the value of subculture, Shildrick and MacDonald (2006) point out that most use – and critique – of the concept has been in relation to the well-known, tightly defined, and stylistically spectacular subcultures of the 1960s and 1970s (Clarke et al. 1976, p. 14). Yet the classic statement of subculture

theory, *Resistance Through Rituals*, also describes subcultures as potentially coming in the form of more *generalized, loosely bounded, and unlabeled* forms of masculine, working-class, “delinquent” subculture. Shildrick and MacDonald (2006) highlight the striking similarity between their depiction of contemporary “street corner society” in the 2000s and the following CCCS description of a looser form of working-class subculture from the 1970s (Clarke 1979, p. 251):

- ▶ Locality continues to act as a focus for some working class cultural identifications, often amongst those who are in some sense marginal to production and to the collective solidarities generated there. Locality continues to act as a base for collective activity among working class adolescents, both in the sense of providing cultural identities (...//...for many otherwise unnamed youth groupings) and constituting their “social space” – “the street,” alleyways, etc. which are public and less tightly regulated than other areas.

In short, as put by Carrington and Wilson (2004, p. 65), “some theorists have dismissed CCCS approaches without considering adequately what aspects of social life the earlier works continue to explain” (MacDonald and Shildrick 2007). Ironically – after scathing and sustained critique of the approach – Muggleton (2005, p. 217), one of the leading post-subculturalists, has also wondered whether, after all, that the “future of the subcultural concept is rather more secure than has often been suggested.”

Conclusion

This essay has reviewed some key recent debates in youth studies, centering on the contemporary relevance of the concept of subculture for youth research. The intellectual pedigree of “subculture” was outlined briefly, with focus on the subculture theory of the CCCS, before turning to a fuller discussion of more recent, alternative theories of post-subculture. At the heart of the argument about the contemporary value of the two concepts – subculture versus post-subculture – is the extent to which social class still divides youth cultural experience, styles, and identities. Unfortunately, the work of the post-subculturalists is flawed in that they tend to assert rather than demonstrate the classlessness of modern youth culture (at the same time

as studying what appear to be the youth cultural forms of more advantaged young people). Ironically, one of the key criticisms of the CCCS was that they tended to assert rather than demonstrate the working-class basis of youth subcultures. A small number of other recent studies – by authors such as Hollands, Bosé, and Nayak – contradict post-subculturalist claims, showing how youth cultural experiences remain divided by long-standing social inequalities. Social and economic exclusion impacts on the ability of youth to participate freely in a postmodern, nighttime economy of club cultures and neo-tribes.

Most studies of social exclusion have not fallen within the frame of youth culture research or considered youth styles, leisure, and identity closely. Youth transitions research, on the other hand, has been interested in processes and experiences of social exclusion for young people. Research from Teesside in North East England has attempted to include exploration of leisure lifestyles into broader investigation of the socially excluded transitions of young people and has introduced the concept of leisure career as a way of doing this. Here, the “street corner society” of young adults growing up in poor neighborhoods was described as a critical element in the shaping, for some young adults, of experiences and transitions of social exclusion. As with some other British research, the Teesside studies see continuing relevance for some formulations of subculture theory. In particular, they argue for the theoretical and social policy value of understanding the hanging around and “doing nothing” of working-class young people’s “street corner society”; what Paul Corrigan (1976, p. 103) described over 30 years ago, in *Resistance Through Rituals*, as “the largest and most complex youth subculture.”

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Social Exclusion in Adolescence

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Overview

Exclusion and inclusion from social groups is a fundamental aspect of social life in adolescence. How adolescents evaluate exclusion based on group membership, such as ethnicity, culture, sexual orientation, and gender is reviewed. This focus provides information on adolescents' emerging notions of fairness as well as their increasing concern with group functioning and group identity. The contexts in which adolescents view exclusion as legitimate or wrong, the reasons why, and what changes with age within adolescence have been studied using two social developmental theoretical models, Social Domain Theory and Social Identity Theory, which are both briefly reviewed. The findings indicate that adolescents' understanding of group dynamics and the role of fairness in peer relationships is complex. Further, group interactions during the period of adolescence are quite salient and reflect fundamental changes in adolescent perspectives about group identity, exclusion, prejudice, and fairness in social relationships and interactions.

Introduction

Adolescents' peer group relationships play an important role in adolescent social and cognitive development. Inclusion and exclusion from social groups occur when the criteria for membership are contested, or threaten group identity and group functioning. Research has shown that extensive experiences with exclusion has long-lasting negative outcomes, both in terms of impinging on healthy social development (e.g., self-esteem) as well as in terms of reflecting various forms of prejudice and discrimination (Bierman 2004; McGlothlin et al. 2007; Rubin et al. 2006).

Three types of peer relationships are identified in adolescents: (1) dyadic friendships; (2) cliques constituted from a small group of friends that interact at different levels of closeness; and (3) crowds that serve to organize and categorize adolescents' social worlds within the school and neighborhood context (Brown

2004; Horn 2003). Research on exclusion in adolescence has focused on the interracial dynamics observed in friendships (Crystal et al. 2008), the group affiliation revealed in cliques (such as the jocks, cheerleaders, and gothics) (Horn 2006), and gender and sexuality reflected in social identity in the context of school environments such as those documented in crowds (Killen et al. 2002b).

Observational research on the characteristics and structure of cliques and crowds has documented age-related changes, which are relevant for understanding changes in adolescents' attitudes and social reasoning about exclusion. In an observational study by Connolly and Furman (2000), for example, adolescents' friendships changed from same-sex cliques in early adolescence to mixed-sex and mixed-age friendships in middle adolescence and then began to break up into dating pairs in late adolescence. Similarly, the structure of crowds becomes more flexible and their influence less potent in the later adolescent years. According to Kinney (1993), in early adolescence there are two main crowds: a smaller high-status crowd and a larger low-status crowd. By middle adolescence, multiple and more differentiated crowds emerge. By late adolescence, however, crowds are less hierarchical and more permeable, allowing for flexibility in membership and association. In addition, older adolescents are more secure with themselves as individuals and rely less on crowd affiliations for support and self-identification (Newman and Newman 2001). Although most research on crowd identification has been done with American adolescents, similar crowd structures can be found among European adolescents (Arnett 2002). While little is known about crowds in other cultures, it has been found that peer relationships hold relative importance to adolescents around the world (Brown and Larson). Moreover, as discussed below, cross-cultural findings on how adolescents evaluate exclusion has documented extensive similarities in cultures such as Australia, Korea, Japan, The Netherlands, Spain, and the USA (Levy and Killen 2008). The importance of such cliques and crowds for adolescents demonstrates just how strongly experiences with exclusion can impact the lives and future trajectory of adolescents who experience exclusion.

Exclusion from peer groups leads to negative outcomes for adolescents, ranging from social withdrawal, anxiety, and to depression (Leary et al. 2006). Often

exclusion has been studied from the perspective of bullies and victims, examining individual differences and seeking to understand the role of individual social deficits (Rubin et al. 2006). Studying exclusion from an intergroup perspective extends this work by examining how adolescents experience exclusion from groups based on group membership including gender, race/ethnicity, culture, and sexual orientation (Killen et al. 2007b). Additionally, examining exclusion in an intergroup context takes into account the development and impact of prejudicial attitudes, stereotypes, and biases.

Forms of Exclusion: Gender, Race/Ethnicity, Culture

Adolescents experience exclusion based on group identity, which has long-term and wide-reaching implications (Rutland et al. 2007). One form of group identity, gender, has been a common basis for exclusion from peer groups among adolescents. While many forms of overt gender exclusion are diminishing, especially in contemporary cultures, exclusion based on gender continues to be a challenge in a wide range of types of groups including athletic teams, academic disciplines, occupations, and social organizations. Another form of exclusion is that based on race/ethnicity, which is often less explicit than gender exclusion, but which contributes to intergroup tension in high schools, higher education, and the workforce (Dovidio 2001). Though children and adolescents tend to reject exclusion based solely on race/ethnicity, using moral reasoning to explain these decisions, (Killen et al. 2002b), exclusion from groups because of one's race/ethnicity is pervasive. In addition, as adolescents struggle to coordinate romantic interests and a developing sense of their gender and sexual identity, many experience exclusion based on sexual orientation (Horn 2008).

Exclusion based on cultural differences or nationality has been pervasive in Europe where strong nationality identities have generated exclusion for centuries. Recent patterns of migration from southern European and African countries to Northern Europe have created new tensions for adolescents in European schools. A burgeoning area of research has focused on these forms of exclusion, such as exclusion of Muslims in the Netherlands (Geiling et al. 2010), Turks in Germany (Feddes et al. 2009), and Moroccans in Spain (Enesco et al. 2008). In the USA, cultural exclusion has focused

on exclusion of new immigrants, such as Latinos (Levy et al. 2008).

Each form of exclusion discussed in this essay has different types of outcomes, ranging from transitory to more detrimental. For example, exclusion based on culture or nationality can heighten the pressures between assimilation and acculturation and has consequences on the preservation of one's cultural identity. Exclusion based on sexual orientation, particularly in adolescence, has been shown to have serious negative outcomes for adolescents including depression and anxiety, school absence and delinquency, and, most troubling, suicide (D'Augelli 1998). Adolescents who experience exclusion as a result of their gender may struggle with gender identity, societal notions of social roles, and academic and occupational aspirations. Additionally, gender exclusion perpetuates stereotypes about acceptability of behaviors, interests, and roles for men and women. Further, exclusion based on race/ethnicity and culture or nationality can result in limited opportunities for advancement in the workplace, restricted access to interest groups and even the perpetuation of violence based upon cultural or national identity. This essay will next examine theoretical models that have been applied to the empirical study of exclusion in adolescence, followed by a brief review of findings regarding the different types of exclusion discussed above.

Theoretical Framework for Examining Exclusion in Adolescence

Each of these forms of exclusion experienced by adolescents function within unique contexts and in the face of intergroup relations. Thus, focusing on the individual deficits of those excluding or excluded is only one side of the complex phenomenon referred to as "exclusion." Another aspect of exclusion and rejection pertains to the role of group dynamics, group identity, and context in understanding these types of exclusion. The frameworks of Social Domain Theory (Killen et al. 2007b) and Social Identity Theory (Tajfel and Turner 1979) provide models for investigating exclusion from an intergroup perspective.

Social Domain Theory posits that individuals evaluate complex issues using a range of reasons, including moral (references to justice, others' welfare, and rights), social-conventional (references to group functioning, group identity, traditions, and conventions)

and psychological (references to autonomy, individuality, and personal prerogatives) for determining why and in what contexts exclusion is seen as acceptable or unacceptable. Examining the reasoning used by adolescents in making exclusion decisions enables researchers to identify underlying biases, stereotypes, and prejudices as well as to distinguish between different forms of exclusion. Social Identity Theory provides a model for examining how identification with the in-group and the out-group contributes to intergroup judgments (Abrams and Rutland 2008; Nesdale 2004). Developing a strong and cohesive group identity is an important milestone of adolescence; at the same time, group identity often serves to perpetuate exclusion of others who do not fit the criteria of group membership.

Killen and colleagues have used Social Domain Theory in their work analyzing children's and adolescents' exclusion decisions, revealing the ways in which different forms of reasoning are used in the exclusion process. In one study, Killen et al. (2002b) interviewed fourth, seventh, and tenth grade children, assessing their social reasoning for exclusion based on group membership (gender and race/ethnicity) in a range of social contexts. The sample, which was evenly divided by gender, included four ethnic groups: European-American, African-American, Asian-American, and Latin-American. The social contexts analyzed were friendship, peer group, and school. Different contexts were studied because it was expected that children and adolescents would evaluate exclusion from some contexts as a clearly moral issue, as has been proposed by Opatow (1990); however, in other contexts exclusion might be seen as social-conventional, for instance, with the aim of protecting group functioning.

Across all contexts, the tenth graders were more likely to approve of exclusion than were fourth or seventh graders, suggesting the vital importance of studying exclusion decisions in adolescent populations. Findings included recognition that exclusion from school was not acceptable based on either race or gender, but that exclusion from friendship groups and peer groups was more acceptable because of gender (i.e., excluding a girl was judged as acceptable) than because of race. Fairness justifications were used across all contexts. The friendship context evoked empathy and personal choice reasoning and the peer group context was the only context that evoked group-functioning reasoning.

Participants were also counter-probed with statements indicating that others felt differently about the acceptability of exclusion than did the participant: they heard counter-probes reflective of social pressure, suggesting authority approval or disapproval of exclusion and indicating exclusion or inclusion acceptability in another country. While social pressure did impact the exclusion decisions of children and adolescents, particularly for the friendship and peer group contexts, in general exclusion was seen as wrong, even with the added social pressure provided by the counter-probes. However, adolescents were still more willing than younger children to view exclusion as acceptable: tenth graders were more willing to approve of excluding a girl from a peer group and an African-American child from friendship. Authority counter-probes also revealed that exclusion was most wrong in the school context and more acceptable in the friendship and peer group contexts. Additionally, social pressure impacted inclusivity more so than did authority figures, reflecting the importance of peer relationships for children and adolescents. Probes about exclusion behavior in an unspecified other country resulted in more judgments of exclusion as wrong based on race/ethnicity than based on gender.

This research provides strong support for the importance of examining adolescent reasoning about exclusion. The adolescent sample was, in many ways, more accepting of exclusion than were younger children. Drawing on this research and recognizing the importance of cliques and crowds to adolescents, Horn conducted a line of research investigating the exclusion decisions of adolescents, using contexts appropriate to adolescents as well as focusing on a variety of high- and low-status cliques (Horn 2006; Horn 2003). She surveyed primarily European-American 9th and 11th grade students, asking them to reason about members of different cliques (i.e., preppies, gothics, and cheerleaders) in contexts that were either multifaceted or prototypically moral (i.e., exclusion or distributive justice). While this research would be stronger if participants were drawn from populations more reflective of the general US population, nonetheless Horn's work contributes greatly to knowledge of adolescent social reasoning.

Overall, adolescents rejected exclusion on the basis of group membership, however exclusion was considered less wrong than denial of resources because of

group membership (Horn 2003). Age-related differences included findings that 9th graders judged exclusion as less wrong than did 11th graders and used more social-conventional reasoning (i.e., maintaining group functioning) to justify these decisions. Additionally, across the age groups, boys were more approving of exclusion and used more personal and social-conventional reasoning than did girls. In ambiguous situations (i.e., when participants were only told the group membership of individuals and not about their personal traits), adolescents did tend to rely more on stereotypes in justifying their judgments. However, when provided with information about the target, they relied on this information instead of group membership.

In a separate study, Horn examined the same data set, attending to differences among high- and low-status social reference groups (Horn 2006). High and low status groups were defined in terms of adolescents' social cliques, for example 'preppies' were a high status group and 'goths' were a low status group. Specifically, she asked participants to list which group they identified with and then examined which social reference group target each participant chose to include in an activity. High-status group members were chosen more than low-status group members. Additionally, high-status participants chose more high-status targets, and used more social-conventional reasoning. Low-status participants used more moral reasoning. Thus, it seems that high-status group members are more concerned with protecting the status quo, whereas low-status group members, perhaps because of greater experience with exclusion, see moral reasons, such as fairness, for inclusion of a more diverse group of individuals.

Moving from adolescent exclusion based on a range of group memberships, Horn and colleagues have conducted a line of research looking explicitly at sexual prejudice and exclusion based on gender nonconformity and sexual orientation. While sexual prejudice has been commonly studied in the social psychology literature with adult populations (Haslam and Levy 2006; Herek 1994), little other research has examined sexual prejudice in adolescents. Horn and colleagues administered a questionnaire to 14–18 year-old high school students as well as a sample of young adults in a university setting, using a sample representative of the US population (for review see Horn 2008).

Participants provided demographic information, as well as evaluations of their comfort with gay/lesbian peers, their beliefs about the origins of homosexuality, and their attitudes toward homosexuality. Additionally, the questionnaire included descriptions of individuals who were either gender conforming or not, and gay or lesbian. Participants were asked for judgments and reasoning about whether it was all right or not all right to exclude, harass, tease, assault, or accept the individuals described.

The researchers found that while 50% of participants judged homosexuality to be wrong, only 11% judged that exclusion of homosexual peers would be all right and only 6% condoned teasing. Thus, while adolescents do not necessarily believe that homosexuality is acceptable, they are, for the most part, not willing to overtly exclude or tease peers who are homosexual, and instead distinguish between beliefs about and interpersonal interactions with gay peers. For those adolescents who evaluated homosexuality as wrong, they also asserted that they would have the least amount of comfort interacting with a gay or lesbian peer. In general, while adolescents expressed comfort interacting with homosexual peers, they were least comfortable interacting in intimate scenarios (i.e., sharing a room on a class trip).

While adolescents generally evaluated negative interactions with gay or lesbian peers as wrong, they were more likely to evaluate exclusion as more acceptable than teasing, harassing, or assaulting gay or lesbian peers. When justifying exclusion, they referenced social conventions and personal choice. Middle adolescents were more likely than older adolescents or young adults to use such reasoning and less likely to use moral reasoning (such as appeals to fairness) in justifying exclusion judgments. Additionally, gender conformity mattered a great deal to adolescents: they judged straight or gay peers who were gender nonconforming in mannerisms or appearance as less acceptable than peers who conformed to gender stereotypes or who were involved in gender nonconforming activities (such as football for girls).

The results of Horn and colleagues (2008) reveal the importance of studying sexual prejudice and gender nonconformity, and reinforce that context does matter for youth when making inclusion/exclusion decisions. Additionally, this research highlights the potential for less overt and explicit forms of social exclusion among

adolescents. Horn's finding that intimate encounters with gay or lesbian peers were particularly uncomfortable for adolescents highlights an important area of research across group membership: how do children and adolescents respond to intergroup contact in intimate relationships?

Killen and colleagues investigated this issue in fourth, seventh, and tenth grade children adolescents from mixed-ethnicity schools about interracial exclusion contexts that varied in terms of their intimacy: lunch at school, a school dance, and a sleepover. Additionally, this research expands current knowledge about exclusion by focusing not just on majority, but also on minority children and adolescents' reasoning about exclusion.

Interestingly, though all participants disavowed race-based exclusion at school, more adolescents judged race-based exclusion to be wrong, perhaps due to greater awareness of the social tenets against race-based exclusion. For non-race-based exclusion, ratings of wrongfulness decreased with age. This likely reflects a focus by adolescents on social conventions and a desire to protect group functioning. However, minority participants judged non-race-based exclusion as less acceptable than did majority participants. Additionally, minority participants judged exclusion of a minority child as less acceptable across the different contexts. Participants also varied in the reasoning used in judging race-based exclusion as wrong: minority participants used more empathy reasoning than did majority participants. Finally, in the sleepover context, participants often judged parental discomfort with a minority race guest as a legitimate reason for exclusion, reflecting the continued importance of parent-child relationships throughout adolescence (Smetana 1988).

Drawing on Allport's (1954) hypothesis that quality contact between groups can lead to better intergroup attitudes, developmental researchers have examined the role of intergroup contact, which refers to the conditions that must be met for contact with members of out-groups to provide experiences that reduce prejudice (Tropp and Prenovost 2008). Thus, in a study by Crystal et al. (2008), adolescents completed an Intergroup Contact Measure, revealing the impact of intergroup contact on exclusion decisions. It was found that participants with higher levels of intergroup contact rated exclusion as more wrong and estimated lower incidences of race-based exclusion than did

participants with lower levels of intergroup contact. Thus, intergroup contact may reduce prejudicial attitudes and lead to less approval of exclusion. Additionally, with age, adolescents estimated higher levels of race-based exclusion. Adolescents also used more non-race-based reasons for exclusion for the peer group context than for the sleepover context, suggesting a desire to perceive peers as more positive as they become more dependent on peers and strive for autonomy from parents (Fuligni 1998).

Sunwolf and Leets extended the research on adolescents' social reasoning about exclusion by focusing on self-reports of actual experience with exclusion approaching the issue from a bona fide group perspective (BFGP) (Leets and Sunwolf 2005; Sunwolf and Leets 2003, 2004). A BFGP asserts that groups have more fluid and dynamic boundaries that can be negotiated by members and those seeking inclusion, Sunwolf and Leets (2003) asked participants to report on personal experiences of exclusion from groups. Open-ended questions about participants' own exclusion from groups they tried to enter, exclusion of others from joining a group, passive witnessing of exclusion, and rules for exclusion, were asked in congruence with closed-ended questions about frequency of exclusion and stress levels associated with exclusion. In this study, researchers found that adolescent's concerns with group dynamics (e.g., peer pressure, wanting to fit in, fear of exclusion) and social fears (e.g., not wanting to be different, being uncool, or worried about reputation) inhibited them from voicing their opposition to exclusion of other peers from their group. Seventy percent of those who reported withholding disagreement with exclusionary behaviors also reported that they regretted not communicating it.

In a follow-up statistical and narrative thematic analysis of this data, Sunwolf and Leets (2004) reported on peer rejection strategies and stress associated with attempting peer group inclusion. They found that participants' recollection of rejection strategies fell in five categories: ignoring, disqualifying, insulting, blaming, and creating new rules; suggesting the ambiguity of group boundaries. It was also found that European-American participants reported experiencing significantly higher stress levels associated with exclusion than minority participants, which is counterintuitive given their higher group status. Adolescents reporting more experience with exclusion also reported

significantly higher stress levels than those having less experience. Similarly, participants who had more experience being left out expressed higher stress levels when witnessing others being excluded than those who were less often denied entry into a group.

Highlighting the negative emotions individuals may have about group experiences and the social rebuking strategies used by adolescents who exclude, the authors continued their analysis to study the rules used by adolescents to justify social exclusion (Leets and Sunwolf 2005). Through qualitative analysis of participant responses, Leets and Sunwolf (2005) identified seven categories of exclusion rules: unattractiveness, punishment, dangerous, group loyalty, benevolent protection, unqualified, and never and others. Participants responded to two questions: one asking them to list circumstances in which it would be acceptable to exclude (moral rules) and another asking them to recall reasons for which they excluded someone from a group (exclusion behavior). The highest percentage of responses for both questions (33% for moral rules, 51% for exclusion behavior) fell in the “unattractiveness” category, thus highlighting a peer’s physical appearance as a salient justification for exclusion. The next highest frequency of responses for the moral rule question fell into the punishment category (e.g., “he always ridiculed me so this is revenge”). Twenty-one percent of the responses referenced group loyalty (e.g., “my friends did not like her”) as a reason for excluding a peer from their own group, thus citing in-group favoritism as the second most important reason for exclusion. The authors suggest these results allude to the salience of maintaining a positive image of one’s self through the group; thus, adolescents may consider it acceptable to exclude in the attempt to protect a positive social identity.

The previous study also brings to the foreground the difference between adolescents’ viewpoints and actions, given the differences in frequencies of exclusion rules reported as ones adolescents acted on versus ones they stated as acceptable. Feigenberg et al. (2008) qualitatively analyzed eighth graders’ responses to a true story narrative in which an excluded child was invited to take part in the exclusion of another child. Respondents were asked to suggest strategies for how the child in the narrative should deal with the situation and give justifications for their proposed strategies. Three main strategies emerged from the responses:

either “upstand” and go against the group to comfort the victim, “perpetrate” and join the group by mocking the victim or “bystand” and be uninvolved in the ostracism. Young adolescents, who were more likely to use conventional justifications, highlighting social norms, were also more likely to recommend not getting involved in the exclusion. Those who chose to stand up for the victim were more likely to use justifications of prosocial transformation (e.g., “They might realize they are doing the wrong thing and not do it again”). Although this study provides insight into adolescents’ reactionary approaches to a nonfictional social exclusion story, and helps clarify what strategies adolescents consider in such situations, it is still not clear what they will actually do given the opportunity. However, the justifications and reasoning that were assessed provide greater understanding of how group boundaries are negotiated given both their moral and social-conventional dimensions. Most of the studies described so far have been conducted with North American samples; however, several cross-cultural studies on exclusion in adolescence will be reviewed below.

Cross-Cultural Perspectives

In two studies focusing on exclusion in Japan and Korea, Killen et al. (2002a) and Park et al. (2003) surveyed American, Japanese, and Korean adolescents about exclusion in a variation of peer contexts. In these studies, fourth, seventh, and tenth grade participants were asked to judge six contexts in which a child was excluded based on specific traits that included aggressiveness, unconventional appearance, poor athleticism, cross-gender identity, sad personality, and social disruptiveness. Measuring participants’ evaluation of exclusion, prescription to conformity, and tolerance of differences, the data collected showed that context and gender, rather than culture, were more potent predictors of these measures.

Despite expectations that Japanese and American findings would differ based on cultural differences, the majority of all children evaluated exclusion as wrong (Killen et al. 2002a). There were within-culture differences across the different contexts, as well as between-culture similarities. Park et al. (2003) also reported within-Asian cultural differences thus proving the heterogeneity that exists in cultures. Japanese and American adolescents were more likely to exclude based on group functioning (e.g., an aggressive child and a slow

runner), while Korean students evaluated the disruptive behavior of acting like a clown as harshly as acting aggressively. Gender differences in evaluations of exclusion were found in both Japanese and American students: girls were significantly more sensitive to exclusion, and were less willing to conform than boys; however, this gap was bigger for Americans. Such gender differences were not found in the Korean sample. Overall, Korean ratings of conformity were higher than Japanese and American ratings, however conformity ratings decreased with age, emphasizing the universality of autonomy judgments in adolescents (Smetana 1997).

These studies showed that although culture does predict to some extent adolescents' evaluations about exclusion, conformity, and tolerance; context and gender play a bigger role in their considerations. Spanish adolescents' attitudes toward exclusion have been examined by Enesco et al. (2008) in a study designed to allow for comparison between American youths' evaluation of exclusion and Spanish youths' evaluations. Enesco et al. (2008) assessed exclusion from three contexts (school, peer group, and friendship), showing that Spanish adolescents evaluate exclusion along all contexts as wrong and mainly used moral reasoning to justify their answers. These findings extended the findings reported by Killen et al. (2002b). Given three contexts, and varying the gender and race (Gypsy child and African child in the case of the Spanish sample) of the child, researchers found that Spanish youth did not differentiate between exclusion across the context nor the identity of the victim, which differed from the Killen et al. (2002b) results. Findings in American samples of children and adolescents' judgments of exclusion revealed a developmental shift from the moral domain to the social-conventional domain, suggesting the importance of group functioning to adolescents. This pattern was not found in the Spanish sample. The majority of Spanish adolescents consistently repudiated exclusion using moral explanations of fairness, integration and prevention of racism, reflecting the prosocial nature of Spanish youth. However, given the continued prejudice that exists in adult societies, including prejudice against immigrants within Spain, further research must be carried out to understand adolescents' exclusion rules given a broader and more varied selection of contexts.

Research on exclusion from Social Identity Theory has contributed to the literature on how adolescents'

experience exclusion. Rutland et al. (2005) conducted two studies, one examining racial exclusion and the second examining exclusion based on nationality in children and adolescents aged 6–16. They focused on how acceptable it was to punish someone for excluding based on race (Study 1) or nationality (Study 2) and also examined differences in judgments based on either low or high public self-focus in order to assess the impact of social and authority-driven pressure against such forms of exclusion.

The findings suggest that while most children and adolescents judge racial exclusion as wrong, adolescents, in particular, see national prejudice as more acceptable: the two adolescent age groups rated punishment for race-based exclusion as significantly higher than for nationality-based exclusion. Additionally, whereas children suppressed their in-group bias under high public self-focus, the young adolescents actually increased their nationality-based in-group bias under high public self-focus and also showed high levels under low public self-focus as well. The authors suggest that this may reflect a heavy focus on intergroup rivalry among young adolescents, which may be heightened in the face of public accountability.

These studies reveal the importance of detangling the differences between race-based and nationality-based exclusion in a variety of contexts, as it appears that nationality-based exclusion is seen as more acceptable. This has significant applications for intergroup relations, considering the increasing global focus of the world. Additionally, while this research is insightful, it focused on minimal, not actual, groups and did not fully assess reasoning. Research on exclusion from a range of cultures, which uses the methodology of probing children about reasoning regarding exclusion, with its foundation in Social Domain Theory will enable continued comparison across cultures and increased ability to draw conclusions about cross-cultural similarities and differences in experiences with exclusion.

In addition, research about cultural tolerance can help explain adolescents reasoning about exclusion. In a study assessing adolescents' judgments about tolerance for practices by Muslim actors, Geiling et al. (2010) surveyed Dutch adolescents about four Muslim practices, which can be reasoned about in either the personal, social-conventional, or moral domain. Findings showed that Dutch adolescents were more tolerant

of practices they considered as personal (e.g., wearing a headscarf) than practices they judged to be moral (e.g., an Imam's speech against homosexuals). Tolerance for social-conventional practices fell in between. Another important finding stemming from this study was that endorsement of multiculturalism predicted tolerance toward Muslim practices more so than group identification, thus suggesting the salience of multicultural education to promoting social equality and breaking down cultural/religious boundaries.

In line with other research (Abrams and Rutland 2008; Killen and Stangor 2001), Geiling et al. (2010) found that older adolescents were less tolerant of Muslim beliefs and practices across all contexts showing more concern for group norms and social expectations given the public debate in the Netherlands about the role of the Muslim minority in Dutch society. Research examining cultural and religious tolerance informs social exclusion research in that it helps identify the relational boundaries that adolescents negotiate when reasoning about exclusion. Further research on tolerance in adolescents living in countries and regions exposed to wars and violent conflicts underlying cultural differences will help identify exclusionary attitudes in contexts where out-group threat is extremely salient. Such research will bring conflict resolution interventionist a step closer to finding long-lasting strategies that would mitigate these group tensions.

Conclusion

Adolescents' evaluations of exclusion have revealed the complexity of the phenomenon. While there are times that exclusion is viewed as wrong (using moral reasons of unfairness), there are times when exclusion is justified (using conventional reasons of group functioning). Adolescent encounters with exclusion are frequent due to the heavy focus, particularly in early and middle adolescence, on the dynamics of crowds and cliques. While adolescent exclusion is receiving increased research focus, there are still significant gaps in the knowledge about how adolescents experience exclusion and why some adolescents justify exclusionary practices.

Specifically, research on exclusion has focused on sampling majority children and adolescents. Recent research that has sampled minority populations has revealed significant differences regarding how minority and majority adolescents reason about exclusion (Crystal et al. 2008; Killen et al. 2007a). In addition, studying

adolescents enrolled in homogenous and heterogeneous schools as was done by Crystal et al. (2008) has revealed a significant effect for intergroup contact for adolescents. Moreover, Verkuyten (2003)'s findings on negative attitudes toward perpetrators of ethnic victimization indicates that individuals exposed to multicultural education benefit. Thus, research has relevance for programs, interventions, and curricula designed to reduce exclusion based on prejudice and discrimination. Research that relies upon the rich, authentic experiences of adolescents with exclusion in realistic intergroup contexts is important. Future research should continue to assess reasoning and different contexts for reasoning, as it is clear that adolescents reason differently about exclusion based on the context of that exclusion. Since it has been shown that group functioning plays an increasing role in adolescent reasoning (Horn 2003), research should also continue to investigate the role of group dynamics in exclusion decisions. Research that measures skill with groups and social perspective taking ability (Theory of Social Mind) reveals that increased skill with understanding groups can lead to more differential inclusion and exclusion behaviors (Abrams et al. 2009). This new line of research, which has only examined minimal groups up to age 11, should be expanded to older age groups and to intergroup contexts.

In conclusion, adolescent experiences with exclusion constitute a central aspect of adolescent social development. Continued rigorous research will lead to deeper understanding of the dynamics of adolescent intergroup relations. Studying exclusion in adolescence will also lead to effective programs designed to reduce prejudicial and biased attitudes and behaviors and to foster positive adolescent relationships, attitudes, and social justice.

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including many that relate directly to adolescents. For example, the model now figures prominently in programs seeking to prevent adolescents' risky health-related behaviors, especially their potential drug and alcohol use (see Midford 2000). As with medical inoculation that exposes individuals to weakened viruses so that they can produce antibodies and resist the effects of later exposure to the virus, social inoculation operates similarly as it deals with attitudes instead of antibodies. Social inoculation involves the inoculations of attitudes as individuals are exposed to counter arguments against what later can become persuasive messages. Providing individuals with arguments against actions enables individuals to resist later stronger messages (see McGuire 1961, 1968). That resistance then enables them to avoid engaging in risk behaviors conducive to harm.

The development of social inoculation approaches reveals a fundamental shift in prevention efforts. Early prevention programs assumed that education and fear were sufficient to motivate adolescents to change health-risking behaviors. Researchers, however, had long noted otherwise (see Evans 1989; Midford 2000). These documented failures led to the development and expanded use of social inoculation. As it relates to adolescents and risk behavior, social inoculation focuses on sources of social pressure, mechanisms of social influence, and states or traits that influence susceptibility to those pressures. As a result, for example, drug prevention programs adopting this model assume that a variety of social pressures push adolescents to use drugs, with those pressures coming from a variety of sources, ranging from the mass media and peers to even idealized images of themselves. To resist these pressures, prevention programs inoculate youth by exposing them to arguments against the use of drugs and training them in the skills necessary to implement nonuse choices.

Social inoculation developed from an outgrowth of social learning theory and informational-processing theory (Bandura 1977; Evans 1989; McGuire 1961; McGuire 1968). While the attention to social influences is taken from social learning theory, informational-processing theory adds an important component in the manner that messages are accepted and best addressed. For example, an individual's attitude toward the source of information influences their acceptance of the material. Such insights lead to, for example, the use of more trusted sources in the implementation of programs, such as peers instead of authority figures. As

Social Inoculation

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The concept of social inoculation refers to a type of risk prevention model derived from the expanding fields of health psychology and behavioral medicine. The concept has been used to address a variety of social issues,

a result, several prevention efforts now involve peers (see, e.g., Weisz and Black 2010). These efforts seek to benefit from the manner peers are attuned to peer cultures, reach other adolescents successfully, and lead programs into meaningful directions (see Backett-Milburn and Wilson 2000). Despite important successes, it is important to note that these programs also can fail, especially when they lack clear objectives, fail to consider environmental constraints, do not adequately train and support peer educators, and fail to secure multi-agency support (see Walker and Avis 1999). These common themes not only reveal how social inoculation works but also highlight the challenges facing the translation of theory into practice.

The social inoculation model increasingly plays an important role in efforts to foster healthy adolescent development. Given the remarkable extent to which research shows how the adolescent period is distinguished by social concerns and responds to social influences, it is not surprising to find an important role for a model that centers on social influences. The model takes advantage of that focus and seeks to benefit from beliefs and attitudes that can be made vulnerable to persuasive attack by opposing arguments. Effective social inoculation models “inoculate” adolescents with both social skills and the knowledge necessary to resist a variety of social pressures urging them to engage in risky behaviors. Social inoculation models have been shown to be grounded in research-based theory and demonstrate positive results. The application of theory into applied practice, however, faces important challenges, and those challenges are precisely the types that this model shows can be surmounted by carefully crafted theory-based programs.

Cross-References

► Prevention Programs

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Social Intelligence

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Adolescence involves dramatic changes in social and emotional functioning (Spear 2000). During adolescence, youth focus more on social relationships and bonds with their peers as they gradually detach from their parents (Kloep 1999). Social and emotional development are accelerated during adolescence, and this phase is believed to be especially important in the emergence of social and emotional intelligence (William et al. 2007).

Social intelligence is a multidimensional mental ability distinct from other forms of intelligence (Weis and Süß 2007). The concept of social intelligence, first introduced by Thorndike (1920), refers to the field of social understanding, action, and interaction. Social life demands not only active but also reactive individuals in the construction of knowledge; it requires the ability to recognize other individuals' mental states in order to respond in ways appropriate for the interpreted situations. This ability to form representative thought that allows one to put oneself in the position of others, and then the ability to respond to that thought, serves as the foundation of social intelligence.

There exists no generally accepted definition of social intelligence, but a few components are well accepted. A key aspect of social intelligence is social understanding, the ability of a person to properly understand and interpret social stimuli that is communicated by various means (Weis and Süß 2007). Social

memory also necessarily is involved in social intelligence; it allows for storing and recalling social information. This type of memory typically is (operationalized) as a memory for name and faces but may cover a broader range of contents (Kosmitzki and John 1993). Social intelligence also involves social knowledge, which involves the “procedural” social memory associated with memory and understanding (Weis and Süß 2007). Added to these aspects of social memory would be the ability to deal with people and use appropriate social techniques in interactions with others. These more developed definitions continue to address Thorndike’s (1920) differentiation between a cognitive component (involving understanding social relationships) and behavioral component (involving the management of relationships) of social intelligence.

Despite the significance of social intelligence to social functioning, research in this area has not developed considerably. Nor has this area of study focused much on the period of adolescence or considered fully the developmental components of what would constitute social intelligence. Rather than focus on social intelligence itself, the study of adolescence has focused more on related areas such as social skills, self-regulation, and interactions with peers and family members. These areas of research are all related closely to social intelligence, but they do not address it directly to develop, for example, measures that would assess social intelligence in a way that intelligence is assessed, which is what the field of social intelligence has attempted to do but mainly with adults. This area of research remains a potentially fruitful one if it would specifically focus on adolescents and youth to understand better the developmental roots, changes, and nature of social intelligence.

Cross-References

► [Emotional Intelligence](#)

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Social Justice Theory

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Overview

The intent of this essay is to provide a concise overview of the relevance and implications of social justice theory to adolescence. To begin, a description of what is meant by the term “social justice” is presented. Next, the relevance of social justice theory to adolescence is described, and relevant research addressing critical social justice issues in adolescent populations is explicated. Finally, future research directions and the implications of a social justice approach to work with adolescents are discussed.

Introduction

For several reasons, social justice theory is important to consider in the context of adolescence. Research has shown that the effects of social injustice are deleterious in the adolescent population. Poverty and family dysfunction serve as risk factors for a number of setbacks in adolescence, including mental, emotional, and behavioral disorders, delayed cognitive development, and poor physical well-being (O’Connell et al. 2009). Furthermore, these negative effects disproportionately affect the lives of children and adolescents. The rate of children and youth living in poverty in America has been consistently higher than that of adults for decades, more than 1½ times higher, and this rate continues to increase. For example, the percentage of adolescent children (ages 12–17) living in low-income families increased from 33% in 2000 to 36% in 2008 (Wight and Chau 2009).

Furthermore, it is children and adolescents within communities of color, who are often among those most negatively impacted by situations of inequality and injustice. For example, ethnic minority children and those in low-income households are more likely to experience heightened rates of violence and less likely to live in neighborhoods that offer resources such as parks, museums, and libraries (O'Connell et al. 2009). Neighborhoods without such features are less able to promote the positive development and well-being of young people (O'Connell et al. 2009). Before delving into this research, it is important to provide a clear definition of the term "social justice."

Defining Social Justice

Social justice is generally defined as the fair and equitable distribution of power, resources, and obligations in society to all people, regardless of race or ethnicity, age, gender, ability status, sexual orientation, and religious or spiritual background (Van den Bos 2003). Fundamental principles underlying this definition include values of inclusion, collaboration, cooperation, equal access, and equal opportunity. Such values are also the foundation of a democratic and egalitarian society (Sue 2001). In addition, a crucial link exists between social justice and overall health and well-being. For individuals, the absence of justice often represents increased physical and emotional suffering as well as greater vulnerability to illness. Furthermore, social justice issues and access to resources are also inexorably tied to collective well-being (e.g., relationships and political welfare) of families, communities, and society (Hage 2005; Kenny and Hage 2009; Prilleltensky and Nelson 2002).

Effects of Inequality on Adolescents

Much research documents the adverse effects of poverty and inequality on the physical, psychological, and social development of adolescents (e.g., Evans and Kim 2007; Hay et al. 2007; Wadsworth et al. 2008; Young et al. 2001). For example, Abernathy et al. (2002) noted that adverse health outcomes start in infancy, as poverty is associated with higher rates of infant mortality. In their study, they assessed how the home environment and family income level affect adolescents' physical well-being. Results showed that negative health-related behaviors were associated with lower levels of

income. Specifically, adolescents living in lower-income families were more likely to live in a smoking household, more likely to smoke cigarettes themselves, and were less physically active. Adolescents in lower-income families were also less likely to have a regular physician (Abernathy et al. 2002).

Elgar et al. (2005) also found evidence of a relationship between negative health behaviors and socioeconomic status. These authors investigate the effects of national-level income inequality – that is, income disparities between the rich and poor – on negative health behaviors, such as drinking and smoking. Elgar et al. (2005) assessed the relationship between living in a country with higher levels of income inequality and alcohol consumption among 11, 13, and 15-year-olds. They found that the 11- and 13-year-olds living in countries with more income inequality were significantly more likely to drink alcohol. They were also more likely to drink more often, and the 11-year-olds were more likely to drink until a state of drunkenness was achieved (Elgar et al. 2005).

Much literature confirms the link between poverty in adolescence and adverse health risks and conditions (e.g., Evans and Kim 2007). These negative health factors may contribute to a shortened lifespan for adolescents living in poverty, and likely contribute to higher rates of chronic health problems among adults living in poverty. For example, Miech et al. (2006) found that rates of obesity were higher among poor adolescents, with adolescents in their sample also less likely to be physically active. Vieweg et al. (2007) found a similar link between poverty and obesity. They found that receiving public health insurance (and lack of private health insurance) was positively correlated with unhealthy weight levels in adolescents. In addition, the incidence of unhealthy weight was highest in Hispanic adolescents, followed by Black adolescents (Vieweg et al. 2007).

The psychological effects of living in poverty have been shown to be equally problematic during adolescence. Adolescents living in poverty often cope with stressful life situations, such as domestic disputes and neighborhood violence, at a higher rate than youth from families with adequate income (Center for Disease Control 2007). In addition, adolescents of color are more likely than White adolescents to live in the poorest, crime-ridden neighborhoods, which place racial minority adolescents at greater risk of exposure

to violence and the effects of negative environments (Douglas-Hall et al. 2006; Schiavone 2009).

Schiavone (2009) interviewed adolescents living in impoverished communities about their encounters with violence. All 14 racial minority youths interviewed indicated that they frequently witnessed violence in their communities. Participants described these experiences as emotionally distressing, leading to feelings of helplessness and fear, which caused them to be distrustful (Schiavone 2009). Furthermore, living under conditions of poverty also tends to demand adult role-taking earlier among adolescence (Dashiff et al. 2009). Dashiff et al. (2009) found that adolescents' awareness of the financial difficulties their parents face appeared to cause negative mood effects, a sense of helplessness, and shame. Adolescents living in poverty are also more at risk for depression, substance abuse, and early sexual activity. Despite these increased mental health risks, the authors found that impoverished communities often lacked adequate mental healthcare (Dashiff et al. 2009).

Simultaneously, school environments often serve to perpetuate and institutionalize systems of injustice for adolescents (Kozol 1991, 2005). Public school districts in the most impoverished communities have fewer resources and opportunities for their youth. For example, in 2003, New York City spent \$11,627 on the education of each child, while in Nassau County on Long Island, New York, the town of Manhasset spent \$22,311 (Kozol 2005). Too often, classrooms in poorer communities are overcrowded, understaffed, and lacking basic equipment and textbooks needed for teaching (Kozol 1991). In addition, such schools are comprised of mostly Black and Hispanic students, often accounting for a majority of the student body. Following his tour of 60 American public schools, Kozol (1991) found that conditions had actually grown worse for urban children in the 50 years since the Supreme Court landmark ruling of *Brown versus the Board of Education*, in which the policy of segregated schools was dismantled. As described by Kozol (2005), "What is happening right now in the poorest communities of America – which are largely black communities... is the worst situation black America has faced since slavery" (p. 313).

Schools and family environments also may be unsafe environments for gay, lesbian, bisexual, and transgender youth. Perceived sexuality has been noted

to be a primary reason for harassment in schools (Matthews et al. 2009). Lesbian, gay, and bisexual youth who have experienced rejection during adolescence were also recently found to be 8.4 times more likely to report having attempted suicide, 5.9 times more likely to report high levels of depression, 3.4 times more likely to use illegal drugs, and 3.4 times more likely to report having engaged in unprotected sexual intercourse compared with peers from families that reported no or low levels of rejection (Ryan et al. 2009). These results mirrored other studies, which found that harassment or rejection in the school environment due to individual differences was harmful to adolescent development, putting such youth at greater risk for substance use, poorer grades, lower self-esteem, and poorer mental health (Descamps et al. 2000; Gay, Lesbian and Straight Education Network 2005; Hodges and Perry 1999).

One of the primary avenues for promoting social justice and reducing inequality for adolescents is through the implementation of preventive interventions. The following section will describe examples of preventive interventions with youth, and guidelines and principles for their implementation.

Preventive Interventions and Social Justice

Preventive interventions may function best by targeting risk factors and strengthening protective factors in young people (Kenny et al. 2009; Wolf 2005). Protective and risk factors occur both on an individual and societal level, thus affecting adolescents within multiple communities and systems. Protective factors include the abilities that at-risk individuals have to develop strengths in spite of negative environmental circumstances (e.g., poverty, prejudice, and discrimination) (Walsh et al. 2009). Such factors can include resilience, self-efficacy, community involvement, and academic achievement. Although these components do not prevent at-risk adolescents from facing social injustice, they increase the likelihood of positive outcomes for youth who face barriers related to their community, school, or home environment.

Preventive interventions that promote social justice are best designed as systemic interventions that reduce inequality in a variety of settings such as schools and communities (Kenny et al. 2009; Wolf 2005). These prevention programs work to simultaneously increase

competencies and decrease problems in young people in order to empower them (Wolf 2005). They strive to give youth the knowledge and skills needed to more effectively deal with situations of unequal social power, as well as work to change social policies that may serve as barriers in the promotion of social justice (Wolf 2005). Successful interventions provide adolescents, families, and communities with the tools and motivation needed to create change on both an individual and systemic level and to promote social justice (Conyne 2004).

Contextual Factors for Adolescents

Well-designed preventive interventions take account of social and contextual factors (e.g., poverty and discrimination), and promote community-wide involvement (Hage and Kenny 2009; Kenny et al. 2009). Ecological theory is one useful model that is frequently utilized in developing effective preventive interventions, as it requires an awareness of many interacting contexts that create adolescents' life circumstances (Bronfenbrenner 1979). These systems include the social, familial, school, and community context of adolescents' lives, all of which need to be considered in creating, designing, and implementing effective preventive interventions.

Guidelines for Effective Preventive Interventions

Prevention scholars have begun to identify a set of guidelines for effective social justice-oriented preventive interventions that are relevant to work with adolescents (Hage et al. 2007; Walsh et al. 2009). First, it is imperative that prevention programs be designed with an understanding of the social context specific to adolescents (Walsh et al. 2009). More specifically, programs should address both risk and protective factors within each setting relevant to the lives of adolescents, including the social, familial, school, governmental, and community levels. Secondly, programs should be created with the ultimate goal of social justice and structural change, recognizing that genuine change must go beyond an individual level (Hage and Kenny 2009; Kenny et al. 2009). Thirdly, effective preventive interventions are also geared toward the appropriate developmental level of the target population. For example, adolescence is characterized by a transition from elementary school to high

school and into adulthood. With this transition come decisions pertaining to work, school, family, and increasing levels of responsibility both for oneself and for one's community. By recognizing adolescents' unique developmental needs, preventive interventions will more effectively support the transition from adolescence into adulthood (Walsh et al. 2009).

In addition to attention to the unique developmental needs of adolescents, preventive interventions should take the cultural context of adolescents into account in designing, implementing, and evaluating prevention programs (Walsh et al. 2009). Multiple factors shape the beliefs and behaviors of an individual adolescent, including racial-cultural identity, ethnic background, family traditions, peer behaviors, and acculturation levels. These cultural influences create an identity that is consistently changing and evolving. Preventive programs that consider the cultural context of adolescence attend to the norms, attitudes, beliefs, and experiences of the target group of adolescents, in their program development, implementation, and evaluation efforts. Not attending to the context may result in programs that inappropriately impose their own values on the target population (Hage et al. 2007).

It is also important to note that collaboration across a variety of disciplines, such as counseling, social work, community psychology, and other related fields, strengthens such programs so that individuals are able to work toward structural change on multiple levels (Hage et al. 2007; Walsh et al. 2009). This collaboration is crucial because it reduces the potential for miscommunication and allows for greater consideration of the specific context of the target community, thereby enhancing program relevance and likelihood of a successful outcome. In addition, it is also imperative that leaders evaluate the extent to which the program meets their specific social justice goals (Walsh et al. 2009), such as a decrease in social inequities. Finally, professionals need to carry out these programs over time in order to reach as many individuals as possible and sustain smaller, short-term changes that have been made (Walsh et al. 2009).

In sum, these principles can be used to implement prevention programs and can help program leaders reach social justice goals by working to eliminate social inequalities. A number of programs that work with adolescents have used these factors to promote social justice, and have shown promising results, as well as the

potential to create and maintain structural change. Some examples of these programs are discussed in the next section.

Examples of Preventive Interventions That Promote Social Justice

The number of preventive interventions for adolescents that target social justice has grown tremendously in the past few years (Wolf 2005). One such program, known as The Boston Connects Program, takes a multilevel approach to promoting social justice by targeting students, peers, families, schools, and communities (Walsh et al. 2008). Students and families in the program are provided with resources to improve academic performance, social competencies, school and community involvement, and support on the individual, peer, and familial levels. The program involves a large-scale intervention targeting both neighborhoods and schools to address risk (e.g., violence, aggression) and protective factors (e.g., mentorship and service opportunities). Evaluations of this program revealed increased support services for students, more community involvement in schools, and improved academic success. More specifically, data suggested that at-risk students in the program progressed academically at the same rate as (if not faster than) students who were not in the program because they were not at risk (Kenny et al. 2009).

An additional example is the Communities That Care program based in Pennsylvania, which uses prevention strategies to address problem behaviors of at-risk adolescents in over 100 communities (Feinberg et al. 2005). One of the most important features of this program is a prevention board made up of community members that create an individualized risk assessment for each community. Preventive interventions are then implemented for each community, targeting problem behaviors such as teen pregnancy, substance use, school dropout, and acts of violence. Leaders from each community serve as the bridge for program and community involvement, ultimately creating a collaborative partnership in which all parties work to establish social justice at the community level. Program evaluations have shown multiple benefits, including increased community involvement and collaboration in programs, as well as improvements in school performance, school safety, parenting, practices and family and community relations (Hawkins et al.

2002; Jenson et al. 1997; Office of Juvenile Justice and Delinquency Prevention [OJJDP] 1996). Evaluations have also shown decreased problems in school (e.g., detention, failure, truancy, suspension, fighting) and decreases in weapons charges, burglaries, and drug offenses (Jenson et al. 1997; OJJDP 1996).

A third preventive program that works with adolescents who face multiple societal barriers, such as poverty and racism, is Tools For Tomorrow, which works with urban youth in public high schools in Boston, Massachusetts (Kenny et al. 2007). The focus of Tools For Tomorrow is on a pivotal point in adolescence, high school graduation. This program educates students about further educational and career opportunities available post-graduation, while also informing them of structural barriers that they will inevitably face due to the social stratification of society (e.g., racism, classism). The program's ultimate goal is to promote social justice for urban youth by addressing barriers and giving students access to the tools needed to prevent negative consequences of school dropout (e.g., lifelong poverty). Initial findings demonstrate that teachers who worked with students in the program observed improvements in decision-making skills (Solberg et al. 2002). Early evaluations also suggest positive results pertaining to binge drinking, delinquent behavior, and other targeted risk factors (O'Connell et al. 2009). Finally, the program has also formed a strong collaborative relationship between an area university (i.e., Boston College) and the public school system (i.e., Boston high schools), allowing the intervention to initiate change from more than one level.

The above preventive interventions provide examples of effective programs that have worked to increase awareness of social barriers and decrease social inequities on multiple levels. By following the principles and guidelines outlined above that speak to effective preventive interventions (Walsh et al. 2009), professionals in the helping profession can effectively design, implement, and evaluate programs that promote social justice and target risk and protective factors for adolescents.

Conclusion

This essay provides an overview of critical issues related to a social justice theory of adolescence. Researchers interested in promoting social justice with adolescent

populations can contribute to existing work by identifying the causes and effects of oppression in the larger society, and by exploring how oppression and its consequences can be prevented. Examples include studies on preventing dating violence (Cornelius and Resseguie 2007), preventing bias against gay and lesbian youth (Fisher et al. 2008; Morsillo and Prilleltensky 2007) and promoting career development for adolescent girls (O'Brien et al. 2000). In sum, in order to impact issues relevant to social justice in adolescents, researchers need to work toward developing effective preventive interventions that address societal issues of discrimination, and exploitation, such as bias against people based on their race, ethnicity, sexual orientation, age, religion, and gender (APA 2003; Perry and Albee 1994).

The examples of social justice prevention practice contained in this essay are meant to provide direction to practitioners, researchers, and theorists in mitigating the harmful effects of poverty and other inequities on youth, and in empowering youth to use their skills and knowledge to engage in creating social change. A primary avenue for cultivating adolescents' skills and awareness is through education about the social and historical context of social injustice and about factors that contribute to the well-being of all adolescents. Roaten and Schmidt (2009) propose beginning such education as early as elementary school by integrating experiential activities and self-awareness exercises into classroom meetings and curricula. Such activities aim at expanding children's knowledge of social inequality and sense of cultural empathy. They note that such activities not only increase self-awareness but also lead students to confront their biases and ethnocentricity (Roaten and Schmidt 2009).

Furthermore, in addition to education about oppression and to designing preventative interventions aimed at reducing or eliminating the negative effects of social injustice on adolescents, scholars and youth leaders need to engage in substantial policy change to adequately address pressing social concerns facing adolescents. For example, professionals can engage in training of school personnel (e.g., teachers, psychologists) to assist them with developing skills and knowledge about implementing prevention projects that target adolescents (Romano 1997). Youth leaders might also become actively involved in political initiatives that lend their

expertise as it relates to health promotion and the prevention of psychological and physical distress among adolescents. Examples include public advocacy initiatives and legislation to reduce community and school violence, to reduce adolescent drug use, and support for cigarette smoking bans in schools and other places frequented by youth. Professionals can further advocate for the support of federal funding priorities that address adolescent health promotion through agencies such as the National Institute of Mental Health, Substance Abuse and Mental Health Services Administration, and the Office of Juvenile Justice and Delinquency. These efforts will work toward ensuring that *all* youth are provided with resources and opportunities to become successful leaders for the next generation.

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Social Learning Theory

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Social learning theory emphasizes the importance of observing and modeling the behaviors, attitudes, and emotional reactions of others and focuses on the reciprocal action between individuals and their environment to determine some aspects of behavior. It is one of the most popular theories in psychological science and criminology. In psychological science, Bandura (1969, 1973) proposed a social learning model that spans both cognitive and behavioral frameworks by encompassing attention, retention, reproduction, and motivation. His model has been applied extensively to the understanding of aggression and psychological disorders, especially in the context of behavior modification. In criminology, Akers (1973, 1990, 1998) proposed a social learning theory composed of four major concepts – differential association, reinforcement, imitation/modeling, and definitions. Akers' theory proposes that individuals learn criminal behaviors as they do noncriminal ones and seeks to specify how they learn these criminal and noncriminal behaviors and behavioral cues through reinforcement. Akers' theory suggests that individuals learn to anticipate rewards and punishments for criminal behaviors within intimate associations to the extent that these behaviors

were previously reinforced, either directly or vicariously. Once behavioral consequences are anticipated, the theory assumes that reinforcement will increase the chances of the behavior since individuals are deemed to maximize rewards and minimize punishments. Social learning theory, regardless of whether it seeks to explain aggression (Bandura 1977) or delinquent behavior (Akers), importantly incorporates protective and preventive factors in addition to factors that facilitate the problem behavior under investigation. The focus is on the balance of influences that make for the probability of problem or conforming behavior, and those influences are not only from one's learning history but also from those operating within given situations and those that are predictive of future behavior.

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Social Networking in Online and Offline Contexts

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Overview

Adolescence is a developmental period in which social networks (cohesive groupings of peers to which the youth belongs) become important for identity, adjustment, and future relationships. This essay provides an

overview of what is known about the characterization, formation, and maintenance of social networks during adolescence. Given the recent explosion of online social networks, such as the Web sites Facebook and MySpace, discussion of adolescents' involvement in these online social networks is included in the essay. Online and offline social networks are compared, taking into account their function, composition, and impact on the adolescent's behavioral adjustment. Finally, directions for future research on these topics are discussed.

Relevance of Social Networking to the Adolescent Developmental Period

Adolescence is the developmental period during which youth are optimally attuned to their peer group (Collins 1997; Gifford-Smith and Brownell 2003). The proportion of each day spent with the peer group as well as the intimacy and closeness in relationships with peers, all rise dramatically during this time (Berndt 1999; Furman and Buhrmester 1992). The amount to which youth are influenced by the behaviors of their peer group is similarly suggested to peak in adolescence (Dishion and Owen 2002; Harris 1995). In sum, it is during adolescence when social networks (groups of peers to which the youth belongs) are arguably the most important.

The emphasis in adolescence on the peer group is considered developmentally appropriate. Adolescents are theorized to be differentiating themselves from their family of origin and to use the reactions of their peers to assist them in creating their own identity (Adler and Adler 1998; Brown 2004; Brown et al. 1986). Moreover, the templates that peer relationships establish in adolescence may become critical to set the stage for healthy socializing in adulthood (Sullivan 1953). In fact, longitudinal work suggests that qualities of peer interactions in early adolescence are repeated in young adult relationships with romantic partners (Stocker and Richmond 2007) and friends (Bagwell et al. 1998; Eisenberg et al. 2002). Collectively, these findings underscore the particular importance of social networks during the adolescent period.

Social Network Theory

Adolescents' peer interactions may be characterized in multiple ways, but this essay focuses on a particular aspect of the relationship with the peer group known as

the social network. Social networks, sometimes referred to as cliques, are cohesive groups of youth who interact more with one another than with other youth (Adler and Adler 1998; Urberg et al. 1995). Social networks may be organized around participation in common activities, such as studying or skateboarding, or may simply be defined by common friendships. Most importantly, however, these networks typically provide a social setting in which adolescents spend time together, form close ties, and learn interpersonal skills that are important in both adolescence and adulthood (Brown 2004).

Adolescents' social networks are structurally different from the crowds that frequently typify high schools. Whereas social networks are comprised of adolescents who actually hang out together, crowds are reputation-based groups, whose members may or may not consider each other friends, such as "the brains, the jocks, the geeks, the popular crowd" (Adler and Adler 1998; Gest et al. 2007a). Thus, crowds often define the social structure of schools, sometimes helping adolescents to classify hierarchies within the peer group (Brown 2004). However, because crowd membership is not necessarily based on actual interactions or affiliations among peers, these groups are likely to contribute more to the teens' sense of identity than the development of their social skills (Steinberg 2005).

Social networks are also different from dyadic friendships (close, mutual relationships between two youth) in that networks may provide adolescents with group support and a sense of a collective identity as a group member, which dyadic friendships may not offer (Gifford-Smith and Brownell 2003). Social networks can also be distinguished from sociometric status (being globally regarded as liked by the peer group at large) because social networks assess adolescents' actual interactions and affiliations with peers, whereas sociometric status measures perceptions of liking (Gifford-Smith and Brownell 2003). For instance, an adolescent could have a strong, tight-knit social network of a few close peers, while being broadly considered as unpopular by the rest of the school. That said, past research has found positive correlations between the likelihood that someone is a member of a social network and the presence of dyadic friendship and high sociometric popularity (Gest et al. 2001; Wentzel and Caldwell 1997). Nonetheless, correlations are modest, underscoring the need to assess social networks as

a distinct construct from dyadic friendships and sociometric status (Gest et al. 2001).

In the field of psychology, social networks are typically assessed using sociometric nomination measures where, for example, adolescents are asked to name the “people they hang out with” from their grade at school (Cairns et al. 1988; Gest et al. 2007b). Social networks can then be identified by comparing the nominations for everyone at that grade level to find the presence of consistent groupings. Adolescents may also be asked to list “the people they hang out with together,” in addition to listing the people with whom they associate personally, which is a way to compensate for having missing participants in a sample (Gest 2007). Computerized software such as Kliqefinder (Frank 1995, 1996) may be used to process the sociometric nomination information using a clustering algorithm in order to group participants into social networks. Observational studies suggest that the social networks determined from sociometric nominations do correlate with visible patterns of interaction; for example, members of the same social network were recorded by independent observers to interact with one another four times more often than with other same-sex adolescents not found to be in their social network (Gest et al. 2003).

Importantly, although sociometrics are considered the standard procedure in the field for assessing social networks, limitations to this methodology do exist. One key limitation is that this method only maps social networks that an individual has within a set context such as school. This is because this procedure requires a majority of individuals in a single context to report on everyone’s networks (e.g., all the students in one grade at a single high school report on the social networks in that grade level). However, unlike among children for whom their primary peer relationships are in the classroom, in adolescence many important relationships are formed with individuals who do not attend the same school (Keisner et al. 2003; Poulin and Pedersen 2007). Thus, although sociometric procedures provide information about social networks within a particular context, they do not consider adolescents’ broader affiliations with peers. For instance, an adolescent could have a strong social network of a few peers outside school (e.g., in the neighborhood or church), while being isolated in his or her school.

Social networks vary in size, cohesiveness, stability, and centrality (Gest et al. 2007a). First, most social

networks are thought to have about four to five members, but variability exists with some being significantly larger or smaller (Gest et al. 2007b). Second, social networks can vary on how tight knit and exclusive they are, sometimes referred to as the density of the social network versus diffuse in boundaries. Third, just as in friendships, some social networks are highly stable whereas in others, members come and go. Finally, centrality is a term used to describe whether the social network is perceived to be influential and socially dominant in the organization at large, with members who are well connected with many other groups versus whether the social network is a marginalized group.

Research about what causes adolescents to form the social networks they do has generally suggested homophily as a guiding principle (McPherson et al. 2001). That is, adolescents are drawn to form social networks with peers who are similar to themselves. Importantly, homophily in social network membership exists for a broad range of constructs, including interests, attitudes, status, and also in regard to drug and alcohol use, externalizing problems, and internalizing problems (Cairns et al. 1988; Hogue and Steinberg 1995).

Online Social Networks

Although traditional investigations of social networking have relied upon networks representing face-to-face relationships among adolescents in a single school, explosive growth has occurred in recent years in online social communication (Madden 2006). Importantly, adolescents are the age group disproportionately affected by this new technology (Pew Internet and American Life Project 2009). While Internet use is now common among all age groups, it is adolescents who predominately use the social communication functions of the Internet, that is, to make and maintain relationships with peers online (Bargh and McKenna 2004).

Social networking Web sites, the most popular of which are Facebook and MySpace, exemplify online social communication. Both originated in 2003–2004 but together they have approximately 230 million unique active users every month worldwide (TechCrunch 2008). On both of these Web sites, users maintain their own page, where they typically include their name, photos, and information about themselves. Web site users are linked to friends in a social network,

and friends post comments and pictures on each others' pages that may be viewed by all network members. The purpose of these Web sites is to enhance communication and the sharing of social information between members of the same social network as well as to recognize the ways in which social networks of friends overlap.

Because of the recency of social networking Web sites, little is known about adolescents' patterns of communication and friendship in this online sphere, and how these patterns may compare to those in the adolescents' offline social networks. Nonetheless, although preliminary, growing evidence suggests continuity between both types of social networks. First, there is evidence that adolescents report communicating with the same individuals on their Facebook and MySpace pages as they do in real life, suggesting considerable overlap in the members of online and offline social networks (Subrahmanyam et al. 2008). Second, positive correlations have been found among college students between their sociability on campus and the number of friends they have on their Facebook Web site (Ellison et al. 2007). This relationship held after statistical control of total Internet use, suggesting a unique function of Facebook in relation to social communication (Ellison et al. 2007).

Mikami et al. (2010) have conducted a series of studies in a sample of youth, followed from ages 13–14 through ages 20–22, where participants' Facebook and MySpace pages were observationally coded. Results have suggested considerable continuity between patterns of communication and quality of friendship in face-to-face relationships with the same behaviors online on social networking Web sites. For example, youths' number of friends on their web page and indicators of connection and support with friends as coded from posts left on their web page were positively predicted by early adolescent sociometric popularity and observations of support and relatedness in an interaction with a close friend (Mikami et al. 2010). Early adolescent behavior problems (self-reported and mother-reported) also predicted the presence of hostility in youths' description of themselves on the web page and inappropriate pictures posted on the web page (Mikami et al. 2010). In addition, problems in early adolescents' relationships with their mothers predicted poorer later peer interactions on youths' social networking web pages (Szwedo et al. *in press*).

Early relationship difficulties also predicted youth having fewer observed peers in photos posted to their web page (Szwedo et al. *in press*), again suggesting that offline relationship problems may be manifested online.

It is important to note that the nature of adolescents' interactions on social networking Web sites may differ from their interactions on other types of online media such as chat rooms, instant messaging, and Internet gaming. The non-anonymous nature of social networking Web sites may encourage youth to use these Web sites to communicate in a similar way as they would in face-to-face relationships. In addition, the fact that these Web sites have very high prevalence rates of usage among adolescents may make the interactions on them more reflective of the interactions that are occurring in face to face. For these reasons, newer results may differ from previous research using different Internet media which found Internet interactions to be superficial and to occur predominantly among maladjusted youth (see summary in Bargh and McKenna 2004; Valkenburg and Peter 2009).

Relationships Between Social Networking and Adjustment

Consistent with the findings that collectively suggest good peer relationships promote positive adjustment, it is theorized that being part of a social network may also be beneficial for adolescents. Being in a social network may provide adolescents with a sense of group support and belongingness as well as with opportunities to negotiate conflicts and take the perspective of other group members (Rubin et al. 2006). In support of these hypotheses, investigators using cross-sectional designs with sixth- and seventh-grade students have found that members of social networks showed higher levels of academic achievement (Henrich et al. 2000; Wentzel and Caldwell 1997) and fewer teacher-reported internalizing problems (Henrich et al. 2000) than youth isolated from social networks. However, these findings cannot rule out the possibility that better adjusted youth are included in social networks, as opposed to the fact that social networks contribute to good adjustment.

Although members of social networks may, on average, show lower levels of psychopathology than do individuals who are not part of social networks, research on the predictive value of social network

membership to subsequent adjustment has yielded more differentiated results. Crucially, the adjustment and behavior of the other members in the adolescents' social network may influence the adolescent's own adjustment and behavior over time, after statistical control of early levels of behavior (Harris 1995). The presence of homophily (McPherson et al. 2001) suggests that adolescents tend to affiliate with peers who have similar levels of adjustment, and that the peer group will influence the adolescent to become more similar to the group over time.

This process has been best studied among adolescents with externalizing and delinquent behaviors, who tend to affiliate with peers who display similar problems (Cairns et al. 1988; Dishion 1990). It is thought that a delinquent peer group will encourage an adolescent's own delinquency through peer pressure and conformity, a process known as peer contagion effects. For example, the extent to which peers reinforce an adolescent's own talk about deviant actions (by joking, laughing, or saying "right on") has been shown to predict subsequent increases in that adolescent's own delinquent behavior (Dishion et al. 1999; Dishion and Owen 2002; Patterson et al. 2000). Conversely, having a peer group that is low on externalizing behavior, or who have a strong affiliation toward academic achievement (Wentzel and Caldwell 1997), can similarly influence a youth to engage in these positive practices.

Although the possible risks imposed by having a poorly adjusted social network are best studied in relationship to externalizing problems, there is also a small body of evidence indicating that homophily and conformity in social networks may also occur for internalizing behaviors (Hogue and Steinberg 1995; Oh et al. 2008; Prinstein 2007). Specifically, adolescents with internalizing problems tend to heighten the levels of internalizing problems in their friends by engaging in collective rumination or moping, processes which are known to exacerbate internalizing distress (Prinstein 2007; Stevens and Prinstein 2007). By contrast, adolescents who are in a social network low in internalizing problems are likely to suggest (or initiate) distraction techniques that are known to be effective in reducing internalizing distress over time (Prinstein 2007; Stevens and Prinstein 2007).

Similar processes may occur in social networking Web sites. Similar to the research on contagion effects in face-to-face social networks, the presence of

deviancy talk comments on youth's web pages as well as pictures on their web pages of deviant behavior may predict increases in externalizing behaviors over a 1-year period, after statistical control of baseline levels of externalizing behaviors (Szwedo et al. 2009). However, the relationship between Web site use and internalizing problems was more complicated than originally thought. Having many friends in youths' online social network and having interactions with more friends online predicted reductions in internalizing problems over the 1-year period, but only for youth who felt less connected in face-to-face relationships at the beginning of the study. By contrast, these same online factors predicted increases in internalizing difficulties for youth who felt more connected in face-to-face relationships at the start of the study (Szwedo et al. 2009). These results suggest that online social networks may help youth who otherwise have difficulty in peer relationships feel connected to peers, and perhaps reduce feelings of depression or anxiety as a result. For youth who do well in peer relationships, on the other hand, online communication through social networking Web sites may be a less rich form of social interaction than they are accustomed to, perhaps leading to an increase in internalizing symptoms if face-to-face relationships are neglected in favor of online socialization.

Review and Future Directions

This essay has provided a summary of social networking in adolescence, how it is assessed, and the potential for such networks to influence adjustment. The importance of social networks in both offline and online contexts was discussed. Although results to date are intriguing, there are several limitations in the current research. Future work may expand on the existing state of knowledge.

First, social networks have been established as overlapping with but still conceptually distinct from dyadic friendship and peer sociometric status, as summarized above. However, research about the consequences of social network participation on youths' adjustment has not well differentiated between the contributions of social network membership, friendship, and sociometric status. Missing in the empirical literature are studies that assess all three of these constructs within the same sample and examine the independent contribution of social network membership

after statistical control of friendship and sociometric status. One exception is the study by Wentzel and Caldwell (1997) who found that social network membership, over friendship and sociometric status, had the strongest influence on sixth graders' academic achievement. Similarly, another study using behavioral genetic methodology found that the influence of a best friend on adolescents' alcohol use could be explained by the adolescent's own genetic tendency to both use alcohol and also to select an alcohol-using best friend, but the influence of a deviant social network remained an independent predictor of increased alcohol use using this behavioral genetic framework (Hill et al. 2008).

Another limitation is that the magnitude of peer contagion effects may theoretically differ depending on the cohesiveness of the social network. That is, close-knit and cohesive social networks may have greater socialization influences on their members relative to more diffuse or unstable social networks. In the dyadic friendship literature, the influence of a best friend on an adolescent's own behavior is suggested to be strongest when the friendship is high in quality (Berndt et al. 1999; Berndt and Keefe 1995). A similar process may occur for the influence of social networks, as is suggested by a recent study (Kwon and Lease 2009). This type of differentiated investigation of peer contagion effects should be investigated in future work.

Online social networking Web sites are a recent phenomenon, so relatively little is known about adolescents' patterns of interaction in this medium. However, preliminary work overall suggests that youth's social networks online using these Web sites may show continuity with their face-to-face social networks (Mikami et al. 2010; Szewedo et al. *in press*). In fact, deviancy talk online may predict increases in deviant behavior similar to the contagion effects suggested to occur in face-to-face social networks (Szewedo et al. 2009). The online medium will continue to be important for social networking. Therefore, future studies might examine characteristics of youths' social networks online, as well as consider both online and offline social networks and social networks assessed outside of school, as predictors of adjustment.

In summary, social networks are highly important for adolescents, and this emphasis on the peer group during the adolescent period is developmentally appropriate. Membership in a social network, or a cohesive

group of peers to which the adolescent belongs, is conceptually distinct from participation in a dyadic friendship or the attainment of high sociometric status. Social network membership may provide youth with key negotiation skills as well as a sense of collective identity that may importantly contribute to good adjustment. At the same time, the attitudes, values, and the behaviors of the social network may also influence the youth to become more similar to that network over time, which can potentially exacerbate behavior problems if the social network members are high in problem behaviors. Online social networks may have similar properties to the face-to-face social networks traditionally studied. Future studies might continue to examine youths' social networks, both in online and offline contexts.

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Social Reasoning

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Social reasoning involves the ability to draw inferences about others' intentions, dispositions, and actions, in order to regulate one's own behaviors. The leading conceptualization in this area was presented by Turiel (1983) who presented a domain model of social reasoning that underpins many other efforts relating to it, such as social information processing or what has become known as social cognition. Turiel's model originally posited three distinct conceptual domains that individuals evaluate when they engage in social understanding and reasoning. The personal domain mainly relates to an individual's interpretation of situations in terms of how they would impact the self. The social conventional domain involves an individual's understanding of a situation in terms of social expectations and social norms. The moral domain involves an individual's understanding of situations in terms of broader issues like human rights, welfare, and fairness. Since then, Tisak and Turiel (1984) identified what has become known as a prudential domain, which involves understanding issues in terms of personal safety. Other researchers continue to elaborate on and examine these domains, but Turiel's model remains the foundation of much of that research.

The development of each domain of social reasoning rests on individuals' prior social interactions and experiences and each domain emerges along its own separate developmental framework and trajectory (Helwig et al. 1990). Although the domains are theorized to develop separately, individuals are deemed to access and integrate knowledge across various domains when they make social judgments. Final judgments will depend on an individual's prior experiences and the current social situation that is interpreted in light of individual and situational biases implicit in events (Guerra et al. 1994).

Studies of social reasoning have gained increasing significance in the study of adolescence. Research in this area has examined topics as diverse as delinquency, social exclusion, authority, discrimination, perceptions of authenticity within relationships, and depressive vulnerability (see, e.g., Killen et al. 2002; Ruck and Wortley 2002; Crane-Ross et al. 1998; Tisak and Jankowski 1996). These studies also have been complemented by other research examining decision making; all of which has become a major thrust of research relating to adolescent development.

Cross-References

► [Social Cognition](#)

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Social Skills Training

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Used in clinical, counseling, and educational psychology, social skills training has been widely accepted as an effective means to teach individuals needed interpersonal skills. Through social skills training, individuals learn how to navigate social situations better as well as meet their own needs more effectively. At its core, this method of training breaks down social interaction into manageable parts, including nonverbal skills, paralinguistic skills, paralinguistic features, verbal content, and interactive balance (Mueser and Bellack 2007). Learning then occurs in small, incremental steps as it proceeds on the assumption that improving social skills or changing selected behaviors raises people's self-esteem and increases the likelihood that others will respond favorably to them. These small steps are what eventually can transform relationship skills and lead to more positive development.

Social skills training is based in social learning theory and operant conditioning (see, most notably, Bandura 1969). From social learning theory, social skills training draws upon the notion that individuals learn from observing and imitating. Operant conditioning, on the other hand, focuses on increasing a desired behavior by reinforcing that behavior. Shaping occurs when reinforcement is given as a subject accomplishes one of many sub-behavioral goals, which eventually leads them to accomplish the overarching behavioral goal. All of these principles are applied in social skills training.

Trainers generally follow predictable steps in programs aimed to assist individuals in their efforts to acquire more effective social skills (see, e.g., Bloomquist 2005; Mueser and Bellack 2007). The first is allowing the client to understand the significance of the targeted skill in the overall behavioral goal. Next, the behavioral goal is distilled into manageable parts. Third, the skill is modeled for the client. Reviewing the demonstration with the client is the fourth step. After that, it is necessary for the client to practice the skill themselves. Sixth, feedback about their performance is given, and then suggestions are provided in the seventh

step. The next step provides the client with another opportunity to practice the skill, and step nine repeats steps six through eight one to three times. Finally, the tenth step is to assign homework for the client to practice their skill. Retention and generalizability to the client's life can be enhanced by practicing the skill in session, assigning meaningful homework, and using the client's support system in natural situations. Additionally, guided trips into the community with the trainer can prove useful. Social skills training, then, involves a long process that includes assessing skill deficit, instructing about specific needed skills, modeling, role-playing, shaping, providing frequent feedback, practicing, and reinforcing positive interactions.

While social skills training is often done in groups, it also can be done on an individual basis. In clinical trials, social skills training has benefitted individuals from numerous populations and age groups: those with intellectual disabilities, social phobias, addiction, severe mental illness, and children with behavioral problems (Cook et al. 2008; Maag 2006). Social skills training also can be used in nonclinical settings, such as with couples, families, community outreach programs, and work-based social skills programs. As has been demonstrated, social skills training is a powerful method to catalyze change in a broad range of clients' lives.

As social skills training continues to gain empirical support, it is important to note that many clients who could benefit from training programs lack access to them. The lack of access comes from not only the lack of programs but also the lack of clinical training that would include teaching social skills. Reviews note that increasing social skills remains one of the most potent interventions for helping individuals develop more rewarding and meaningful relationships (Mueser and Bellack 2007). The extent to which social skills training can help build relationships is of considerable significance given how relationships are important to an individual's quality of life and how relationships also are important in promoting social integration into communities.

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Social Support

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Adolescence is a time of transitions; social, physical, cognitive, and emotional changes provide challenges for adolescent development as well as opportunities for growth. One factor frequently cited in coping with this transition is social support. Understanding the role of social support in the lives of adolescents facilitates making sense of adolescent behavior and development as well as sustaining adolescents' growth.

Overview

Social support is aid and caring received from others. It can come from different sources and meet a variety of needs. Social support is a complex, multidimensional construct. Some research suggests social support promotes adolescent development and adjustment while other research suggests that it makes youth more vulnerable to behavioral problems. Knowledge of how social support can affect adolescent development can assist the development of programs for youth or provide suggestions for one-on-one interactions with adolescents.

There are differences by demographic variables in the effects of social support. Understanding the diversity of adolescents' experiences with social support is important in that it increases the likelihood of sensitive interventions for youth and more precise research

design. This also would allow adults to tailor their responses depending on the needs of specific adolescents and design research that is more refined. This essay examines some of these factors.

Definitions of Social Support

Social support includes the belief that others like, value, care for, and want to do things with one (Harter 1985). Another definition of social support is relationships, beliefs, and interactions that foster mastery of emotional distress, sharing of tasks, advice, skill development, and material assistance (Pierce et al. 1996). Both significant others and global networks have been differentiated in past research (Milardo 1992). Significant others are people with whom a child has an intimate relationship, frequently a family member or close friend. A global network, however, is comprised of all of the people a child knows. These sources provide different resources, and both are important (Milardo 1992).

According to Robert Weiss (1974), there are six dimensions of "relational provisions" that social support can provide: attachment, obtaining of guidance, opportunity for nurturance, reassurance of worth, a sense of reliable alliance, and social integration. Attachment is the aspect of social support that results in feelings of comfort, security, and belonging. Obtaining of guidance includes receiving support and information in regard to dilemmas. Opportunity for nurturance is the degree to which a relationship provides the person with occasions to care for others. Reassurance of worth provides the individual with feelings of self-confidence and being valued. Reliable alliance is the belief that support from a relationship will persist. Social integration includes relationships or networks where one can share interests, activities, ideas, and such.

Major Theorists and Researchers

Several researchers have examined the nature and significance of social support as it relates to adolescents. Duane Baumeister, coauthor of the Network of Relationships Inventory (Furman and Buhrmester 1985), has published numerous articles and chapters on social support in children, adolescents, and young adults. His work has included research on youth's perceptions of sibling and peer relationships, including the development of interpersonal competence and relationships

of youth with Attention-Deficit/Hyperactivity Disorder (ADHD). He also has studied gender and cultural differences in friendships. Michelle Kilpatrick Demaray, coauthor of the Child and Adolescent Social Support Scale (Malecki et al. 2000), has authored several articles and chapters on social support in youth. Her research includes gender and nationality differences, importance of supports, aggression and victimization, social support and adjustment, and experiences of social support by youth with ADHD. Wyndol Furman, coauthor of the Network of Relationships Inventory (Furman and Buhrmester 1985), has published many articles, chapters, and a book on social support. His research focus has included romantic relationships, friendships, sibling relationships, effects of parental attachment on subsequent relationships, peer interactions, and treatment of interpersonal difficulties in youth. Susan Harter, author of the Social Support Scale for Children (Harter 1985), is well known for her contribution to the assessment of social support in youth as well as youth self-perception. Her research includes articles and chapters on authenticity in adult couples, interactions between self and social support, impact of lack of support, emotion, and motivation. Christine Kerres Malecki, coauthor of the Child and Adolescent Social Support Scale (Malecki et al. 2000), has published articles and chapters regarding gender and nationality differences in social support, importance of support, assessment of support, social support and aggression/victimization, social support and adjustment, and impact of social support on academic achievement. Lastly, Robert S. Weiss has published extensively, including the topics of grief and loss, attachment, marriage and divorce, work and retirement. His contribution to social-support research is the conceptualization of different social-support provisions that relationships can supply. As even a brief examination of their work reveals, this area of study is quite robust and growing in important directions.

Sources of Social Support

Adolescents frequently receive support from parents, non-parental adults, and peers. The effects of support from these different sources also interact with each other. Parental support is associated with adaptive outcomes. For example, among adolescents at risk for school failure, parent support predicted physical

health, psychological well-being, and adjustment after controlling for demographic variables, including neighborhood danger (Bowen and Chapman 1996).

Social support also can come from adults outside of the home, including mental health professionals, teachers, and neighbors. The majority of adolescents receiving services from a psychotherapist or school counselor following parental separation indicated that these individuals were one of the most important source of support (Halpenny et al. 2008). Among adolescents at risk for school failure, teacher support predicted physical health and psychological well-being and neighborhood support predicted psychological well-being and adjustment after controlling for demographic variables, including neighborhood danger (Bowen and Chapman 1996).

Peers are a frequent and powerful source of support for adolescents. Peer support predicted psychological well-being in a group of middle-school students (Buchanan and Bowen 2008). Peer support can come from classmates or close friends, and the effects vary. Sometimes peer support can have a negative influence.

Support from different sources can interact in several ways. There are three major theories about how sources of social-support interact: continuity, compensatory, and alternation. The continuity theory of relationships states that peer relationships recapitulate relationships with adult and have an additive impact on well-being. A number of studies are consistent with this theory. Peer and adult support interacted such that adult support had a greater impact on well-being at higher levels of peer support than at lower (Buchanan and Bowen 2008). Hence, positive peer relations tend to add to the positive influence of positive parental relations. Adolescents who reported poor support from families upon starting college reported lower levels of support at the end of their first semester (Lakey and Dickinson 1994). Poor support from parents is repeated in peer relationships.

Another method of interaction is a compensatory model, whereby support from one source can alleviate the effects of an absence of support in other relationships. There is some support for this theory also. A study of Israeli adolescents found that social support from friends was influential only when support from mothers was absent, and that father support had little influence on self-esteem after controlling for support from mother and friends (Hoffman et al. 1988). In this

case, the sources of support interact so that if one is deficient, the other sources become more influential.

An alternation model of interaction occurs when adolescents tend to turn to different sources for support. For example, parents are a common source of sense of reliable aid (belief that the person will consistently be there for you), affection, instrumental help (material assistance), and enhancement of worth, as well as being rated by young adolescents as the most important source of support. Relationships with mothers were characterized as high on intimacy the most satisfactory. Grandparents were a significant source of affection and enhancement of worth. Teachers provided instrumental support. Relations with friends were described by companionship, intimacy, and equal power. Siblings relationships were full of conflict (Furman and Buhrmester 1985). Each relationship provided unique supports, and youth turned to those people accordingly.

Social Support and Development

Social support is important to adolescent social and emotional development. Young adolescents without a close friend were less prosocial (e.g., helpful, polite), more emotionally distressed, and had lower grades. They continued to be more emotionally distressed 2 years later (Wentzel et al. 2004).

Social support has an impact on adolescent functioning, but adolescent functioning also can affect social support. Youth with behavior problems tend to experience negative relationship with others. For example, youth with ADHD frequently have disrupted peer, parent, and teacher relationships. This lack of support then can lead to depression, creating a cycle of poor relationships and emotional and behavioral problems (Sifers and Mallela 2009).

Past research generally supports the notion that significant other social support may serve as a protective factor by moderating the negative effects of stressful life events through provision of emotional support, information, or resources need to deal with stressors effectively (Garmezy 1985). Many studies are consistent with this; however, some research also has found circumstances in which social support is a vulnerability. A number of studies have indicated that high levels of peer support are associated with negative behaviors in adolescents. For example, when peer support increased and family stress was high,

expectations for success were lower and sense of alienation was higher than for youth experiencing increased family stress but not an increase in peer support. Friend support was associated with higher levels of lying and disobedience. Furthermore, reciprocal conflict-ridden relationships were associated with higher levels of lying and disobedience than unilateral conflictual relationships or reciprocal, low-conflict friendships (Cairano et al. 2007). Adolescent girls with high levels of overall social support were more vulnerable to the effects of life stress on academic performance (Weist et al. 1995).

Group Differences in Social Support

Research suggests differences in the effects of social support by group membership. Differences have been found by gender, ethnicity, nationality, age, socioeconomic status (SES), and disability status. Perhaps, the most frequently found group differences in social support occur by gender. Girls seem to be more likely to benefit from close-friend and parent support than boys, but also more likely to suffer from the effects of a lack of support. Specifically, social support moderated the impact of bullying on internalizing distress for both boys and girls, but the relationship was significant for only teacher, classmate, and school support for boys and parent support for girls. There was not an interaction between victimization and externalizing behavior for boys, but for girls the two variables interacted such that girls experiencing low levels of bullying and high levels of friend support had lower levels of externalizing behavior than those with limited friend support, and the opposite was true at high levels of bullying (Davids and Demaray 2007).

Young adolescent girls perceived higher rates of support from close friends and classmates than boys. Girls reported more support from close friends than other sources and boys reported less support from classmates than other sources. Furthermore, social support was not associated with externalizing, internalizing, or adaptive behavior for boys, but it was for girls. In particular, low levels of parent support were associated with higher levels of aggression and conduct problems. Low levels of classmate support were associated with high levels of hyperactivity and depression and low levels of leadership and social skills. Low levels of close-friend support were associated with low levels of conduct problems and social skills (Rueger et al. 2008).

There also are gender differences in developmental changes in social support. Sixth-grade girls reported higher levels of schoolmate and teacher support than boys, but experienced a steeper decline in classmate support as they became eighth graders (Way et al. 2007). This finding is particularly important in light of research suggesting that girls are particularly vulnerable to deficits in their social-support networks.

Group differences also exist by ethnicity. Social support at school was associated with early initiation of drinking for non-Latino Caucasian youth, but not Latino or African American youth (Bossarte and Swahn 2008). African American adolescents reported higher levels of support from family, but not friends or non-familial adults compared to non-Latino Caucasian adolescents (Barone et al. 1998).

Some research has identified differences in social support by nationality. Youth in the United States reported higher rates of support from parents, teachers, classmates, close friends, and school, as well as higher rates of emotional, information, appraisal, and instrumental support than youth in Finland (Davidson et al. 2008). Hence, there appear to be international differences in sources and types of support.

The experience of social support varies with development. In a study of youth who had undergone hematopoietic progenitor cell transplant, children reported higher social support from teachers than adolescents, whereas adolescents reported higher social support from peers than children (Barrera et al. 2007). Declines in perception of teacher and schoolmate support occurred over the middle-school years (Way et al. 2007). These findings are consistent with a tendency of adolescents to seek more support from peers than adults, and more from close friends than acquaintances.

Socioeconomic status also has been associated with differences in subjective social support. Lower SES sixth graders reported more teacher support and less schoolmate support than higher SES youth. There were no significant differences in close-friend or family support (Way et al. 2007).

Disability status can affect perceptions of social support. Adolescents receiving special education services reported more support from non-familial adults than youth not receiving such services, but there were no significant differences in reports of friend or family support (Barone et al. 1998). This could be because

youth in special education have more regular and close contact with school staff.

While there is much research on social support, there still are some controversies. Some are long standing, such as whether actual or perceived social support is most important, and others are newer such as the impact of technology on social support. The question of whether perceived or received social support is pivotal in adolescent development has been debated. While some claim that it is important to study actual support received, much of the research has tended to focus on subjective reports of support (e.g., Barrera et al. 2007; Lakey and Dickinson 1994; Rueger et al. 2008). This research suggests that perceived support has a significant impact on adolescent functioning, regardless of objective measures. However, others claim that the actual support received is what is crucial to positive outcomes.

There is a controversy about the impact of social networking sites and other forms of electronic communication on adolescents' social support. In a survey of adolescents and adults, using the internet to communicate with close friends and family was associated with lower depression scores 6 months subsequent to the report of Internet use. Using the Internet to meet people was not associated with a change in depression scores over 6 months for people who initially reported low levels of social support; however, it was associated with an increase in depression scores for those who initially reported moderate or high levels of social support (Bessière et al. 2008). This suggests that use of the internet for socializing appears to augment the benefits of social support for those who use it to contact face-to-face supports or create new supports. The increase in depression scores for people who had reported moderate to high levels of support but then were looking to meet new people online may be due to a breakdown in social-support networks necessitating looking for new sources of support.

Measures of Social Support

There are several commonly used measures of social support, which vary by format, whether they assess global (support across people) or significant other (support from specific individuals) social support, and whether they differentiate social support by source or type. The Social Support Scale for Children (SSSC;

Harter 1985) measures children's perceptions of social support from parents, teachers, classmates, and close friends. The measure consists of 24 items that result in parent, teacher, classmate, and close-friend support scales. Items are presented in a structured alternative format to decrease the effects of social desirability by legitimizing either option and not requiring the child to endorse an "I" statement. Scores can be averaged across the four subscales to derive a composite global social-support score. The internal consistency for the subscales ranges from $\alpha=0.72$ to $\alpha = 0.88$. The close-friend support scale was found to correlate $r=0.46$ with a measure of personal disclosure to friends. The classmate support scale was found to correlate $r = 0.62$ with a measure of social acceptance and popularity among peers (Harter 1985).

The Network of Relationships Inventory (NRI; Furman and Buhrmester 1985) is a 33-item self-report measure that asks the youth about his or her relationship with his or her mother, father, siblings, another relative, teacher, best friend, and boyfriend/girlfriend (if applicable). It is designed to assess children's perceptions of their relationships with significant others. The child responds to questions about 11 characteristics of each relationship using a five-point scale. The characteristics assessed include: importance of the relationship, relative power of the child and the other, conflict, satisfaction with the relationship, intimacy, companionship, affection, guidance, enhancement of worth, punishment, and reliable alliance. Several studies have used the NRI to assess significant relationships and have found it to be valid and reliable as a measure of children's social networks (Furman and Buhrmester 1992). The internal consistency of the NRI was found to be $\alpha=0.80$ in a sample of fifth- and sixth-grade children (Furman and Buhrmester 1985).

The Child and Adolescent Social Support Scale (CASSS; Malecki et al. 2000) is a 60-item self-report measure of global social support for youth in grades 3 through 12. The CASSS is based on Tardy's multidimensional model of social support and is made of five 12-item subscales (classmates, close friend, parents, teachers, and school). It assesses appraisal, emotional, informational, and instrumental support on a six-point scale. The CASSS provides scores by source of support or a total support scale. It has good internal consistency ($\alpha=0.89$ – 0.97) and test-retest reliability (0.58–0.78 over 8–10 weeks). Factor analysis

supports the five-factor structure, and there is evidence of convergent validity (Malecki et al. 2004).

The multidimensional scale of perceived global social support (MSPSS; Zimet et al. 1988) was developed with college students, but is frequently used with adolescents. It is a 12-item measure of perceived support from family, friends, and a significant other. It assesses respect, social popularity, and social support on a seven-point scale. This three-factor structure is supported by factor analysis. The measure also yields a total support scale. Scores range from 12 to 84. The scale has strong internal reliability ($\alpha =0.85$ – 0.91) and test-retest reliability is good (0.72–0.85; Zimet et al. 1988).

The Inventory of Socially Supportive Behaviors (ISSB; Barrera 1981) is a 40-item measure of the types of support a person has received over the past month. It consists of a five-point scale on three factors: advice/information, nondirective assistance, and tangible assets as well as a total score.

The Arizona Social Support Interview Schedule (ASSIS; Barrera 1981) is a 56-item, five-point scale that assesses significant other support by source (mothers, fathers, boyfriends, teachers, best friends, grandparents, sisters, brothers) and type (sharing private feelings, money, advice, positive feedback, physical assistance, social participation, and interpersonal conflict). It also assesses changes in support over the past 2 years.

Conclusions

This essay examined definitions of social support as well as key factors that relate to it. As was seen, social support constitutes an important aspect of study relating to adolescence. This area of study continues to grow as new measures are being created and researchers are making important steps in understanding the nature of social support and its potential significance.

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Social Trust

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One of the key developmental tasks of adolescence involves discerning how to engage with others and one's general social community (see, e.g., Flanagan 2003). Although there are many ways to study this discernment and the extent of actual engagement, the concept of social trust has emerged as one of the most important ways to understand it. Researchers and commentators conceptualize social trust as the extent to which an individual holds a positive belief in humanity, particularly the extent to which individuals trust that people usually will treat others fairly and not take advantage of another for personal gain (Kelly 2009). This orientation is not only of significance to particular individuals but also to society in

general in that it can result in important contributions to society given that individuals who have high levels of social trust tend also to engage in cooperation, be more tolerant, volunteer, give to charity, and participate in civic and political activities. Equally important, youth who lack social trust are more likely to engage in juvenile delinquency and other problematic activities as they experience overt exclusion from prosocial community activities (Pan et al. 2005; Kelly 2009). Lack of social trust has the potential to influence the very fabric of society; individuals with high social trust are more likely to view members of out-groups as part of their moral community and feel responsibility for their welfare. Given the potential centrality of social trust to relationships and community life, it is no surprise to find that considerable concern emerges when indicators suggest a general decrease in social trust among youth as compared to prior cohorts (see Smith 2005).

Despite its significance, research on social trust tends to focus on adults and ignore its developmental roots beyond broad group comparisons. Yet, while researchers have not examined, for example, the developmental correlates of social trust, it may be assumed that social trust is established before adulthood. Studies of perceptions of humanity in early adolescents have shown that those who viewed people as able to change were less likely to judge others or stereotype out-groups; they also were able to see similarities between themselves and members of a disadvantaged group, and to have a history of volunteering to help others (Levy and Dweck 1999; Karafantis and Levy 2004). While these correlates of perceptions of humanity also may well be correlates of social trust, researchers still have yet to test directly the factors that contribute to the development of social trust; nor do they know about its relative stability.

The period of adolescence presents an ideal point at which to study the development of social trust, as the period also involves individuals' questioning of their own authenticity and trustworthiness. With increasing exposure to a variety of social experiences and an expansion of sociocognitive competences, variation would be expected in the extent to which individuals have social trust. Indeed, as adolescents age and given what is known about peer group formation and identity development, it could be expected that social trust would decrease in part due to the challenge of finding others with similar interests and norms. But that tendency may be countered by other developmental abilities. Trust requires social

intelligence, being informed through experience, and is tempered by skepticism. Older adolescents' ability to think about others also means that they can be better able to conceptualize a generalized other (i.e., "humanity") and to distinguish between many aspects of their social world, including the ability to distinguish between their social circumstance and those of a generalized other. These examples reveal how the understanding of social trust can be informed by key developmental changes occurring during the adolescent period, they also show that it is not clear whether social trust can develop in positive or negative directions.

Although the study of trust itself has not developed as much as might be expected (see Bernath and Feshbach 1995), there have been important developments that might relate to the study of social trust. There has been important research conducted relating to parent-adolescent trust and its socialization (see, e.g., Rotenberg 1995), but the bulk of it relates to parents' trust of adolescents (Kerr et al. 1999). Considerable research on trust in adolescence has centered on friendships (see Rotenberg 1991; Betts and Rotenberg 2008). That area of research is of significance in that, since many aspects of friendships are negotiated, broader social trust may reflect these negotiations. Although it may be that these types of trust generalize to broader contexts and other relationships, whether and how they do so remains to be seen given that the objects of trust likely are quite different. It likely can be assumed that relationships with parents, friends, and other significant others influence an individual's general view of society, but how those relationships do so remains an area open for research.

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Social Withdrawal

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Overview

In this essay is reviewed the existing theory and research on social withdrawal during early, middle, and late adolescence (approximately 10–19 years of age). First considered are relevant theory, definitions of social withdrawal and related constructs, and issues pertaining to measurement and assessment. Next, the empirical literature on the contributions of biology and genetics to the development of social withdrawal, and the ways in which parents contribute to social withdrawal during childhood and adolescence are reviewed. Thereafter, the peer relations and psychological correlates and consequences of social withdrawal during adolescence are described. This section is followed by a review of research that focuses specifically on gender

and cultural differences in the outcomes of social withdrawal. Surprisingly little empirical research has been conducted on social withdrawal specifically during adolescence. Therefore, this essay concludes with a discussion of future research directions.

Social Withdrawal During Adolescence

Adolescence is generally considered to be a time of “moving away” from parents and “moving towards” peers. It is well established that the peer group is an important and unique context for children's socio-emotional, social-cognitive, and academic development. However, peer relationships, including friendships, social networks, and burgeoning romantic relationships, assume an increasingly critical role in the influence of well-being and adjustment during adolescence. Moreover, there are increased pressures and expectations to socialize with friends and engage in social activities after the transition from childhood into adolescence. *Socially withdrawn* adolescents by definition spend a higher proportion of their time alone and on the periphery of the social scene. Accordingly, such individuals may not only be viewed negatively by their peers due to their atypical behavior, but may also “miss out” on the positive developmental opportunities afforded by social interactions.

Somewhat paradoxically, adolescence is also an age period during which the potential benefits of certain types of solitude first come to be appreciated. For example, adolescents report more positive affect following periods of self-imposed solitude as compared to pre-adolescents (e.g., Larson 1997). Adolescence is also marked by an increase in the uses of privacy, as well as a greater ability and need to be alone. Among adults, solitude has been described as an important context for religious experiences, creativity and insights, as well as the simple enjoyment of leisure activities.

Given the unique social features of the adolescent developmental period, it is perhaps somewhat surprising that compared to relevant research during early and middle childhood, and even adulthood, little is known about the experience of being socially withdrawn during adolescence. Nevertheless, the findings thus far offer important insights into the development and continuity of withdrawn behavior from childhood into adolescence, and the negative adjustment concomitants of adolescent social withdrawal.

This essay begins with a brief overview of definitions, theory, and issues pertaining to measurement and assessment in the study of social withdrawal. Next, the extant empirical literature on the biological underpinnings of social withdrawal, and the ways in which parents contribute to the development of social withdrawal are reviewed. Thereafter, investigations of the peer relations and psychological “costs” of social withdrawal during adolescence, and the work of researchers who compare withdrawn boys and girls, and those who focus specifically on social withdrawal across cultures are described. The essay concludes with suggestions for future research.

Defining Social Withdrawal and Related Terms

Social withdrawal refers to the consistent (across situations and over time) display of solitary behavior when encountering familiar and/or unfamiliar peers (Rubin et al. 2009). Compared to their more sociable agemates, socially withdrawn adolescents less frequently take advantage of available opportunities for social interaction, and thus end up spending comparatively more time alone. In general, social withdrawal is a relatively stable construct throughout childhood and into adolescence, and also across contexts (e.g., home, school, and community activities). Conceptually, it is important to distinguish *social withdrawal*, during which an adolescent chooses to be alone and away from peers, from *active isolation*, during which an adolescent might spend more time off by themselves (in the presence of peers) because they are actively excluded, rejected, and/or isolated by peers.

Researchers have focused on two broad “reasons” why individuals might withdraw themselves from opportunities for social interaction. Some adolescents may refrain from peer interactions because they are too wary and anxious. In this regard, several related constructs have emerged in the literature. For example, in young children, the temperamental characteristic *behavioral inhibition (BI)* denotes biologically based wariness during exposure to novel people, things, and places. In older children and adolescents, *shyness* refers to a personality trait that contributes towards feelings of wariness in the face of social novelty and/or self-consciousness in situations of perceived social evaluation.

In general, adolescents tend to be more susceptible than children to feelings of self-consciousness and embarrassment, particularly in dealings with peers, members of the opposite sex, and authority figures. Moreover, the adolescent developmental period marks the more frequent emergence of clinically diagnosed *social anxiety disorder*, characterized by “a marked and persistent fear of social or performance situations in which embarrassment may occur” (American Psychiatric Association 1994, p. 411).

By contrast, it has also been suggested that some children engage in less social interaction because they are *socially disinterested* (or *unsociable*) and may simply prefer to play alone. Among adults, the preference for solitude has been referred to as a *solitropic* orientation. However, to date, the “non-fearful preference for solitary activities” has not been extensively studied in adolescence. There is some research evidence indicating that social disinterest is a comparatively “benign” form of social withdrawal in younger children. However, it has also been suggested that social withdrawal (for *whatever* reason) might come to have more negative implications in later childhood and adolescence because of age-related increases in expectations regarding social interaction. Yet, these assertions have not been confirmed empirically.

Relevant Theories

Theories that emphasize the importance of peer interactions and relationships for the development of normal social relationships and social skills have provided the theoretical foundation for the study of those children and adolescents who interact rarely with and avoid their peers (see Rubin et al. 2009 for more thorough review). For instance, Piaget (1932) argued that peer relationships provide unique developmental contexts in which children could experience opportunities to examine conflicting ideas and explanations, to negotiate and discuss multiple perspectives, and to decide to compromise with or to reject the notions held by peers. Piaget further postulated that from such interactions, children came to develop the capacity for sensitive perspective-taking or the ability to understand the thoughts, feelings, and viewpoints of others. In turn, this ability to view and understand the perspective of others was thought to lay the basis for socially competent behavior and the development of meaningful and rich social relationships.

Learning and social learning theory have also stimulated current research on social withdrawal. It was suggested, and it is now known, that children learn about their social worlds, and how to behave within them, through direct peer tutelage as well as by observing each other. In this regard, children punish or ignore non-normative social behavior and reward or reinforce positively those behaviors viewed as culturally appropriate and competent. Finally, in ethological theory, it is argued that there is a relation between biology and the ability to initiate, maintain, or disassemble social relationships. It is a central tenet of ethological theory that social behavior and organizational structure are limited by biological constraints, and that they serve an adaptive evolutionary function.

Taken together, these theories and the data supportive of them have led psychologists to conclude that peer interaction and relationships are significant experiences for positive socio-emotional, social-cognitive, and psychological adjustment and well-being during childhood and adolescence. There is no single developmental theory that explicitly predicts how children and adolescents who rarely interact with their peers will develop. However, the assumption in the aforementioned theories is that children who are not involved with their peers may “miss out” on important opportunities to grow, learn, and develop. Many researchers studying social withdrawal have been focused on testing this assumption.

Measurement of Social Withdrawal

A wide range of assessments and methodological approaches have been used to measure social withdrawal and related constructs. Among studies of younger children, the most common techniques include parent/teacher ratings and behavioral observations. However, in adolescence, self- and peer-reports are most often employed, because adolescents are thought to be the most knowledgeable about their internal states and how they spend their time. For example, to explore experiences of solitude, adolescents have been asked to keep diaries of their social activities and time spent alone over a period of several days (e.g., Larson 1997). Widely used peer nomination protocols include the *Revised Class Play* (Masten et al. 1985), which involves adolescents nominating peers who fit various behavioral descriptors. The sensitivity/isolation factor

has been used to identify children and adolescents who do not frequently interact with peers, and includes items related to both shyness/withdrawal (e.g., items such as “Someone who is shy,” “Someone whose feelings get hurt easily”) and social isolation/exclusion (e.g., “A person who is often left out,” “A person who can’t get others to listen”). Subsequently, some researchers have suggested dropping items related to active isolation from this factor in order to provide a “purer” assessment of social withdrawal.

Finally, assessments are also available for specific subtypes of social withdrawal. For example, shyness in older children and adolescents is typically assessed with self-report measures such as the *Children’s Shyness Questionnaire* (Crozier 1995). Coplan and colleagues (Coplan et al. 2004) developed the *Child Social Preference Scale*, a teacher and parent report measure of shyness and social disinterest during early and middle childhood. This measure was recently revised as a self-report measure of unsociability, shyness, and avoidance (i.e., avoidance is conceptualized as stemming from strong preferences to avoid and weak preferences to be with others) for young adolescents (Bowker and Raja in press). Peer nominations for unsociability have also been recently developed and utilized (“Who are the kids in your class who *like* to play alone but aren’t shy?”; Spangler and Gazelle 2009).

Biological Underpinnings

As noted above, there is considerable evidence that social withdrawal has a dispositional basis. Several researchers have shown that behavioral inhibition (*BI*) in infancy and toddlerhood predicts socially reticent and anxious behavior in the peer group throughout the years of childhood and into adolescence. Socially reticent behavior, in turn, predicts social anxiety among adolescents (Rubin et al. 2009). This continuity is particularly marked by extremely inhibited young children who demonstrate particular physiological characteristics. Thus, the route from *BI* in infancy/toddlerhood to social reticence and anxious solitude in early and middle childhood and thereafter to social anxiety in adolescence appears to have as its basis elevated levels of cortisol, higher and more stable heart rate (lower vagal tone or heart rate variability), right frontal EEG asymmetry, heightened autonomic reactivity, and an enhanced startle response (e.g., Fox et al. 2001).

Furthermore, the link between *BI* in early childhood and social anxiety during adolescence is moderated by heightened attention monitoring (as assessed by evoked response potential, ERP); the relation between *BI* in early childhood and social anxiety in adolescence is significant only for those who evidence hypervigilance as assessed by ERP. Also, in adolescence, researchers have found associations between both early childhood and adolescent *BI* and high reactivity of the amygdala (as assessed by fMRI) to the display of unfamiliar or emotional faces. Lastly, there is some evidence of a genetic predisposition to *BI*, withdrawal, and social anxiety. For example, *BI* has an estimated heritability of .50–.70, with higher heritability for children who are extremely inhibited (e.g., Hariri et al. 2002).

The Role of Parents

Several aspects of the parent–child relationship contribute to the development of social withdrawal: quality of the attachment relationship; parenting beliefs about their children's needs; and parenting beliefs and practices characterized as intrusive, negative, and insensitive. To begin with, there is consistent evidence that *BI* and socially reticent behavior in childhood is predicted by an insecure attachment relationship. Given the stability of these behaviors, this link to insecure attachment in infancy is not inconsequential. Additionally, parents of socially withdrawn children view their children as vulnerable and in need of protection. These parenting beliefs likely contribute to an inappropriately warm, intrusive, and insensitive parenting style during the childhood years. Although the majority of these parents may feel as if they are doing what is best for their shy, wary child, the preponderance of existing literature indicates that overprotective, intrusive parenting hinders the social and emotional development of *BI* and socially withdrawn children (e.g., Degnan et al. 2008). Beyond the middle childhood years, the developmental literature on the role of parents in the development of social withdrawal is relatively limited, although there are established links between adolescent social anxiety and intrusive and overprotective parenting (e.g., McLeod et al. 2007). Evidence is also emerging that mothers of withdrawn children continue to endorse intrusive parenting beliefs through the early adolescent years, and that this intrusive pattern of parenting exacerbates anxiously withdrawn behavior (e.g., Kennedy Root and Rubin 2009).

Correlates and Consequences of Social Withdrawal

The majority of studies of adolescent social withdrawal focus on its peer relationship and self-system correlates and consequences. This literature is addressed in the subsequent section.

Social Withdrawal, Peer Rejection, Exclusion, and Victimization

There is strong empirical evidence that social withdrawal is both a correlate and consequence of *peer rejection*, or active dislike by the peer group, during early adolescence. These findings are similar to what is found in studies of social withdrawal during early and middle childhood. Withdrawn children and adolescents are likely rejected by their peers because their shy, timid behaviors are viewed as atypical, and are not valued by the peer group. The associations between social withdrawal and peer rejection become stronger as children transition into early adolescence, likely because it is during the early adolescent developmental period that there is increased emphasis on positive social interactions, and relationship and group involvement. Several studies have also linked social withdrawal to decreased peer acceptance (which refers to liking by the peer group), and increased peer exclusion (which occurs when a child is actively left out of group activities and conversations by their peers; Gazelle and Rudolph 2004), and physical victimization (e.g., Rubin et al. 2006). But, much of this research involved samples of withdrawn youth during early and middle childhood and early adolescence. It is possible that as social solitude becomes viewed as more acceptable and as more of a personal choice during middle and late adolescence (Larson 1997), some of withdrawn youth's peer difficulties diminish.

Social Withdrawal and Friendship

The studies described above clearly demonstrate that socially withdrawn young adolescents struggle at the *group* level of social complexity. Do they also experience peer difficulties at the *dyadic* level or with friends? To date, few researchers have considered this question. However, preliminary evidence indicates that socially withdrawn children and adolescents are as likely as their non-withdrawn agemates to have at least one mutual and stable best friendship. For instance, Rubin and colleagues (Rubin et al. 2006) found that that

approximately 60% of socially withdrawn young adolescents had at least one mutual best friendship, a percentage nearly identical to that of their more sociable counterparts.

There is also evidence that withdrawn young adolescents tend to form friendships with similarly withdrawn and similarly victimized peers (Rubin et al. 2006), a finding consistent with a large body of research indicating that children and adolescents are attracted to, and subsequently form friendships with peers who are similar in age, race/ethnicity, and behavior (i.e., aggressive and delinquent behavior). Although the similarities in withdrawn behavior and victimization may facilitate friendship formation, such similarity may not always make for the “best” of friendships. Both withdrawn young adolescents and their best friends tend to perceive their friendships as relatively poor in relationship quality (e.g., lacking intimate disclosure and helpfulness; Rubin et al. 2006). And, two observational studies of withdrawn young adolescents interacting with their mutual friends demonstrated that withdrawn adolescents are rather constricted in their verbal communication, tend to be less actively engaged in mutual tasks with their friends, and are less emotionally expressive relative to non-withdrawn adolescents (Schneider 1999, 2009). These behaviors and interactional styles likely interfere with the intimate disclosure and mutual give-and-take that is needed for high-quality friendships during late childhood and early adolescence. It is also possible that a *misery-loves-company* scenario exists for many withdrawn adolescents and their friends such that their shared misery leads to increased psychological distress, which in turn, leads to less than positive friendship experiences.

Social Withdrawal, Self-Perceptions, and Internalizing Difficulties

Given their experiences with peer rejection, exclusion, and victimization, it should not be too surprising that socially withdrawn youth think and feel poorly about their social skills and their peer relationships. Empirical research also reveals strong concurrent and longitudinal associations between childhood and adolescent social withdrawal and such internalizing problems as loneliness, depression, negative self-regard, feeling of insecurity, and social anxiety (e.g., Rubin et al. 1995). Recent social information processing studies

also have revealed that withdrawn young adolescents often blame themselves for hypothetical negative peer events and select passive or avoidant coping strategies (e.g., Burgess et al. 2006). Self-blame and avoidant coping have been associated with internalizing difficulties during adolescence and adulthood. And, feelings of and expectations for rejection predict increased social withdrawal during early adolescence. Thus, these findings suggest a self-reinforcing cycle of socio-emotional and behavioral difficulties and negative social-cognitive functioning for many socially withdrawn adolescents (Rubin et al. 2009).

It is important to note however that individual differences in the extent to which withdrawn children and adolescents experience problematic peer relations appear to have significant implications for their internalizing difficulties and the continuity of their behavior. For instance, recent studies have shown that withdrawn children and young adolescents who experience peer difficulties, such as peer rejection and exclusion, are the most at risk for internalizing difficulties and are the most likely to be stable in their social withdrawal over time (Gazelle and Rudolph 2004; Oh et al. 2008). Oh and colleagues also found that certain friendship factors (e.g., friendlessness, friendship instability, having a withdrawn friend) were related to increased withdrawal over time.

Yet, it is also worth noting that withdrawn young adolescents with friends are viewed as more sociable by their peers compared to withdrawn young adolescents without friends (Rubin et al. 2006). Burgess et al. (2006) found that some of withdrawn young adolescents' negative social-cognitive biases (e.g., tendencies to self-blame) were diminished when thinking about scenarios involving their mutual good friends. As well, Bowker and Spencer (2010) recently demonstrated that having mutual mixed-grade friendships (friendships with same-school peers who are in a different grade) protected withdrawn boys from peer victimization during early adolescence. Taken together, findings suggest that such problematic group and dyadic peer relations experiences as rejection, exclusion, and friendlessness represent significant risk factors in the lives of withdrawn youth but that the absence of peer group difficulties and the presence of friendships may be important protective factors. Withdrawn children who display additional behaviors that are not valued by the peer group (such as aggressive or attention-seeking

behaviors) appear to be the most at risk for peer difficulties (Gazelle 2008). However, it is not known whether this is also true during adolescence.

Social Withdrawal and Gender

There is little evidence to suggest that there are sex differences in the prevalence or frequency of social withdrawal (or related construct) in early or middle childhood. However, in later childhood and early adolescence, girls tend to self-report higher levels of shyness than boys. It is possible that the emergence of social anxiety disorder during this age period contributes to this sex difference. As such, sex differences in self-reports of shyness during this age period may reflect adolescent girls' greater social anxiety.

Alternately, this sex difference may be a result of a reporting bias in later childhood. Girls may be more likely to report feelings of shyness because of the greater social acceptability of such emotions for girls than for boys. Fear and anxiety, the prominent emotional features of shyness, are considered "feminine" in Western societies. It has been suggested that shyness is less socially acceptable for boys than for girls because it violates gender norms related to male social assertion and dominance. As they become increasingly aware of such stereotypes, boys may be more likely to underreport feelings of shyness.

Evidence for a gender difference in the social acceptability of social withdrawal can be found in how others respond to such behaviors in boys versus girls. For example, results from studies with younger children suggest that shy/withdrawn behaviors in girls are more likely to be rewarded and accepted by parents, whereas the same behaviors in boys are more likely to be discouraged and result in more negative interactions. Similarly, in early and middle childhood, social withdrawal (in general) as well as both shyness and social disinterest are more strongly associated with peer exclusion and rejection for boys than for girls.

Less is known about potential gender differences in others' responses to social withdrawal in adolescence. However, results from some studies suggest that in later childhood and adolescence, social withdrawal in boys becomes increasingly more strongly associated with socio-emotional difficulties (e.g., loneliness, anxiety, and lower self-esteem) than social withdrawal in girls. Results from some longer-term longitudinal studies also suggest men who were shy/withdrawn as children

married and started families later than their non-shy peers, whereas the same is not true for shy/withdrawn girls (Caspi et al. 1988).

Social Withdrawal and Culture

Although most social withdrawal research and theory has been tested in Western cultures (i.e., United States, Canada, Sweden), there is growing interest in studying social withdrawal across cultural contexts. Unfortunately, little is known about social withdrawal during *adolescence* outside of the United States and Canada. Yet, results of recent cross-cultural studies suggest that childhood social withdrawal may be viewed as less problematic (and less contrary to cultural goals) in Eastern societies (e.g., China, Indonesia, Korea) than in the West. For example, results from early cross-cultural research indicate that anxious-withdrawn children in China are well accepted by their peers, reporting lower levels of loneliness and negative self-regard than their North American counterparts. However, it should not be concluded that social withdrawal carries *no* risk in Eastern cultures. Some investigators have found positive associations between social withdrawal and maladjustment (e.g., peer rejection) in China and other Eastern societies, including India and Hong Kong. Moreover, results from some recent research in China suggests that shyness may be becoming a stronger correlate of peer and psychological difficulties, perhaps due to the growth of individualistic values in China over the past 20 years (Chen et al. 2005).

Summary and Future Directions

In this essay is reviewed the extant literature on social withdrawal during adolescence. The empirical research provides some support for the existence of links between biology, genetics, certain types of parenting (e.g., overprotective parenting), and social withdrawal during childhood and adolescence. It is clear that problematic peer relations experience (e.g., rejection, exclusion) are both contributors to and consequences of adolescent social withdrawal, and that variability in the extent to which socially withdrawn adolescents experience peer difficulties helps to explain variability in their internalizing difficulties and the continuity of their behavior. It appears that the "costs" of being socially withdrawn may be greater for adolescent boys than adolescent girls. Additionally, results from those

few studies that have considered the correlates of social withdrawal in both Western and Eastern cultures suggest that socially withdrawn adolescents around the world experience some degree of negative treatment by their peers.

These conclusions about social withdrawal during adolescence are drawn primarily from investigations of social withdrawal during *early adolescence*. As a result, very little is known about how socially withdrawn adolescents fare during middle and late adolescence. Furthermore, little theoretical and empirical attention has been paid to *subtypes* of social withdrawal beyond the early and middle childhood years. Yet, if it is true that certain types of solitude, such as unsociability, become more acceptable and beneficial for adjustment during adolescence and young adulthood, researchers may discover that compared to shyness, *unsociability* is associated with different adjustment correlates (such as creativity), and possibly fewer adjustment difficulties (such as less peer rejection).

A more complete understanding of social withdrawal during adolescence will also require researchers to consider types of relationships (e.g., romantic relationships), contexts (e.g., places of employment), and outcomes (e.g., identity formation; career aspirations) that are especially relevant during *adolescence*. For instance, platonic other-sex friendships, romantic relationships, and mixed-sex peer groups, which become more common and influential on adjustment throughout adolescence, could prove to be influential relationships in the lives of socially withdrawn adolescents. A withdrawn adolescent who does not “fit in” at school may find similar peers and friends at their places of employment, or in after-school clubs or “hangouts” (e.g., coffee shops), who help to alleviate feelings of self-consciousness and anxiety. Of course, it will be necessary for investigators to consider these relationship and contextual factors, and outcomes during early adolescence, middle adolescence, and late adolescence and in different cultures to ascertain whether certain factors are more influential at different points in development and in different cultures.

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et al. 2009; Rew and Wong 2006; Ritt-Olson et al. 2004). Spirituality, therefore, may be an important construct for researchers of adolescence to explore. This report aims to facilitate understanding of spiritual development in adolescence by focusing on four important issues within the field. First, issues surrounding the definition and measurement of spirituality in adolescence will be explored. In this section, the various ways in which spirituality has been defined and measured in the literature is examined (particularly in contrast to religiosity), and the importance of understanding the various conceptualizations is emphasized. Second, the way in which certain developmental features of adolescence may prompt spiritual growth during this period of life, will be considered. This section explores how cognitive, neurological, and emotional changes during adolescence may make teens more likely to engage in the exploration of spiritual ideas, experience a spiritual conversion or commitment, and make spiritual commitments that endure over time. Third, major findings and foci of the empirical research on spirituality in adolescence will be examined, focusing in particular on work that has demonstrated that spirituality may be linked with lower levels of negative behavior such as substance use and delinquency, and higher levels of positive behavior such as community service and emotional well-being. Fourth, directions for future research will be considered, specifically focusing on the importance of developing a more comprehensive understanding of how the various domains of spirituality are related to various domains of religiosity over time, the need for research on non-U.S. populations, and the need for experimental studies.

Spiritual Development

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Overview

Although the field of developmental psychology has often neglected topics related to spirituality, the past decade has seen a surge of interest in this domain (Roehlkepartain et al. 2006). Benson (2004), for instance, has called for psychology to “honor spiritual development as a core developmental process that deserves equal standing in the pantheon of universal developmental processes” (p. 50). Much of the response to this call for increased scientific understanding of spiritual development has come from researchers who focus on the stage of adolescence. This is perhaps not surprising, as adolescence has long been recognized as a time when a great deal of growth occurs in spiritual and religious domains (e.g., Levenson et al. 2005; King and Roeser 2009; Spika et al. 2003). Furthermore, researchers have demonstrated that spirituality may be related to positive psychosocial adjustment, including low involvement in risk-taking (substance use, delinquency, etc.) and good mental health (Perez

Definitional and Measurement Issues

A major challenge in the study of adolescent spirituality involves the definition and measurement of the construct. Historically, spirituality was conceptualized as the private or personal aspects of religion, and spiritual individuals were seen simply as people who were deeply religious (Koenig 2008). The definition of spirituality in the psychological literature, however, has been broadened considerably in recent years. Many researchers (e.g., Miller and Thoresen 2003; Zinnbauer and Pargament 2005) now consider spirituality to involve the behaviors, thoughts, and feelings that arise from a concern with or search for the sacred, divine, or nonmaterial aspects of life. These scholars tend to

espouse the view that spirituality is often, but not always, pursued within the boundaries of religion (e.g., Hill and Pargament 2003; Zinnbauer et al. 1997; Zinnbauer and Pargament 2005).

Miller and Thoresen (2003) make use of an interesting metaphor to illustrate this conceptualization of spirituality, stating that “the field of religion is to spirituality as the field of medicine is to health” (p. 28). Just as medicine is a fairly common and successful means through which individuals achieve health (but not the *only* means – consider good eating habits and exercise, for example), religion is *just one* of the common and reasonably successful means through which individuals facilitate connection with the sacred. The term “spiritual development,” made popular by Peter Benson and his colleagues (Benson 2004; Benson et al. 2003) also reflects this conceptualization, where “spiritual development is the process of growing the intrinsic human capacity for self-transcendence, in which the self is embedded in something greater than the self, including the sacred . . . It is shaped both within and outside of religious traditions, beliefs, and practices” (p. 206).

Recently, the definition of spirituality has been extended even further by some researchers to include factors such as emotional well-being, human values, meaning, and purpose in life (Koenig 2008). For instance, in two prominent studies (Dowling et al. 2004; Dowling et al. 2003), adolescent spirituality was defined as “seeing life and living in new and better ways, taking something to be transcendent or of great value, and defining self and relation to others in ways that move beyond the petty or material concerns to genuine concern for others” (Dowling et al. 2004, p. 7). This very broad conceptualization of spirituality may be problematic for research purposes, and further attention will be given to this issue later in this essay.

Due to the diversity of definitions across studies, many scales exist that all claim to measure some form of “spirituality.” This inconsistency represents a challenge for individuals attempting to make sense of the role of spirituality in adolescent development. Further complicating matters is the fact that spirituality is an enormously multidimensional construct, and different measures assess various dimensions of the construct (Benson et al. 2003; Tsang and McCullough 2003). Tsang and McCullough (2003) and Hill (2005) emphasize that measures of *dispositional* spirituality assess how “spiritual” a person is at a trait-like or

dispositional level, while measures of *operational* spirituality assess how individuals experience spiritual realities, their motivations for being spiritual, and their use of spirituality to deal with problems. Researchers have not done a particularly good job of being clear about the particular domains or dimensions of spirituality being assessed within a given study, or considering how the results obtained in a study may have been related to the particular measure/domain of spirituality that was utilized.

Another complication with definitional and measurement issues involves the overlap of spirituality with religion. A detailed exploration of the distinction between spirituality and religiosity is beyond the scope of this essay, and excellent overviews of definitional and measurement issues related to the difference between spirituality and religion readers are presented in Hill et al. (2000), Hill (2005), Koenig (2008), Zinnbauer and Pargament (2005), Zinnbauer et al. (1999), and Zinnbauer et al. (1997). For the purpose of this report, however, attention will be drawn to the issue that because spirituality and religiosity are typically correlated, items assessing both constructs are often combined in a single scale and labeled as either “spirituality” or “religiosity.” As an illustration, Koenig et al. (2008) assessed what was termed “religiousness” using a composite measure of items such as frequency of religious service/youth group attendance, frequency of prayer and scripture reading, frequency of discussing religious teachings with others, number of friends with similar beliefs, and overall importance of religion in daily life. In another study, Kerestes et al. (2003) assessed what they labeled “religious perspective” and combined items such as “I have a close relationship with God,” and “My faith/spirituality helps me to answer questions about myself and the world around me” with items such as “It is important for me to share my religious beliefs with others” (also see Ozorak 1989; Regnerus 2003; Wills et al. 2003). In these studies, although several items on the scales could be considered aspects of a personal concern with and/or search for the sacred, they were included with items that were very specific to organized religion. Thus, the studies could not provide information about spirituality as a distinct but related domain from religiosity.

Contributing to this problem is the fact that researchers are often not specifically interested in differentiating spirituality from religiosity (i.e., the focus

is typically on the association between religiosity/spirituality and other variables), and it is more parsimonious to combine both constructs in a single scale if statistics support such a merger (e.g., high reliability, items load onto one factor). Furthermore, in some populations, spirituality may be inseparable from religion (i.e., for highly religious individuals the search for the sacred may be pursued exclusively within religious practices and beliefs). For example, in a sample of 13- and 14-year-old Indonesian Muslims (Indonesians are, on average, highly religious, see Lippman and Keith 2005), French et al. (2008) found that a single latent variable combining religiosity and spirituality was a better fit with the data than a two-factor model. Unfortunately, such issues have contributed to a dearth of knowledge about spirituality (as separate from religiosity) and confusion regarding whether findings in a study can be attributed to spirituality or religion.

These definitional and measurement issues are important to keep in mind when interpreting the literature. If some studies find associations between spirituality and (for instance) an index of psychosocial adjustment and other studies find a null (or opposite) effect, it may be because very different definitions/measures of spirituality were used, or because in some studies aspects of spirituality were combined in a scale with aspects of religiosity. In reading the literature on spirituality, therefore, it is essential to consider how spirituality was defined and measured, whether the items and/or scale(s) reflect dispositional or operational domains of spirituality, and whether elements of religiosity were also included in the scales.

Features of Adolescence that may Promote Spiritual Development

Adolescence is often considered to be a period of life when individuals experience changes and growth in the spiritual domain. This growth may happen, at least in part, because some of the normative development that occurs in adolescence may make teens particularly responsive to environmental stimulation of a spiritual nature (Good and Willoughby 2008). In this section, the reasons why normative adolescent development that occurs within other domains (i.e., intrapersonal, cognitive, and neurological) may facilitate growth in the spiritual domain will be explored. In particular, this section explores why adolescents may be more likely

than individuals in other stages of life to (a) engage in the exploration of spiritual ideas; (b) experience a spiritual conversion or commitment; and (c) make spiritual commitments that endure over time (Good and Willoughby 2008).

Exploration of spiritual ideas. As individuals enter adolescence, their aptitude for abstract thought increases. The capability to think abstractly allows individuals to consider and generate hypotheses about unfamiliar (as opposed to real, familiar, or concrete) situations and ideas (e.g., Inhelder and Piaget 1958; Overton et al. 1987). This increased capacity for abstract thought also enables them to consider different ideas about spiritual concepts. As this capacity grows, they may find themselves asking difficult, abstract questions such as “How can a loving God exist when there is so much pain and suffering in the world?” Furthermore, because adolescents are better able than children to engage in deductive reasoning (e.g., Chapell and Overton 1998; Ward and Overton 1990), they may have a greater capacity to systematically test their hypotheses about abstract spiritual questions and to draw conclusions on the basis of what they find.

Another key cognitive capacity that emerges in adolescence is metacognitive orientation, which is the ability to reflect on and evaluate one’s own ideas and the ideas presented by other people (Moshman 1998). In a review of the research on metacognitive abilities, Byrnes (2003) stated that while children tend to assume that all knowledge is certain and objective, adolescents are able to consider multiple perspectives, and to evaluate the validity of different perspectives using evidence or reasoning-based methods. Therefore, adolescents have at their disposal a newfound cognitive ability to critically evaluate the sources from which they have received knowledge about spiritual matters. For instance, they may begin to question whether there is adequate evidence that the holy books of their religions are actually inspired by God.

Support for the hypothesis that adolescents may be particularly likely to engage in spiritual exploration also comes from the research on identity formation. Identity formation is a crucial component of intrapersonal development in adolescence (e.g., Erikson 1968), and commitment to a set of spiritual beliefs (whether they be theist, atheist, or agnostic) may be a key means of identity commitments (Kroger 1996; Schwartz 2001). Indeed, adherence to a spiritual belief system

typically involves the adoption of a particular worldview and set of ideologies concerning work, love, life, and death. Therefore, not only might the search for the self precipitate questioning in adolescents about what they have been taught regarding spirituality, but it could also facilitate the adoption of identity commitments.

Adolescent spiritual conversions and commitment experiences. One outcome of spiritual exploration during adolescence may be a conversion or commitment experience (Erikson 1964). Recent research indicates that these experiences are quite common among U.S. adolescents. For example, using data from a nationally representative survey (the National Study of Youth and Religion) that employed a random digit-dial telephone survey of U.S. households, Smith and Denton (2005) reported that 55% of adolescents reported having “made a personal commitment to live life for God.” Even when considering only those teenagers who reported they were “not religious,” 13% said they had made a personal commitment to live life for God. These statistics suggest that religious/spiritual commitment experiences happen for large numbers of teenagers today, even for those who are not affiliated with a religious group.

Zinnbauer and Pargament (1998) define conversion as a gradual or sudden process where a change involving the sacred occurs in an individual. These types of experiences may be associated with intense pleasurable feelings (Newberg and Newberg 2005; Spika et al. 2003) Empirical support for this hypothesis comes from a small number of experimental studies examining the relation between brain activity and spiritual/religious and paranormal experiences. Although this field of research is still in its infancy, results from several studies using positron emission tomography (PET) suggest that spiritual experiences may be correlated with distinct neural patterns, such as increased blood flow in the limbic structure (which is associated with emotion), as well as the frontal and parietal structures (areas associated with thought, cognition, and belief) (Azari et al. 2001, 2005; Persinger 1993, 1997). It is possible that the nature of conversion experiences may interact with the normative emotional and cognitive characteristics of adolescents in such a way that may make adolescents particularly susceptible to experiencing a spiritual commitment or conversion; this idea is considered in detail in the following section.

Emotion, cognition, and conversions. Adolescence is a period of heightened emotions; teenagers tend to have higher highs and lower lows than children or adults (Dahl 2004). This intensity may be particularly salient for negative emotions such as depression and anxiety (e.g., Jessor and Jessor 1977; Larson et al. 1980; Larson and Ham 1993). Dahl (2004) stated that, while adolescents are in possession of this set of “turbo-charged emotions” (p. 17), they often do not possess the cognitive maturity to fully regulate these emotions. Researchers have suggested recently that the prefrontal cortex, which controls self-regulatory capacities such as impulse control, planning, and foresight, may not be fully mature until young adulthood (Giedd 2004; Hooper et al. 2004; Luciana 2006). In one study, Galvan et al. (2006) presented fMRI data showing that areas of the brain involved in planning and control develop later than areas of the brain that are sensitive to immediate rewards. In short, there is evidence to suggest that adolescents, on average, are less skilled than adults at logically considering consequences before engaging in behavior. The choices that adolescents make, consequently, may often be guided by intense emotions in the moment, rather than by calculated decision-making processes (Steinberg 2004).

One result of this interaction between high-intensity emotions and relatively immature cognitive abilities may be sensitivity to opportunities for conversion. Spika et al. (2003) state that conversions may sometimes follow a “behavior first, then belief” sequence of change. An adolescent who, in the moment, senses an intense love and affection from or “oneness” with a higher power may act on these feelings and make a religious or spiritual commitment without first considering the “consequences” of such a commitment (for instance, engaging in practices of spiritual discipline such as meditation, sacrificing sleeping in on Sunday mornings to attend worship services, or giving up pork or alcohol or extramarital sex). An adult, however, may be more likely to look past the emotion of the moment and use foresight and planning in considering the long-term implications of a commitment. These inhibitory cognitive skills may make it easier for adults to avoid making impulsive spiritual commitments.

Conversion represents only one type of emotionally intense spiritual/religious experience (Newberg and Newberg 2005), and adolescents may also be more

likely to become involved in other experiences (i.e., group ritual, individual prayer, meditation) that are associated with intense feelings, such as awe, peace, tranquility, and ecstasy (Newberg and Newberg 2005). Adolescent insensitivity to reward, wherein adolescents engage in intense, thrilling activities to experience the same kind of pleasurable feeling that an adult may experience from an everyday task (e.g., Vaidya et al. 2004; Spear 2000) also could make teenagers more likely than children or adults to seek out spiritual experiences that produce pleasurable feelings. Simply going to religious services, for example, may not provide sufficient stimulation for adolescents; rather, they may seek out more intense experiences that satisfy their desire for novel, exciting activities. Religious groups have long understood this adolescent need for intense stimulation, and during the past several decades many religious organizations geared toward teenagers have adopted an MTV-style youth ministry to attract the younger generation (Gerson 2006; Steptoe 2006). In fact, 45% of all teens surveyed by Smith and Denton (2005) had attended at least one religious conference, rally, retreat or congress, 51% had an experience of spiritual worship that was very moving or powerful, 50% believed they had experienced a definite answer to prayer or specific guidance from God, and 46% believed they had witnessed or experienced a miracle from God.

Stress, negative life events, and conversion. Stress and negative life events are other important factors to consider for why adolescents may be susceptible to spiritual conversions. There is a substantial body of empirical evidence linking stress to conversions. Compared with nonconverts, adults who reported a recent religious or spiritual conversion also reported experiencing more stressful life events and personal problems (Zinnbauer and Pargament 1998; Kox et al. 1991). This link between stress and conversions is relevant for the purposes of this essay because researchers have suggested that entry into adolescence may be associated with an increase in stressful or negative life events such as fallings-out with peers, break-ups of romantic relationships, or fighting with parents (e.g., Larson and Ham 1993; Spear 2000). Furthermore, adolescents may not yet have developed the skills for regulating the powerful emotions that accompany these stressful events (e.g., Chambers et al. 2003; Galvan et al. 2006). The tendency for adolescents to report more

intense negative emotions may also be related to stress perception, rather than actual stressful events; that is, adolescents often perceive life events as being more stressful than do children or adults (Spear 2000). Allen and Matthews (1997), for example, found that in response to a laboratory stressor adolescents showed a greater increase in blood pressure and heart rate than children. Because stressful or negative life events are sometimes associated with spiritual or religious conversion, it is possible that increased exposure to stress in adolescence coupled with a cognitive bias toward perceiving events as more stressful could contribute to adolescent susceptibility to conversion.

Endurance of adolescent spiritual commitments. There is a dearth of research on whether spiritual commitments made in adolescence are more likely to “stick” than adulthood conversions. There is indirect empirical and theoretical evidence, however, that implies spiritual commitments made in adolescence (and perhaps in early adulthood) may be more likely to endure throughout the lifespan. The first line of evidence for this claim comes from the identity formation literature. Research has established that while adolescence is a period of ideological exploration (Erikson 1968), firm commitments to a set of personal beliefs (including spirituality) tend to increase as individuals move into young adulthood (e.g., Adams et al. 1989; Adams and Fitch 1982).

By the time individuals enter adulthood, therefore, many of their ideological commitments may be fairly well established. Importantly, young adults’ major decisions such as choice of career or a spouse may often be related to their ideological commitments. For example, young people tend to select marriage partners who are similar to themselves in terms of social class, religion, personality, intelligence, and educational plans (e.g., Simpson and Harris 1994). There is also evidence that young adults consider their personal values in career-related decision making. For example, Constantine et al. (2006) report that college students often used prayer, church, and Bible reading to help deal with career-related challenges. Several researchers have also suggested that individuals may consider their career to be an extension of their spiritual values, wherein the spiritually or religiously motivated desire to serve others, treat others with kindness, and to follow the call of God is fulfilled in part through their vocation (e.g., Duffy 2006; Lips-Wiersma 2002). This

evidence implies that it may be more difficult to form spiritual commitments after adolescence. Consider how difficult it would be for a 40-year-old adult to adopt a Buddhist spiritual orientation (where one of the main tenets is the rejection of attachment to worldly possessions) when he or she selected a career or a spouse based on a very different set of ideological values in early adulthood.

Finally, research on the relation between memory and emotion also lends indirect support to the hypothesis that religious or spiritual commitments made in adolescence may be more likely to endure throughout the lifespan. It is well established that memories of emotionally charged events (so long as they are not extraordinarily stressful) are remembered more readily than everyday, less emotional events, and they are remembered with more accuracy and vividness (e.g., LaBar and Cabeza 2006; Richards and Gross 2006). Given the emotionally charged nature of conversions and other spiritual experiences in adolescence, it is conceivable that spiritual experiences that occur in adolescence may remain more salient in an individual's memory than such experiences in adulthood (because they may be less emotionally intense). In adulthood, an individual may come back to these salient, emotionally intense adolescent memories as reasons or evidence for which they should remain committed to their spiritual beliefs.

Major Findings and Foci of Empirical Studies

The ideas presented above address why, on a theoretical level, adolescence may be a "sensitive period" for spiritual development. Those claims, however, largely have not yet been tested by empirical research. It would be useful, therefore, to consider what is *known* (i.e., supported by empirical studies) about adolescent spirituality.

The most prevalent focus of the field of psychological research on spirituality in adolescence has been the association of spirituality with internalizing and externalizing problems. In general, studies have found that spirituality is associated with positive outcomes such as lower depression and anxiety, and less involvement in health risk behaviors (e.g., substance use) (e.g., Dew et al. 2008; Desrosiers and Miller 2007; Cotton et al. 2006; Perez et al. 2009; Rew and Wong 2006).

These results however, must be interpreted with some degree of caution and criticism. First, as is

pointed out by Koenig (2008) and echoed by Dew et al. (2008), some researchers use exceptionally broad conceptualizations of spirituality. Some of the more popular scales used in recent studies of spirituality conceptualize the construct as including "positive psychological states" (Koenig et al. 2008, p. 350), such as the sense that life has purpose and meaning, feelings of peacefulness, and being connected with others. For instance, the "existential well-being" subscale of the spiritual well-being scale (which has been used in adolescent and young adult populations; e.g., Cotton et al. 2009) assesses an individual's sense of purpose, satisfaction with life, and hope for the future, including items such as "I feel that life is a positive experience," and "I feel that life is full of conflict and unhappiness" (reverse scored). The Brief Multidimensional Measure of Religiousness/Spirituality is another commonly used tool to assess spirituality in adolescent populations (e.g., Desrosiers and Miller 2007, 2008; Dew et al. 2008; Kelley and Miller 2007), and several of its subscale domains (i.e., meaning, values) measure characteristics such as inner harmony and connection to others. The Daily Spiritual Experiences Scale (Underwood and Teresi 2002), while in some items assesses constructs related solely to feelings of connection with the sacred (e.g., "I feel God's presence"), also includes items that could be considered indicators of mental health (e.g., "I feel a selfless caring for others," "I feel deep inner peace or harmony," "I feel thankful for my blessings"). Koenig (2008) points out that when spirituality is assessed in a very broad manner, individuals who are healthy and well-adjusted would score higher on these types of spirituality scales and subscales than mentally or physically unwell individuals simply because the items used to assess both these constructs (mental health and "spirituality") are similar. This issue raises the question as to whether it is appropriate to conceptualize spirituality as involving positive psychological/emotional states, particularly when spirituality is being used to predict internalizing and externalizing problems. Koenig (2008) also points out that this definition of spirituality makes it impossible to consider situations where an individual's search for the sacred may be associated with negative feelings such as inner turmoil and morbid thoughts.

Scales that do not conceptualize spirituality as including emotional well-being, such as the Index of Core Spiritual Experiences (INSPIRIT; Kass et al. 1991)

may be more appropriate when testing the association between spirituality and adolescent adjustment problems. The INSPIRIT measures individuals' experiences with the sacred/transcendent aspects of life (i.e., feelings that god/a higher power exists). In a recent study using a large sample of adolescents followed yearly from grade 7 to grade 9, Perez et al. (2009) found that the INSPIRIT indirectly predicted depressive symptoms over time, through the mediating variables of personal agency and direct coping. Koenig (2008) also suggested that it might be useful to consider how dimensions of spirituality such as mystical experiences (e.g., using Hood's (1975) Mysticism scale) or religious/spiritual doubts, uncertainties, and questioning [e.g., using Batson and Schoenrade's (1991) Quest Scale] are associated with mental health.

Another main area of focus of the empirical research on adolescent spirituality is the relation between spirituality and positive domains of youth development. For instance, Dowling and colleagues (Dowling et al. 2003, 2004) explored the relation between spirituality, religiosity, and thriving (an index of positive youth development). These studies found that spirituality predicted thriving directly, and that the relation between spirituality and thriving was also mediated by religiosity. Of concern, however, was the overlap in how the constructs of spirituality and thriving were assessed. Specifically, spirituality was conceptualized as a higher-order latent variable encompassing three lower-order factors including orientation to do good work (items such as "Imagine you see a little kid fall and get hurt on the playground, would you run over and try to help?"), orientation to help others (i.e., "How many hours did you give to people outside your family that have special needs during the last month without pay?"), and participation in self-interest activities (i.e., "In the past 12 months, how many times have you been out on a date?"). Thriving was a higher-order variable with nine lower-order factors, such as presence of a moral compass, search for a positive identity, personal values, view of gender equity, and path for a hopeful future. Although results from structural equation modeling suggested that spirituality and thriving were best represented as two separate higher-order latent factors, at face level there appears to be a great deal of overlap between spirituality and thriving, as defined in this study. Therefore, it may not be surprising that spirituality predicted thriving.

In other research linking spirituality to positive youth development, Kelley and Miller (2007) found that daily spiritual experiences predicted life satisfaction to a greater extent than religiosity. Spirituality also may be related to community service and civic engagement (e.g., Serow and Dreyden 1990), particularly if spirituality is conceptualized as involving a concern with or sense of responsibility for others. In a qualitative study, Mariano and Damon (2008) conducted interviews with 48 adolescents about the role of spirituality/faith in finding purpose in life. They found that spirituality (and religious faith, as the two were often intertwined for these participants) may influence life purpose in diverse ways, such as through the intention to contribute to society (i.e., adolescents' sense of spirituality leads to an intention to contribute), the development of character, and the infusion of personal goals with value.

In short, empirical research has generally revealed that spirituality is associated with lower levels of maladjustment and higher levels of positive development. There are many challenges still to be met, however, and much work still needs to be done if an advanced, comprehensive understanding of the role of spirituality in the lives of adolescents is to be developed. It is these more complex issues which must be examined in future research, some of which are considered in the following section.

Directions for Future Research

Although research on spiritual development in adolescence has made great strides in the past decade, compared to other domains of development, the field is still in its infancy. There is still a great deal of research that must be done before a more complete understanding of how this domain operates during adolescence is reached. In this section, the five issues that represent important areas for future research to explore are considered.

First, while considerable progress has been made in understanding the relation between spirituality and other domains of development (e.g., mental health), much less is known about spirituality as a domain of development *in its own right*. In other words, although researchers know about the variables with which spirituality is correlated, our comprehension of this construct in a truly developmental sense – how its various dimensions unfold within individuals over time – is

limited. Some knowledge of rank-order and mean-level change in spirituality over time can be gleaned from patterns of spirituality reported in longitudinal studies (or large multi-cohort cross-sectional studies) that focused on the relation between spirituality and other domains. For instance, French et al. (2008) reported a correlation of 0.49 in self-rated spirituality in Indonesian early adolescents (mean age 13.3) over a 5-month period, indicating considerable rank-order stability in spirituality in the sample (information on changes in mean-level spirituality over the same time period was not provided). Desrosiers and Miller (2007) reported that the Daily Spiritual Experiences Scale (which assessed perceptions of emotional involvement and interaction with sacred/transcendent aspects of daily life) was not significantly correlated with age. Ozorak's (1989) cross-sectional multi-cohort study of changes in religiosity across adolescence included a scale of personal religious experiences, which could be considered to assess the domain of spirituality (items included frequency of solitary prayer and reading sacred literature); here, grade 11 and 12 students reported significantly lower scores on this scale than grade 9 students.

While these studies provide some useful information on univariate descriptive patterns of change over time, much more detailed information is needed, such as how spirituality and religiosity function independently and concurrently over time, and how the various domains of spirituality operate over time. Furthermore, it will be important for future research to explore intraindividual variability in trajectories of spirituality across adolescence (i.e., subgroups of adolescents who report increasing, decreasing, stable high or stable low patterns of spirituality), and how these different trajectories may differentially predict adjustment.

Second, it is essential for researchers to develop a more complete understanding of the ways in which spirituality as separate from (but related to) religiosity. Many theoretical articles have been written about the differences between spirituality and religiosity, but in empirical research the domains are not often separated. This issue becomes even more important when considering the changing religious landscape of modern Western society. Most notably, attendance at religious services has decreased considerably in the USA, Canada, and Europe over the past 50 years (e.g., Brierley 2006; Clark 2003; Dogan 2003; Miller and Nakamura

1996). One of the outcomes of the growing decline in religious service attendance has been the birth of the construct of "unreligious spirituality" (Zinnbauer et al. 1997). Many individuals, including adolescents, identify themselves as "being spiritual but not religious" (e.g., Smith and Denton 2005; Shahabi et al. 2002; Zinnbauer et al. 1997). For example, using data from a nationally representative survey, Smith and Denton (2005) reported that 51% of adolescents said it was "very true" or "somewhat true" that they were "spiritual but not religious." Results from a Canadian nationally representative survey (Bibby 2009) indicated that, although only 21% of teens attended religious services weekly and 13% said that religious involvement was very important to them, over 75% reported that they often wondered about ultimate questions such as what happens after death and the purpose of life. Results from a representative study of 15–24 year-olds in 15 European countries (as reported in Lippman and Keith 2005) indicated that 42.6% of participants considered themselves "nonpracticing believers," compared to only 19.4% who reported that they were "practicing believers."

Despite the attention given to the idea of being "spiritual but not religious," the empirical literature has devoted relatively little attention to understanding this phenomenon at an in-depth level, particularly in adolescent populations. Results from interviews conducted with 267 American adolescents from 45 states (Smith and Denton 2005) indicated that many youth who reported on a survey that they were "spiritual but not religious" were actually committed members of religious institutions. In the interviews, youth explained that they considered themselves spiritual but not religious because they wanted to emphasize that "in their mind and self-image institutional trappings have not displaced their personal, spiritual faith" (p. 79). It could be hypothesized, therefore, that some adolescents may be less skilled at attaching a "correct" label to their spirituality/religiosity (i.e., a self-description that is consistent with actual spiritual/religious behaviors and beliefs). The ability to correctly define one's spiritual/religious self-description may improve with age, as studies with adults have found that individuals who identify as "spiritual but not religious" reported significantly lower levels of religious activity involvement than those who considered themselves "spiritual and religious" (Shahabi et al. 2002; Zinnbauer et al. 1997).

It is important for future research to examine this issue further, in order to develop a more comprehensive understanding of “unreligious spirituality” and its trajectory over time. For instance, “unreligious spirituality” may reflect an enduring profile of spiritual and religious beliefs and behavior that is stable over time; conversely, this type of religious/spiritual orientation could be more transient than “spiritual and religious” or “not spiritual or religious” orientations, perhaps reflecting a stage in-between being both religious and spiritual and being neither religious nor spiritual. These are important questions to consider as religious institutions play less and less of a role in public life in Western society.

Third, a greater amount of research needs to be conducted with non-U.S. populations. The U.S. population may be unique with regards to spirituality because, on average, its citizens are more religious (i.e., involved in formal religious institutions, consider formal religion important) than citizens of other developed societies. For instance, in a nationally representative survey conducted in 1999 (The IEA Civic Education Study, as reported in Lippman and Keith 2005) where 14-year-olds in the USA were compared to their counterparts in 28 other developed nations in five regions of the world, it was found that U.S. adolescents reported the highest level of participation in religious groups (42%, compared to 27% in Southern Europe, 20% in Asia and the Pacific, 14% in Western Europe, 13% in Northern Europe, and 10% in Eastern Europe). It is possible that research on adolescents living in developed nations other than the USA may be needed to more fully comprehend spirituality (particularly nonreligious spirituality). Scales that combine items assessing religiosity with items assessing spirituality, while less than optimal even with U.S. samples, may be much less appropriate in developed countries outside of the USA.

Fourth, it would be useful for researchers of adolescent spirituality to consider conducting experimental studies to gain a sense of when spirituality may be considered a causal factor in some of the domains which are commonly linked with spirituality in survey research. While it is not possible to manipulate individuals’ dispositional spirituality, it may be possible, for instance, to manipulate the salience of spirituality during an experiment. It would lend a great deal of credibility to the field of study if experimental evidence

demonstrated that spirituality “caused” (even temporarily) factors such as greater well-being or a lower propensity to engage in negative behaviors.

Finally, within the field of developmental psychology, researchers must work toward gaining a consensus on the most appropriate definitions of “spirituality” and “religiosity,” and the most effective scales for capturing both dispositional and operational spirituality and religiosity *in adolescence*. If a “gold standard” for definition and measurement could be attained, communication among researchers would be improved and scholars would be better able to communicate their findings with other psychologists as well as the media, practitioners, and the general public. Researchers in the field of health have begun to make progress toward such a goal, with the Brief Multidimensional Measure of Religiosity/Spirituality (Fetzer Institute 1999). It is only when some consistency in definition and measurement is attained that researchers will be able to truly understand which aspects of mental, emotional, psychological, and physical health are predicted by spirituality (versus religiosity) in adolescence.

Conclusions

It is clear that spirituality is an important domain of human development, a fact to which psychologists are just beginning to pay attention. There is a general consensus that spirituality is a positive part of life, and one that may contribute to positive development in other domains. The field is ripe with opportunities for more advanced research to explore the complexities of spiritual development. To be sure, there are limitations that have impeded (and continue to impede) progress in this field of research, such as the difficulty in defining and measuring spirituality, the complexity involved in separating spirituality from religiosity, and the lack of experimental studies. These issues, however, may represent challenges inherent in a new and complex field of study, and careful exploration by skilled researchers will likely diminish many of these problems. Adolescence, in particular, may be a particularly fruitful stage of life on which researchers of spiritual development can focus, as adolescence may be a period where individuals are particularly receptive to environmental stimulation of a spiritual nature and where many changes in spirituality may occur over a relatively short period of time.

Cross-References

- Faith
- Religiosity in Adolescence and Emerging Adulthood

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Sport and the Development of Family, School, Peer, and Community Strengths

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Overview

This essay explores ways in which sport involvement builds valuable family, school, peer, and community strengths, which in turn support adolescent healthy development.

Sport as a Critical Social Setting

Educators, mental health practitioners, youth pastors, coaches, afterschool program staff, and other adult leaders are challenged with creating positive social settings that promote healthy youth outcomes. One such social setting is sport, or organized, recreational, and skillful physical activity that has an element of

competition (Rogers 1977; Siedentop et al. 2004). Participation in sport contributes to adolescents' physical, psychological, emotional, intellectual, and social development (Anderson-Butcher et al. this issue; Shields and Bredemeier 1995; Fraser-Thomas et al. 2005; Eccles and Barber 1999; Eccles et al. 2003; Ewing and Seefeld 2002; Gould and Carson 2008; Hansen et al. 2003; Hedstrom and Gould 2004; Hellison and Cutforth 1997; Gould and Weiss 1987; Larson et al. 2006; Marsh and Kleitman 2003; McNeal 1995; Petitpas et al. 2005; Smoll et al. 1993). Sport also may be used as a context that further supports youth outcomes by addressing certain environmental factors and influences that relate to adolescent development. As such, this essay explores ways in which sport involvement builds valuable family, school, peer, and community strengths from a risk and resilience framework.

Positive Youth Development

A risk and resilience framework provides a useful method for investigating how specific conditions relate to positive youth development (Anderson-Butcher and Cash 2010; Anderson-Butcher et al. 2003a; Anthony et al. 2009; Guerra and Bradshaw 2008; Jensen and Fraser 2006). Within the framework, *risks* or *risk factors* are defined as characteristics or experiences that increase the likelihood of the occurrence of problem behaviors (Hawkins et al. 1992; Jensen and Fraser 2006). *Protective factors*, also called *assets*, are characteristics or experiences that decrease the likelihood of the occurrence of problem behaviors and/or minimize risks (Benard 2004; Jensen and Fraser 2006; Rutter 1987).

A growing literature base documents the mediating and moderating influences of both risk and protective factors on a host of behavioral outcomes such as academic failure, substance use, and juvenile delinquency (Hawkins et al. 1992; Smith and Carlson 1997; Cash and Anderson-Butcher 2006; Dryfoss 1990; Benson 1997; Hawkins et al. 1992; Jensen and Fraser 2006; Jessor et al. 1995; Rutter 1987; Sameroff and Seifer 1990; Werner and Smith 1982; Fraser 2004; Lawson and Anderson-Butcher 2001). Table 1 highlights example influences present within the individual, peer, school, family, and community systems. It showcases specific risk and protective factors known to influence positive youth development outcomes.

Given that these multiple family, peer, school, and community conditions or experiences contribute to adolescent development, social settings that reduce risk factors and promote protective factors have special relevance. Indeed, this is why positive youth development programs, in general, have grown in importance. Research suggests participation in these social settings in turn contributes to academic achievement and overall child well-being (e.g., Catalano et al. 2002; Durlak and Wells 1997; Greenberg et al. 2001; Hawkins et al. 1999; National Research Council and Institute of Medicine 2002; Lauer et al. 2006; Leffert et al. 1996; Roth et al. 1998). These programs may be especially important for adolescents, as research suggest participation may nullify risks typically associated with increasing age (Anderson-Butcher and Fink 2006; Anderson-Butcher et al. 2003b).

Positive Youth Development Through Sport

Sport is one social setting that contributes to positive outcomes for youth. Example sport settings include recreational games, physical education classes, organized sport leagues, sporting events, fitness-related programs, play-based therapeutic strategies, and school-based extra-curricular activities. Important relationships exist among sport participation and multiple risk and protective factors at the individual system level. There also are multiple ways in which sport involvement builds valuable family, peer, school, and community strengths which in turn support of overall healthy youth development. Research supporting the importance of sport for addressing risks and building protective factors in these broader systems are explored in the following.

Sport and the Family System

Sport involvement may support the strengthening of multiple family-related assets. In essence, sport offers family members ample opportunities to positively interact with each other. Research showcases examples of such opportunities, as well as the benefits resulting from these experiences.

There are multiple benefits to parents and children playing sports together. These hands-on, play-based interactions allow parents to pay full attention to their children (Ginsburg 2007). Within these family activities, parents show their children that they care

Sport and the Development of Family, School, Peer, and Community Strengths. Table 1 Example risk and protective factors (Expanded from Anderson-Butcher et al. 2004; Cash and Anderson-Butcher 2006; Lawson and Anderson-Butcher 2002)

System	Example risk factors	Example protective factors
Individual	• Youth are rebellious, impulsive, and alienated	• Youth display social competence
	• Youth are involved in risk-taking behaviors	• Youth have effective problem solving, decision making, resistance, and anger management skills
	• Youth display sensation seeking behaviors	• Youth are involved in faith-based institutions
	• Youth have mental health needs or other disabilities	• Youth have high intelligence
	• Youth have favorable attitudes toward antisocial behaviors	• Youth have high self-esteem, self-confidence, and self-efficacy
• Youth have mild temperaments		
• Youth are adaptable/flexible		
• Youth have hope and optimism for the future		
Peer	• Peer group is involved in antisocial or problem behaviors	• Youth have positive peer relations and pro-social networks
	• Peer group has adopted favorable attitudes toward antisocial behaviors such as substance use	• Peer group is characterized by pro-social norms, attitudes, and behaviors
	• The peer system rewards and reinforces antisocial behaviors	
Family	• There is a history of conflict and child maltreatment within the family	• Family members feel connected and attached to each other
	• Poor management and discipline techniques are used within the family	• There are positive parent/caregiver–child relationships
	• Parents/caregivers provide little supervision and monitoring of children	• Family members provide reinforcement and rewards for involvement in pro-social activities and the display of pro-social behaviors
	• The family has a history of problem behaviors or mental health needs	• Opportunities exist to contribute to the family in meaningful ways
	• The family is isolated and has limited support in the community	• Functional parenting styles and communication patterns exist within the family
		• Family members have their basic needs met
		• The family has stable employment and housing
• The family has high expectations for youth		
• The family provides youth access to opportunities to be involved in pro-social activities		
• The family participates in pro-social activities together (i.e., play)		
• Parents/caregivers are involved in their children’s schooling		

Sport and the Development of Family, School, Peer, and Community Strengths. Table 1 (Continued)

System	Example risk factors	Example protective factors
School	<ul style="list-style-type: none"> Youth feel little connection with and commitment to school 	<ul style="list-style-type: none"> Youth have opportunities for participation in meaningful activities at school involving service, leadership, extracurriculars, sports, classroom activities, etc.
	<ul style="list-style-type: none"> Youth do not enjoy school 	<ul style="list-style-type: none"> The school rewards and provides recognition of youth involvement in pro-social behaviors
	<ul style="list-style-type: none"> Youth experience early academic failure 	<ul style="list-style-type: none"> The school's climate is welcoming and responsive
	<ul style="list-style-type: none"> Rules for behavior are not clearly defined 	<ul style="list-style-type: none"> The school is safe and supportive and bully-free
	<ul style="list-style-type: none"> Rules for behavior are inconsistently enforced 	<ul style="list-style-type: none"> Teachers and school staff have high expectations for student achievement
	<ul style="list-style-type: none"> The school does not monitor student behaviors well 	<ul style="list-style-type: none"> Youth have strong relationships with teachers and other school staff
	<ul style="list-style-type: none"> The school has inadequate resources and systems-level barriers exist 	<ul style="list-style-type: none"> Teachers and school staff are committed to the school Youth have strong, caring relationships with teachers The school encourages positive parent/family involvement
Community	<ul style="list-style-type: none"> The community is disorganized and characterized by high mobility of families and organizations 	<ul style="list-style-type: none"> There are multiple opportunities for involvement in pro-social activities such as faith-based programs, extracurricular activities, and social events in the community
	<ul style="list-style-type: none"> Laws inadequately deter and/or may foster problem behaviors 	<ul style="list-style-type: none"> The community reinforces and rewards youth for their involvement in pro-social activities
	<ul style="list-style-type: none"> Problem behaviors (i.e., gang involvement) are promoted via community norms and values 	<ul style="list-style-type: none"> There are caring adults in the community who are invested in youth and in the neighborhood
	<ul style="list-style-type: none"> Drugs, alcohol, and weapons are readily available in the community 	<ul style="list-style-type: none"> The community is safe and supportive
	<ul style="list-style-type: none"> The media portrays violence and other antisocial behaviors 	<ul style="list-style-type: none"> The community has quality and accessible services and supports available for its constituents
	<ul style="list-style-type: none"> Broader societal discriminatory practices impede the community's progress and/or increase marginalization and social exclusion 	<ul style="list-style-type: none"> The community is a place where people feel a sense of attachment and belonging Informal social support networks (i.e., neighborhood groups, etc.) are present within the community The community has high expectations for its members, especially youth The community views youth as valuable assets The community celebrates cultural diversity Community members feel little attachment and connection to their neighborhood and each other The community norms reinforce pro-social behaviors The community is characterized by pro-social cultural norms and peace The economic development of the community is thriving

and are willing to join with children “on their level.” Some also suggest that family sport-based activities may serve as less-stressful family settings, ones where parents often are more able to practice effective parenting techniques (Ginsburg 2007). In fact, evidence suggests that family management techniques are improved as families organize their daily schedules around sport (Dorsch et al. 2009). Furthermore, sport involvement during the out-of-school time may support working parents, as adult-led sport activities in turn assist further with family supervision and management (Anderson-Butcher et al. 2006; Lawson and Anderson-Butcher 2001).

Family attachment and sense of belonging also may be enhanced as families participate in, attend, and/or watch community and professional sporting events together. Family outings to local Friday night football games, college games, and tailgating experiences, and professional sporting events all serve as important mediums where families convene and interact in pro-social environments.

Other opportunities exist within sport for parents to be involved in their children’s lives. To support sport participation, parents often arrange sport activities, transport children to games and practices, and observe their children’s play and games (Ginsburg 2007). Families also participate together in family events and activities sponsored by sport leagues and agencies. Together, the time and energy spent by parents in support of sport involvement shows adolescents that their parents care. Parents show through their participation that they are interested in how their children spend their time. Indeed, there is some evidence to suggest that parent-child relationships improve as families spend time together via sport (Dorsch et al. 2009).

Family social networks also develop through sport (Eccles et al. 2003; Dorsch et al. 2009). For instance, parents support each other through carpools, team dinners, and other organized family-based activities. Parents also support each others’ children in meaningful ways via sport. Parents of peers on teams develop strong relationships with adolescents, serving as caring adults who monitor behaviors, provide reinforcement and encouragement, and serve as sources of adult support. Additionally, parents create strong peer networks among themselves, often socializing outside of sport in adult and family activities. These parent-to-parent support networks may contribute to other family and

parent-related outcomes (Anderson-Butcher et al. 2004; Dorsch et al. 2009).

Other benefits for families were noted in Dorsch et al. (2009)’s qualitative study involving parents of sport participants. Parents in their study reported that parent-child communication channels improved through sport experiences. Parents talked regularly to their children about their sport involvement. They provided reinforcement, encouragement, feedback, and advice. Parents in turn described how these communications improved the quality of their relationships with their children. Reciprocally, these enhanced parent-child relationships further improved parent-child communications.

Some sport organizations also provide additional supports for families. For instance, some sport and youth development organizations such as Boys & Girls Clubs offer parent education and support groups (Anderson-Butcher et al. 2002). Others, such as Ohio State University’s Learning in Fitness and Education (LiFE) Sports (Anderson-Butcher et al. 2009) camp, offer quarterly booster sessions for families of youth involved in the program. LiFE Sports also provides each child with free physicals for youth participants who register for the program, clearly providing another family support mechanism.

Indeed, sport may afford families with ample opportunities to strengthen internal relationships and external support systems. As parents and children interact within this setting, several protective factors are built and perhaps risk factors deterred. These improved family conditions and experiences clearly support broader positive youth development outcomes.

Sport and the Peer System

There are ample opportunities, as well, to address risk and build protective factors in the peer system through sports. Sports afford youth with opportunities to establish positive peer relationships and groups. Peer-to-peer relationships developed and nurtured through sport serve as positive social support systems for adolescents (Amorose 2007; Anderson-Butcher 2008; Eccles et al. 2003; Smith 1999; Weiss and Stuntz 2004). Adolescents satisfy needs for belonging and connectedness by seeking out these friendships and social networks through sport. Additionally, peer relationships and interactions often are maximized as youth develop through sport interpersonal skills such

as cooperation, team problem solving, and group mastery (Anderson-Butcher et al. 2010).

Together, team members comprise pro-social peer groups who share similar experiences and goals (Eccles et al. 2003; Weiss and Smith 2002). Friendships developed through sport often last a lifetime. These peer groups, overseen and facilitated by a coach or adult leader, often result in positive norms and values that guide membership (Mahoney et al. 2006). For instance, norms for the peer group may result in the adoption of an activity-based culture, high expectations for academic success, and clear socialization toward involvement in postsecondary education (Eccles et al. 2003).

Adult-to-peer relationships also are developed in this important social setting. In fact, research shows that sport participants have access to a broader range of supportive adults as compared to non-sport participants (Eccles et al. 2003). Indeed, these adult leader-youth relationships may contribute to a host of long-term developmental outcomes (Anderson-Butcher et al. 2006). Sport also may serve as a context where adolescents form social identities (Eccles and Barber 1999), as participants become athletes, fans, team members, and spectators. In fact, youth may try out different activities as they search for social identity matches (i.e., I'm a gymnast, I'm a Boys & Girls Club member, I'm a Buckeye, etc). These social identity groups, especially ones characterized by pro-social attitudes and norms, positively relate to developmental outcomes (Eccles et al. 2003).

Additionally, organizational structures within sport govern what members do with their time, as well as control exposure to competing norms and values (Eccles et al. 2003; Youniss and Yates 1997). In other words, sport organization helps to control the amount of unsupervised time to which adolescents and their peer networks are exposed (Mahoney et al. 2006). In turn, they are more likely to engage in pro-social behaviors, as opposed to filling their unstructured time with less optimal experiences.

In the end, sport settings afford adolescents many opportunities for enhancing peer-related protective factors. Relationships and support networks created through sport, resultant pro-social norms adopted and endorsed, and sports' organization and supervision provided are important protective factors that support adolescents' healthy development overtime.

Sport and the School System

Involvement in school sports also promotes enhanced protection and reduced risk. For instance, several researchers have documented significant relationships between school connectedness and participation in school sports and related extracurricular activities (Eccles et al. 2003; Barber et al. 2001; Eccles and Barber 1999; Lauer et al. 2006; Mahoney and Cairns 1997; Marsh 1993; Marsh and Kleitman 2002). In turn, school connectedness and related constructs (such as belonging) are related to child well-being and academic outcomes (McMahon et al. 2004; Resnick et al. 1997).

In essence, school sports often provide youth opportunities to satisfy their basic needs for relatedness, as well as support identity development (Anderson-Butcher 2008; Anderson-Butcher and Fink 2006; Eccles et al. 2003). Indeed, athletes often feel they are an important part of the matrix of the school. Some suggest, as well, that the sense of school connectedness resulting from sport participation may also support the adoption of other pro-social norms and expectations related to school academic performance (Eccles et al. 2003). Additional rules for participation may reduce the likelihood that youth engage in problem behaviors. For instance, curfews and substance use policies instituted by coaches and school administrators may contribute to reduced problem behaviors.

Rules and oversight mechanisms for sport participants, such as minimal grade point averages required for participation and study-group attendance policies, may also further promote academic success. Indeed, findings from the National Longitudinal Education Study support positive school performance outcomes resulting from sport involvement. More specifically, athletic participation resulted in enhanced educational aspirations, increased time spent in learning activities, and involvement in postsecondary education in this youth sample (Marsh and Kleitman 2003). Other benefits exist, such as increased access to postsecondary options as youth receive athletic scholarships at colleges and universities.

Furthermore, many schools also offer out-of-school time youth development programs that often incorporate sport within their overall designs. For instance, school-based afterschool programs provide valuable pro-social opportunities such as recreational sport, as well as provide adolescents with supervision and positive reinforcement from adult leaders and coaches

(Anderson-Butcher 2004). These programs are especially valuable for youth of color and those living in poverty, those who would not otherwise have access to these valuable developmental opportunities. Many of these programs attract youth to their programs via sport activities, but then provide important social development programs and academic support interventions.

In some cases, other residents of the community also benefit from sport activities offered at schools, as facilities are opened in the nonschool hours for recreational sport programs and other community events. Community members also experience a sense of attachment to local schools and their sporting teams as they serve in roles of the fan, booster, or volunteer. In fact, some school districts across the country (such as Maysville Local School District in Ohio) have maximized these relationships to help with fostering community support for school levies and facility renovations.

Ultimately, involvement in school sports by adolescents and other community members contributes in multiple ways to increased protective factors among youth. Clearly, adolescents experience academic and other healthy youth development outcomes as a result of these important opportunities. The community at large may also benefit.

Sport and the Community System

Sport also supports improvements in the community system. In turn, some of these benefits influence broader pro-social opportunities and experiences for youth, families, as well as community members. These experiences often contribute to promoting positive adolescent outcomes through indirect pathways.

Sporting events serve as pro-social opportunities in the community system. These are settings with individuals, families, and community members congregate together and experience fun and a sense of togetherness. There is some evidence to suggest that this sport involvement contributes to the well-being of a community. In essence, sporting events foster a sense of connection among its participants, including its athletes, sport organizers, and spectators (Misener and Mason 2009; Fink et al. 2009; Trail et al. 2003). A sense of belonging to a socially recognized, valued group via sport often results (Eccles et al. 2003).

Others point to the importance of engaging community groups (and sport consumers) through the organization of socially responsible sporting events (Babiak and Wolfe 2006; Ingham and MacDonald 2003). For instance, many sport organizations use citizen volunteers as a way to connect constituents further to sport-related development strategies (Misener and Mason 2009). Others suggest the use of citizen volunteers and fan bases in sport as mechanisms for fostering commitment among constituents for broader social and political issues (Green 2001; Misener and Mason 2009). Some recommend the use of sport within the helping professions, especially when priorities involve marginalized populations (Lawson and Anderson-Butcher 2000). Still others have used sport to address trauma and grief in communities stricken by grief and loss (Martinek et al. 2006). If designed accordingly, sport indeed can be tool for creating connections and mutual support, as well as a source of enjoyment for community members.

Beutler (2008) and others (Kidd 2008; Misener and Mason 2009; Pelissero et al. 1991) highlight ways in which sport promotes economic and community development. For instance, the construction of sport stadiums in major cities may support urban economic development (Misener and Mason 2009; Pelissero et al. 1991). As capital is brought to a community, more opportunities for safe, supportive, and community mobilization in turn results (Misener and Mason 2009).

Other community benefits have been described. For instance, once events are hosted and/or during non-season periods, sport facilities also are used for community events, social recreation, and health-related activities (Misener and Mason 2009). In host cities such as for the Olympics, revenues from sporting events have been reinvested, as well, in community activities and youth sport development efforts (Kidd 2008). These additional resources help bring sport infrastructure and programming to communities where reinvestments occur.

Sport also reflects societal norms, values, culture, and traditions, as well as underlying marginalization and discriminatory practices (Coakley 2004). As such, some have noted the importance of sport for promoting individual empowerment, especially among girls and individuals with disabilities. Key policies in sport related to gender equality and individuals with disabilities, for example, have influenced broader society

norms and policies related to access and opportunities (Beutler 2008; Kidd 2008). Inclusion among these populations often marginalized due to social, ethnic, or religious barriers also may foster understanding and tolerance among the broader population. In fact, some suggest sport may promote peace and social capital as it brings individuals and communities together across cultural and ethnic divides (Beutler 2008; Kidd 2008).

Finally, sport involvement among the broader population also contributes to important public health outcomes. Community members' involvement in sport and physical activity is related to a host of health-related benefits, such as reduced obesity, diabetes, and cardiovascular disease (Gordon-Larsen et al. 2004; Pate et al. 1996). No doubt, the costs of not participating in sport and related physical activity to society are high. In the end, sport may be used in multiple ways to foster protective factors and strengths within the broader community. In turn these macro system influences support further youth engagement in sport and other positive experiences.

Benefits, Yet Missed Opportunities

As showcased here, sport contexts offer a host of benefits for adolescents, as risk and protective factors in the family, peer, school, and community systems are addressed. Coupled with health and mental health related benefits resulting from individual participation, sport is indeed an important social setting for youth.

Although there are multiple benefits, many adolescents do not profit from sport as much as they could. Multiple factors within the environment impact whether adolescents will have access and the opportunity to participate in sport. Additionally, oftentimes opportunities for positive youth development through sport are not fully maximized when youth do participate. Sport is often not organized in ways to maximize optimal development. Each of these issues is discussed in the following.

Many miss opportunities for benefitting from sport participation. For example, youth living in communities characterized by poverty and disadvantage often have limited opportunities for sport involvement due to limited funding, lack of facilities, safety issues, and fears of violence (Ainsworth et al. 2003; Casey et al. 2005; Fleury and Lee 2006; Ginsburg 2007; Hellison and Cutforth 1997; Pedersen and Seidman 2005). Unfortunately, the availability of sport programs is

inequitably distributed in the communities where adolescents are at most risk (Mahoney et al. 2005).

Research also showcases how some youth benefit from sport more so than others. For instance, minorities participate less in sport and related activities than nonminority peers (Ewing and Seefeldt 2002; Gordon-Larsen et al. 1999). Gender differences also exist, as females continue to participate in sport less often than males (Gordon-Larsen et al. 1999; Eccles and Barber 1999; Seefeldt et al. 1992). Socioeconomic status also is related to participation and access, and youth living in poverty or residing in less educated families participate in fewer sports and related activities (Fredericks and Eccles 2006; Casey et al. 2005; Lareau 2003). These findings suggest that the social construction of sport, as well as the opportunities for sport involvement, may differ for certain groups and community sectors. Local, national, and global efforts are under way to address these racial, ethnic, gender, and socioeconomic disparities (Kidd 2008).

Recently, there also has been a reduction in sport opportunities even in middle-class communities. As the economy has struggled, communities are closing their doors to recreation centers, dropping extracurricular activities, and decreasing funding for out-of-school time programs. School districts also are challenged with passing levies, and many school sport programs are no longer being supported with district general revenue funds. New pay-to-play policies have been instituted, further deterring youth sport participation. Costs are deterring youth from participating and programs are becoming increasingly inaccessible to youth (Fraser-Thomas et al. 2005; Sallis et al. 1999).

Within communities that are thriving economically, sport programs are becoming increasingly institutionalized, expensive, competitive, and focused on elite performance (De Knop et al. 1996; Kidd 2008). In fact, even international programs for youth supported through the International Olympic Committee devote most of their resources on helping high-performing athletes become even more competitive (Kidd 2008). Many youth drop out of sport due to increased competitiveness and lack of enjoyment experiences associated with sport's design (Seefeldt et al. 1992).

There also is a need for improved sport-setting designs and strategies. More specifically, when youth do participate in sport settings, in some cases the potential of these involvement experiences is not fully

maximized. Oftentimes there are limited resources in place to support the overall infrastructure and organization of sport (Beutler 2008). This is even more the case in urban cities where organizations are often overburdened and underfunded (Hellison and Cutforth 1997). There are also issues related to program design. Sport and physical education programs directed at achieving developmental goals tend to be organized an ad hoc, informal, and isolated manner (Beutler 2008). This seems to also be the case within afterschool settings. Programs often operate from a “safe haven” perspective, as opposed to an approach designed to fully maximize learning and related outcomes (Anderson-Butcher et al. 2004). There is less focus on whole child development within sports settings, as well as increased instruction on sport performance enhancement (Kidd 2008). In the end, participation in sport settings may not be maximized if programs are not implemented and managed in ways that fully maximize multiple pathways for impact.

There is some evidence that sport’s organization and design may indeed negatively impact adolescents and other systems of support. To name a few, participation in some types of sports (team sports characterized by peer groups especially) has been found to be related to increased substance use (Eccles et al. 2003; Eccles and Barber 1999). In some families, the protective influences of both play and high-quality family time may be negatively affected by current trends toward highly scheduling children in sports (Ginsburg 2007). Community benefits of sport for parent socialization and broader social capital may depend on certain community qualities and norms (Dorsch et al. 2009). And there is some evidence that sporting events may lead to social exclusivity, further reinforcing cultural divides and social isolation (Schimmel 2006). No doubt better design strategies and training for coaches, youth workers, parents, and other adult leaders may help improve the quality of sport programming for youth.

Conclusion

Although researchers have documented positive outcomes for youth, families, peers, schools, and communities, there is still much to learn. Few studies, to date, explore the interrelationships among risk and protective factors and problem behaviors, especially in relationship to understanding of the various mediating and

moderating mechanisms operating within sport and other social settings (Anderson-Butcher et al. 2009; Anthony et al. 2009). There is a need for longitudinal studies controlling for selection factors, therefore allowing for a better understanding of the relationship between sport participation and development to emerge (Eccles et al. 2003). Complex interrelationships among individual, peer, school, family, and community factors together predict whether adolescents will develop in healthy ways. Rigorous research will allow for the distillation of when sport works for whom and under what circumstances.

Nonetheless, sport as a context to promote broader development has recently gained more momentum. The United Nations formally recognized in 2001 that sport could be used at the individual, community, national, and global level to address the Millennium Development Goals. Sport can address poverty, support public health and prevent illness, address inequalities, build peace, and resolve conflicts (Beutler 2008). Similarly, 2005 was recognized as the International Year of Sport and Physical Education, resulting in a global awareness agenda designed to promote the use of sport to promote education, health, development, and peace by governments worldwide (Beutler 2008; Kidd 2008). There now is a Special Adviser to the Secretary-General of the United Nations on Sport for Development and Peace in Geneva and New York. A formal Plan of Action on Sport for Development of Peace was presented to the General Assembly in 2005. This Plan is being used to guide governmental policies, practices, and resource allocations related sport organization and programming for the broader society (Kidd 2008).

In essence, sport is emerging as a human right (Kidd 2008). Evidence is mounting in relation to the importance of sport for adolescent development, as well as for supporting improved conditions and assets within and across multiple systems, including the family, peer, school, and community. Clearly, sport when designed to fully maximize these multiple conditions and experiences can serve as a critical social setting that promotes adolescent development as well as other valuable macro outcomes.

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Sports and Youth Development

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Overview

This essay highlights the contribution of sport to positive adolescent development. Specifically, the research evidence on youth development outcomes associated with sport participation is synthesized. Ten key design principles are then described that promote and maximize adolescent development in this important social

setting. An example sport-based youth development program, Learning in Fitness and Education (LiFE Sports), is then highlighted to illustrate each of these design principles. Finally, emergent practice issues and research priorities related to sport and adolescent development are discussed.

Youth Sport Participation

Adolescents in the USA spend more than half of their waking hours in leisure activities (Larson and Verma 1999). Many indeed spend this discretionary time in sport. Sport involvement often is defined by a primary activity, such as soccer, racing, football, tennis, golf, bowling, hunting, and basketball. The definition of sport, however, can be much broader than this. Sport is recreational, skillful physical activity that has an element of competition and is organized in some manner (Rogers 1977; Siedentop et al. 2004). Given this broad definition, sport may reference games played on the playground, physical education in school, organized sport leagues, fitness-related programs, backyard pickup games, play-based therapeutic settings, or even school-based extracurricular activities.

It is estimated that 51 million children and adolescents between the ages of 6 and 17 participate in sport each year (American Sports Data, Inc., 2004 as cited in Danish et al. 2005). Of these youth, 54% report involvement in organized team sports, while the remaining 46% participate in pickup games and other less-structured sport activities. During the 2008–2009 school year alone, approximately 1,140,000 high school students in the USA participated in high school football, 989,954 were involved in basketball, and another 1,014,739 participated in outdoor track (National Federation of State High School Associations, NFHS 2009). In addition, 30% of US high school students participate in physical education classes each year (Center for Disease Control 2007). Not only is sport participation exceptionally high for both children and adolescence in the USA, but trends have shown a steady increase in participation over the last 20 years (Brustad et al. 2001; Ewing and Seefeldt 2002; NFHS 2009).

Given these trends, it is important to understand how sport contributes to positive adolescent development. To begin, this essay synthesizes the research on the youth development outcomes associated with sport participation. It then provides examples of effective

programs as well as issues relating to their implementation and possible future areas of research.

Sport and Youth Development Outcomes

Many positive outcomes are associated with involvement in sport settings. For example, research documents the relationship between participation in these settings and enhanced emotional, intellectual, physical, psychological, and social development. Other benefits involve behavioral changes such as decreases in behavioral problems, delinquency, and substance abuse. Table 1 below provides an extensive list of outcomes linked to participation in sport and related physical-activity-related settings.

Although multiple benefits accrue through sport participation, research also links sport involvement to several other less-desirable outcomes. For example, sport participation has been linked to increases in anxiety, decreases in motivation, and increases in negative affect (see Brustad et al. 2001). In addition to these negative psychological and physical outcomes, youth who play sports may also be more likely to engage in risky behaviors, such as substance abuse and aggression/violence in the sport context (Aaron et al. 1995; Eccles and Barber 1999; Eccles et al. 2003). To understand these conflicting results, attention must be paid to how the sport context is designed. The following section highlights features of the sport setting that maximize positive adolescent development.

Key Sport Design Principles to Maximize Adolescent Developmental Outcomes

A variety of scholars suggest that the differential outcomes resulting from sport participation, as well as participation in other positive youth development settings, relate to how programs are designed and implemented by coaches, youth workers, educators, and other adult leaders. Several key sport design features have been identified as critical for maximizing adolescent developmental outcomes (Anderson-Butcher 2005; Anderson-Butcher et al. 2004b; Anderson-Butcher and Cash 2010; Eccles and Gootman 2002; Fraser-Thomas et al. 2005; Gould and Carson 2008). The following is an overview of ten key design principles that are important for ensuring maximal outcomes associated with participation. Key insights are provided, as well, in

Sports and Youth Development. Table 1 Youth development outcomes associated with participation in sport and physical activity

Construct	Reference of support
Emotional development	
Enhanced mood	Berger and Owen 1988
Decreased loneliness	Page and Tucker 1994
Decreased depression	Collingwood et al. 1991; Mutrie and Biddle 1995; Piko and Keresztes 2006
Decreased stress/anxiety	Collingwood et al. 1991; Rostad and Long 1996
Decreased mental health issues	Gruber 1986; Steiner et al. 2000
Intellectual development	
Higher school grades	Broh 2002; Eccles and Barber 1999; Eccles et al. 2003; Fredricks and Eccles 2006; Mahoney et al. 2005
Lower dropout	McNeal 1995; Yin and Moore 2004
Increased likelihood to attend and complete college	Barber et al. 2001; Eccles et al. 2003; Fredricks and Eccles 2006; Mahoney et al. 2003
Increased standardized test scores	Eccles and Barber 1999; Mahoney et al. 2005
Enhanced school attendance and performance	Collingwood et al. 1994; Landers and Landers 1978
Increased school connectedness and engagement	Eccles and Barber 1999; Faulkner et al. 2009
Higher educational aspirations	Marsh and Kleitman 2002
Physical development	
Increased perceptions of athletic competence	Cliff et al. 2007; Donaldson and Ronan 2006; Harter 1981
Increased physical self-perception	Daley 2002; Piko and Keresztes 2006
Increased physical activity	Annesi 2006; Lubans and Sylva 2006; Weintraub et al. 2008
Increased motor skill competence	Cliff et al. 2007; Hansen et al. 2003
Reduced body mass index	Agbuga et al. 2007; Weintraub et al. 2008
Healthy dietary behavior	Baumert et al. 1998; Delisle et al. 2010
Psychological development	
Increased self-concept	Annesi 2006; Bohnert et al. 2008; Collingwood et al. 1991
Increased self-efficacy	Annesi 2006; Lubans and Sylva 2006
Increased psychological well-being	Bohnert et al. 2008
Increased self-esteem	Daley 2002; Gruber 1986; McHale et al. 2005; Pedersen and Seidman 2004
Increased moral development	Bredemeier et al. 1986; Miller et al. 1997
Social development	
Enhanced interpersonal skills	Collingwood et al. 1994; Hattie et al. 1997; Weiss 1991
Increased initiative	Larson et al. 2006
Increased emotional regulation	Hansen et al. 2003; Larson et al. 2006
Enhanced psychosocial maturity	Fletcher et al. 2003

Sports and Youth Development. Table 1 (Continued)

Construct	Reference of support
Increased social competence	Donaldson and Ronan 2006; Fletcher et al. 2003; Larson et al. 2006; McHale et al. 2005
Increased affiliation/belonging	Leonard 1997
Enhanced peer relations	Larson et al. 2006; Weiss and Duncan 1992
Enhanced parent relations	Collingwood et al. 1994
Enhanced leadership and responsibility	Hattie et al. 1997
Enhanced coping and stress management techniques	Delisle et al. 2010; Rostad and Long 1996
Other outcomes	
Decreased behavioral issues	Donaldson and Ronan 2006
Decreased substance abuse	Aaron et al. 1995; Collingwood et al. 1991; Collingwood et al. 1994; Delisle et al. 2010; Fredrick and Eccles 2006a
Decreased delinquency	MacMahon 1990; Segrave et al. 1985
Decreased vulnerability	Gruber 1986
Decreased crime rates	Hartmann and Depro 2006

relation to how sport could be structured by adult leaders to maximize each relevant feature.

1. *Organize activities that are structured, focused, and intentional.* Sport should be designed to maximize time-on-task and developmental opportunities. Too often, sport settings and other physical-activity settings are characterized as unstructured, ad hoc, and informal (Anderson-Butcher et al. 2004a, 2003a; Beutler 2008). Placek's (1983) terminology of "busy, happy, good" is an adequate descriptor. Adult leaders should be planful in their sport design, implementing activities that are goal-directed and structured. The structure of activities may vary, however, dependent upon desired outcomes. Larson et al. (2005) found there are benefits for activities structured mostly by adults (i.e., adult-driven), and other types of benefits for activities mostly structured by youth (i.e., youth-driven). Adult-driven approaches target-specific objectives and allow youth to develop specific skills and competencies (i.e., social skills, sport-specific skills). Youth-driven approaches, on the other hand, further support adolescents' leadership development and empowerment. As Larson et al. (2005) note, youth-driven and adult-driven approaches to structuring activities may not be "mutually exclusive choices" (p. 71). Adult leaders might consider using both approaches depending upon participant qualities and desired outcomes. The key is to individualize instruction and organization so that the instructional or process time within the sport context is maximized.
2. *Teach both sport and life skills.* Opportunities to learn and practice sport-specific skills are essential to any program design (Eccles and Gootman 2002). In addition to these skills, however, sport also provides an opportunity to teach other important life skills, such as responsibility, problem solving, teamwork, and emotional regulation (Larson et al. 2006). Teaching these life skills might occur during the course of practicing sport-specific skills, or they might be taught as part of a social skills curriculum within a broader sport program, or they might be emphasized in both. Theokas et al. (2008) suggest integrating sport and life skills through the following approach: (1) introduce the life skill, including how it can be practiced in both the sport and nonsport setting; (2) provide opportunities to practice the skill within the sport setting;

(3) provide opportunities to practice the skill in the nonsport setting; and (4) provide opportunities for youth to reflect on their successes and failures in practicing the new skill. In addition, Gass (1985) suggests that programs must involve significant others in the learning process (such as coaches, parents, etc.). For example, adult leaders should model these skills as they work with adolescents and encourage parent volunteers and others to do the same. By including significant others, generalization and maintenance of these skills outside of the sport context can be further enhanced.

3. *Promote a mastery motivational climate.* Achievement-related contexts, such as sport, should be structured to promote effort, self-improvement, and skill mastery – the key facets of a mastery motivational climate (Smith et al. 2009; Weiss 2008). A mastery climate often is contrasted with an ego climate, where emphasis is placed on winning and comparing adolescents' skills to others. Adult leaders are central in fostering positive motivational climates, and subsequently, in constructing what it means for adolescents and/or a team to be successful. To promote mastery climates, adult leaders should encourage and reinforce sport participants for their dedication and effort, as well as their learning of new and/or improved sport and life skills (i.e., social skills, emotional regulation skills, etc.). Ample opportunity should be allowed for adolescents to practice and refine skills in safe environments (Eccles and Gootman 2002). Making comparisons between adolescents and using consequences to reprimand mistakes made during practice and learning attempts should be minimized (Smith et al. 2009).
4. *Foster initiative.* Larson (2000) suggests that sport is a prime setting for the development of initiative, defined as the "ability to be motivated from within to direct attention and effort toward a challenging goal" (p. 170). Empirical evidence corroborates these claims (Larson et al. 2006). Initiative results from three distinct elements – intrinsic motivation, engagement, and directed effort (Larson 2000). Intrinsic motivation, or being motivated to participate in sport for internal reasons (i.e., because you want to), can be promoted when

adult leaders adopt and implement autonomy-supportive strategies (Mageau and Vallerand 2003). Example autonomy-supportive strategies include providing age-appropriate structure, providing boundaries, recognizing adolescent's feelings, and giving adolescents choices (Eccles and Gootman 2002). External incentives and consequences, such as winning trophies or conversely, running laps, often decrease intrinsic motivation.

Engagement, another critical element of initiative, can be maximized when opportunities offered within the context of sport have meaning and relevance to adolescents inside and outside of sport (Larson 2000). For example, teaching adolescents how to set goals is important not only to sport, but also to excelling in school and the workforce. Learning skills such as cooperation and teamwork are also vital across the multiple contexts in which adolescents are engaged. Adult leaders can maximize youth engagement in sport, as well as application of skills in other settings, by providing meaningful, relevant learning opportunities for participants.

The last critical component for fostering initiative, as defined by Larson (2000), is allowing adolescents an opportunity to apply their motivation and engagement over time toward some ultimate goal (Larson 2000). In comparison to other youth development settings, such as afterschool programs, sport by its very nature often is designed for participants to achieve long-term goals. For example, qualifying for playoffs or end-of-season competitions can serve as ultimate goals that participants strive to achieve over the course of a season. Or, in the case of other less-organized sport programs, adult leaders might organize a skills challenge or course for their participants. No matter what the goal, adult leaders should allow adolescents to have a voice in choosing activities and in overall individual and team decision-making (Rosewater 2009).

5. *Be youth-centered.* Youth should have opportunities to engage in leadership roles and participate in decisions relative to sport (Rosewater 2009; Eccles and Gootman 2002). In this way, participants' voices are heard and programs are youth-driven (Larson et al. 2005). As adult leaders acknowledge participants' perspectives, allow them to make

decisions, and adopt other autonomy-supportive strategies, they empower the adolescents to become responsible not only for themselves, but for others (Hellison 2000; Mageau and Vallerand 2003). Ultimately, any programmatic decision should be based on the adolescent population being served, and if possible and relevant, should be made through a collaborative decision-making process.

6. *Engage school, family, and community partners.* Schools, families, and communities all have valuable resources to contribute to sport and other youth development programs. For example, communities have valuable indoor and outdoor space to implement programming. Schools might be able to assist in promoting and recruiting adolescents for programming. Also, when sports-based programs are intentionally linked to schools, youth are more likely to have positive educational outcomes (Rosewater 2009; Anderson-Butcher 2004). Suggestions for adult leaders fostering linkages between schools and sport-based programs include: requiring school attendance for participation, employing teachers and other school staff in the sport-based programs, and creating opportunities for coaches or other adult leaders to serve as liaisons within the schools (Rosewater 2009).

Families also are invaluable resources, as they may volunteer, provide links and connections to businesses and other stakeholders in local communities, and support the learning that takes place in sport by facilitating generalization to other settings (i.e., school, home, etc.). Adult leaders in sport settings should create ample opportunity for positive interactions with parents/guardians. In addition, important information should be shared with parents/guardians in a timely fashion and through diverse mechanisms, such as individual conversations, paper flyers, or e-mail messages.

Tapping into these school, family, and community resources and maximizing their potential contribution to sport allows for a more comprehensive and holistic approach, one that prioritizes the multiple systems that impact adolescent development (Bronfenbrenner 1979). Additionally, creating these school–family–community partnerships also help ensure youth participants

have access to other types of resources. For instance, Lawson and Anderson-Butcher (2000) highlight the importance of coaches, youth workers, and educators for the identification of early risk factors among youth. These adult leaders often can connect adolescents and their families to valuable services and supports. Some research suggests that youth are more likely to follow up on these linkages and receive the supports they need if referred by a caring adult (Anderson-Butcher et al. 2006).

7. *Provide physical and emotional safety.* Sport programs must operate in facilities that are safe, clean, and free from hazardous obstacles or environments that could injure or harm adolescent participants (Eccles and Gootman 2002). Equipment also should be utilized that provides optimal protection for adolescents against injury (i.e., shinguards, helmets, pads, etc.). Beyond physical safety precautions, the emotional and psychological safety of participants needs to be addressed (Eccles and Gootman 2002). Rules, norms, and healthy conflict resolution mechanisms should be developed to promote both positive adult–peer and peer–peer interactions. Bullying, intimidation, violence, and harassment should be met with consistent and age-appropriate consequences.
8. *Use data to drive decision-making.* Whether collected through structured evaluation strategies (e.g., surveys or focus groups) or more anecdotal in nature, decisions about programming should be grounded in data. Specifically, adult leaders should design and implement activities based on an assessment of the skill level and needs of the youth participants being served. For example, data may suggest that participants do not feel a sense of connection to other peers. As such, the coach might incorporate more team-building exercises and “team nights” into the following year’s programmatic design. The quality of the sport context also should be regularly assessed to help monitor the incorporation of these key design features. Programmatic effectiveness data also should be collected and used to inform other continuous improvements. Making decisions in this way ensures that the programmatic design is meeting the needs of the adolescent population served.

9. *Create opportunities for connectedness and belonging.* Adolescents should feel a sense of connection to their peers and adult leaders. Ullrich-French and Smith (2009) document the importance of peer relationships to continued participation in sport. Other researchers also highlight the importance of peer groups, teams, and member structures for the adoption of pro-social values and norms (Eccles et al. 2003). Adult–peer relationships also are instrumental to positive development. For instance, Anderson-Butcher et al. (2003a) found that youth who perceive adult leaders as encouraging and supportive are less likely to engage in problem behaviors such as fighting, and more likely to engage in positive behaviors such as helping others.

Amorose (2007) and Anderson-Butcher (2005) have identified several strategies coaches and youth workers can implement to foster this sense of connection with significant others. Examples include providing opportunities for adolescents to socialize both inside and outside of the sport setting and using inclusive language that allows all adolescents to feel welcomed and supported. A recent qualitative study conducted by Iachini et al. (2010) revealed that many high school sport coaches already engage in these strategies as a means to foster relatedness.

Feeling a sense of belonging to the sport program itself also is important (Anderson-Butcher and Conroy 2002; Anderson-Butcher and Fink 2006). Anderson-Butcher (2005) suggests that feelings of belonging have strong implications for recruiting youth to participate in programs, as well as maintaining their participation once they become involved. To foster a sense of belonging, adult leaders should design and implement activities that minimize exclusion and allow all adolescents to have maximum participation. For example, participant involvement may be maximized by having practice equipment for all participants (one ball for each player so waiting time is reduced), using space that affords individual practice, or structuring small-sided games (3 on 3 versus 11 on 11) to increase the number of “touches” or engagement in the sport. Hiring practices of adult leaders should focus on employing qualified staff who reflect the

demographics and diversity of the adolescent population being served. Adult leaders also can work to create a sense of identity, a connection to the team, or a strong affiliation with an organization so that belonging and attachment is fostered.

10. *Be enjoyable and fun.* Sport settings also have to be experienced as fun and enjoyable by youth participants. Oftentimes, many youth participate in sport for the social and physical aspect of the activity. They are not motivated by the high-pressure, competitive, or “win at all cost” environment. Therefore, adult leaders should design activities that engage youth in meaningful ways, allow for positive interactions with peers and adult leaders, and build on ideas and suggestions from youth. Activities also should be designed so that they match participants’ skills and reflect “where the participants are.” If an activity is too difficult, oftentimes youth will become discouraged. Ensuring that the sport setting provides optimal enjoyment for youth is critical for both recruitment and retention (Anderson-Butcher 2005).

Research indicates that the ten principles discussed above can serve as a strong foundation for designing any sport program. As adult leaders design sport programs in this way, they can maximize the developmental outcomes afforded to youth through participation. To illustrate this point, the following section highlights how these design principles were incorporated into a 4-week sport-based youth development summer program at The Ohio State University (OSU) called the Learning in Fitness and Education (LiFE) Sports Program.

Program Example: LiFE Sports

OSU’s LiFE Sports program was developed to enhance the social and athletic competence of economically disadvantaged youth during the summer months. It is operated as administered by the OSU Athletic Department and the College of Social Work. Several other key units on campus (i.e., Recreational Sports, Physical Education and Educational Services, College Access) and in the community (Boys and Girls Club of Columbus, Inc, Ohio Department of Education) are also key partners (see www.osulifesports.org for more information). Specifically, the mission of LiFE Sports is: “to foster social competence among youth through their

involvement in sport, fitness, and education activities.” In order to achieve this mission, LiFE Sports is designed to provide programming that is *structured, focused, and intentional*.

To begin, key primary and secondary outcomes were identified by leaders within LiFE Sports. Since LiFE Sports aims to increase both social and athletic competence, primary and secondary outcomes were identified for the LiFE Sports program in relationship to both of these areas. Table 2 provides an overview of both the primary and secondary outcomes anticipated for youth participating in LiFE Sports.

Key activities were then identified that would lead to these targeted outcomes. Specifically, LiFE Sports is designed so that youth participate in sport activities, such as basketball, soccer, football, and swimming, as well as a play-based educational activity each day. Every activity has a specific curriculum to ensure both *sport and life skills* are being taught.

These curricula also are designed to promote a *mastery motivational climate*. Specifically, activities within each curriculum are designed to allow for maximum participation from youth. Instead of an activity where youth are eliminated and forced to sit and watch, LiFE Sports activities allow youth to be engaged and active for the duration of the activity. To support this, staff also are trained in how to implement the

curriculum and how to encourage youth to focus on personal improvement over winning.

The LiFE Sports curriculum also is designed to *foster initiative*. Specifically, the last 2 weeks of the educational curriculum allows youth the opportunity to apply effort over time toward a culminating event, the LiFE Sports Olympics. During these weeks, youth create invitations and develop programs, advertisements, and team banners for the Olympics. Additionally, youth have the opportunity to work together and practice the social skills they learned during the prior 2 weeks, such as goal-setting, teamwork, and cooperation, in preparation for the event.

The Olympic event itself also is an intentional design strategy within the LiFE Sports program. The entire event is *youth-centered*. Youth fulfill the roles of coaches, athletes, and referees and also have the opportunity to decide which person on their team will serve in each role. This event also provides an opportunity to *engage family and community partners*, as parents and community members are invited to attend the event and celebrate the culmination of participants’ efforts over the 4 weeks of the program.

In order to ensure the *physical safety* of youth participants, all LiFE Sports programming takes place on fields and in facilities maintained by a professional recreation staff. In addition, an athletic trainer remains onsite during all LiFE Sports events to handle any injuries or other threats to physical safety. Program staff also are provided with an action plan to be implemented in cases of emergency.

And, not only are staff trained to ensure the physical safety of youth, but they also receive training to protect the *psychological safety* of the children and adolescents at LiFE Sports. As part of the LiFE Sports curricula, staff and youth establish rules and norms for positive interactions. In addition, steps for conflict resolution are also addressed. This helps to reduce or eliminate instances of bullying and intimidations, which are clear threats to psychological safety.

As the LiFE Sports program ends each year, leaders of the program meet to determine what programmatic improvements need to be made for the following year. To inform program improvements and to ensure *data-driven decision-making*, leaders of LiFE Sports collect and analyze program data. Specifically, pre- and post-tests are given to youth at the beginning and end of the program. Additionally, staff complete questionnaires

Sports and Youth Development. Table 2 Primary and secondary objectives identified for youth participating in LiFE Sports

Primary objectives	<ul style="list-style-type: none"> ● Increase social competence among youth participants ● Increase self-control, personal motivation/commitment, teamwork, and social responsibility ● Youth will demonstrate a sense of belonging and connection to the LiFE Sports program and its staff
Secondary objectives	<ul style="list-style-type: none"> ● Increase participants’ perceptions of athletic competence ● Increase participants’ exposure to university/college life and interest in pursuing a higher education ● Refer participants to other youth organizations and opportunities in Columbus

designed to assess their reflections on curriculum implementation. This information is helpful in monitoring implementation fidelity and determining which activities were most successful in achieving the targeted objectives.

As an example of how data drives programmatic improvements, leaders found that the 2008 LiFE Sports pre- and posttest data indicated that there was no increase in youths' perceptions of belonging over the course of camp. Given that *belonging and connectedness* are important aspects of sport-based programs, several adjustments were made to the programmatic design the following year. For example, in 2009, fewer youth were assigned to each group to maximize the opportunity for interaction among youth and camp counselors. Second, several activities were redesigned to be more inclusive and provide opportunities for maximum participation. Finally, in addition to the 4-week camp, six booster sessions were added to the LiFE Sports programming. These booster sessions provide additional opportunities for youth and their families to engage with LiFE Sports staff and feel a sense of belonging to the program.

School-family-community partnerships also are intentionally maximized as part of LiFE Sports. For example, all of the booster sessions were held at a local Boys and Girls Club site. A partnership with the Ohio Department of Education also has allowed LiFE Sports participants to receive breakfast and a hot lunch each day of the program. LiFE Sports families also serve an important role within the program. Specifically, LiFE Sports has two parent consultants who are helping design strategies to encourage more parent involvement during the booster sessions and the summer program. LiFE Sports also partners with several OSU departments and organizations. The Department of Recreational Sports provides facility space for LiFE Sports programming. Additionally, Economic Access Initiative, the P-12 Project and Undergraduate Admissions and First Year Experience partner with LiFE Sports to host a College Access and Career Day during the program. These partnerships are essential to the overall success of the LiFE Sports program as it relates to outcomes for youth.

Ultimately, a program with all nine of the design principles mentioned above will not make a difference for youth if they do not engage in the program. Therefore, it is critical to remember that youth want to have

fun at LiFE Sports! If youth are not having fun, it is unlikely they will be fully engaged in the program and they may even eventually decide to drop out of the program completely. As such, LiFE Sports activities are designed to provide optimal challenge, without the pressure of winning and intense competition. Youth also are given the opportunity to engage in the development of activities and make changes to enhance their enjoyment and satisfaction with the program.

Emergent Issues in Practice

As indicated, sport is an important medium that contributes to developmental outcomes. When designed in accordance with the features listed above, these outcomes are maximized on behalf of the youth participant. It is important to note, however, that many youth are dropping out of this important developmental setting as they get older (Seefeldt et al. 1992). Approximately 35% of children are estimated to drop out of sport each year (Gould and Petlichkoff 1988). This trend is disconcerting, particularly because involvement in sport and other youth development settings may nullify the risk for engaging in problem behaviors typically associated with adolescent populations (Anderson-Butcher et al. 2003a, b).

There are several potential reasons for this lack of involvement. For example, lack of fun, emphasis on winning, and competing time of other activities can deter adolescents from continued participation in sport (Weiss and Ferrer-Caja 2002). There also has been a recent shift toward the "professionalization" of youth sports. Year-round training and early specialization are becoming commonplace in youth sport (Gould and Carson 2004). In fact, most youth (44%) only play one sport, and the majority of parents (76%) prefer that their children limit themselves to one sport. The added pressure of increased training and a one-sport focus, combined with the often violent and overly competitive nature of sport, often results in stress, injuries, and burnout (Scanlan et al. 2005; Shields and Bredemeier 1995). The pressure to win and the focus on physical competence in the sport context also can lead youth to feelings of low self-confidence and self-esteem (Martens 1993; Wankel and Kreisel 1985).

Because of these factors, it is even more imperative that adult leaders working in sport and other youth development settings are adequately prepared for their critical role in these environments (Halpern 2000;

Gould and Carson 2008). For example, these leaders should be prepared with the knowledge and skills to implement the key design strategies offered here. Professional development opportunities and educational programs must be designed toward this end.

In addition, while there is evidence that some adolescents are dropping out, there also is research to suggest that not all adolescents even have a chance to begin. While some adolescents just may not be interested or may lose interest over time, many youth are not afforded with opportunities for sport involvement at all. Key environmental and family factors constrain their access.

For example, economically disadvantaged neighborhoods are often characterized by poor lighting, limited facilities, and high rates of crime (Ainsworth et al. 2003). Because of this, many youth may have limited access to participate in sport outside due to fear of violence and inadequate physical space (Pedersen and Seidman 2005). In addition, neighborhoods characterized by poverty may not have adequate funding to support sport opportunities that could be located inside, such as in schools and community centers (Casey et al. 2005; Pedersen and Seidman 2005).

Beyond the influence of the environment, family income and structure also impact the adolescents' access to participate in sport and other related youth development opportunities. Empirical evidence supports the unequal participation rates of adolescents from lower income and/or less-educated families in comparison to their more advantaged counterparts (Bouffard et al. 2006; Frederick and Eccles 2006). In addition, family structure also influences adolescents' opportunity to participate in sport. For example, Huebner and Mancini (2003) found that transportation issues often arise in single-parent households, particularly as work schedules may impact their ability to get their child to an activity (Casey et al. 2005).

Together, all or some combination of these environmental and family factors often limit the access and opportunity adolescents have to participate in sport and other youth development activities. The irony is that participation in these activities may actually benefit adolescents the most, especially given increased risk exposure during this developmental age. As such, adult leaders should develop an awareness and understanding of these factors, particularly as they are critical to the development of recruitment and retention

strategies aimed at getting these adolescents in the door and then keeping them engaged once they are there (Anderson-Butcher 2005; Bouffard et al. 2006).

Emergent Research Priorities

There also are several emergent research priorities in the area of sport. Currently, limitations exist within the sport literature in relationship to the specific characteristics that predict whether youth will engage in these social settings, as well as the mechanisms underlying the relationships among involvement and positive outcomes (Anderson-Butcher and Cash 2010; Anderson-Butcher et al. 2003b; Anthony et al. 2009; Eccles et al. 2003; Gould and Carson 2008; Weiss and Smith 2002).

There also is a need for longitudinal studies that examine selection factors, allowing for a better understanding of the degree to which outcomes are associated with participant characteristics or actual sport involvement (Eccles et al. 2003). As mentioned by Gould and Carson (2008), a great deal may be learned, as well, from the examination of different sport contexts (i.e., individual vs. team, recreational vs. highly competitive, type of sport such as soccer vs. basketball) and their related outcomes. More rigorous research designs are needed to further understand the different outcomes that may result based on the sport organization, type of sport, or other relevant characteristics. For example, many day treatment and residential programs use sport, recreation, and physical activity within their programs. One wonders about the added-value of the use of sport settings in these therapeutic environments serving adolescents. Little research to date has examined the specific outcomes associated with these settings.

Researchers also have wondered whether outcomes are automatic by-products of participation (Weiss and Smith 2002), or if they can be maximized with more targeted, outcomes-driven design strategies (Anderson-Butcher et al. 2006). The emergence of sport-based positive youth development programs, such as OSU's LiFE Sports, may allow for this type of question to be answered. Other models, such as Hellison's Teaching Personal and Social Responsibility in Sport (TPSR) model (Hellison 2003), are important, too. In TPSR, the sport context is designed strategically to create specific youth development outcomes (i.e., self-control, effort, etc.), as opposed to a sole focus on sport-related skill instruction. There is preliminary

evidence to suggest the effectiveness of TPSR (Hellison and Walsh 2002), but more systematic research and extensive design strategies are again needed to further examine the potential of these settings.

Conclusion

Overall, sport is an important setting to maximize positive adolescent development. Regardless of whether sport is used on the playground, in physical education, in sporting leagues, fitness programs, or in unstructured leisure time, when designed and implemented appropriately, the benefits for adolescents are numerous. As such, continued emphasis should be placed on preparing adult leaders to design these important settings, especially as maximizing adolescent involvement and impact are needed if the true value of sport is to be met.

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repeatedly inflicts on another unwanted contacts or communications that cause fear in the recipient. The preponderance of stalking research to date has only considered this behavior in adults. However, there is emerging recognition that stalking is a salient problem among juveniles. This essay canvasses the major issues in this burgeoning field of research, examines the few empirical studies that have considered the nature and context of stalking by juveniles, including gender differences, and provides guidance regarding the clinical management of juvenile stalkers.

Introduction

Stalking occurs when a person repeatedly intrudes upon another to such an extent that the recipient fears for their safety (Mullen et al. 2009). Stalking may be motivated by a range of intentions, including seeking to establish a relationship with a person, attempting to reconcile a previous relationship, exacting revenge for a perceived harm or as preparation for a planned assault, usually sexual (Mullen et al. 1999). The term “stalking” refers to a range of behaviors, such as persistently contacting the victim via phone, e-mail, or letters, keeping them under surveillance, loitering around their home or workplace, or intruding upon them in such venues or public places. While some stalking behaviors may seem innocuous when considered individually (e.g., telephoning a person), it is when such acts are repeated over time that they can become more ominous for the victim and constitute a damaging form of victimization (Pathé and Mullen 1997; Kamphuis and Emmelkamp 2001; Purcell et al. 2005).

Stalking is proscribed as a criminal offence in many English-speaking countries, including the USA, Canada, Australia, New Zealand, and the UK, as well as several European countries, including Germany and the Netherlands. The drafting of anti-stalking laws has not been without controversy (see Purcell et al. 2004a), particularly since stalking behaviors can overlap with interactions that, however unwelcome or inappropriate, are nonetheless part of many people's everyday experience, such as being pursued for a date or involved in a dispute with a neighbor or colleague. Research suggests that the overarching term “stalking” encompasses two separable phenomena: (1) brief, self-limited harassment that lasts for a few days and is largely confined to unwanted approaches by strangers and

Stalking

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Overview

Stalking is a prevalent crime in most industrialized, English-speaking countries. Stalking refers to a constellation of behaviors in which one person

(2) persistent stalking by a known acquaintance that lasts for weeks or months and can involve associated threats and violence. The watershed between these two forms is the continuation of the behaviors for more than 2 weeks (Purcell et al. 2004b).

Epidemiological studies suggest that stalking is a prevalent crime, affecting an estimated 10–15% of adults (Australian Bureau of Statistics 1996, 2005; Tjaden and Thoennes 1998; Budd and Mattinson 2000; Purcell et al. 2002). These community-based studies indicate that the majority of victims are female (75%) and most perpetrators are male (80%). Victims are typically stalked by someone known to them (80%), including ex-intimate partners, acquaintances, estranged relatives and friends, and work-related contacts. Few studies have considered risk factors associated with stalking victimization, although age and gender may be significant predictors. Using data from the British Crime Survey, Budd and Mattinson (2000) found that women aged 16–19 years reported the highest annual rates of victimization, with 17% having been stalked in the previous 12 months. This suggests that stalking is a significant problem for young people, particularly females.

Stalking Among Juveniles: Key Issues

The overwhelming majority of stalking research has focused on adult perpetrators. Until recently, the extant literature on juvenile stalking consisted of a handful of media reports and case studies (e.g., Urbach et al. 1992; McCann 2000; Brewster 2003). This has perhaps led some commentators to conclude that stalking by juveniles is “relatively rare” or “uncommon” (see Scott et al. 2007), despite the absence of prevalence studies in this population.

The lack of scientific and popular attention to juvenile stalking may be explained in part by the tendency to conceptualize stalking behaviors in young perpetrators as harmless or otherwise inoffensive. For example, stalking following the termination of an intimate relationship among juveniles has been trivialized (at least in the popular media), as the “throes of a broken heart” (e.g., Sydney Morning Herald 2003). Similarly, unwanted efforts to establish a relationship have often been labeled as merely “puppy love” or a “crush” when this involves a juvenile (see Brewster 2003). Trivializing such conduct does a serious

disservice to those cases that genuinely constitute stalking and which inflict considerable harm on the victim. For example, the case that referred to the “throes of a broken heart” involved the attempted murder of a female secondary-school student by her teenage ex-boyfriend at an Australian school. Unwilling to accept the termination of their relationship, the youth took a crossbow to school and fired a volley of arrows at his ex-girlfriend, seriously wounding her and impaling her friend who was seated beside her. At trial, the youth was acquitted of attempted murder as the judge “was satisfied the boy was telling the truth when he said he wanted to maim but not kill his former girlfriend” (Sydney Morning Herald 2003).

The failure of many researchers and clinicians to acknowledge the potential seriousness of juvenile stalking may also reflect the desire to avoid pathologizing normal or developmentally appropriate behaviors in young people. This is a legitimate concern, and as such it is important to recognize that a *continuum* of behavior exists, from valid but misguided attempts to rekindle a terminated relationship, or inept efforts to establish a relationship, through to damaging forms of pursuit that constitute stalking (see Mullen et al. 2001). The challenge for those whose work brings them into contact with juvenile stalking cases is to determine what are developmentally appropriate and acceptable (albeit irritating and unwanted) behaviors and what is stalking. This is often far from straightforward, and requires a comprehensive assessment of the context in which the behaviors have emerged, the perpetrator’s aims and motivations and how the behavior aligns with the perpetrator’s emotional and cognitive development. Awareness by the young perpetrator that their behavior is causing fear, and/or the continuation of the behavior after the victim has clearly expressed their desire that it stop, may also be useful indicators of when otherwise innocuous behavior has crossed the line into stalking.

Stalking among juveniles should not be unexpected. Many of the motivations for stalking that operate in adults are equally apparent in juveniles, such as managing disputes among peers, or initiating or terminating a relationship. Negotiating the coming together and breaking apart of intimate relationships is especially challenging for many juveniles, particularly as they are likely to be experiencing their first romantic or sexual encounters. For example, research indicates

that dating violence is common among young people (Carolyn Olson et al. 2004; Brown et al. 2009), with estimates during adolescence ranging from 9% to 65% (Howard et al. 2003; Kreiter et al. 1999). The challenges of managing relationships or disputes are also arguably complicated in juveniles by developmental variations in social competence and emotional and cognitive maturity. Indeed, stalking behavior may be *even more* common in juvenile populations given that their impulse control and social decision-making are still in development (see Elkind 1998), although this is yet to be examined in empirical comparisons with adult samples.

Empirical Studies of Juvenile Stalkers

To date, only two studies have considered the nature of stalking in juvenile perpetrators. The first study was published by McCann (2000), who assembled 13 cases via legal case reports, mental health evaluations, and media articles published in the USA. The sample was aged between 9 and 18 years, with all but one of the perpetrators male and all but one of the victims female. Adults were pursued in seven cases and six involved the stalking of peer-aged victims. Given the method of sampling, it is not surprising that clinical diagnoses were noted in 7 of the 13 cases, typically conduct disorder or psychosis. The perpetrators typically confined their stalking activities to seeking physical proximity to their victims – usually involving overt sexual advances – and making repeated phone calls. Some 61% made threats and 31% engaged in physically violent conduct. The primary motivation for stalking in this group was the desire for “sexual contact” with the victim, followed by revenge and resentment. These juveniles typically pursued known acquaintances (61%), such as classmates and teachers, although three pursued strangers. Only one case involved the stalking of an ex-intimate partner.

McCann’s (2000) small and selective sample represents the extreme end of the stalking spectrum, with the perpetrator’s behavior being sufficiently damaging or disordered in each instance to warrant mental health or criminal justice intervention. While this prevents meaningful generalizations, this work was nonetheless instrumental in drawing attention to the problem of juvenile stalking. Importantly, the findings indicated that stalking in juveniles can be motivated by a range

of factors and that psychopathology contributes to this form of offending. That threats were common and physical assaults occurred in a third of cases, clearly demonstrates that stalking by juveniles cannot merely be dismissed as harmless or otherwise innocuous.

A more recent study by Purcell et al. (2009) represents the largest systematic study of juvenile stalking published to date. The authors assembled a sample of 299 juvenile perpetrators from a metropolitan Children’s Court in Melbourne, Australia (the population of Melbourne is approximately four million). The sample was obtained by a search of consecutive applications for an intervention order (IO) against a juvenile aged 18 years or less. Intervention orders (known as “restraining orders” in the USA and “injunctions” in the UK) are designed to protect the applicant by restricting the unwanted behavior of the perpetrator, including approaching, contacting, threatening, harassing, or assaulting the applicant. This methodology was used as the majority of juvenile stalking cases are managed in the civil jurisdiction via applications for an IO, with few cases of criminal stalking processed annually in the Children’s Court. This reflects the policy in Australia (and the UK) to avoid bringing juveniles into the criminal justice system whenever possible.

In Purcell et al.’s study (2009), a stalking case was defined as multiple unwanted intrusions that persisted for more than 2 weeks. Given the age group concerned, a distinction was made between bullying and stalking behaviors on the basis of where the behaviors occurred. Unwanted approaches and communications that occurred entirely within the premises of a school or public institution legitimately attended by both the victim and perpetrator were classified as bullying, but not stalking. When such behaviors extended *beyond* the school or shared institution into the victim’s domestic and wider social situation, this was classified as stalking.

The mean age of the juvenile stalkers in Purcell et al.’s (2009) sample was 15.4 years (range 9–18 years) and the majority were male (64%). The proportion of female juvenile perpetrators (36%) is notable for being higher than the rates previously observed in adult samples. For example, in clinical forensic samples, the rates of female stalking are 21–22% (Purcell et al. 2001; Harmon et al. 1998, respectively), while in community samples they range

from 11% to 19% (Tjaden and Thoennes 1998; Budd and Mattinson 2000, respectively). Given the different methods of ascertainment across these studies, it cannot be concluded that stalking is more prevalent among juvenile females relative to their adult counterparts, but the juvenile rates are sufficient to indicate that stalking by young females is a salient problem.

The majority of victims in Purcell et al.'s study were female (69%) and their mean age was 18.8 years (range 5–77 years). Almost all juvenile perpetrators pursued someone known to them (98%), most commonly a school peer, family or peer acquaintance, ex-boyfriend or girlfriend, estranged friend or a neighbor. Interestingly, more than half of the perpetrators in this study stalked someone of the same gender (57%), although same-gender stalking was significantly higher among females (86%) compared to male perpetrators (40%). This likely reflects differences in the motivations for stalking (see below), with juvenile males more likely than females to be motivated by rejection and sexual predation, whereas females were more likely than their male counterparts to be motivated by bullying and retaliation (Purcell et al. 2010). Juvenile females were also more likely than males to recruit others to their efforts to harass the victim, a tactic referred to as “stalking by proxy” (Mullen et al. 2009). This perhaps reflects female adolescents' propensity to offend within the context of a peer group rather than as individuals.

The most common stalking behaviors in Purcell et al.'s sample were unwanted approaches (76%), telephone calls (42%), text messaging (15%), and following (16%). The duration of the stalking behaviors ranged from 16 days to a maximum of 6 years (median = 120 days). High rates of associated violence were observed in this sample, with 75% of victims reporting being threatened and 50% physically assaulted by their perpetrator. Serious sexual assaults were disclosed by five victims.

The motivation for the perpetrator's behavior and the context in which the stalking emerged were used to construct categories of stalking. The majority of juveniles in Purcell et al.'s sample engaged in *stalking as an extension of bullying* (28%), or *retaliation* (22%) for a perceived slight or injury. The latter category contrasts with resentful patterns of stalking in adults (see Mullen et al. 1999) in that the reprisal against the victim is far more *immediate* in juveniles, as opposed to

adults, whose desire for retribution is usually sustained for longer periods of time. A significant proportion (22%) of cases were classed as *rejected* stalking, with the perpetrator seeking to reconcile a lost intimate relationship with the victim or to exact revenge for the rejection, or both. A further 20% involved *disorganized and disturbed* harassment by young people who targeting multiple (often unconnected) victims within their environment, often neighbors. Of particular concern was the 5% of *sexually predatory* juvenile stalkers, the majority of whom (13 of 16) had sexually or physically assaulted their victim. These were not overeager or insensitive approaches, but persistent patterns of following culminating in sexual assaults or violence and intimidation aimed at obtaining sexual contact.

Only 2% of Purcell et al.'s (2009) sample were categorized as *infatuated* or intimacy seeking. It is unlikely that the latter finding reflects a lower frequency of infatuation among juveniles compared to their adult counterparts, in whom intimacy-seeking patterns of stalking are common (Mullen et al. 1999). Rather, relational intrusions, even in their more extreme manifestations, appear to be regarded by their adolescent targets as within the range of normal, if unwanted, experience (Sinclair and Frieze 2000; Spitzberg and Cupach 2003). Since they tend to be normalized, relational intrusions in this age group are likely to evoke irritation rather than fear, and therefore are unlikely to be sufficiently disturbing to induce victims or their parents to seek an intervention order.

As previously indicated, the motivations for juvenile stalking differed according to gender, with female perpetrators largely motivated by bullying and retaliation (Purcell et al. 2010). In the bullying cases, no clear precipitant for the behavior could be discerned other than the perpetrator's apparent desire to persecute and torment the victim, whereas in retaliatory cases, a precipitating incident or grievance could be identified in each instance. Anger, vengeance, and punishment permeated much of the stalking by juvenile females, which is consistent with the notion of relational aggression (Crick 1995), whereby damage to a relationship serves as the primary means of harm. The association with physical aggression was also present in almost half this group, which is not uncommon for young females (Crick and Nelson 2002).

In contrast, juvenile males exhibit a broader range of stalking motivations, which is consistent with their

adult counterparts. Rejection following the breakdown of an intimate or dating relationship was the most common context in which the stalking emerged for young males, followed by retaliation, bullying, disorganized and disturbed stalking, as well as sexual predation. Juvenile males also showed a greater propensity than females for targeting a member of the opposite gender, a pattern that is paralleled in adult male stalkers (Harmon et al. 1998; Mullen et al. 1999; Palarea et al. 1999).

Major Differences Between Juvenile and Adult Stalking

The picture of juvenile stalking that emerges from Purcell et al.'s study (2009) differs to that in adults. Juvenile stalking is characterized by far higher levels of threats and violence than is found in adult stalking (see McEwan et al. 2007), with over half of the sample subjected to physical attacks and five suffering a serious sexual assault. The extent to which this reflects an age-crime curve, or other stalking-specific influences is at this stage of enquiry unclear. There was also greater involvement of female perpetrators and more involvement by the stalker of accomplices in the stalking by juveniles. Stalking by ex-partners was less frequent than in adult cohorts (Meloy and Gothard 1995; Harmon et al. 1998; Palarea et al. 1999; Mullen et al. 1999) though still made a substantial contribution. Stalking as an extension of bullying is, not surprisingly, common in juveniles, though infrequently observed in adults. What was unexpected was the frequency of stalking related to retaliation and a nonspecific pattern of disorganized harassment usually directed at multiple targets, the latter form being rarely encountered among adult stalkers.

In contrast to adults, who typically utilize a broad repertoire of (often covert) intrusive behavior, juvenile stalkers favor *direct* means of contact, mostly via unwanted approaches and phone calls. Overall, juvenile stalking manifests as a more direct, intense, and overtly threatening form of pursuit than that observed in adults. In adults, the lowest rate of violence is found among those who pursue strangers (Mohandie et al. 2006). That this sample had only a handful who pursued strangers may explain part of the relative increase in the rates of violence, but does not reduce the level of concern that such high rates of violence should evoke.

The Impact of Juvenile Stalking

The impact of the stalking on the psychosocial functioning of victims in Purcell et al.'s (2009) juvenile sample closely parallels that reported by adult victims (Pathé and Mullen 1997; Kamphuis and Emmelkamp 2001; Purcell et al. 2005). Chief among these were anxiety and pervasive fear that the perpetrator would "make good" on threats. Students subjected to stalking by peers and ex-partners attending the same school frequently indicated being unable to concentrate in class and fearing for their physical safety at school. Not unexpectedly, absenteeism and a decline in school performance were commonly reported. Severe depression or suicidal ideation was spontaneously reported in several dozen cases and one victim required hospitalization. Given that most victims were themselves juveniles at a critical phase in their psychosocial development, the long-term effects of stalking may well be even more serious than in most adult victims, although this is yet to be empirically examined. This argues not just for recognizing the seriousness of juvenile stalking but for establishing appropriate support and treatment services for these young and often vulnerable victims.

Managing Stalking

At this early stage of knowledge about juvenile stalkers, the clinical management strategies recommended for treating adult offenders should be used as a guide for responding to juvenile perpetrators (Scott et al. 2007). This includes a comprehensive psychiatric/psychological assessment that takes into account the perpetrator's emotional and cognitive development (especially as this may pertain to any legal requirements that the perpetrator be able to form intent to harm the victim), as well as peer influences and familial functioning. A general risk assessment for escalation to threats and physical violence against the victim is also recommended. Careful assessment of the risk of self-harm by the perpetrator may also be warranted, particularly given the high rates of suicidal ideation and attempts among juvenile offenders in general (e.g., Rohde et al. 1997)

Just as adult stalkers often have multiple deficits that benefit from intervention (e.g., impaired social skills, substance misuse; see Mullen et al. 2009), so do adolescent stalkers, some of whom may have significant histories of behavioral problems at home and school. It is also not uncommon to encounter significant deficits

in verbal skills in young perpetrators, which in itself may be a risk factor for stalking at this age. Marked deficits in verbal intelligence have certainly been observed in an adult sample of stalkers (MacKenzie 2006). In these cases, behavioral treatment approaches are more likely to be acceptable to the client and effective, rather than cognitive strategies. Irrespective of age, stalkers with emerging or manifest psychiatric illness (e.g., psychosis, depression) require assertive clinical treatment, and any contributing deficits in social skills and competence should be appropriately augmented.

It is important to note that the school environment is the venue for many forms of juvenile stalking. Many young victims in Purcell et al.'s study (2009) reported feeling vulnerable to ongoing intrusions and assaults both at school and in transit to and from school. Unfortunately, clinical experience suggests that many schools are ill-prepared to manage stalking behaviors, despite the almost universal requirement for formal anti-bullying policies. Schools often claim to be powerless to act if the perpetrator is not one of their own students, or limited in the sanctions that they can apply to a student-perpetrator without compromising their educational entitlements. While the latter claim is valid, this should not equate to "no action," since reasonable restrictions on a student's movements around school (to avoid contact with the victim) or suspensions are unlikely to jeopardize a student's educational opportunities. Ironically, victims who have refused to attend school for fear of encountering their stalker have been threatened with expulsion for repeated truancy in several cases. Schools may require professional advice to not only manage a perpetrator's behavior (e.g., via setting boundaries, mediation, or other legal interventions) but to effectively support young victims who are frequently exposed to stalking in the school environment.

Conclusions

Stalking among juveniles is a serious but previously neglected issue. This is striking when one considers the crucial stage at which this behavior occurs in both the victim's and the perpetrator's social and emotional development. The experience of being stalked during childhood or adolescence is likely not only to compromise the victim's emotional well-being, but potentially interfere with their educational functioning, the consequences of which may echo into future employment

or higher-education opportunities. The developing personality of the young victim may also be influenced by the experience of being stalked, such that prominent themes of fear, mistrust, and isolation are incorporated, to the potential detriment of their social and interpersonal functioning.

While the potential impacts on the victim are cause enough for greater attention to juvenile stalking, it is the opportunity for prevention – or at least early intervention – with this group of offenders that makes the issue so especially compelling. Intervening at the first signs of stalking behaviors offers the best chance of reducing stalking recidivism in the perpetrator, and arguably of stemming any progression to more entrenched or serious forms of interpersonal violence in later life (e.g., domestic abuse or sexual assault). Regrettably, early intervention in juvenile justice and adolescent forensic mental health is sorely lacking, if not absent, in most countries. Such reform is urgently needed not only to promote the functional recovery of young offenders, but to move to a more preventative approach in the management of offenders and offending. Further attention to and study of juvenile stalking offers a critical step forward in how this may be achieved.

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Status Offenses and Offenders

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Status offenses are a class of transgressions considered offenses for minors but not considered crimes for adults. In the United States, state laws define what constitutes status offenses and who can be deemed status offenders. Given the focus placed on state law, this area is riddled with considerable variation. Variation exists both in terms of the label that would be attached to those who commit status offenses as well as the nature of the status offenses themselves. Variation also takes the form of the legal responses to behaviors deemed status offenses and efforts to treat them differently from delinquent or criminal acts. Despite

that variation, this area of law reveals important themes. These themes and variations highlight the legal system's efforts to deal with issues particular to an adolescent's social status and the challenge of determining the extent to which adolescents should be treated unlike adults.

An examination of state laws regulating status offenders reveals that they tend to be difficult to find. The reason for that difficulty is that status offenders often are not even deemed status offenders but most likely a "person in need of supervision" ("PINS") or a "child in need of supervision" ("CHINS"). Despite some states' tendency to designate status offenders as PINS and CHINS, a look at state laws reveals that other terms can be used in different states as well as within them. These other terms range widely, such as child in need of protection, child in need of services, family in need of services, family with service needs, unruly child, incorrigible child, ungovernable child, minor requiring authoritative intervention, child in need of aid, child in need of care, child beyond the control of parents, youth in need of intervention, wayward child, undisciplined juvenile, dependent child, at-risk youth, and juvenile-family crisis. In addition to variation in the behaviors that may constitute status offenses, considerable variation exists in who can be labeled status offenders. The age of majority (18) tends to be the cutoff age for the commission of status offenses, although some statutes limit some status offenses according to age (such as 15 or 16). These variations in names and ages are important to highlight in that they reveal a fundamental point about status offenders. Status offenders become status offenders not only because of what they do but also because of their relationship to their families. Definitions highlight how the legal system treats status offending largely as a family issue, which has important repercussion in how the legal system treats status offenders.

Many types of behaviors can be considered status offenses. As there are many labels for status offenders, there are many types of behaviors that states do classify as status offenses. Despite wide variation, the majority of states recognize at least four major types of status offenses. The first is ungovernability (or sometimes called incorrigibility, unruliness, or misbehavior). That label can describe many behaviors, ranging from disobeying family rules to engaging in sexual activity (Kandel and Griffiths 2003). The second category

includes runaways and throwaways. Although laws do not distinguish between running away and being thrown out, both are very much related in that they result in the same behavior. Running away means leaving without permission and staying out overnight and often involves a minimum age; typically only 14- or 15-year-olds and above can be deemed runaways (Loken 1995). The third group of status offenses involves truancy. Unlike other status offenses, states sometimes consider truancy a delinquent act, not just a status offense, given the close links between truancy and delinquent and criminal behavior (Spaethe 2000). Curfew violations tend to be the last major group of status offenses recognized across states. Curfew laws are ordinances that dictate hours after which juveniles may not loiter on the streets. These are increasingly popular (and controversial) ways to control juvenile crime as they have replaced what used to be decisions made by families (Note 2005). Lastly, states also have defined other behaviors as status offenses, and these range from underage alcohol or nicotine consumption to wearing baggy pants, although these offenses most likely could have been subsumed by existing categories (for a review, see Matthews 2000).

The variation found in labels used for offenders and behaviors of what would constitute status offenses continues in how courts respond to status offenders. One of the most remarkable developments in the legal history of status offenses has been efforts to remove them from the juvenile justice system. Many advocacy groups and legal organizations had long argued for the removal of status offenders from the jurisdiction of the courts in favor of entirely service-based programs and in hopes of decriminalizing the offenses (Feld 1999). The major law that was intended to assist in this regard, the *Juvenile Justice and Delinquency Prevention Act* (JJDP), was enacted in 1974. As with other federal laws, this one provided financial incentives (grants) to states if they developed laws and programs consistent with federal mandates. Given the federal government's largess and the needs of states, states tend to comply, which they did in this case. Although the JJDP has been thought of as the statute that decriminalized status offenses and separated them from delinquent acts (and thus really created status offenses by making offenses really only applicable to juveniles), the legislation actually did not do that. Rather, the legislation mandated the deinstitutionalization of status offenders

or removal of status offenders from juvenile correctional facilities. The distinction is of significance, especially in terms of the services and rights adolescents retain, which would be part of determining the success of the legislation.

On its face, the JJDPA achieved important successes. Most notably, it reduced the number of status offenders (Feld 1997). Regrettably, it is difficult to determine the extent to which the act actually succeeded in better providing for status offenders. It is likely that the changes meant that many adolescents are never served by the courts at all (rather than that there are actually fewer status offenders) (see, e.g., Feld 1997). If the youth are served, it could be when their actions turn into criminal or delinquent behaviors. It also could be that the behaviors have now shifted to being charged as delinquent or criminal acts rather as noncriminal status offenses. This would not be surprising given how some status offenses may be similar to or related to delinquent ones (see, e.g., Kedia 2007). The controversies are likely to continue given that this area is void of definitive research that could address controversies.

Assuming that the number of status offenders has been reduced, and that the reduction reflects a real change, it may not follow that those who are identified as status offenders are treated appropriately. One of the peculiarities of status offenses is that they do not require courts to respect as many of the offenders' constitutional rights that would need to be respected had they been deemed delinquents. Minors alleged to be delinquents have been granted many of the constitutional rights afforded adults, while those alleged to be status offenders are subjected to much more discretionary decision making by the courts on the grounds that the flexibility and discretion best serve adolescents' needs. The informality highlights the premise that, rather than determining innocence or guilt, interventions for status offenses are to guide and reform troubled children and their families. Given the discretion, it is not surprising to find that the system has been criticized for its improper use of discretion (Kedia 2007), which helps to confirm the challenges that society faces in identifying and addressing the needs of troubled and troubling adolescents.

Cross-References

► [Runaway Youth](#)

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Statutory Rape

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Statutory rape is a criminal offense that typically refers to prohibited sexual relations with a minor deemed unable to consent to certain types of sexual behavior. Generally, statutory rape applies to someone who is older than the minor, and with minors who have reached puberty (often the age of 12 or 13 and up); otherwise, the law deems the offense as a variation of child molestation. Statutory rape implies coercion, which means that, unlike other forms of rape, a prosecution need not show that there was force (see Levesque 2000). Statutory rape, then, involves sexual acts that would be legal if not for the age of at least one of the parties.

In the United States, statutory rape is governed by state law, and those states typically do not use that term; they instead use terms such as sexual assault or sex offense. States vary considerably in their definitions

of statutory rape (for a review, see Levesque 2000). The statutes are considerably nuanced. For example, some jurisdictions specify a minimum difference in age (often 3 years), minimum and maximum age of the victim, and minimum age of offenders, for the actions to constitute statutory rape. Similarly, statutory rape generally is viewed as a strict liability offense, which means that a defendant is responsible if it is found that they engaged in sexual relations and their ages fit within the boundaries of the statutes. Yet, several states permit exceptions, such as whether the defendant was legitimately mistaken about the victim's age or the victim was married (see, Levesque 2000). States also vary in terms of the punishments imposed on those found guilty of statutory rape.

Several rationales support the use of statutory rape laws. The laws broadly protect adolescents in that minors tend to be unable to consent to relationships due to their age; the law assumes the acts nonconsensual on the rationale that the assumption helps to protect minors. Statutory rape laws protect minors from adults who could have power over them and makes it easier to prosecute cases without having to show that there was coercion by force. In addition, the need for statutory rape laws has been reinforced by concerns that adult men “prey” on minor women, and that tougher enforcement would reduce rates of adolescent pregnancies and births, as well as welfare expenditures (see Donovan 1997). These protections are deemed necessary given that minors, as a group, do appear to be uniquely vulnerable to coercion and exploitation as it relates to their sexual decision making.

Critics have challenged the rationales supporting statutory rape laws. Some argue that statutory rape laws ignore the reality that some adolescents are mature enough to consent to sexual activity and that, as a result, the laws limit the sexual autonomy of some adolescents who otherwise might be able to engage in sexual activity without harm. Some also argue that focusing on statutory rape laws to address issues of adolescent pregnancy, for example, ignores the many complex reasons adolescents engage in sexual activity or wish to bear children (see Oberman 2000). More aggressive laws also could discourage some minors from obtaining needed reproductive health care given that disclosing information about their partners could lead to their prosecution and incarceration (Donovan 1997). In instances

involving pregnancies, more aggressive enforcement also can run the risk of jeopardizing young women's support from their partners and reduce the chances that they will develop relationships with their children. These sentiments have been echoed by commentators who suggest that the laws reach too broadly, lead to selective prosecution, and run the risk of prosecuting cases that are counterproductive and fail to advance society's broader goal of protecting youth (James 2009).

Cross-References

- ▶ [Date Rape](#)
- ▶ [Rape](#)

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Steroid Use

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Overview

Although relatively uncommon, adolescent abuse of anabolic-androgenic steroids is a source of considerable public health concern. Between 1.5% and 4% of US teenagers have used steroids without a doctor's prescription, putting them at risk for a wide range of adverse physiological and psychological consequences. Abusers seek to build muscle tissue in order to enhance their athletic performance, to correct perceived deficits in their esthetic appearance, or in some cases to cope with physical or sexual trauma. Steroid abuse is also

associated with a complex of problem behaviors including other forms of substance abuse, physical violence, unsafe sex, suicidality, and disordered eating. Although conventional anti-drug approaches relying on scare tactics or drug testing have generally proven ineffective or even counterproductive, integrated approaches that include education, skills training, and peer influence have shown promise in preventing steroid abuse.

Anabolic-androgenic steroids (AAS) are synthetic drugs that mimic the functions of testosterone, the primary male sex hormone. These drugs are “anabolic” (promoting muscle development) and “androgenic” (causing masculinization in the body). Because most versions are designed with the intention of promoting the former effects while minimizing the latter, the name is often shorted to “anabolic steroids” or just “steroids.” Combined with a program of high-intensity physical exercise and adequate nutrition, steroids can accelerate gains in muscular strength and lean body mass (National Institute on Drug Abuse [NIDA] 2006).

Steroids can have therapeutic value. Some steroids are approved by the Food and Drug Administration for use in treating conditions resulting from abnormally low testosterone (such as delayed puberty and some types of impotence), as well as wasting conditions associated with AIDS and other diseases. Doctors sometimes use steroids to treat some types of anemia, breast cancer, osteoporosis, endometriosis, and other specific medical conditions as well (Hoffman et al. 2009). Despite their potential medical benefits, however, steroids are considered a public health concern because they are frequently abused as a means of enhancing athletic performance or physical appearance. In addition, doses taken by abusers are often considerably stronger than doses used to treat medical conditions (American Academy of Pediatrics [AAP] 1997).

Steroids can be taken orally, injected intramuscularly, or absorbed through the skin. Frequently abused steroids include commercially available preparations such as nandrolone (AKA Deca-Durabolin or Durabolin), oxandrolone (AKA Oxandrin), or stanozolol (AKA Winstrol), veterinary steroids such as boldenone (AKA Equipoise) or trenbolone (AKA Revalor), and a host of other variants not approved for use in the USA, such as ethylestrenol, methandriol, and methandrostenolone (AKA Dianabol) (Cohen

et al. 2007; U.S. Department of Justice [USDOJ] 2004). In addition, steroidal supplements such as DHEA (dehydroepiandrosterone) or Andro (androstenedione) are widely believed to increase testosterone levels in the body in a manner comparable to steroids, although less is known about their side effects. Until recently, most of these drugs were classified as dietary supplements and could be purchased legally without a prescription; with the notable exception of DHEA, steroidal supplements were designated as controlled substances in 2004 (NIDA 2006).

Steroid abusers have also developed a unique lexicon to describe their activities. *Cycling* refers to the practice of taking multiple doses over a specific period of time, discontinuing use temporarily, and then starting the pattern again. *Pyramiding* involves a progressive escalation of the number or frequency of steroids used, followed by a gradual tapering off. Also common is the practice of *stacking*, or combining different types of steroids in order to create a more powerful interaction effect (Yesalis 2000).

Physiological and Psychological Effects of Steroid Abuse

The primary effects sought after by most steroid abusers include alterations in body weight and composition. Accelerated protein synthesis leads to associated increases in muscle mass and strength and decreases in body fat that collectively result in increased strength, power, and endurance. Steroids are also commonly believed to reduce recovery time between workouts, making it possible to train harder and more frequently. However, these primary effects are commonly accompanied by a dismaying array of potential adverse side effects that range from inconvenient to debilitating or even lethal.

Physiological side effects fall into several categories:

Children and teenagers: Steroid abuse can affect height, particularly in boys, whose bones are designed to continue growing until testosterone levels reach a given level. When this level is artificially achieved with steroids, the growth plates at the ends of the bones ossify (stop developing). The resulting stunted growth is likely to be permanent (NIDA 2006).

Boys and men: Steroid abuse creates a hormone imbalance that can have several paradoxical effects. First, the androgenic functions result in excess virilization of multiple bodily systems. In the

reproductive system, effects may include priapism (sustained, painful erections), painful urination, prostate enlargement, and prostate cancer. The chemical imbalance also signals the testes gland that it no longer needs to generate testosterone. The testicles accordingly shrink, leading to lowered sperm production, impotence, and possible sterility. The steroids eventually break down into estradiol, a female sex hormone, resulting in gynecomastia (enlarged breasts) that may be permanent even in the event of discontinued abuse (Hoffman and Ratamess 2006).

Girls and women: The androgenic effects of steroids are even more marked in female abusers, since women normally have less testosterone than men. Excess virilization of the reproductive system takes the form of clitoromegaly (enlarged clitoris), breast tissue shrinkage, and reproductive abnormalities. Steroid use has been linked to amenorrhea (loss of menstrual periods), cervical cancer, endometrial cancer, and infertility; moreover, use during pregnancy can affect the developing fetus, leading to mental retardation or pseudohermaphroditism. Further masculinizing effects may include deepened voice and a fat-to-muscle ratio that is abnormally low for women (Gruber and Pope 2000). Most of these effects are likely to be permanent, although a few (e.g., amenorrhea) may be reversed if steroid use is discontinued (Kutscher et al. 2002).

All steroid abusers: Regardless of gender, steroid abusers are subject to changing patterns of hair growth, including male pattern baldness and hirsutism (increased growth of facial and body hair). Increased oiliness of the skin leads to cysts and severe acne, particularly on the back and upper arms. More serious than these largely cosmetic effects, abusers risk impaired liver function from jaundice, cancer, and potentially fatal cysts in the liver. Cancerous tumors may also occur in the kidneys. In addition to fluid retention and general weakening of the immune system, elevated blood pressure and LDL (“bad”) cholesterol and decreased HDL (“good”) cholesterol may contribute to cardiovascular dysfunction, including blood clots, strokes, atherosclerosis, and heart attacks (Hoffman et al. 2009). The most severe side effects, those with a measurable impact on mortality risk, are relatively uncommon.

For injection steroid abusers, a final category of physical risk stems from the use of nonsterile injection

techniques, contaminated needle sharing, or use of illegal steroids manufactured under unsanitary conditions. At minimum, resulting infections can cause pain and abscesses at the injection site; at worst, infections such as HIV, hepatitis B and C, and bacterial endocarditis can be life-threatening (NIDA 2006).

Psychological consequences of steroid abuse are more controversial, in part because the phenomenon of “roid rage” has been sensationalized (and to some extent mischaracterized) in popular media reports. The link between aggression and steroid use is as yet unclear because available data do not clearly establish if the relationship is causal. However, reports of increased aggression are widely documented, often manifesting in violent or criminal behavior. In addition, steroid abusers variably report extreme mood swings ranging from depression to euphoria, altered libido, irritability, anxiety, distractibility, forgetfulness, and confusion (Pope and Katz 1994; Yesalis 2000). In infrequent cases, paranoia, delusions, and other psychoses may severely impair normal functioning (Bahrke et al. 1998; Su et al. 1993). These effects are generally reversible and for the most part are not severe enough to require clinical treatment. Their incidence and strength depend on the composition and dosage of the steroid used.

There is some evidence to suggest that at least for some abusers, steroids may be addictive. Because steroid use is motivated not by an immediate psychoactive high but by a long-term, delayed goal or reward, some of the clinical criteria used to define drug dependence (e.g., steadily increasing the dosage taken over time, or giving up other life activities to pursue drug access) may not precisely apply (Kanayama et al. 2009). However, many steroid abusers continue to use steroids despite negative physical, psychological, or social consequences, and users may experience withdrawal symptoms upon discontinuation (Brower 2002). Cessation of steroid use can be associated with depression, fatigue, loss of appetite, restlessness, insomnia, reduced libido, headache, or muscle and joint pain (USDOJ 2004; Wood 2006).

Prevalence of Adolescent Steroid Abuse

Adolescent steroid abuse is relatively uncommon. According to the Centers for Disease Control and Prevention’s Youth Risk Behavior Survey (YRBS), in 2007,

3.9% of all US high school students reported that they had ever taken steroid pills or shots without a doctor's prescription (Eaton et al. 2008). Other sources suggest a somewhat lower prevalence. The most recent findings from the Monitoring the Future (MTF) study (which serves as a primary source of US government estimates of adolescent drug use) indicate a combined lifetime steroid abuse rate of 1.6% for US 8th, 10th, and 12th grade students in 2008 (Johnston et al. 2009).

Most sources agree that steroid abuse, once largely the purview of elite athletes, began to make the transition to mainstream abuse in the 1980s. Illicit use of these drugs by adolescents increased markedly during the 1990s, peaked in the early 2000s, and has since declined somewhat. For example, according to the 2007 YRBS data, overall illicit steroid use by US high school students increased from a low of 2.7% in 1991 to a peak of 6.1% in 2003 before declining to current levels. Grade-specific, annual abuse rates over time, provided by the MTF study, confirm this general pattern. For example, the prevalence of past-year steroid abuse by high school seniors more than doubled between 1992 (1.1%) and 2002 (2.5%) before dropping to 1.5% in 2008.

Current declines in steroid abuse by adolescents may be accompanied by parallel declines in abuse by college athletes. In a series of studies conducted by the National Collegiate Athletic Association, self-admitted steroid use fell from 4.9% in 1989 (Anderson et al. 1993) to 1.5% in 2001 (National Collegiate Athletic Association [NCAA] 2001) and to 1.2% in 2005 (DeHass 2006), the most recent data available. However, these studies also highlighted a potential trend toward earlier initiation among those who do use performance-enhancing drugs.

Demographics of Adolescent Steroid Abuse

Teenage boys are significantly more likely than teenage girls to abuse steroids (Eaton et al. 2008). This gap tends to increase over the course of adolescence; in the MTF study, 8th grade boys were more than twice as likely, 10th grade boys were almost three times as likely, and 12th grade boys were five times as likely as their female counterparts ever to have abused these drugs (Johnston et al. 2009). Although conventional wisdom generally views this public health problem

through a masculine lens, it is notable that the fastest-growing user population today is female.

Steroid abuse also varies by race and ethnicity, geographic region, and age. Hispanic and white adolescents report the highest incidence of lifetime steroid abuse (4.6% and 4.1%, respectively) and Black adolescents the least (2.2%). However, interracial patterns of steroid abuse differ by gender. For boys, rates are highest among whites; for girls, rates are highest among Hispanics. The reasons for these differences are as yet unclear. Regionally, the highest lifetime rates of steroid abuse are found in the Northeast, somewhat lower rates in the Midwest, and the lowest rates in the South and West. There is some evidence to suggest that the prevalence of steroid abuse declines with age; adolescents report markedly higher rates than young adults aged 19–30 (Johnston et al. 2009). In contrast, some studies of adult users have found that the average age of onset for this behavior is in the mid-20s (Cohen et al. 2007). One way to reconcile these conflicting findings would be if most adolescent users are short-term experimenters only, who discontinue their steroid use after a relatively brief period and thus do not qualify for studies of adult users.

Motivations for Adolescent Steroid Abuse

Adolescents generally abuse steroids for one or more of the following three reasons: to enhance athletic performance, to improve physical appearance, or to cope with physical or sexual trauma. In addition, steroid use often occurs within the context of a broader constellation of problem behaviors. Unlike most of forms of substance abuse, steroid abuse is more likely to be committed by “occupational abusers” seeking a practical advantage in the commission of their work or vocational activities than by recreational users seeking a psychoactive high. Bodybuilders, athletes, and fitness enthusiasts are well-known to be at risk for steroid abuse, since this practice can enhance physical performance when combined with a rigorous exercise regimen. Construction workers or manual laborers may seek to enhance their physical strength; security or prison guards, law enforcement officers, or armed services personnel may seek to facilitate physical intimidation or aggression; actors or models may seek to promote the appearance of a well-defined physique

(USDOJ 2004; Dart and Ferranto 1991; Evans-Brown and McVeigh 2008).

Like adults, many adolescents abuse steroids in order to improve their athletic performance, with participants in strength-oriented sports and especially bodybuilders at the highest risk. However, there is growing recognition in the research community that some abusers are motivated by other reasons (Wichstrom and Pedersen 2001). Pop culture and media images promote standards of beauty and fitness for both genders that can be difficult for most people to attain (Field et al. 2005). Adolescents are particularly vulnerable to the stigma associated with failure to meet these esthetic standards. Some suffer additionally from a behavioral syndrome known as body dysmorphia or muscle dysmorphia, characterized by a severely distorted body image. Galvanized by an exaggerated perception of themselves as small, weak, or flabby, these adolescents may respond by taking extreme measures to increase their muscle size (particularly boys) and/or reduce body fat (particularly girls), including disordered eating (Irving et al. 2002) and body-shaping drug use (Goldfield 2009; Rohman 2009).

Survivors of abuse or assault may also react to the traumatic experience by striving to enhance their own physical strength and size. Male weightlifters who abuse steroids are significantly more likely than their non-abusing peers to have been physically or sexually abused as children (Porcerelli and Sandler 1998; Skarberg and Engstrom 2007). This motivation may have particular relevance for women who have been sexually assaulted. One study of female weightlifters found that 13% had been raped as teenagers or adults; more than half of the rape survivors subsequently began abusing steroids or other anabolic drugs in order to gain muscle mass for self-defense (Gruber and Pope 1999). Bulking up provides a deterrent to future attacks by making the more physically competent and intimidating prospective victim a less inviting target.

Adolescent steroid abuse sometimes occurs as part of a broader pattern of problem behaviors. Among both girls (Elliot et al. 2007) and boys (Kindlundh et al. 2001), steroid users report higher rates of smoking (Yesalis et al. 1993), problem drinking (Miller et al. 2005), illicit substance use (DuRant et al. 1993; Meilman et al. 1995), unsafe sex (Middleman and DuRant 1996), interpersonal violence (Beaver et al.

2008), suicidal ideation and/or behavior (Miller et al. 2002), and vehicular risk-taking (McCabe et al. 2007), as well as disordered eating and other forms of pathogenic weight control behavior (Irving et al. 2002). The co-occurrence of steroid abuse with such a variety of health-compromising activities may seem counterintuitive, since conventionally steroids are taken in order to improve physical performance and/or appearance. However, clusters of problem behaviors may play a common role in the social ecology of adolescent life; they tend to be learned together and are normatively expected to be performed together, with the primary purpose of asserting adult status and securing the approval of one's peers (Jessor and Jessor 1977; Jessor 1992). Within this developmental context, steroids may effectively be interchangeable with other illicit drugs. In addition, given elevated rates of past steroid abuse among at least one sample of adult male drug addicts, some researchers have questioned whether steroid use may increase susceptibility to dependence on other drugs (Kanayama et al. 2003).

Legal and Historical Context of Steroid Abuse

First synthesized in the 1930s, reports of nonmedical use of anabolic steroids in the United States go back as far as the 1950s when professional weight lifters and other strength-oriented elite athletes began using them to increase muscle mass and enhance performance (AAP 1997). By the late 1960s, steroid use by Olympic athletes had spread from strength and power sports to events emphasizing speed, agility, and endurance, becoming so prevalent that they were ironically nicknamed the "breakfast of champions" by the editor of *Track & Field News* (Hendershott 1969). Increasingly widespread use in Olympic, professional, and collegiate sports throughout the 1960s and 1970s (Todd 1987) led to increasing concern about the health effects of these drugs as well as the ethical implications of their use in competitions. Still, disagreements over the effect of steroids on performance as well as technical difficulties with effective detection delayed serious enforcement of drug testing or sanctions until the early 1980s (Hoffman et al. 2009). Not until the 1988 Seoul Olympics, when champion sprinter Ben Johnson was stripped of his gold medal after testing positive for Stanozolol, did the issue achieve international recognition as a serious social problem.

The US government soon banned the distribution or possession of anabolic-androgenic steroids for nonmedical reasons (Anabolic Steroid Control Act, 1990). By this time, however, steroid abuse had begun to spread beyond the elite sports world, and nonathletes in search of body enhancement joined the black market for illegal steroids in large numbers. Many users commonly obtained drugs smuggled from other countries, diverted from pharmacies, or produced in black market laboratories. Others sought legal alternatives to the drugs now on the banned list, including human growth hormone, steroid precursors such as Andro, or new “designer” steroids such as THG (tetrahydrogestinone) (Rhea et al. 2008).

Steroid abuse by nonathletes, adolescents, and women continued to rise throughout the 1980s and 1990s, but this form of drug abuse remained inextricably linked to the world of sports. Thus, the pattern of escalation continued unabated until the issue was reintroduced to the public spotlight with the 2003 BALCO (Bay Area Laboratory Cooperative) scandal, which exposed the continuing problem of sports doping via designer steroids. A subsequent, second round of hearings and new legislation (Anabolic Steroid Control Act 2004) added 26 new steroids and steroid precursors to the existing list of controlled substances (Hoffman et al. 2009). Nevertheless, new doping scandals arise on a near-annual basis: a title stripped from Tour de France winner Floyd Landis in 2006 (Macur 2007), gold-medalist runner Marion Jones’ 2007 admission of steroid abuse during the Sydney Olympic games (Schmidt 2007), and the release of the Mitchell Report documenting endemic abuse in professional US baseball (Mitchell 2007). The public commentary surrounding these events has strongly emphasized the ethical implications of using steroids to gain an unfair advantage over one’s opponents, while simultaneously casting steroid abuse in the context of illicit drug use rather than physical enhancement via dietary supplementation. Perhaps as a result of this narrative framing, rates of adolescent steroid abuse have fallen somewhat in recent years. Whether this trend will continue remains to be seen.

Steroid abuse has been widely condemned by both health experts and professional sports organizations, for reasons of both safety and fairness. The American Academy of Pediatrics’ Committee on Sports Medicine and Fitness (AAP 2005), the American College of

Sports Medicine (1987), the National Strength and Conditioning Association (Hoffman et al. 2009), and the National Institute on Drug Abuse (NIDA 2006) have all issued position stands indicating that this practice is dangerous because of the risk of adverse immediate or long-term physiological and psychological effects. Nonmedical use of steroids has also been banned by the International Olympic Committee, National Collegiate Athletics Association, National Football League, National Basketball Association, Major League Baseball, National Hockey League, and most other major amateur or professional sports organizations (Hoffman et al. 2009).

Steroids are classified as a Schedule III drug, like narcotic painkillers and barbiturates (Anabolic Steroid Control Act 1990; 2004). Possession without a valid prescription is punishable by up to a year in prison and a fine of \$1,000. Trafficking (sale or possession with intent to sell) is punishable by up to 5 years in prison and a \$250,000 fine. In both instances, penalties escalate for repeat offenses. Some states have supplemented the federal status with additional fines and penalties of their own (Office of National Drug Control Policy 2009). Steroid-related criminal convictions may also result in educational or employment consequences; for example, students may lose access to financial aid or health professionals may lose their medical licenses (Hoffman et al. 2009).

Prevention/Intervention Strategies Against Adolescent Steroid Abuse

Educational approaches: Early efforts to reduce steroid abuse through education were largely a failure. Until the early 1980s, prevailing medical opinion denied the muscle-building and performance-enhancing effects of these drugs (Hoffman and Ratames 2006). The serious loss of credibility associated with this denial was further exacerbated by prevention efforts that emphasized didactic discussions (that failed to address the practical experiences of current users) and scare tactics (exaggerating the frequency of the most serious negative side effects) (Barnes 2006). Already skeptical athletes and body builders dismissed these warnings as propaganda and relied on word-of-mouth and later Internet sources of black market drugs and information, creating a subcultural knowledge base comprised of individual observations and rumors (Pope et al. 2004; Todd 1987). Contemporary adolescents seeking access to

steroids may turn to this subculture rather than unsympathetic health professionals. Even when the information presented is both accurate and balanced, educational programs alone are not sufficient to change immediate or long-term drug-related behavior (NIDA 2006). Biased or selective educational presentations are counterproductive in that they may actually increase the likelihood of abuse (Goldberg et al. 1991a; b).

Punitive approaches: Most current strategies for preventing steroid abuse in professional or collegiate sports are punitive. Oversight organizations (IOC, NCAA, NFL, etc.) use urinalysis to detect steroid abuse, including random testing out of season (USDOJ 2004). Penalties for a positive test may include fines, stripping of titles or awards, or temporary or permanent loss of playing privileges (AAP 2005). However, even at the elite level drug testing remains controversial. Urine-based drug tests can be made to yield false positives with the aid of masking agents, and blood-based drug tests are generally rejected as unacceptably invasive even at the Olympic level. Although the Supreme Court declared random drug testing of student-athletes to be Constitutional in 1995 (*Vernonia School District 47J v. Acton* 1995), fewer than 4% of school districts do so (NIDA 2006); the practice has met with considerable resistance on grounds of safety, feasibility, and civil liberties. The effectiveness of steroid testing for adolescents has not yet been thoroughly evaluated and preliminary results have been inconsistent (Barnes 2006; Goldberg et al. 2003). One concern is that these programs may fail to deter steroid use, and conversely may promote or reinforce the perceived effectiveness of steroids as body-shaping or performance-enhancing aids.

Integrated approaches: The most promising interventions to date have been multi-component programs that combine drug education, drug refusal skills enhancement, and peer pressure. The Athletes Training and Learning to Avoid Steroids (ATLAS) program uses a team-centered, partly peer-led curriculum to provide male adolescent athletes with training in exercise, nutrition, and communications skills as well as education about the effects of steroid abuse. Evaluations have shown that participation in the ATLAS program is associated with reduced intentions to use steroids, lower odds of new steroid use, and reduced use of other illicit drugs (Goldberg et al. 2000). ATLAS' sister program ATHENA (Athletes Targeting Healthy

Exercise and Nutrition Alternatives) employs a similar approach to the prevention of disordered eating and abuse of steroids and other body-shaping drugs in adolescent female athletes (Elliot et al. 2006). The ATLAS curriculum in particular has been endorsed by the National Institute on Drug Abuse (NIDA 2006), the U.S. Department of Education (U.S. Department of Education 2001), and the National Strength and Conditioning Association (Barnes 2006). However, even these exemplary intervention strategies are limited in their efficacy, since they apply only to participants in organized sports.

Other approaches: Although few other coherent prevention or intervention strategies have yet been tested, review of the existing literature suggests several avenues with potential promise. Adolescent access to illicit steroids might be reduced through more effective policing of the web-based black market or more stringent protocols to prevent inappropriate prescription by clinicians (Rhea et al. 2008). Recognition of the close association between steroid abuse and other problem behaviors militates in favor of supplemental interventions tailored to at-risk adolescent nonathletes (Miller et al. 2005). Alternatively, given the powerful cultural incentives (e.g., esthetic or competitive norms) to continue abusing steroids despite potential adverse consequences, some researchers have called for a harm-reduction approach. Under this philosophy health practitioners would provide nonjudgmental guidance in minimizing the dangers of steroid abuse, such as sterile needles, small doses, short cycles, and self-monitoring for serious side effects (Evans-Brown and McVeigh 2008).

Cross-References

► [Substance Use Risk and Protective Factors](#)

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Stigmatization

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Stigmatization involves the process of branding, labeling, or otherwise singling out individuals to signify their difference. Stigmatization manifests itself through discriminatory attitudes and stereotypes attached to labels that foster devaluing, discrediting, marginalizing, disempowering or excluding, and rejecting individuals (Goffman 1963). The process is of great significance to the study of adolescence in that it relates directly to how adolescents can feel about themselves, how others treat them, and how they can seek and receive assistance to counter the negative effects of stigma. For example, the fear of being stigmatized remains the most cited reason individuals, especially adolescents, to avoid psychotherapy (Vogel et al. 2009).

The stigma evoked by mental illness results in significant consequences for the self-concept, quality of life, and economic opportunities of youth suffering from mental disorders (Pescosolido et al. 2007). Although the stigma of mental illness and its negative effects has been shown to be pervasive in adolescents and to interfere with treatment and overall life quality, strategies for reducing stigma have been shown to promote help seeking for those with the illness (see Romer and Bock 2008). Despite these important developments and the understanding that stigma is the major barrier to the use of mental health and other services among youth, there continues to be limited research on this topic (Hinshaw 2005; Chandra and Minkovitz 2007).

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Storm and Stress

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Overview

Adolescence has often been depicted as a period of “storm and stress,” a time in development in which

trouble – with behavior, emotions, and relationships, especially with parents – is at a peak. Reasons for “storm and stress” have ranged from evolutionary considerations to hormones to accumulated life stresses. This essay reviews this conceptualization of “storm and stress,” evaluates current data relevant to “storm and stress” claims, and presents data suggesting that “storm and stress” expectations might contribute to actual or perceived “storm and stress.”

Storm and Stress Defined

Every article or book on “storm and stress” begins with G. Stanley Hall (1904), the founder of developmental psychology, who gets credit for first describing adolescence as a time of “storm and stress.” As the first person in the modern era to write extensively and empirically about adolescent development, his views were influential. To say adolescence was a time of storm and stress was to say that it was a turbulent time, a time characterized by intense fluctuations in thinking, emotion, and behavior. Hall thought it was normal for youth to exhibit extremes in both positive and negative behavior, the latter including behavior that could be considered quite problematic. Hall’s descriptions of adolescence fill two long volumes, so that no brief set of quotes can do his views justice, but some example descriptions that define the original notion of storm and stress include:

- ▶ ...every step of the upward way is strewn with wreckage of body, mind, and morals (Vol. I, p. xiv)
- ▶ Psychoses and neuroses abound in early adolescent years...This causes great emotional strain, which some have described as a kind of repressed insanity that is nevertheless normal at this period. (Vol. I, p. 266)
- ▶ ...normal children often pass through stages of passionate cruelty, laziness, lying and thievery... their vanity, slang, obscenity, contagious imitateness, their absence of moral sense, disregard of property, and violence to each other, constitute them criminals in all essential respects, lacking only the strength and insight to make their crime dangerous to the communities in which they live. (Vol. I, pp. 334–335)
- ▶ All boys develop a greatly increased propensity to fight at puberty, and although most of them while pretending to give way completely seem very terrible in their rage... (Vol. I, p. 356)

- ▶ The joys of life are never felt with so keen a relish . . . [yet] depressive are almost as characteristic as expansive states of consciousness. The sad Thanatopsis mood of gloom paints the world in black (Vol. 11, p. 79)
- ▶ Self-feeling is increased, and we have all degrees of egoism and all forms of self-affirmation. . . The youth who has been amenable to advice and even suggestion, now becomes obstreperous, recalcitrant, filled with a spirit of opposition (Vol. II, p. 80)

Over the past century, ideas about adolescence as a time of storm and stress have been modified, but continue to reflect the idea that this developmental stage is marked by difficulty, particularly in the domains of risk-taking and rebelliousness, emotional disturbances, and parent–child conflict (Arnett 1999).

Hypothesized Reasons for Storm and Stress

The emergence of turbulence during adolescence has had a variety of proposed explanations. Influenced by Lamarckian theory, Hall believed the roots were in a recapitulation of a difficult stage in evolutionary development (Hall 1904; also see Arnett 1999). Hormonal changes of puberty have also been blamed, particularly by psychoanalytic scholars (see Buchanan et al. 1992, for a discussion). More recently, contextual and systems approaches emphasize on accumulation of life stresses, such as school changes, physical changes, cognitive changes, and changes in expectations from and relationships with adults and peers that make adolescence a challenging time (e.g., Simmons et al. 1987).

Storm and Stress Stereotypes Among Parents and Other Adults

Although current scholarly conceptualizations of adolescence rarely embrace extreme “storm and stress” viewpoints, ideas about adolescence as a difficult and even turbulent time characterized by rebelliousness, emotional problems, and problematic parent–child relationships are not hard to find in “lay” conceptions of adolescence. A recent analysis of images of teenagers in the media shows that media portrayals are often negative (Amundson et al. 2005). In particular, teens are frequently portrayed as separate from adults, or causing adults problems (Heintz-Knowles 2000). Interestingly, adults recognize that negative media views do not fit their personal experience with adolescents well,

but rather than assume the media images are unrepresentative of adolescents, they assume their personal experience is unrepresentative (Aubrun and Grady 2000). Books and other resources intended to help parents often reflect the stereotypes, with titles such as *Yes, your teen is crazy: Loving your kid without losing your mind* (Bradley 2002) and *My son is an alien: A cultural portrait of today's youth* (Danesi 2003).

Although there are limited scientific data on popular views of adolescence, the data that exist suggest that many adults view youth negatively, as selfish, narcissistic, rude, and irresponsible (Nichols and Good 2004). Supporting the existence of negative stereotypes, mothers of young adolescents and college students rate adolescents as a group more negatively than they do younger children on a number of characteristics. For example, adolescents are believed to be significantly more risk-taking/rebellious, internalizing, and conforming; and less active, friendly, or upstanding/prosocial (Buchanan and Holmbeck 1998). There are, of course, individual differences in the extent to which “storm and stress” ideas are endorsed as typical of adolescents, and factors such as one’s personal experience in adolescence (Buchanan and Holmbeck 1998), gender, and current experience with adolescents (Buchanan et al. 1990) matter. And as Arnett (1999) notes, such data show that people “. . . see storm and stress as characteristic of adolescents taken as a group, not that it is characteristic of all adolescents without exception” (p. 324). However, there is no doubt that many adults and most likely many youth – given messages they receive from adults and from the media – hold beliefs similar to those of G. S. Hall: that risk-taking, emotional problems, and parent–child distancing and conflict, even at high levels, are common and normal developments during adolescence. And it is possible that some adults see such developments as inevitable.

Evidence for Storm and Stress

Next the debate over whether adolescence is accurately represented as a time of “storm and stress” is addressed using evidence regarding the three domains of “storm and stress” identified by Arnett (1999). Detailed treatments of adolescent risk-taking, emotional problems, and parent–child relationships are included at other points in this volume. Furthermore, Arnett (1999) presented a different and somewhat more detailed

examination of evidence of storm and stress in these three domains. Thus, the following review of relevant data is selective; the focus is on representative data in each of the three domains that either were not published at the time of the earlier review or were not mentioned in that review. References are to illustrative data that speak directly to the following specific questions that are critical to the debate concerning storm and stress. The first two specific questions that drive this review of behaviors in each of the three domains are: (a) how do adolescents compare to both younger and older individuals (i.e., are negative characteristics at a developmental peak, relatively speaking, during adolescence?); and (b) what are the absolute levels of characteristics among adolescents (i.e., does the prevalence of characteristics suggest that negative characteristics are “normal” or “inevitable” at adolescence?)? After addressing these questions separately for each domain, two additional questions relevant to the debate are taken up: (c) how do “storm and stress” behaviors during adolescence relate to ultimate well-being (i.e., are negative characteristics “healthy” in the sense that they predict more positive development in the long run?); and (d) are there any positive developments characteristic of adolescent development (i.e., are typical developments all negative, or have we focused on the negative to the exclusion of the positive?).

In this essay, adolescence is defined as between the ages of, roughly, 11–13 (or early middle school children) on the lower end and 18 (or high school seniors) on the upper end. College-aged students are not considered “adolescents” given that they are more likely to be living away from home and parents than are younger youth, and given that for various reasons they are more legitimately characterized as “emerging adults” (Arnett 2000). Furthermore, because some “storm and stress” behaviors (e.g., sexual activity) are arguably more concerning, less accepted, and more amenable to adult influence prior to high school graduation, it is the years before high school graduation that is the focus.

Although the overall picture offered by the more recent data on risk-taking, emotional change, and parent–child relationships is similar to the picture offered by earlier data cited by Arnett (1999), this review offers a somewhat different interpretation of this picture vis a vis the “storm and stress” debate. For the most part, Arnett concluded that research did support a “storm and stress” view, mainly because of relative increases in

problems during adolescence compared to childhood. In contrast, it can be argued that the data do not support a “storm and stress” view, because many adolescents do not exhibit significant problems in the three “storm and stress” domains, because significant problems do not signify normal or healthy development, and because adolescent development entails much that is positive.

Risk-Taking and Rebelliousness

There are many behaviors that might reflect risk-taking in an adolescent, and conclusions about changes in and prevalence of risk-taking vary depending on the specific behavior. Although risk-taking and minor “anti-social” behavior peaks during adolescence (Moffitt 1993), most adolescents do not engage in serious delinquent behavior (Buchanan et al. 1992). Rates of aggression are no higher in adolescence than they are in childhood, although adolescent aggression can be more dangerous (Buchanan et al. 1992). Few problem behaviors are normative in the sense of being present in the majority (i.e., >50%) of adolescents. The exceptions are drinking alcohol and having sex, which despite being considered “risk-taking” or “problem” behaviors for adolescents are acceptable – even glamorized – for adults.

Both alcohol use and sexual activity are higher in adolescence than childhood, although both continue to increase into adulthood (Arnett 2000). Some experience with both of these risky behaviors is indeed normative – though not inevitable – by the end of high school. Approximately three quarters of teens have consumed alcohol at least once by the end of high school (Johnston et al. 2009); and approximately 65% of high school seniors have had sexual intercourse (Centers for Disease Control and Prevention 2008). Regular alcohol use, however, is not normative. Less than half (43%) of 12th graders report that they have used alcohol in the past 30 days, and about one-quarter have engaged in binge-drinking (five or more drinks in a row) within the previous 2 weeks. Although the fact that one-quarter of teenagers have engaged in binge-drinking in the past 2 weeks is and ought to be of concern to adults, it certainly does not imply that risky or inappropriate alcohol use is normative or inevitable during adolescence. Furthermore, rates of both alcohol use and sexual activity have declined over the couple of decades, and there are substantial subgroup

variations in these and other risk behaviors (Centers for Disease Control and Prevention 2008; Johnston et al. 2009), all of which suggests that these forms of risk-taking are not fixed or inevitable. The fact that the most prevalent “storm and stress” behaviors exist with respect to behaviors that are highly encouraged and promoted for and by adults in American society further suggests that these behaviors are not likely to be a results of inevitable biological or psychological turmoil, moral wreckage, or an inclination to be “recalcitrant,” “obstreperous,” or “oppose adults,” but rather in a desire to behave like adults and to engage in behaviors that society clearly values.

Emotional Change

Rates of depression rise during adolescence, compared to childhood. About 30% of adolescents report feeling sad or hopeless almost every day for at least 2 weeks sometime in the previous 12 months, and these rates rise to over one third for 12th grade girls (Center for Disease Control and Prevention 2008). Rates of considering, attempting, and completing suicide also rise compared to childhood, but they continue to rise into adulthood (National Adolescent Health Information Center 2006). These changes present serious problems for those who experience them, but they do not indicate that emotional problems are unique to adolescence, normative, or inevitable. Rates of depression in adulthood are also significantly higher than those in childhood, and in general it seems that during adolescence rates of emotional problems become similar to those in adulthood. For example, in 2007, 8.2% of adolescents and 7.5% of adults reported having a major depressive episode in the past year (Substance Abuse and Mental Health Services Administration 2009 a, b). The majority of adolescents, like the majority of adults, experience emotionally difficult days and periods, but do not exhibit persistent or debilitating emotional problems.

Beyond depression, everyday emotions do differ somewhat at adolescence compared to before and after adolescence. Compared to younger children, adolescents experience fewer positive emotions and more negative emotions (Larson et al. 2002). Compared to adults, adolescent emotions are less muted: their emotions are more variable and include more extremes in both the positive and the negative direction. Yet, in their study documenting change in daily moods over

time among 5th–12th graders, Larson et al. (2002) found that, despite an overall change toward more negative emotions as children move from childhood into adolescence, the overall emotional profile for most adolescents was positive. Average affect remained positive from 5th to 12th grade, with the percent of positive affect reported in random experience sampling falling from 74% to 71%, and the average percent of negative affect rising from 13% to 20%. Thus, absolute levels of affect are overwhelmingly positive across adolescence. Individual differences in change were also apparent, with two-thirds of the sample reporting less positive affect at Time 2 than Time 1, but one third actually showing more positive affect over these years.

Parent–Child Warmth and Conflict

The time that children spend with their parents declines across the teenage years (i.e., from 5th to 12th grade), more so because of the increasing opportunities outside of the home and the ability to take advantage of them (e.g., having a driver’s license) than because adolescents are fleeing a negative environment in the home (Larson et al. 1996). Time in some activities, such as “talking” actually stays stable over these years. Negative affect increases in the home, just as it does in general, but overall there is much evidence that relationships between parents and youth stay mostly good over the teenage years. The majority of teenagers report getting along with their parents well or very well (Horatio Alger Association 2003), and 50% of youth say that if they had more time they would spend it with family (the most frequent of all choices; Horatio Alger Association 2003). Although reported parental warmth declines and parent–child conflict increases as children move from childhood into adolescence, overall levels of warmth remain high and overall levels of conflict remain low in an absolute sense (e.g., Barber 1994; Shanahan et al. 2007a, b), and such changes vary by factors such as ethnicity and birth order. Thus, once again, although relative changes are in the direction of more trouble, significant problems are not normative nor are they inevitable.

Relations Between “Storm and Stress” and Healthy Development

Storm and stress behaviors are not typically indicators of healthy development. High levels of risk-taking, emotional problems, and difficult parent–child

relationships tend to be related to higher levels of psychiatric disorder (e.g., Rutter et al. 1976) and difficulty as a young adult. For example, alcohol use raises the risk of academic and health problems, and early drinking predicts a variety of problems in young adulthood, ranging from employment problems to criminal involvement (Ellickson et al. 2003). Sub-clinical symptoms of depression adolescence predict high risk of major depression in adulthood (Pine et al. 1999). More positive relationships with parents during adolescence generally predict greater well-being and lower levels of both internalizing and externalizing (i.e., risk-taking) problems during adolescence and young adulthood (e.g., Allen et al. 2007; Coley et al. 2009; Gutman and Sameroff 2004). Although some adolescents traverse adolescence safely and soundly despite experiencing “storm and stress,” there is no evidence that could be found to suggest “storm and stress” is necessary for a healthy future or that lack of “storm and stress” forestalls healthy development.

Positive Developments During Adolescence

Positive developments during adolescence have not often been the focus of research, although in more recent years there has been an increasing examination of such possibilities (Lerner 2007; Lerner et al. 2005). Adolescents in fact display many positive characteristics. For example, 61% of adolescents do some sort of community service one or more times per month (Horatio Alger Association 2003), a rate that far exceeds that of monthly drinking. The most common reason given for volunteering is that “it makes me feel like I am helping others”; only 6% report doing it because it is a school requirement. Over three-quarters of adolescents say they are motivated and inspired to work hard in high school and 72% say they would work harder if expectations were higher (Horatio Alger Association 2005). Resistance to peer influence is steady between age 10–14 years, and then increases over the middle to late adolescent years; this trajectory holds for male and female adolescents and for adolescents from diverse backgrounds (Steinberg and Monahan 2007). Although the historical and popular focus on adolescence as a time of trouble might have limited vocabulary and efforts to describe positive developments (Lerner et al. 2005), emerging theory and research suggests that there is much to be discovered.

Possible Impact of Expecting Storm and Stress

Given the abundance of messages endorsing “storm and stress” notions in American society, and the lack of more nuanced information about adolescent behavior and well-being such as that presented above, it is possible that some individuals – parents and youth alike – overestimate the extent to which storm and stress is normal or inevitable. For example, as stated earlier, individuals tend to believe that negative media images of adolescents are more representative of real adolescent behavior than are their own, more positive, experiences (Aubrun and Grady 2000). Such images also might lead parents to have more negative expectations for their own adolescents than they should based on the child’s history of behavior, and given adolescents’ capacity for positive change (Lerner et al. 2005). Buchanan (2003) found, for example, that negative generalized beliefs about adolescents predicted negative expectations for one’s own young adolescent child among mothers, even controlling for the child’s temperament and current functioning.

When parents expect their adolescent child to exhibit higher “storm and stress” behaviors – in other words, when they have expectations in line with negative generalized beliefs about adolescents – these expectations might contribute to a self-fulfilling prophecy. The same might be said for youths’ own expectations for behavior at adolescence. Thus, at least some of the actual or perceived “storm and stress” behaviors that youth exhibit might be the result of such expectations. Several emerging lines of recent longitudinal research point to this possibility.

Buchanan and Hughes (2009) report that both maternal and young adolescents’ expectations for higher risk-taking and rebelliousness predicted more adolescent-reported externalizing (i.e., risk-taking, rebellious, deviant) behaviors 1 year later, even after accounting for several other good predictors of externalizing behaviors. The results for adolescents’ expectations suggest, at minimum, that perceptual bias contributes to reports of risky behaviors among young adolescents; in other words, adolescents who expect to engage in more risk-taking later perceive themselves consistently with those expectations. However, adolescents’ reports of externalizing are believed to be valid indicators of actual problem behaviors (e.g.,

Huizinga and Elliott 1986), so the findings might also indicate a self-fulfilling prophecy. The results for mothers' expectations are also consistent with a self-fulfilling prophecy, in that mothers' expectations predict adolescents' (i.e., a different, and arguably valid, reporter) reports of risk-taking. Other studies that focus specifically on alcohol use provide evidence for a self-fulfilling prophecy: mothers' expectations for underage drinking predict their adolescents' future underage drinking even after accounting for several established predictors of underage drinking (Madon et al. 2003) and these effects appear to accumulate over adolescence (Madon et al. 2006).

Young adolescents' expectations concerning the extent to which they will feel "alienated" – angry, depressed, and distanced from parents – during adolescence also predict more distanced relationships with parents (i.e., less closeness, more conflict) 1 year later, as reported by the adolescent. Higher expectations for alienation also predict more self-reported susceptibility to peer pressure (Buchanan and Hughes 2009). As with risk-taking, several other good predictors of these outcomes (early parent–child relationships and susceptibility to peer pressure, parenting, adolescents' behavior and temperament) were controlled, so expectations for alienation predicted these outcomes above and beyond what one might expect based on existing relationships, parenting, or youth characteristics. The findings concerning alienation might reflect only a perceptual bias (and not a self-fulfilling prophecy) in that both expectations and outcomes were reported by the adolescent. They do not, however, preclude the possibility of a self-fulfilling prophecy. Furthermore, perceptual biases of this type might be important, in that adolescents' perceptions of their relationships with parents predict other aspects of behavioral and emotional well-being (e.g., Steinberg and Silk 2002).

In one other line of research that addresses the potential self-fulfilling impact of beliefs and expectations regarding "storm and stress," Jacobs et al. (2005) found that parents' generalized stereotypes about adolescents' "social concern or peer focus" when children were in middle school predicted adolescents' self-reported orientation toward peers and involvement with deviant friends in high school. In sum, there is a small but significant body of evidence that parents' and youths' expectations for adolescence that are consistent with negative "storm and stress" ideas about

adolescence might contribute to both perceptions of and actual adolescent behavior.

How might self-fulfilling prophecies with respect to "storm and stress" come about? Research indicates that self-fulfilling prophecies in the school classroom occur as a result of altered teacher behavior toward target children for whom they have differing expectations (e.g., Brophy and Good 1970). Similarly, parents' and youth's expectations might influence how they act toward one another and how they interpret one another's behavior or emotions as children move into and through the adolescent period (e.g., Harris 1993). In one study designed to explore the associations between maternal expectations for their adolescents' risk-taking and maternal behaviors that might promote risk-taking (Ellingsen and Buchanan 2009, under review), it was found that higher expectations for risk-taking were correlated with lower maternal efficacy, more permissive parenting (e.g., less monitoring, fewer consequences) with respect to alcohol use and sexual activity, and verbal messages endorsing the normality and inevitability of risk-taking. As noted above, if youth expect that normal adolescents become more distanced from and more negative toward their parents as adolescents, they might be more likely to notice, perceive, and remember instances of such distancing and anger (e.g., Trope and Thompson 1997) that then become more prominent in their phenomenological experience. Such negative perceptions might increase the risk of mood and risk-taking problems that are more likely in youth who feel distanced from or angry toward adults.

Conclusions, Gaps in Knowledge, and Future Research

Research on adolescent behaviors that might be considered evidence of storm and stress is widespread. One can focus on negative developments, which of course occur; Steinberg (2001) cautions that to characterize storm and stress view of adolescence as "entirely wrong" is misleading. Certainly, the reality that there are higher levels, on average, of risk-taking, emotional problems, and parent–child conflict during adolescence as compared with childhood causes stress for some parents and some adolescents. However, although these negative behaviors increase in frequency during adolescence as compared to childhood, in some cases these behaviors (e.g., sexual activity, tendency

toward depression) stabilize or continue to increase into adulthood, indicating that the teenage years are a time in which individuals move toward more adult-like behavior. Furthermore, the majority of adolescents do not participate in excessive risk-taking, experience debilitating or disruptive emotional problems, or have distanced, difficult relationships with their parents. In fact, the majority of adolescents experience many positive moods, positive relationships – even with their parents – and are engaged in positive activities and contributions to their communities. Furthermore, extreme risk-taking, mood disorders, and problematic parent–child relationships of the type described by G. S. Hall predict poor outcomes rather than a healthy trajectory of development. Adolescent behaviors have been studied in a wide variety of populations and contexts, and “storm and stress” behaviors indeed vary over individuals, by groups (e.g., ethnic, gender, socioeconomic status), and across history. These individual and group variations are further evidence that expectations, values, and environmental contexts matter with respect to “storm and stress,” and that such behaviors are not an inevitable result of biological or psychological maturation.

Understanding of the impact of “storm and stress” expectations on actual “storm and stress” is, relatively speaking, in its infancy. The research that does exist suggests that expecting storm and stress works to increase storm and stress; it also suggests that some of the “storm and stress” behaviors witnessed in current data on adolescents might result from such expectations. Arnett (1999) expressed concern that if “storm and stress” is *not* expected, normal adolescent behavior would become pathologized. This would be a valid concern if “storm and stress” expectations were replaced with expectations that adolescents will do no wrong or have no problems. An alternative is that expectations for adolescents should be much like those we have for other developmental periods: expectations that people make mistakes and sometimes exhibit bad or unhealthy behavior; expectations that people sometimes experience difficult times and negative moods; and expectations that people sometimes feel distanced from and fight with those to whom they are closest. With such expectations, when difficult situations arise, adults would not necessarily rush to pathologize, but they might be more sympathetic (e.g., responding with feelings of sympathy for stress

that precipitates a bad mood; responding with attempts to work out a parent–child misunderstanding) if “storm and stress” notions are not endorsed. Although it is a question for research, when adults hold “storm and stress” expectations, it might be more likely that their responses to difficulty could be dismissive or overly negative, because the source of the problem is seen to be mainly within the teenager and perhaps unavoidable.

Clearly, more research is needed to see whether and how any impact of “storm and stress” expectations varies across adolescence, for different behaviors or indices of well-being, by temperament of the youth or parents, by gender of youth or parent, or other contextual factors (ethnicity, socioeconomic status). It is of interest to know under what circumstances expecting storm and stress leads to negative results such as self-fulfilling prophecies or failing to intervene for youth who have treatable problems, and under what circumstances such expectations result in realistic acceptance of normal difficulties (see Arnett 1999).

Because the link between expectations and behavior is likely to be reciprocal, and because it can reflect confounds of personal and contextual characteristics or reporting biases, studies addressing this issue must ultimately be quite comprehensive: measuring multiple variables from multiple reporters longitudinally. And because the role of expectations in and of themselves is likely to be relatively small – there are many important influences on adolescent behavior and well-being – it will typically be necessary to have large samples in order to achieve the power necessary to detect such effects. Researchers who are designing large studies of adolescent development would be advised to consider including some measures of expectations so that further illumination of the extent to which expectations create self-fulfilling prophecies can be studied more comprehensively. If indeed expectations are important, it might be possible to improve adolescent outcomes in part by educating parents and youth with more positive information about adolescence.

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Stress

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People's daily lives require them to react to challenges, or stressors, that take place around them and that impact their development. At times, when these stressors prove overwhelming to an individual's capacity to cope, that person undergoes a psychologically

and physically stressful experience. If a person encounters this type of situation repeatedly, they can become subject to longer-term effects that prove detrimental to their emotional and physical health. For youth, repeated exposure to stress can also inhibit healthy development, and those developmental effects are likely to be different depending on earlier and current stresses, all of which likely will affect those occurring during adulthood and the effects of those later stresses as well (see Lupien et al. 2009).

Stressful events highlight the significance of biological systems in shaping development. Responding to physiological or psychological stressors involves releasing a number of hormonal signals that allow us to cope with stressful demands. The hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic adrenomedullary (SAM) system exhibit normal patterns of stimulation in daily activities. These systems intercede in cases of stress responses as they control stress-induced hormonal secretions. A stressful experience inaugurates a hormonal and neurochemical response that raises individuals' levels of vigilance and arousal. Metabolically speaking, stressors induce the need for extra energy so individuals can deal with the present threat, and also, so they can suppress any unnecessary physiological activity and mobilize needed energy stores. These responses are vital to survival, as they allow organisms to cope with internal and external demands imposed by stressful events (see Sapolsky et al. 2000). These responses typically are healthy and expected, but prolonged or chronic exposures to stress, and the related stress hormones, can produce negative effects, including posttraumatic stress disorder, that could viably incite permanent alterations in the typical patterns of activity that appear on the HPA axis.

Evidence indicates that stressors experienced during the adolescent period can have effects peculiar to that period (Romeo 2000). Although stress obviously can lead to deep psychological dysfunction in adulthood, adolescents do appear to be more susceptible to the effects of stress compared to adults. It also is just as likely that this period of vulnerability translates into an opportune developmental window for effective interventions (see Romeo 2010). Stressful experiences can be countered by possible resources available to youth that could allow them to cope more effectively. These potential protective factors include prior experience, cognitive skills, personality characteristics and

tendencies, resiliency, social support, and available social networks.

Although research does show that some responses to stress can alleviate its effects, this area of research reveals an incredible complexity of factors. Stress can include normative, chronic, or acute stress, and multiple types of the same stressor can be present simultaneously in any given situation. For example, research proposes that maternal food insecurity poses a more rampant problem than child food insecurity. Even in prosperous nations like the United States, food insecurity has become an increasingly significant problem among the poor and even other social groups given the effects of unhealthy food on obesity and other excessive weight problems. But, even where there is food insecurity, other stressors play important roles as, for example, has been shown in research indicating that maternal stressors amplify a food insecure adolescent's probability of experiencing negative outcomes, such as being overweight or obese (Lohman et al. 2009).

As a concept, stress tends to be presented as signifying a negative influence on a person's health and overall quality of life. This idea proves realistic when stressors negatively impact mental health and incite unhealthy responses like smoking or substance use/abuse. For example, researchers have proposed a stress–incubation/corticolimbic dysfunction model based on the interplay of exposure to stress, developmental stage, and neuromaturational events that may explain the seeking of specific classes of drugs later in life (Andersen and Teicher 2009). That model supports the view that the interaction of exposure during a sensitive period and maturational events produces a developmental cascade that leads to the initiation of substance use at younger ages, and increases the likelihood of addiction by adolescence or early adulthood. Importantly, genetic and environmental factors interact dynamically, as each factor is inextricably affected by the presence of the other. Consequently, when coping resources become necessary to be used, and they prove viable enough to deal with the existing circumstances, then the act of experiencing and adapting to stressors can induce positive changes out of necessity for the person responding to the situation. Put simply, stress and vulnerability do not necessarily predict outcomes; they predict the chances of outcomes.

Available evidence highlights how early experiences play a significant role in the manner individuals

respond to stress. Particularly significant are parents' and early caretakers' abilities to identify their needs and respond to them effectively. Much research has demonstrated that babies possess varying levels of coping capacities in response to changes that occur in their immediate environment, with some adapting more easily than others. Babies prove highly individual, and some may become upset at stressors that would not faze another child. The most effective parenting emerges when infants experience a consistent emotional base and receive positive, responsive, and individual attention that can feel secure and develop the tenacity and courage to investigate their physical environments and analyze new associations. If older children lack familiarity with this type of stable base, they might encounter difficulties in interpreting signals that represent a lack of security from relationships or their environment. They might not have developed adequate skills or knowledge of how to protect themselves, so they might be particularly susceptible to bullying, or they may engage in such unacceptable deportment themselves. An extensive research body that encompasses longitudinal studies reveals the importance of early child–parent interactions, as well as the long-term ramifications of such associations. Children who do develop this much needed secure base early on possess a stronger capacity to adapt to environmental stress, to cultivate friendships, and select appropriate companions. Children who receive this secure base cultivate a parallel resiliency that simultaneously serves as a predictor of the child's capacity to acquire additional support sources later in life. An individual's capacity to cope with stress thus remains highly dependent on early caretaking relationships.

Older children's experiences of threats, as well as their capacity to gain confidence from multiple sources (from both domestic and other sources, such as schools and communities), become heavily influenced by their earlier experiences. Mentors can mitigate negative ramifications from early difficulties, by exerting a positive impact on children's lives, as older children become more and more cognizant of and influenced by particular sources of chronic and acute stressors, both within and apart from their nuclear families (DuBois et al. 2002). Some examples of such stressors include economic challenges, social or familial violence, or abusive situations (see Kaplow and Widom 2007). Children who prove most tolerant of change and more easily

adaptable (they possess “easy” temperaments) also prove more resilient to such challenges over the long term. However, such children may also withstand abusive conditions for a longer period before seeking assistance; this question remains unanswered. Still, resilience is more common than is often believed and there are multiple and sometimes unexpected pathways to resilience (Bonanno 2004).

Children who undergo extended or long-term stressors can negatively impact children’s health and school performance. Representative symptoms include somatic difficulties (like headaches, abdominal discomfort, and sleep problems) or mental health issues (including depression and anxiety) (see Kaplow and Widom 2007). Students can also exhibit problematic behavior and lower academic performance, and these issues can eclipse the true source of the child’s emotional upsets, so that it takes longer to uncover the actual underlying stressor. Children who have this type of experience also stand a higher risk of death, such as situations involving extreme cases of natural disasters (e.g., bombings, or occurrences like Hurricane Katrina); they might also exhibit posttraumatic stress disorder indicators, especially if they have witnessed violence to a loved one (see, e.g., Kimhi et al. 2010).

Students who undergo this type of experience need support from a variety of resources, and that support must be implemented according to several factors. The child’s age proves a crucial element in selecting a coping resource, as young children must necessarily involve recuperation of the caregiver or parents. Specifically, if parents have their own issues, these must be handled to support the child (e.g., postpartum depression, considerable medical challenges, or anxiety about their own physical security); in some cases, parents need additional support to handle their own personal stressors. Older toddlers and elementary school-aged students might benefit from having an explanation of the situation presented to them, so that children can experience a greater locus of control in an often unpredictable and chaotic situation. In general, when students can become exposed to a safe and secure environment, this experience can produce great strengths as they allow them to gain access to a stable situation that includes emotional support and a strong network structure. All children, regardless of age, need to feel emotional security after exposure to extreme stressors and that support can come from a variety of

sources; for example, mentors can cultivate trust with such students, even if they cannot obtain this support from parents.

Youth need to develop a sense of control in order to be able to apply evaluative abilities to situations they face so as to devise useful coping strategies. This sense can be cultivated through individual or group interventions, and prove most effective when students themselves can exert some control over the situation and their response to it; for example, at high levels of stress, adolescents with poor problem-solving skills have been shown to experience elevated suicidal ideation and be at greater risk of making suicidal attempts (see, e.g., Grover et al. 2009). However, support structures that also allow youth to adapt to situations, when they cannot control them, also proves helpful. Students closer to adolescence exhibit a more developed tendency to be able to identify those circumstances over which they can maintain control, and which responses prove most effective in managing the stressors. Ultimately, collaboration between youth, their families, and the larger community can produce a more positive outcome for future interventions (Dumont and Provost 1999).

Cross-References

► [Stress Management](#)

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Stress Management

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Overview

Adolescents have to deal with many stressors, which are associated with maladaptive psychosocial development during adolescence. Therefore, the attenuation of the adverse stress effects on adolescent adjustment is of high importance. Internal resources are essential factors to diminish these stress effects. Coping capacities have been shown to be significant protective factors to the psychosocial adjustment to stressors. Recent coping research has suggested that two adaptive coping styles can be differentiated from a maladaptive coping style. Effective stress management trainings for adolescents have been designed as multimodal prevention programs addressing the modification of these coping styles. Thus, methods to employ (adaptive) emotion-focused coping skills such as relaxation are implemented in order to reduce stress in the short-term. In addition, cognitive techniques such as positive self-instruction and problem solving, and skills training such as social skills training are incorporated in order to enable the long-term mastering of daily stressors. Furthermore, in the “Anti-Stress-Training”

(AST) for children and adolescents (Hampel and Petermann 2003), which is presented further on in more detail, maladaptive coping is discussed and its impact on the coping process is reflected. Prior research provided evidence that multimodal stress management trainings do improve coping abilities of adolescents and thereby support their psychosocial development.

Introduction

The transition from childhood to adolescence is a developmental period of high vulnerability mainly caused by an enormous increase in common and developmental stressors. On the one hand, common stressors such as interpersonal conflicts or school-related demands are more frequently and of higher intensity during adolescence (Seiffge-Krenke 2000; see also essay “► Stress”). On the other hand, adolescents have to deal with many developmental tasks such as adjusting to accelerated physical maturity, reaching autonomy from their parents, or experiencing first romantic relationships. Especially, common stressors are linked to psychological and physiological stress symptoms. Most importantly, stress-related internalizing problems such as anxiety and depression, and externalizing problems such as aggression have been found (Compas et al. 2001).

Nevertheless, further research has shown that coping abilities are important factors, which can influence the stressor-adjustment relationship. According to Lazarus, coping consists of efforts, both action-oriented and intrapsychic, to manage environmental and internal demands, and conflicts among them, which tax or exceed a person’s resources (Lazarus and Folkman 1984). In most concepts of coping, two coping styles are distinguished; more direct coping modes (i.e., problem-focused, primary control or approach coping) and more indirect coping efforts (i.e., emotion-focused, secondary control or avoidant coping). Some researchers mentioned that by using these dichotomized concepts, adaptive and maladaptive coping are confounded. For instance, the mainly adaptive coping strategy “distraction” and the maladaptive coping strategy “aggression” are both subsumed under emotion-focused coping. Therefore, some researchers suggested a three-dimensional concept of coping, comprising of two functional coping styles and one dysfunctional coping style (e.g., Seiffge-Krenke 2000). Referring to this concept and the classification of

Lazarus and Folkman (1984), Hampel and Petermann (2005) differentiated between the two adaptive coping styles “emotion-focused coping” (minimization, distraction/recovery) and “problem-focused coping” (situation control, positive self-instructions, and social support). In addition to these two adaptive coping styles, a maladaptive coping style was suggested, including passive avoidance, rumination, resignation, and aggression. While adaptive coping was related to better psychological adjustment, maladaptive coping was associated with reduced adjustment (Compas et al. 2001; cf. Hampel and Petermann 2005).

Cross-sectional and longitudinal studies have demonstrated that the employment of coping strategies depend on the developmental stage of children and adolescents. Despite mixed results, it can be summarized that the adaptive emotion-focused coping strategy “distraction” decreased in 9- to 14-year-old children and adolescents, problem-focused strategies such as problem solving showed a stable course, and higher cognitive strategies such as cognitive restructuring began to emerge during early adolescence (Compas et al. 2001; Hampel and Petermann 2005). In addition, maladaptive coping such as resignation, rumination, aggression, and avoidance enhanced during early and middle adolescence. These developmental changes in coping have to be taken into account while designing stress management programs for children and adolescents, emphasizing especially the adverse coping pattern during early and middle adolescence.

Stress Management Trainings

Stress management trainings for children and adolescents differ in their aim and complexity. Universal or primary preventive programs are based on a broad concept and are aimed to strengthen the health status of children and adolescents. For this reason, these programs include health-promoting methods such as relaxation or problem solving. Based on comprehensive empirical data, this essay puts an emphasis on this type of program. Indicative or secondary preventive programs were designed to treat children and adolescents whose health status is impaired; specialized treatments are applied to cure their disease. Finally, selective or tertiary preventive programs were conceptualized to treat chronically ill children and adolescents, whose health status can be exacerbated by maladaptive coping; their disease management is promoted by even

more specialized treatment regimens. Overall, the different types of preventive programs vary in the composition and broadness of the target population and selectivity of implemented treatment components. Regarding the complexity of programs, unimodal trainings with relaxation or problem solving only and multimodal training with a combination of different psychological methods were developed. Thus, cognitive elements like problem solving and behavioral elements such as relaxation or social skills training were integrated in so-called cognitive-behavioral preventive programs.

Effective Elements of Cognitive-Behavioral Stress Management Trainings

Many stress management trainings were designed as unimodal programs, implementing relaxation or (social) problem solving only, even though coping with stress could not be improved in the long-term by these programs (cf. Hampel and Petermann 2003; Maag and Kotlash 1994). Hence, the inclusion of at least these two elements, relaxation and problem solving, are suggested. Multimodal stress management trainings were designed with this proposal in mind (for a review, see Maag and Kotlash 1994) to reduce acute stress and to promote long-term mastering of stress by improving the perception of stress situations and stress symptoms, identifying maladaptive coping strategies, and acquisition or modification of adaptive coping strategies. Effective stress management trainings implemented a variety of different methods. In general, these programs incorporated

- Cognitive restructuring
- Practicing relaxation
- Skills training such as acquisition of social skills and school-related or general problem solving skills.

Evaluation studies supported the effectiveness of cognitive-behavioral stress management trainings among children and adolescents. Nevertheless, Clarke (2006), who found modest effect sizes for the prediction of psychosocial well-being by active coping, drew the conclusion that former intervention studies essentially focused on problem-oriented coping. Future conceptualizations should also include emotion-focused coping strategies to increase the flexible repertoire of adaptive coping. Therefore, exercises with the emphasis

on the improvement of emotion-regulating strategies, such as relaxation, recovery, and distraction, should be incorporated more explicitly into stress management trainings.

Most of the cognitive-behavioral stress management trainings addressing children and adolescents were based on the “Stress Inoculation Training” (SIT) developed by Meichenbaum (1985). There are several reasons why researchers suggested that the SIT is an appropriate approach for the conceptualization of stress management trainings among children and adolescents (cf. Maag and Kotlash 1994). First of all, the SIT is based on the psychological concept of stress according to Lazarus and Folkman (1984). Moreover, it is aimed to strengthen individuals’ resources and therefore follows the approach of learned resourcefulness. The SIT incorporates well-evaluated, effective methods of the cognitive-behavioral therapy and therefore measures up to the complex stress process. Thus, restructuring the stress and coping process are enabled by cognitive methods, regulation of emotions becomes possible due to relaxation, and behavior modifications are enabled by behavioral methods. Finally, the SIT guarantees generalized effects by focusing on the transfer of acquired coping strategies into daily life.

Stress Inoculation Training

Due to the fact that the “Anti-Stress-Training” (AST) for children and adolescents of Hampel and Petermann (2003) is also based on the SIT, this approach is presented here. The SIT is based on the idea that stress situations should not be evaluated as individual threats but as problems that can be solved. The SIT is structured in three consecutive stages: information, acquisition, and application. During the *information stage*, the psychological concept of Lazarus is explained and the individual stress and coping process is explored. By applying these methods, the stress and coping process is reevaluated. Thus, stress situations are appraised as challenging rather than threatening situations. During the *acquisition stage*, effective coping skills are developed by strengthening already existing, and learning new coping strategies. Divergent methods are applied such as relaxation, physical exercise, and cognitive techniques (cognitive restructuring, problem solving, and positive self-instruction). Within this context, individuals are trained in coping, which is adapted to the stress situation; problem-focused coping should be

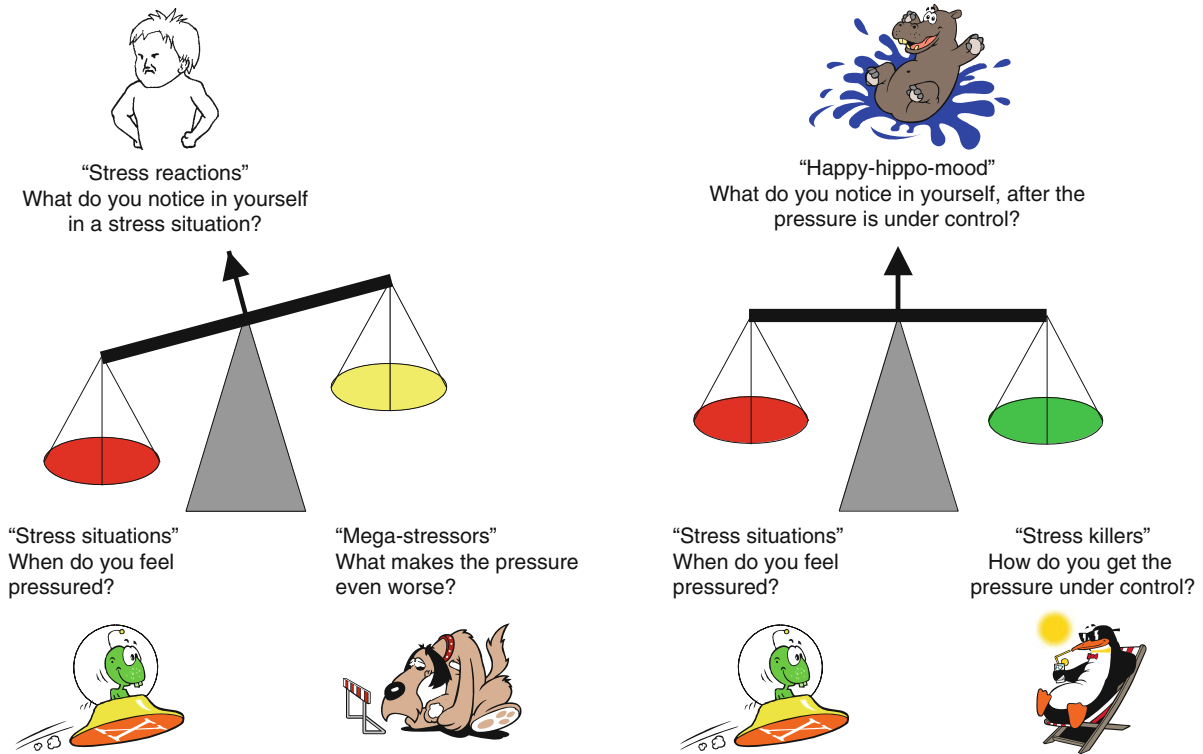
applied to controllable situations (e.g., academic stressors) and emotion-regulating strategies should be employed at stress situations, which are uncontrollable (e.g., social stressors). Finally, the acquired coping skills should then be applied to daily stress situations during the *application stage*. Methods such as imagination, role-playing, modeling, and stepwise confrontation with stressors are used. Furthermore, relapse-preventing elements are integrated in order to improve individuals’ self-efficacy. To stabilize treatment effects, booster sessions are highly recommended by Meichenbaum (1985).

Practical Application Exemplified by the “Anti-Stress-Training”

General Aspects

The “Anti-Stress-Training” (AST; Hampel and Petermann 2003) was developed for children and adolescents aged from 8 to 13 years. It is designed treating children and adolescents in groups up to six participants. The version of the AST, which is conceptualized as a primary preventive program consists of four sessions lasting 2 h including a break of 15 min in between.

During the *first session*, information about stress and coping is given referring to a cardboard model of a stress scale (Fig. 1; quotations indicate the terms used in the AST). In accordance with Lazarus and Folkman (1984), the stress scale makes it clear that stress can be characterized by an imbalance between increased demands (“Stress Situations”) and absent adaptive coping strategies (“Stress Killers”) or maladaptive coping strategies (“Mega Stressors”). Stressful encounters and coping strategies are explored and discussed. During the training, relaxation (“First, I’m going to relax!”), recreation (“Everything will work better after a break!”), distraction (“I’m thinking of something else!”), and minimization (“Don’t take it that seriously!”) are employed to increase emotion-focused coping. Moreover, situation control (“First, I make a plan!”), positive self-instructions (“I’m encouraging myself!”), social support (“I’m asking for somebody’s help!”), and reaction control (“First of all, I have to handle myself!”) are practiced to improve problem-focused coping. Additionally, denial (“I’m not stressed out!”) is introduced as a coping strategy, which is adaptive in the short-term when the stress situation is uncontrollable (cf. Meichenbaum 1985). Furthermore,



Stress Management. Fig. 1 Semantic phrases and pictorial cues of the five concepts of the coping process in the “Anti-Stress-Training” (from Hampel and Roos 2007, p. 61)

physical, emotional, and cognitive stress reactions (“Stress Responses”) are explored and self-perception is improved by exercises. Finally, indicators of a successful coping process (“Happy-Hippo-Mood”) are discovered.

In the *second session*, the “stress chain” is taught in order to make clear that the coping process can be described as a problem-solving process (cf. Meichenbaum 1985): First of all, a “Stress Situation” needs to be recognized followed by the identification of stress reactions, “Stress Response,” including “Stress Emotion,” “Blackout,” and “Somatic response.” Adaptive coping strategies to reduce the stress (“Stress Killers”) are explored afterward. The emotional and physical well-being as much as the cognitive performance needs to be approved as an indicator of successful coping (“Happy-Hippo-Mood”). Later, the following maladaptive coping strategies are discussed: passive avoidance (“I avoid stress!”), flight (“I’m leaving!”), social withdrawal (“I keep to myself!”), rumination (“I’m steadily thinking of the problem!”), resignation (“I’ll never make it!”), and aggression

(“I explode!”). Finally, positive self-instruction and recovery skills are practiced.

During the *third and fourth session*, coping skills are trained in role-plays in order to employ a flexible repertoire of adaptive coping strategies, which can be utilized differentially in specific stressful encounters. Using homework assignments, the acquired coping skills are applied to daily life. In all sessions, relaxation exercises are practiced; in the first both sessions progressive muscle relaxation and in the last both sessions imagery. Prevention of relapse takes place by imagination of unsuccessful coping processes and exploring coping strategies to deal with the stressful encounters effectively.

First evaluation studies supported the effectiveness of the universal preventive AST, nevertheless, more evidence was provided implementing an adapted version during inpatient rehabilitation of chronically or mentally ill children and adolescents (e.g., Hampel and Roos 2007). In order to reach broader samples, school-based versions of the universal preventive AST were designed. A recent meta-analysis provided evidence

for the beneficial effects of school-based universal prevention programs targeting stress management (Kraag et al. 2006). Interestingly, only 4 of the 19 studies applied a multimodal stress management training. In the following sections, two versions of the school-based multimodal AST are described.

School-Based Stress Management Training for Fifth Graders

Design and procedure. A school-based AST was developed for fifth graders aged from 10 to 12 and comprised six weekly sessions, each lasting 45 min. The AST was conducted during class time and in gender-specific groups. In total, 50 boys and 61 girls of 5 classes participated in the study; the girls were trained by 2 female trainees and the boys by 1 male trainee. All trainees were graduate students in psychology and educated in the AST. One part of the classes ($n = 51$ students) was trained first (experimental group, EG), while the other part of the classes was randomized to the waiting list control group (WCG; $n = 60$). Outcome effects were evaluated at 3 sample points; related to the EG, pre, post, and 3 months after intervention. Classes of the WCG were evaluated 3 months pre, immediately pre, and post intervention.

Treatment. The six weekly sessions were divided into a start-up, a closing session, and four training sessions with the same time structure. Based on empirical data, early adolescents show increased stress, anger control problems, low self-esteem, and great impact of media. Therefore, the sessions' topics comprised of stress management, anger control, problem solving, and influence of the media.

During the *first session*, the adolescents and trainees got to know each other by playing group games, group rules were agreed to by the participants, and the topics of the sessions to come were briefly discussed. Moreover, progressive muscle relaxation was conducted as relaxation exercise and a homework regarding social skills was assigned. The following *four sessions* were structured in the same way: Firstly, the students were welcomed in the gender-specific groups and the relaxation was performed. Secondly, the homework, which always related to the specific topic of one session, was discussed. Thirdly, the actual training period took place. Methods such as role-playing or group discussions were used. The sessions ended with the

explanation of a new task as homework. In the *closing session*, relaxation was practiced and the learned topics were reflected and summarized. Moreover, certificates and a small gift were offered to the students as approval for their participation.

Measure. Coping strategies were measured by the German Coping Questionnaire for children and adolescents (*Stressverarbeitungsfragebogen für Kinder und Jugendliche*, SVF-KJ; cf. Hampel et al. 2008; Hampel and Petermann 2005). Coping responses were answered in relation to two common stressors: an interpersonal stress situation exemplary described by a conflict with peers or malicious gossip expressed by peers, and an academic stress situation exemplified by taking a difficult exam or dealing with too much homework. Nine coping strategies were represented by 4 items each whose likelihood of occurrence was rated for 36 coping responses on a 5-point Likert scale (0 = "not at all", 4 = "in any case"). Emotion-focused coping was measured by minimization (e.g., *I say to myself: It isn't as bad as all that*) and distraction/recreation (e.g., *I'm reading something, that's fun*). Problem-focused coping was represented by situation control (e.g., *I'm making a plan to fix the problem*), positive self-instructions (e.g., *I say to myself: I know, I can solve the problem*), and social support (e.g., *I'm talking to somebody about that*). Maladaptive coping was measured by passive avoidance (e.g., *I'd like to stay away from the situation*), rumination (e.g., *I keep on worrying and thinking about the situation*), resignation (e.g., *I keep on thinking: It's really pointless*), and aggression (e.g., *I'd like to explode*). Presentation of results will focus here on cross-situational coping.

Results. Minimization increased from the pre to the post assessment in the EG only marginally. In the WLC, minimization decreased significantly between 3 months prior and immediately prior to intervention and was increased after intervention. Situation control was enhanced in the EG compared to the pre assessment and did not show changes at the follow-up assessment. In the WLC, situation control decreased between 3 months prior and immediately prior to intervention and was increased after intervention.

Conclusions. The school-based AST for fifth graders did show some beneficial effects on adaptive coping, which did not depend on gender. The problem-focused coping strategy "situation control" was improved after

the school-based AST both in the EG and the WLC, which can be attributed to the components of stress management and problem solving. The emotion-focused coping strategy “minimization” showed a short-term improvement only in the WLC. No significant changes could be detected in maladaptive coping. This is in line with former results, showing fewer effects of shorter versions of the AST on maladaptive coping (cf. Hampel and Petermann 2003). As described in the next section, implementing more intensive components of stress management seems to increase the effects on maladaptive coping.

School-Based Stress Management Training for Sixth to Ninth Graders

Design and procedure. A school-based AST with elements of experiential education was developed for sixth to ninth graders aged from 10 to 14 and consisted of a six weekly training sessions for students, coaching sessions for teachers, and an information session for parents prior to and after the intervention (Hampel et al. 2008). Seventeen teachers were trained to deliver the AST to their students during class. Coaching of teachers, educating of parents, and two sessions for the students were conducted by two doctoral students. In total, 160 boys and 160 girls participated in the study. One school ($n=138$ students) participated in the school-based AST with elements of experiential education (EG), while the other school was untreated (control group; CG; $n=182$). Outcome effects were evaluated at three sample points: pre, post, and 3 months after intervention.

Treatment. The *first session*, which was conducted by the doctoral students included the introduction of training contents and the progressive muscle relaxation. Information about stress was given and stressful situations as well as adaptive and maladaptive coping strategies were explored using the stress scale. Moreover, group plays to foster positive self-instructions and acquire social skills were conducted. In order to intensify treatment effects, students received a booklet with the main training contents, information about stress, and homework to continue working with the topic after school.

The following *six weekly sessions* were conducted by the teachers. The important components of the

intervention were the following: increasing of treatment motivation by designing their own booklet; improving the perception of bodily responses; exploring individual stressors and coping strategies; employing a flexible repertoire of adaptive coping strategies, which should be adapted to the type of stressor; practicing relaxation and breathing exercises; exploring and practicing recovery activities; practicing positive self-instructions and social skills. In the *final session*, the subject matter was summarized by the doctoral students, positive self-instruction and social skills were practiced and imagery was guided. As a final point, to thank the students for participating, they received a certificate and a small gift.

The school-based AST was accompanied by weekly sessions of experiential education, including cooperating tasks, concentration tasks, and body sensation tasks in order to make a positive impact on body perception, body concept, general and social self-efficacy, and social behavior. After the fourth week, the students received their results of the coping and self-efficacy questionnaires. In addition, 3 months after the school intervention, the subject matter on stress was repeated in a booster session.

Measure. Coping strategies were measured again by the SVF-KJ (cf. Hampel et al. 2008; Hampel and Petermann 2005). As interpersonal stressors are the most salient stressors during adolescence (Clarke 2006), evaluation of coping response related to academic stressors was omitted in this study.

Results. Beneficial effects of the school-based AST with elements of experiential education on perceived stress and self-efficacy have been found, but reports on results here will focus on coping effects. Distraction/recreation increased in the short- and mid-term in the EG and in the mid-term in the CG. Rumination decreased in the short- and mid-term in the EG. In contrast, the CG did not show significant changes toward this strategy. In the EG, substantial short- and mid-term improvements were found for minimization, social support, resignation, and aggression. In the CG, minimization did not change over time, but social support decreased after the treatment compared to baseline. Moreover, resignation and aggression were enhanced immediately and 3 months after intervention. Thus, after the intervention and at the follow-up assessment, the EG reported significantly higher levels

of minimization, distraction/recreation, and social support and lower levels of rumination, resignation, and aggression in comparison with the CG. Age-dependent treatment effects on situation control, positive self-instructions, and passive avoidance indicated that early adolescents (sixth and seventh graders) benefited more from the intervention than the middle adolescents.

Conclusions. The school-based AST with elements of experiential education for sixth to ninth graders did show favorable effects on adaptive and maladaptive coping, which were mainly independent on age group and did not depend on gender. Thus, it can be assumed that by incorporating more intensive components of stress management, maladaptive coping can also be modified. Additionally, the AST evoked improved perceived stress and self-efficacy across both genders and age groups. Overall, the school-based AST with elements of experiential education was able to strengthen the important internal resources “coping” and “self-efficacy” among early and middle adolescents, who are in a very critical transition period characterized by a high amount of risk factors for the psychosocial development.

General Conclusions

Multimodal stress management trainings for children and adolescents have been found to enhance the flexible repertoire of coping strategies and thereby enable a situation-dependent use of coping strategies. Knowledge about stress and coping represents a fundamental component. Relaxation is an effective component because it describes an important emotion-focused coping strategy, which is indicated for utilization in uncontrollable stress situations but is not developed in children and early adolescents. In addition, problem solving, positive self-instruction, and conflict management are major components of cognitive-behavioral stress management trainings. Nonpersistent effects on coping in the literature supported that booster sessions should be applied in order to stabilize favorable effects across a longer period. However, future conceptualizations of stress management trainings should integrate these effective treatment elements. Applying these multimodal trainings, coping abilities and self-efficacy among children and adolescents can be enhanced and thereby the resiliency of children and adolescents can be strengthened.

Cross-References

► [Stress](#)

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Strip Searches and Students' Rights

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In the United States, the Fourth Amendment recognizes the right against unreasonable searches and seizures. That right generally requires a law enforcement

officer to have probable cause and, in some instances, a warrant for conducting a search. Although applying probable cause to certain cases can be challenging, the general rule is that probable cause exists when an officer has reasonably trustworthy information arising from facts, circumstances, and other knowledge that would be sufficient in themselves to support the belief that an offense has been or is being committed and that the evidence will be found in the place to be searched. There are many exceptions to these rules, and some involve searchers by non-law enforcement such as teachers and school administrators (Levesque 2006). In these circumstances, a major exception to the need for warrants and probable cause would be the “special needs” doctrine. That doctrine more readily permits searches when the government has an interest beyond law enforcement, as those searchers can be based on reasonable suspicion rather than the higher burden of probable cause (see *New Jersey v. T.L.O.* 1985). As a result, for example, the Supreme Court has adopted a standard of reasonable suspicion to determine the legality of a school administrator’s search of a student; and it has held that a school search will be permissible in its scope when the measures adopted are reasonably related to the objectives of the search and not excessively intrusive in light of the age and sex of the student and the nature of the infraction (*New Jersey v. T.L.O.* 1985, p. 342). This reduced protection from searches has been interpreted as an individual’s reasonable belief that they have a moderate chance of finding the evidence that is being sought.

Given the uncertainties that may arise when people have different views of what is reasonable, it is no surprise to find that this area of law remains murky in practice. The uncertainties have considerable significance. The uncertainty can lead to intrusions in people’s lives when they are searched without justifiable grounds. The potential uncertainty also leaves those who would conduct searches open to litigation against them for inappropriately infringing on people’s rights. These two factors often come to the center of controversies when individuals have been subjected to controversial searches that some would deem inappropriate.

One of the most intrusive searches that could be made on adolescents, indeed on any individual, would be strip searches. These types of searches have been permitted in schools, and have been seemed

permissible, for example, to search for stolen property, such as money, or contraband, such as drugs. Given the highly intrusive nature of these searches, an issue arose as to whether they should be permitted and, if so, whether students should have more protection from searches by requiring, for example, school administrators to have a higher burden to show that they believe they will find contraband and whether such searches should be limited to specific contraband, such as explosives. The United States Supreme Court addressed this issue in *Safford Unified Sch. Dist. No. 1 v. Redding* (2009).

In *Redding*, an assistant principal (Wilson) escorted 13-year-old Redding from her middle school classroom to his office and showed her a day planner containing knives and other contraband. She admitted owning the planner, but said that she had lent it to her friend and that the contraband was not hers. Wilson then produced four prescription-strength, and one over-the-counter, pain relief pills, all of which are banned under school rules without advance permission. She denied knowledge of them, but Wilson said that he had a report that she was giving pills to fellow students. She denied it and agreed to let him search her belongings. He and Romero, an administrative assistant, searched Redding’s backpack and found nothing that would support their claim. Wilson then had Romero take Redding to the school nurse’s office to search her clothes for pills. After Romero and the female nurse (Schwallier) had Redding remove her outer clothing, they told her to pull her bra out and shake it, and to pull out the elastic on her underpants, thus exposing her breasts and pelvic area to some degree. No pills were found. Redding’s mother filed suit against the school district (Safford), Wilson, Romero, and Schwallier, alleging that the strip search violated Redding’s Fourth Amendment rights. Under the law used to challenge the school district and officials’ behaviors, the school, and those working for the school would be held responsible if they knowingly infringed on the student’s rights (in this case, if they knew that she should not have been strip-searched based on the grounds that they had).

The Supreme Court held that the strip search of the student was unreasonable and a violation of the Fourth Amendment. The Court reasoned that the principal knew beforehand that the pills were common pain relievers and that there was no indication of danger to

the students from the power of the drugs or their quantity, and any reason to suppose that the student was carrying pills in her underwear. Although finding that the search was not justified, the Court ruled, since there was no clear legal precedent on which to base the nature of the protection against strip searches, that the school officials were immune from being held responsible for infringing on Redding's rights.

Importantly, the case had highly critical dissenting opinions. Some argued that the unconstitutionality of the search was obvious and that, as a result, the school officials engaged in outrageous and abusive conduct, which would mean that qualified immunity was inappropriate. Another strong dissent argued that the Court simply should not interfere with the school's attempts to maintain a safe and healthy environment for students, that implementing and amending public school policies was beyond the Court's function. That dissent also argued it could be objectively reasonable to believe that the area searched could conceal the contraband, and, as such, the search was justifiably within the scope announced by *T.L.O.*

Redding gains significance in that the Court clarified the scope of adolescents' Fourth Amendment rights in regard to school searches. In important ways, the case recognized and expanded students' privacy interests. Although the Court granted the school officials qualified immunity, it did set a clear precedent which now limits the use of qualified immunity. In addition, the case shows that the Court is willing to limit what is meant by "reasonable" and that the standard can be used to safeguard the privacy and other interests that the Fourth Amendment. Also significant about the case is that other cases since *T.L.O.* had expanded the state's power to conduct searches, such as in drug testing cases, which made it somewhat surprising that the Court did not support the state's interests and freedom to search, in a way reflective of only one dissenter. On the other hand, the facts of the case may limit its broader reach as schools deal with a variety of complex fact patterns that may not lead to searches deemed as intrusive as those in *Redding*. Although much remains to be seen, it is clear that the case will be noted as a foundational one in discussions of adolescents' rights.

Cross-References

► [Searches and Seizures in Schools](#)

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Student Engagement

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Overview

Student engagement with school is a construct that acknowledges the active role of the student in learning and focuses upon alterable aspects of risk (e.g., infrequent school attendance, minimal cognitive effort on academic tasks, low enjoyment of learning) that impact student commitment to, and investment in, educational outcomes. Agreement exists that the engagement construct is multidimensional, with potential for considering the confluence of behavior, cognition, and emotion that students experience en route to valued outcomes such as academic and socio-emotional competence, high school completion, and lifelong efforts to learn. The engagement heuristic is valued for its predictive utility, attention to contextual influences with students, and the capacity it affords for the comprehensive examination of constructs typically examined in isolation. Areas of agreement and in need of refinement are addressed as are critical measurement considerations. The frequent incongruence between adolescent students and educational contexts and the substantial impact of high school dropout on life-course trajectories position student engagement, a lifelong construct, as critical for the adolescent period.

Introduction

Student engagement with school is a construct with considerable potential for researchers and interventionists alike (Fredricks et al. 2004). This construct and its accompanying conceptual models could enhance understanding of student progressions

toward valued outcomes such as motivated learning, socio-emotional and academic competence, and graduation from high school. Among researchers, agreement exists that student engagement is a multidimensional construct, that facilitators must be differentiated from indicators of engagement, that engagement itself should be valued in addition to the role it serves as a mediator of other outcomes, and that the construct underscores the crucial and active role students provide in the learning process (Fredricks et al. 2004; Sinclair et al. 2003; Skinner et al. 2008). Despite much agreement and optimism regarding the construct, some conceptual and measurement areas in need of refinement also exist and must be addressed.

“We can require adolescents to attend school, but learning requires conscious and purposeful effort, which cannot be legislated” (National Research Council and Institute of Medicine [NRCIM] 2004, p. 13). Student engagement is a recently emerging (Fredricks et al. 2004; Mosher and McGowan 1985) and strongly resonating construct for families, students, educators, and researchers alike. This widespread interest in the student engagement construct is related to (1) the recognition of the critical role assumed by students in the learning process; (2) the focus cast, by an engagement perspective, on malleable aspects of student risk; and (3) the perceived amplifying effect whereby engaged and disengaged students each become more so over time (Fredricks et al. 2004; Furrer et al. 2006). The engagement construct not only underscores the importance of a “student’s psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote” (Newmann et al. 1992, p. 12), but also provides a heuristic for partitioning aspects of student risk into those over which youth-serving organizations (e.g., schools) have substantial influence and those which they are less able to impact (e.g., socioeconomic status).

Although recognition of the importance of the active involvement of a student in the learning process has been acknowledged for some time, renewed interest has been generated by concerns with the array of activities and contexts competing for adolescents’ attention as well as high dropout rates, especially for urban youth (NRCIM 2004). In addition, student engagement is valued for its attention to more alterable types of student risk. Research differentiating relatively stable

background characteristics of risk – status/demographic risk, e.g., socioeconomic status, family structure, neighborhood influences, from more malleable student action- and perception-based risk; functional risk, e.g., school attendance, behavioral infraction rates, extracurricular activity participation, out-of-school time spent on coursework (Christenson and Reschly in press; see also Finn 1993) – has both advanced the understanding of risk factors impacting students as well as clarified proximal and distal targets which educators, and their partners across student contexts, can plausibly impact. Moreover, results suggesting cyclical effects between levels of engagement and responses from contexts as well as continued increases or decreases resulting from these cycles imply long-term dividends (or costs) from decisions to employ (or forgo) engagement-related interventions (Furrer et al. 2006). Early development of student interest in, and dedication to, education as well as continued efforts to learn throughout one’s life are critical for a society dependent upon a knowledgeable citizenry.

Specific Relevance to Adolescence

Student engagement is relevant prior to, during, and after the adolescent period. Yet, the focus upon student engagement as an antidote to perceptions and behaviors leading to high school dropout and as attentive to the valued outcome of competent high school graduates rather than students merely accumulating the necessary amount of “seat time” has increased the salience of the engagement construct for those interested in middle adolescence. Despite this increased salience, research has demonstrated the relevance and critical importance of attending to student levels of engagement in early primary grades (Alexander et al. 1997; Barrington and Hendricks 1989). Focus upon these early grades represents a paradigm shift from beliefs of predictors of dropout as circumscribed within the high school period to an increased understanding of dropping out as the culmination of a gradual process of disengagement from school (Rumberger 1987). Efforts to model a trajectory from dropout back to the earliest predictors of this negative outcome revealed useful variables from grade levels much earlier than expected. While early indications of disengagement exist and are certainly crucial to monitor, research suggests increased predictive precision of dropout as variables

are examined within grade levels closer to, and throughout, early and middle adolescence (e.g., Balfanz et al. 2007). Moreover, the significant developmental changes marking the adolescent period and the necessity of responsive contextual adjustments (see Eccles et al. 1993 for more on stage-environment-fit) underscore the value of the engagement construct to researchers examining, and educators working with, adolescents.

Despite the emergence of engagement as the bottom line in school completion research (Appleton et al. 2006) and the origins of many conceptualizations of engagement as rooted within the dropout prevention research (e.g., Finn and Rock 1997; NRCIM 2004), the construct has a broader relevance for the adolescent period. Within adolescent samples, dimensions of engagement have been predictive of school-related variables such as achievement (Miller et al. 1996). Moreover, motivation-based facilitators of engagement have been predictive of important public health and criminal justice outcomes such as sexual behavior risks and delinquent behavior (Hawkins et al. 1999). Finally, research has demonstrated a trend of continued declines in levels of engagement as students progress through grade levels corresponding with middle and high school (Eccles et al. 1993; Fredricks and Eccles 2002). The occurrence of these declines and their increase throughout early and middle adolescence underscore the critical role of engagement-targeted interventions during these developmental periods. Increased awareness of student levels of, and antecedents to, engagement is critical for research efforts and to enable practitioners to implement timely and relevant interventions.

Key Definitions

Student engagement with school reflects a construct also referenced via other terms including academic engagement, engagement, engagement in schoolwork, school engagement, student engagement, student engagement in academic work, and participation/identification (despite the absence of the word engagement, Participation-Identification Theory (Finn 1989) is central to many engagement conceptualizations). The intent in using the term student engagement with school is to clearly highlight the importance of the student's active role in the process as well as underscore the many contexts influencing a student's level of

engagement with school. Throughout this essay engagement and student engagement can be interpreted as abbreviations for student engagement with school.

Engagement can be viewed as student commitment or investment (identification with) and participation in the goals, values, and activities espoused by the school (Finn 1993; Fredricks et al. 2004). Student engagement in school is believed to be a multidimensional construct with conceptualizations including as few as two to as many as four subtypes or components (Appleton et al. 2008). Researchers have noted the potential of the multidimensional student engagement construct, particularly with its perceived capacity to meaningfully unite engagement components and the constructs they subsume. This potential is realized with the ability to examine these constructs, clarified individually by extensive bodies of work, in the presence of each other and with increased attention to additive or interactive effects (Fredricks et al. 2004). In fact, Fredricks and colleagues noted suggestions to reserve the term "engagement" solely for instances where these multiple dimensions and constructions are examined together.

Yet, ubiquitous agreement that student engagement is multidimensional differs from agreement on the subtypes composing the construct and differences do exist on the number of proposed dimensions or subtypes (Appleton et al. 2008). Those espousing a two-dimensional conceptualization generally include a behavioral (e.g., participation in school-related activities) along with an affective or emotional (e.g., identification with school/education, enjoyment of, and interest in, learning) component (e.g., Finn 1989; Marks 2000; Willms 2003) also referred to as psychological (Appleton et al. 2006). More current literature reviews of the student engagement construct revealed general agreement on a tripartite conceptualization involving the differentiation of a cognitive (e.g., strategic learning; higher cognitive processing of course content) dimension (Fredricks et al. 2004; Jimerson et al. 2003). A four-dimensional taxonomy has also been proposed (Appleton et al.; Christenson and Thurlow 2004) which utilizes the theoretical work of several researchers (Connell 1990; Connell and Wellborn 1991; Finn 1989; McPartland 1994) as well as research resulting from the 18-year implementation of the Check & Connect (<http://ici.umn.edu/checkandconnect>), engagement-based, intervention.

This taxonomy differentiates academic engagement from behavioral engagement enabling researchers and interventionists to distinguish socially active, but minimally academically involved students from those moderately involved in both aspects or academically active, but minimally socially connected. The addition of the academic engagement component aligned with the strong, replicated results linking academic learning time to student achievement (Fisher and Berliner 1985) and cohered with researchers examining engagement for specific tasks (Marks 2000). Moreover, the four-part typology is believed to improve the specificity for intervention although the additive and interactive relationships between these four subtypes represent an area requiring further study.

The Critical Role of Contexts on Engagement

Students themselves should not be perceived as engaged or disengaged. An appraisal of a student perceived as disengaged within one context (e.g., the science classroom) will undoubtedly find that same student engaged within another context (e.g., the language arts classroom, debate practice, or on the basketball court). As students would not be expected to respond similarly to the same stimuli across relational contexts (Reis et al. 2000), it is critical to consider engagement not as an attribute of the student, but rather as a function of a given context (Christenson and Anderson 2002; NRCIM 2004). A central model underlying engagement theory proposes the impact of contexts upon engagement and subsequent socio-emotional and academic outcomes as mediated by student initial and more stable perceptions of his or her status within these contexts (Connell and Wellborn 1991; Skinner et al. 2008).

The role of the context is critical for engagement including during the rapid changes of adolescence when these environments are often not ideally responsive (Eccles et al. 1993). Context-based engagement models honor theories of a core human need for belonging (Baumeister and Leary 1995). Specific, educationally oriented conceptualizations describe the influence of the contexts experienced by students upon their perceptions of the satisfaction of fundamental needs for autonomy, competence, and relatedness (Connell and Wellborn 1991). Students are believed to seek out sources for the satisfaction of these fundamental

needs with commitment toward and investment in (i.e., engagement in) a particular context as an outgrowth of the extent to which that context provides the “nutriments” for fulfilling these needs (Ryan and Deci 2000). Essentially, focus upon these needs as fundamental underscores the high probability of continued fulfillment-seeking behavior on the part of the student and the potential for fulfillment in other contexts (whether positive or negative) should school contexts fall short of meeting these needs. A simple representation of this model (adapted from Connell and Wellborn 1991) would be Context→Self→Engagement→Outcome. Student evaluations of how well contexts meet fundamental needs can be described as the extent to which students believe: I can (perceptions of competence and control), I want to (values and goals), and I belong (social connectedness) (NRCIM 2004). The above models include two types of engagement-related variables: facilitators (within the context and self) and indicators (of engagement itself).

Differentiating between indicators and facilitators of engagement (Sinclair et al. 2003) is crucial to understanding student engagement. This distinction has been summoned both to guide intervention efforts and conceptually to separate aspects of engagement believed to exist within the construct itself from outside influences hypothesized to influence levels of engagement (Sinclair et al. 2002; Skinner et al. 2008). Focusing upon the engagement construct itself, academic engagement can be described as active effort on academic tasks, including qualities such as persistence and thoroughness, and is indicated by observable behaviors such as credit accrual and homework completion. Behavioral engagement can be considered as involvement and congruence with school-related activities and is indicated by variables such as school attendance, appropriate behavior, and participation in extracurricular activities (including those outside of the school setting, but consistent with the school’s educational goals). While both academic and behavioral engagement have been described as low inference (i.e., readily observable) and can readily be determined from observable data (Appleton et al. 2008), both the cognitive and emotional subtypes of engagement are less easily determined and rely upon higher levels of inference. Most of the cognitive and emotional subtypes have relied upon self-report data from the student

and frequently other reporters such as school staff, peers, and family members. Cognitive engagement is defined by both an investment in learning and a self-regulatory component necessary for employing relevant academic strategies (Fredricks et al. 2004). Emotional engagement has also been referred to as affective engagement and described as student emotional reactions to learning experiences including the enjoyment of learning or a sense of belonging (Fredricks et al. 2004).

Defining student engagement and situating the construct as influenced by student-context interactions is critical. Such descriptions and delineations capitalize on areas within which much agreement exists among engagement theorists. Despite these areas of general consistency, several conceptual and measurement issues persist and require discussion. Conceptually, the relationship between motivational and engagement constructs differs across paradigms and the means by which, and thresholds for, facilitators impacting engagement is unclear.

Key Conceptual Issues and Controversies

Motivational facilitators versus engagement per se: Much discussion has centered on the relationship between motivational and engagement constructs. Some conceptualizations propose engagement as a systematic outgrowth of specific motivational processes (e.g., Wentzel and Wigfield 2007). Others note that motivation is necessary, but not sufficient for engagement (Appleton et al. 2008). Agreement exists that engagement is a construct worthy of study in its own right (Fredricks et al. 2004). Reviews of literature have found that constructs considered as aspects of engagement by some are differentiated as motivation by others (Fredricks et al. 2004; Jimerson et al. 2003). To reign in the proliferation of varying constructs possessing the engagement label and improve the conceptualization of the construct, deliberate efforts to clarify the relationship between motivation and engagement are necessary. Some have provided initial efforts in this area (e.g., Skinner et al. 2008), but further work is needed.

Facilitator impact upon engagement: Although vital, paradigmatic attention to the distinction between facilitators and indicators of engagement highlights critical questions, the underlying heuristic suggests that student

perceptions of these facilitators will impact experiences of autonomy, competence, and relatedness with subsequent influences upon student levels of engagement or disaffection (Connell and Wellborn 1991). Yet, research also supports the importance of refining assessments to evaluate engagement independent of measurements of these facilitators (Skinner et al. 2008). Assuming levels of facilitators and indicators of engagement are able to be distinctly obtained; questions remain on the process whereby, and threshold values surpassed, when facilitators do impact levels of actual engagement. For instance, are any changes to levels in facilitators expected to modify engagement levels or must certain threshold levels be met for changes to occur? If changes to facilitators are believed to vary directly with levels of engagement, then is it necessary to assess engagement itself or could values of some, or all, facilitators suffice? Beyond the above conceptual issues, several measurement issues related to the student engagement construct must also be addressed.

Measures and Measurement Considerations

Differing measures exist for assessing student engagement although these instruments vary somewhat in terms of their conceptualization of engagement, the students for whom they are appropriate, reporters of engagement, and their length. Moreover, since academic and behavioral engagement are believed to be indicated by data often collected or available to be collected by schools, most survey-type engagement measures are intended to assess cognitive and affective/emotional engagement. Conceptually, engagement is believed to evolve, with variations in both intensity and duration allowing for important distinctions among students on the construct (Fredricks et al. 2004). Thus, engagement is thought, conceptually, to vary in meaningful ways and, operationally, to be able to be gauged along those variations. Despite the perceived benefits of measuring engagement and the measures currently in existence, concerns persist regarding the continuum of the scale, the stability of measurements, the most critical outcome variables to examine in relation to engagement, the utility of measuring the academic subtype, the appropriate frequency of measurement, and the level at which engagement should be assessed.

Current measures: A sample of currently published instruments purporting to measure engagement

include the High School Survey of Student Engagement (Center for Evaluation and Educational Policy 2009), Me and My School survey tool (New Zealand Council for Educational Research 2008), Motivation and Engagement Scale (Martin 2007), Research Assessment Package for Schools (Institute for Research and Reform in Education 1998), and Student Engagement Instrument (Appleton et al. 2006; see Fredricks (in press) for a more comprehensive review of engagement instruments).

Engagement versus disaffection: A critical consideration in the measurement of student engagement as a predictor of outcomes of interest is the continuum of the engagement scale and whether the inclusion of other constructs is important. For instance, does a single continuum of the engagement construct suffice when considering mediating influences between contexts and outcomes? Do differentiations varying between complete disengagement and near absolute engagement sufficiently comprise the engagement-related influences upon valued outcomes (e.g., Appleton et al. 2006)? Some have suggested that the engagement scale varies from high engagement, beyond the absence of engagement, to an active disaffection or active disengagement from school (Skinner et al. 2008). While others have differentiated engagement as a positive, enabling behavior/cognition/emotion from active disaffection as a complementary negative, disabling behavior/cognition/emotion (Connell and Wellborn 1991). Greater consensus is required on the continuum of engagement.

Stability of student engagement: Given the importance of stable measurement of engagement for research and intervention efforts alike, a crucial area of continued research is the equivalence of measurements of engagement across, at least, students of differing cultural backgrounds, ages, and genders. Moreover, empirical results have already suggested differing gender-based responses with girls tending to indicate higher levels of belonging and identification with school than boys (e.g., Goodenow 1992; Voelkl 1997). To some extent, examinations of the stability of measurements of engagement have commenced at least across developmental periods and gender (see Betts et al. 2010). Yet, such results, while suggesting stability, represent the mere surface of a body of work in need of much further development.

Outcome variables: Another important consideration in examining the influence of measured amounts of student engagement is the appropriateness of outcome variables. First, engagement itself as a marker of student commitment toward and investment in learning has been mentioned as a valued outcome itself (Fredricks et al. 2004) and may be considered so in future research designs. Second, many variables currently included in research designs and statistical analyses are bound within the secondary level. Yet, the long-term outcomes desired for students, and the expected benefits of engaged learning, extend well beyond the middle and high school periods. Essentially, secondary-level variables are utilized as proxies for longer-term outcomes without some assessment of their usefulness for this purpose. If the intent is to gauge the long-term outcomes of students and the predictive usefulness of engagement in forecasting these outcomes, a better choice may be to include long-term variables in actual research designs and statistical models (see Finn 2006). Such an extended focus is consistent with a school completion versus dropout prevention perspective as well as sufficiently attendant to the perceived benefits of considering student levels of engagement. A preliminary proposal of variables might include indicators of success within post-secondary education or workplace activities as well as criminal justice records or civic involvement. Certainly such efforts may require collaborations across institutions, but a context-focused perspective of engagement already encourages these types of partnerships (NRCIM 2004) and some institutions and research groups have already undertaken such efforts (e.g., Ramp Up to Readiness <http://www.rampuptoreadiness.org/about/research>).

Consideration of academic apart from behavioral engagement: The value of considering academic engagement apart from behavioral engagement has implications for both measurement and intervention. Considering these subtypes together, e.g., with a single value, as behavioral engagement raises questions on the ability to differentiate students who attend regularly, avoid disciplinary actions, and are involved in social aspects of school but who are minimally or uninvolved in academic aspects. Depending on summary metrics, high enough values on attendance and social aspects of behavior could obscure low values on academic tasks. Researchers and those working with youth could

overlook academically disengaged youth resulting in inaccurate conclusions and/or inefficient use of intervention resources.

Frequency of measurement: Low inference (i.e., academic and behavioral) and high inference (i.e., cognitive and affective/emotional) subtypes of engagement may differ substantially in the frequency with which levels of indicators can be assessed. Since low inference indicator data can often be obtained from existing data sources (e.g., percentage of enrolled days attended or number of disciplinary infractions per 100 days of attendance) these may be much more easily obtained on a frequent basis without biasing or influencing the student being measured. The impact of measurement itself (e.g., on the engagement of the student) will need to be determined. With self-report measures only recently becoming more available, their use for engagement monitoring on a frequent basis is uncertain. Specifically, research must be conducted to distill current high inference engagement measures to a set of less time-consuming items sufficient for reliable and valid predictions to valued outcomes. Moreover, efforts will need to be undertaken to examine the parameters for how frequently these reduced measures can be administered without inappropriate degradation of their predictive utility.

Level of measurement: Studies of student engagement vary in terms of the level at which they measure the construct. Level of measurement considerations have relevance for both research efforts to systematically categorize antecedents to, and outcomes associated with, engagement as well as for intervention protocols. The variation in levels of measurement across studies has important implications for the conclusions that can be drawn regarding the impact of engagement upon important outcomes. Further, the impact of level of measurement upon the outcomes associated with engagement has important implications for intervention work. For instance, if, for assessments of engagement to be meaningfully connected to relevant outcomes, measurements must be considered for each specific class in which a student is enrolled, then the administration and analysis time associated with gauging engagement is increased substantially. Such increases may render efforts to monitor all engagement subtypes untenable for practitioners or at least impractical at the frequencies that may be deemed optimal. Continued efforts are necessary to (1) consider

differential relationships of engagement with valued outcomes as a function of level of measurement as well as (2) determine the theoretical and practical differences between classroom-specific and larger school community engagement (Fredricks et al. 2004; see also Marks 2000).

Conclusions

Student engagement with school remains a construct with great potential for enabling richer understandings of students as integrations of behavior, cognition, and emotion (Fredricks et al. 2004) and interactive across contexts (Christenson and Anderson 2002). Attention to engagement indicators enables identification of disengaging students while efforts toward facilitators of engagement can hone intervention efforts. Engagement has relevance for all students with effective identification efforts spread across schools or youth-serving organizations and efficient intervention practices varied according to levels of alterable risk (see Christenson et al. 2008). Despite many areas of agreement, there are conceptual and methodological issues that require further attention to increase the precision of descriptions, understanding of mechanisms, and effectiveness of intervention efforts.

Cross-References

► [Academic Achievement: Contextual Influences](#)

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Substance Abuse Treatment

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Overview

Adolescence represents a risk period for drug involvement and problems associated with drug use. Whereas the adolescent drug abuse treatment field has made great strides in the development of evidence-based approaches, many challenges exist to improve treatment outcomes. This essay discusses several promising avenues to promote treatment responses.

Treatment Need

Alcohol and other drug abuse among American youth continue to present a significant public health concern. Adolescence represents a critical period for the onset of drug use. The onset of use during these years negatively impacts cognitive, physical, and psychosocial development, and it increases the likelihood for developing a substance use disorder (SUD). Further, for some youth, it contributes to a progression to a longer-term addiction (Chung and Martin in press).

According to the National Survey on Drug Use and Health, approximately 144,000 adolescents per year

receive treatment for drug or alcohol problems (SAMHSA 2009). Available treatment tends to be relatively low intensity: 64% of adolescent specialty treatment is non-intensive outpatient, 16% intensive outpatient, and 16% residential (SAMHSA 2009). However, among youth that meet DSM-IV criteria for at least one substance use disorder (SUD), it is estimated that about 90% do not receive drug treatment (SAMHSA 2009). There may be several reasons for the large gap between SUDs and treatment utilization by youth: little if any local treatment options, poor health coverage, low motivation by the youth, and unsupportive parents.

Treatment Effectiveness

Despite this issue of low treatment utilization, significant advances have been made since 1990 in the development and scientific evaluation of treatments for adolescent drug abuse (Dennis and Kaminer 2006). Perhaps the most significant sign of these advances is the increased rigor in evaluating the effectiveness of treatment approaches and strategies. Many treatments for adolescents with a SUD that are now considered evidenced based (evaluated with a clinical controlled trials), including family-based treatments, motivational enhancement approaches, 12-step, therapeutic community, community reinforcement approach, cognitive behavioral, and pharmacological approaches (Deas and Thomas 2001; Williams and Chang 2000; Winters 1999; Winters et al. 2009). Also, brief interventions are receiving more attention for use in diverse settings, such as in emergency rooms, school-based clinics, and juvenile detention settings (O’Leary and Monti 2004). Despite prominent differences in design and methodology, the most recent studies employing various treatment modalities in youth with SUD have reported remarkably similar outcomes (Waldron and Turner 2008).

Yet abstaining from alcohol and other drugs represents a major challenge for adolescents during and after treatment. They are especially vulnerable to relapse right after completion of a treatment program (Deas and Thomas 2001; Winters et al. 2009). This body of work indicates that adolescents generally show relapse rates by 1 year to be in the range of 40–60% (Winters et al. 2009), and that longer-term recovery is often marked by cycles of recovery and relapse (Dennis and Scott 2007). A recent meta-analysis of treatment

outcome studies for adolescents show about a 67% relapse rate by 1 year (Lipsey et al. 2010). Another problem is that a sizable number of teenagers drop out during treatment (Deas and Thomas 2001; Godley et al. 2004).

Research is responding to these problems. It is doing so by investing in the study of these two general types of poor responders to adolescent drug abuse treatment: youth who do not complete treatment (i.e., dropout and administrative discharge) and youth who complete treatment yet who soon relapse.

Improving Treatment Response

Researchers have begun to identify candidate variables associated with treatment response, such as increasing problem recognition (O’Leary and Monti 2004), and mediators of behavioral change to reduce relapse, such as improving self-efficacy (Burlinson and Kaminer 2005) and perceived family support (Liddle et al. 2001). Yet in the face of growing consensus that SUD is a chronic disorder (McKay 2005) with relapsing-remitting course (Chung and Martin in press; McLellan et al. 2000), greater attention has been placed by treatment providers on the role of aftercare or continuing care (CC) to improve treatment response. The American Society of Addiction Medicine defined CC as “The provision of a treatment plan and organizational structure that will ensure that a patient receives whatever kind of care he or she needs at the time.” The treatment program thus is flexible and tailored to the shifting needs of the patient and his or her level of readiness to change (American Society of Addiction Medicine Patient Placement Criteria 2001, p. 361).

It is challenging for treatment providers to connect adolescent clients to aftercare programs and services (Winters and Kaminer in press). Too often there is minimal or no coordinated effort to provide a system of continuing care (CC), and when CC is provided there is a substantial variability within and between programs. Clients are vulnerable to relapse in the face of inconsistent and weak posttreatment support. Many youth do have aftercare options in their community, and when referrals are made, many adolescents do not engage in such services, or if they do, minimally so. Godley and colleagues (Godley et al. 2007) found that only 36% of adolescents discharged from residential treatment attended one or more aftercare sessions at community clinics.

Whereas the use of “booster” sessions had been a common strategy for providing CC for clients with a mental disorder, an emerging view with the addiction field is that posttreatment support should include a continuum of care including management and monitoring similar to methods used in chronic disease management (McKay 2005; Scott et al. 2005). I have identified five emerging approaches for strengthening CC for adolescents with a SUD: developmentally suitable treatment, adjusting treatment given the heterogeneity of youth, use of technology, use of reinforcements, and recovery high schools. Each approach is briefly discussed below.

Shaping Treatment to Be Developmentally Relevant

Treated teenagers differ from their adult counterparts in length and severity of substance use, typical patterns and context of use, type of substance-related problems most often experienced, and source of referral to treatment (Chung and Martin in press). Moreover, new findings from brain imaging studies suggest that the brain continues to develop through adolescence and into young adulthood (about age 25 years) (Gogtay et al. 2004), and additional studies suggest that the way the brain develops during adolescence may contribute to risky judgments, including the tendency to make choices based heavily on emotion, may position the teenager to be particularly vulnerable to the effects of drugs, particularly alcohol (Spear 2002). These neurodevelopmental findings have led to various speculations about their clinical implications, including that youth may be less motivated to change drug use behaviors than adult clients, that advice alone may be ineffective for promoting change for a teenager, and that positive peer influences and interactions during treatment may be important to treatment outcome (Winters 2009). Furthermore, youth often enter treatment because of external pressures by adults (e.g., referral by a concerned parent, mental health clinician, or school staff) (Battjes et al. 2003), which may further contribute to the teenager’s negative attitude about drug treatment.

Treating adolescents with a SUD may include several features that take into account their developing brain (Winters 2009). It may include client-centered, motivational interviewing (MI) techniques as well as group therapy with older teenage role models. It also

includes active or experiential learning techniques (e.g., role playing, psychodrama, recreational activities as a therapeutic tools). Lastly, it also involves skill building techniques for coping with stress and to reduce urges to return to drug use.

Addressing Youth Heterogeneity by Adapting CC

A promising approach to deal with the heterogeneity of client problem profiles is adaptive or “SMART” interventions (Lavori et al. 2000; Murphy et al. 2007; Ridenour and Stormshak 2009). The basic application of this approach is to apply an algorithm of enhanced treatment for those individuals who do not respond well to the initial level of treatment. Poor responders are then provided a different or a more enhanced version of the same treatment. Given that many youth do not readily respond to treatment, an adaptive procedure may benefit the youth drug abuse treatment field.

A challenge to this approach is how to define poor treatment response and the timing of when to apply the next step of treatment. Should the client be switched from initial treatment to another strategy? If so, to what type of treatment approach? Or perhaps the client should receive a more intensive version of the same treatment, or have a supplemental treatment to augment what the client is already receiving (McKay 2009). One secondary effect of the adaptive approach is that it has the potential to increase rates of participation; the burden on the patient is lower at the outset, and the tailoring that occurs for nonresponders may be perceived favorably by these clients. Adaptive care may also increase cost-effectiveness and cost-benefit, because lower intensity treatments are also often less costly.

The extant research on adaptive approaches is limited to the adult literature. Adaptive or stepped care treatment algorithms have been developed and evaluated for affective disorders (Otto et al. 2000; Scogin et al. 2003). McKay (2009) summarized 15 adult drug treatment studies; most of these studies concluded that the adaptive approach was associated with either better drug use outcomes or equivalent outcomes compared to treatments with other advantages (e.g., lower cost and lower patient burden).

Using Technology to Strengthen Aftercare Services

Aftercare services are beginning to include the use of the Internet and the telephone to promote access to and engagement with adolescent clients after primary treatment (Kaminer and Napolitano 2004, 2010). The Internet provides a cost-efficient and practical opportunity for easy and timely communication between counselors and clients; its use as an adjunct to CC merits greater attention by service providers. The application of the telephone for aftercare has formally been investigated. Kaminer and colleagues (Kaminer et al. 2008) studied aftercare for youth to test the relative efficacy of three randomized aftercare conditions for treatment completers that included: individualized 50-min integrated motivational enhancement and cognitive behavioral therapies, individualized integrated motivational enhancement and cognitive behavioral therapies, brief therapeutic phone contacts limited to 15 min only, and no-intervention control condition. Ninety percent of treatment completers finished the assigned aftercare conditions. The phone intervention was found to be feasible and acceptable to both adolescents and therapists (Burlinson and Kaminer 2007). There was a significant reduction for number of drinking occasions, heavy drinking occasions, drinks per occasion, and highest number of drinks per occasion as a function of combined active aftercare conditions versus the no-active aftercare condition.

Employing Reinforcements to Promote Post-treatment Recovery

Incentive-based approaches have been applied to adults (Carroll and Onken 2005), and this strategy is beginning to be investigated with adolescents. Incentives or vouchers are often in the form of award prizes (e.g., dollar prizes) and are contingent on client abstinence and treatment compliance (Sindelar et al. 2007). This approach is based on the operant conditioning principle that the use of consequences can modify behavior.

An illustration of this strategy with youth was reported by Henggeler and colleagues (Randall et al. 2001). Multisystemic therapy (MST) was adapted with community reinforcement plus vouchers approach (CRA) to treat adolescents with a substance use disorder. Key features included frequent random urine screens to detect drug use, functional analyses to

identify triggers for drug use, self-management plans to address identified triggers, the development of drug avoidance skills, and vouchers to reward treatment compliance and abstinence.

Given that the scientific progress in behavioral treatments for adult SUDs includes the use of vouchers, such incentive-based approaches to promote recovery for youth merits greater attention. These approaches can be readily integrated into the variety of behavioral approaches that are becoming the mainstay in adolescent treatment, including cognitive behavioral therapy, contingency management, and family therapy.

Recovery High Schools

School is a critically important social environment for adolescents with SUDs. On the one hand, school sits at the heart of the threat of relapse and other unhealthy and maladaptive behaviors. The National Survey of American Attitudes on Substance Abuse annual survey of students ages 12–17 (Center on Addiction and Substance Abuse 2009) found that about two-thirds of high school students say drugs are used, kept, or sold on the grounds of their schools. Most adolescents who receive treatment for SUDs return to their pretreatment schools. Association with drug-using peers, alcohol or drug availability, and academic challenges (Clark and Winters 2002; Hawkins et al. 1992; Svensson 2000) are significant relapse-risk factors for youth after drug treatment. One study found that virtually all adolescents returning from treatment to their old school reported being offered drugs on their first day back in school (Spear and Skala 1995). For the student who attempts to resist peer pressure, difficulty coping with negative feelings and interpersonal conflict may endanger a teen's newly established sobriety (Winters et al. 2009).

Yet, schools can be opportunities for promoting recovery and protecting students. School bonding, school interest, and academic achievement are negatively associated with substance use, particularly among low-achieving students (Bryant et al. 2003). Succeeding academically can help students stay sober and ultimately graduate (Winters et al. 2009), as “connectedness with school” is a protective factor for adolescents (Resnick et al. 1997), and involvement in pro-social school activities can promote recovery (Vaillant 1988).

Recovery high schools (RHSs) provide an alternative high school option to provide recovery support and a protective environment for students with SUDs and related behavioral, emotional, or mental health needs. They provide academic, therapeutic, and supportive services that support the therapeutic needs of students. Unlike traditional remedial programs, which usually provide short-term therapeutic interventions and then return students to mainstream schools, RHSs provide a longer-term setting from which students may choose either to graduate or to transition back to their regular schools. Recovery schools tend to be schools of choice and emphasize the willingness of a student to attend as an enrollment criterion.

While these schools offer a promising approach to significantly improve both academic and behavioral outcomes, RHSs have not been rigorously tested for either effectiveness or cost-benefit. RHS-specific research is sparse and mainly descriptive, appearing in theses and unpublished reports and papers (Finch 2008). Overall, these reports suggest that RHSs are feasible to implement and sustain, and participating students and staff believe they have positive educational and behavioral outcomes. As more districts and state or federal agencies consider funding recovery school programs, evidence using rigorous approaches is needed to demonstrate better and more cost-beneficial behavioral and academic outcomes relative to similar recovering students in mainstream schools. Assuming overall effectiveness is demonstrated, additional analyses to characterize the most effective program elements is needed to guide policy and service development.

Future Directions

Perhaps the most important future research priority for this field is to address the issue of poor response to treatment. There is still a lack of research aimed at enhancing treatment strategies to maximize treatment engagement and completion (Winters et al. 2009), and only a few programs clearly specify what types of efforts (if any) will be made for linking adolescent clients to CC (Godley and Godley in press). Two empirical studies on CC have been published to date (albeit not adaptive CC) (Godley et al. 2007; Kaminer et al. 2008), and along with other outcome studies, the field is beginning to identify factors that influence response

(e.g., motivational factors, presence of coexisting disorders, peer drug use, parental support, application of coping skills, and availability of continuing care). It stands to reason that treatment approaches and strategies that optimally address these factors, such as motivational enhancement strategies and cognitive behavioral therapy, will be effective when applied to youth with a drug abuse problem. A related future research priority is the investigation of factors affecting extended recovery. The emerging interests in the use of adaptive treatments, technology-based aftercare services, and recovery high schools are promising. It is also this author's view that the treatment field has not taken advantage of brain development research to further refine treatment. Findings from neurodevelopment research provide potentially new insights regarding how to engage youth in the behavior change process, including the content and delivery of treatment.

In sum, it is estimated that there are more than 300 controlled evaluations of alcohol dependence treatments in the adult literature (Miller and Wilbourne 2002), and there are also numerous controlled evaluations of drug dependence treatments for adults. Whereas by comparison there is a modest number of controlled evaluations of adolescent drug abuse treatments, this area of study is making great advances in research and the future looks bright as the knowledge base further expands the understanding of the nature and extent of effective treatments.

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Cross-References

- ▶ [Alcohol Use](#)
- ▶ [Alcohol Use Disorders](#)

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Substance Use Risk and Protective Factors

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Overview

Adolescent drug use continues to be a major public health problem in the USA and is a global concern. Although countless youth engage in problem behaviors such as delinquency and truancy, participation in some of these risky behaviors decreases with age. However, the trend is reverse for adolescent drug use. Drug use initiated during adolescence may continue into adulthood (Kandel and Chen 2000) and could lead to more serious drug behaviors, such as drug abuse and dependence (Kandel 1980). These trends, among others, make significant a close examination of adolescents' use of drugs.

To further the understanding of adolescent drug use, this essay provides an overview of existing research findings relating to it. The analysis begins with offering succinct definitions of drug use and is followed by a discussion on gateway drugs, since adolescent drug use experimentation often initiates with these substances. An overview of the prevalence and consequences of adolescent drug use is then presented. Next, a review of the major theories used to understand adolescent drug use and a comprehensive review of the risk and protective factors associated with adolescent drug use are presented. It is noted that these biopsychosocial factors that are examined have been salient in developing preventive interventions and will be important as future interventions are modified to be more effective and long-lasting. Attention is then given to discussing gender differences in adolescent drug use. The essay concludes with a discussion of populations generally studied, measurement issues, and future research needs.

Definitions of Drug Use

Licit or legal drug use refers to the use of legal drugs, such as tobacco and alcohol. Although licit drugs are

legal, when they are used by individuals under 21 years of age (18 for cigarettes), it is illegal. Illicit or illegal drug use refers to the use and misuse of illegal and controlled drugs (CDC 2007a). Examples of illicit drugs are heroin, cocaine, and methamphetamine. Drug *use* refers to “the use of selected substances including alcohol, tobacco, drugs, inhalants, and other substances that can be consumed, inhaled, injected, or otherwise absorbed into the body with possible detrimental effects” (Centers for Disease Control and Prevention, CDC 2007b). Drug *abuse* refers to the use of a substance to modify or control mood or state of mind in a manner that is illegal or harmful to oneself or others (NIDA 2005). Drug *dependence* is defined by the DSM-IV-TR (2000) as a maladaptive pattern of drug use that leads to clinically significant impairment or distress. The next section briefly describes the connection and paths between soft drugs and experimentation with hard drugs, abuse, and dependence.

Gateway Drugs

Initially, “gateway drugs” referred to tobacco and alcohol (Dupont 1984). Some researchers have expanded the classification of gateway drugs to include marijuana (Goode 1974; Johnson 1973). The gateway hypothesis suggests that adolescents first experiment with drugs that are legal for adults, such as tobacco and alcohol. It is expected that these softer drugs might be followed by marijuana experimentation and subsequently, hard drugs, such as methamphetamine and cocaine. Youth typically begin experimenting with gateway drugs because these are socially acceptable and easily accessible, and tend to progress to harder drugs after initiation and maintenance of gateway drugs.

Experimenting with gateway drugs reduces barriers and increases opportunities for exposure to illicit drugs. Consequently, youth who engage in tobacco, alcohol, and marijuana use are more likely to use illicit drugs than youth who do not consume these drugs. These youth are also at risk for later drug use, abuse, and dependence. In a study of 27,616 current and former drinkers, Grant and Dawson (1998) examined the relationship between the age alcohol was first used and the prevalence of lifetime alcohol abuse and alcohol dependence among adults at least 18 years of age. They found that adults who started to drink during early adolescence were three to four times more likely

to develop drug problems in later life, than those who began drinking in later adolescence. For instance, the rates of lifetime drug abuse declined from approximately 11% among those who initiated drinking at age 16 or younger to approximately 4% among those whose onset of alcohol use was at age 20 or older. Similarly, the rates of lifetime drug dependence declined from approximately 40% among individuals who initiated drinking at age 14 or younger to approximately 10% among those whose onset of alcohol use was at age 20 and older. In a similar study, Grant (1998) examined the relationship of early onset smoking with lifetime drinking and the subsequent development of DSM-IV alcohol abuse and dependence. Early onset smoking was positively associated with more excessive alcohol consumption and more severe alcohol use disorders compared to late onset smokers and non-smokers. More recently, Hingson et al. (2006) examined the relationship of early onset drinking with age of alcohol dependence and chronic relapsing dependence. Hingson and colleagues found that adults who initiated alcohol use before age 14 years were more likely to experience alcohol dependence and within 10 years of onset of alcohol use compared to adults who began drinking at 21 years or older. These early initiators more often experienced past-year drug dependence and multiple chronic dependence episodes. As a whole, these findings support the need to implement policies and prevention programs that delay gateway drug consumption.

Prevalence of Adolescent Drug Use

The National Survey on Drug Use & Health (NSDUH) is one of the most widely known national studies of drug use. It provides information on the prevalence of tobacco, alcohol, and illicit drug use. It is a national sample of the civilian noninstitutionalized population ages 12 and older that provides data on patterns of drug use among different age, gender, and ethnic groups (Substance Abuse and Mental Health Services Administration, SAMHSA, 2007).

Tobacco Use

According to SAMHSA (2007), in 2006, among all youth ages 12–17, 3.3 million (12.9%) reported that they used tobacco at least once during the past month. Of these, 2.6 million (10.4%) reported smoking cigarettes. The prevalence of current cigarette smoking

declined in 2006 to 10.4% from 13.0% in 2002. Among youth ages 12–17, the prevalence of cigarette smoking was slightly higher for females (10.7%) than males (10.0%) in 2006.

Alcohol Use

In 2006, among all individuals ages 12 or older living in the USA, approximately 125 million people or slightly more than half (50.9%) reported current alcohol use (SAMHSA 2007). Approximately 10.8 million individuals (28.3%) ages 12–20 reported that they were currently drinking alcohol. Among this age group, more males (29.2%) than females (27.4%) reported current alcohol use. Among youth ages 12–17, the rates of alcohol use among males (16.3%) were similar to females (17.0%) (SAMHSA). For youth, rates of current alcohol use was 3.9% among individuals ages 12 and 13, 15.6% among individuals ages 14 and 15, 29.7% among 16- and 17-year-olds, 51.6% among young adults ages 18 and 20, and 68.6% among individuals ages 21–25 years of age (SAMHSA). These findings suggest that age is positively associated with alcohol use (SAMHSA).

Illicit Drug Use

NSDUH includes six categories of illicit drug use: marijuana, cocaine, heroin, hallucinogens, inhalants, and the nonmedical use of prescription-type pain relievers (tranquilizers, stimulants, and sedatives). According to SAMHSA (2007), in 2006, 9.6% of youth ages 12–17 reported using illicit drugs. The prevalence of illicit drug use increased with age. Illicit drug use was reported by almost 4% of youth ages 12–13, 9.1% of youth ages 14 and 15, 16.0% of youth ages 16–17, and 22.2% among individuals ages 18–20. Illicit drug use was lower among individuals ages 21–25 at 18.3% than individuals ages 18–20 (SAMHSA). Therefore, it seems that illicit drug use increases with age until individuals reach young adulthood (ages 21 and older).

Among youth ages 12–17 that reported using illicit drugs, 6.7% used marijuana, 3.3% misused prescription-type pain relievers, 1.3% used inhalants, 0.7% used hallucinogens, and 0.4% used cocaine (SAMHSA 2007). Among these youth, the types of drugs used varied by age group. For example, the drugs most commonly used by 12–13-year-olds were prescription-type pain relievers (2.0%), followed by inhalants (1.2%), and marijuana (0.9%). However,

marijuana was the dominant drug used by 14- and 15-year-olds (5.8%), followed by prescription-type pain relievers (3.1%), and inhalants (1.7%). Marijuana was also the most commonly used drug among 16–17-year-olds (13.0%), followed by prescription-type pain relievers (4.7%), hallucinogens (1.3%), inhalants (1.1%), and cocaine (0.8%).

Male and female adolescents ages 12–17 had similar rates of current marijuana use (6.8% and 6.4%, respectively). Current marijuana use among male adolescents declined from 9.1% in 2002 to 6.8% in 2006. It also slightly declined among female adolescents from 7.2% in 2002 to 6.4% in 2006 (SAMHSA 2007).

Consequences of Adolescent Drug Use

A number of studies have documented the micro and macro consequences of adolescent drug use (e.g., Boyd et al. 2006; Jordan and Lewis 2005). On a micro level, drug use is associated with psychosocial, academic, mental health, and health consequences. Adolescent drug use is associated with social consequences, such as juvenile delinquency (Jordan and Lewis 2005), unprotected sexual activity (Boyd et al. 2006), adolescent pregnancy, violence and homicide, motor vehicle accidents and injury related to impaired driving (Wu and Khan 2005), and later unemployment (Brook et al. 2002). Drug use and abuse is also correlated with adverse psychosocial consequences to include disruption of family life and suicide (Emshoff et al. 1996; Ensminger and Slusarcick 1992; Segal and Stewart 1996). In addition, adolescent drug use is correlated with academic consequences, such as school failure and poorer school adjustment (Hays and Revetto 1990). Drug use at an early age has also been correlated with negative adverse mental health outcomes, such as impaired developmental and mental health functioning (Anthony and Petronis 1995; Belenko et al. 2004; Choi et al. 2005).

Drug use, abuse, and dependence also impact society on a macro level. Drug abuse costs the USA over \$484 billion annually through its effects on the criminal justice and social service systems (National Institute on Drug Abuse 2005). These costs include drug treatment; housing inmates; welfare stipends and other support, such as housing; and care for children whose parents are drug abusers. The annual cost

of drug abuse to the USA is substantially more than other health areas, such as cancer (\$171.6 billion) and diabetes (\$131.7 billion).

Major Theories of Adolescent Drug Use

To date, there is not a single theory that dominates the adolescent drug use literature, and extensive reviews of the primary theories used to foster an understanding of adolescent drug use have been provided by other researchers (e.g., Petraitis et al. 1995; Ramussen et al. 1998). Numerous theories exist; a list of a few major theories that are used to understand adolescent drug use are presented. For example, some theories, such as Theory of Reasoned Action (Ajzen and Fishbein 1980) and Theory of Planned Behavior (Ajzen 1985; 1988) focus primarily on cognitive causes of adolescent drug use and describe how the decision-making process contributes to adolescent drug use. Other theories, such as Social Learning Theory (Akers 1977) and Social Cognitive Theory (Bandura 1977, 1986) describe how weakened commitment to conventional values and weakened attachment to family affect adolescent substance use. Theories are also available that focus on conventional commitment and social attachment and detail how various factors promote withdrawal from conventional society, detachment from peers, and attachment to peers who use drugs. An example of a conventional commitment and social attachment theory is The Social Development Model (Hawkins and Weis 1985). Other theories detail how intrapersonal characteristics and personality traits of adolescents contribute to adolescents drug use, such as The Social Ecology Model (Kumpfer and Turner 1990–1991), Self-Derogation Theory (Kaplan 1975), Multistage Social Learning Model (Simons et al. 1988), and Family Interaction Theory (Brook et al. 1990). In addition, some integrative theories incorporate cognitive, learning, commitment/attachment, and intrapersonal influences, such as Problem-Behavior Theory (Jessor et al. 1991) and Peer Cluster Theory (Oetting and Beauvais 1986a, 1986b, 1987).

Risk and Protective Factors for Adolescent Drug Use

Hawkins et al.'s (1992) seminal work of risk and protective factors for adolescent drug use provides

a comprehensive conceptual framework. With few exceptions, most research that has explored the adolescent drug use phenomenon has investigated risk factors. This essay provides a review of factors that lead to (risk) and reduce (protective) adolescent drug use. *Risk factors* have been defined as indexes or markers that exacerbate the negative effects of the risk condition (Luthar et al. 2000). *Protective factors* have been defined as influences that prevent, limit, or reduce drug use and that may counter, buffer, neutralize, and interact with risk factors within or across time (Brook et al. 1989a, b). Extensive research on the risk and protective factors associated with adolescent drug use has been completed elsewhere (e.g., Hawkins et al. 1992) and is beyond the scope of this essay. In the next section, risk and protective factors across five domains that are associated with adolescent drug use are briefly discussed. These include individual, family, peer, school, and neighborhood factors.

Individual Domain

Individual protective factors can include intelligence, problem-solving ability, social skills, positive self-esteem, positive attitude, positive temperament, emotional stability, and low childhood stress (Grover 1998). Other individual and cultural protective factors may include high religiosity and ethnic identity and low experiences of discrimination and racism (Belgrave et al. 2000; Belgrave et al. 1997). Individual risk factors for adolescent substance use may include a sensation-seeking orientation, poor impulse control, attention deficits, and hyperactivity (Jenson 2004). Behaviors and temperament traits that increase vulnerability to drug use develop as early as age 5 (Zucker et al. 1995). The behaviors and traits manifested in these young children include impulsivity, reduced ego control, and attention deficit disorder (Cicchetti et al. 1993; Hinshaw et al. 1993); difficult temperament (Patterson 1986); below-average verbal IQ (DeBaryshe et al. 1993; Tremblay et al. 1992) and academic underachievement (Hinshaw et al. 1993); negative affect (Compas 1987) and difficulties with emotional regulation (Cole and Zahn-Waxler 1992); social incompetence (Blechman et al. 1995); and aggression and coercion as means to rewards (Patterson et al. 1992; Quay 1993). Genetics is also a risk factor for adolescent drug use that falls within the individual domain, and is discussed next.

Some studies have suggested that adolescent *drug use* may be related to social factors, such as parenting and peer influences, whereas *drug use disorder* may be related to genetics (e.g., Glantz and Pickens 1992). Researchers have found that children of alcoholic parents show more alcoholism than those whose biological parents are not alcoholic (Center for Substance Abuse Prevention 1993). For example, in a study of adopted children, Cadoret et al. (1995) found two possible pathways from parental alcohol use to their children's drug use, genetics, and modeling. In one path, they found that alcoholism in the biological parent predicted substance use disorder in the children. Similarly, Tsuang et al. (2001) focused on the relationship between genetics and adolescent drug use. Tsuang and colleagues found that biological children of alcoholics who were raised by nonalcoholic parents were shown to have a three- to fourfold increased risk for alcohol abuse than adoptee children whose biological parents were not alcoholics. Despite significant findings that genetics is associated with drug use, currently no single gene is thought to account for adolescent drug use, abuse, or dependence.

Family Domain

In general, research continues to illuminate the protective capabilities of families. Family protective factors can include being a firstborn child, being raised in a small family, low parental conflict, caring relationships with parents and siblings, and caring relationships with extended family members. Family risk factors for substance use include family conflict, poor family management practices, dysfunctional family communication patterns, parent and sibling substance use, and poor parent-child bonding (Jenson 2004; Windle 2000). Parenting factors considered important in the adolescent drug use literature include the parent-adolescent relationship, parental monitoring, and parental attitudes toward drug use. These parenting factors are briefly described next.

As mentioned previously, family cohesiveness is a protective factor for adolescent drug use. A close, loving, and affectionate relationship between parents and adolescents is also an important factor in protecting adolescents from drug use (Brook et al. 1990; Stewart 2002). Specifically, a close parent-adolescent relationship directly inhibits drug use and indirectly

influences peer selection (Bahr et al. 1998; Sokol-Katz et al. 1997). However, a few researchers have found weak or no relationship between the quality of family relationships and adolescent drug use (e.g., Bahr et al. 1995; Hoffmann and Su 1998).

Adequate parental monitoring and supervision of adolescents' behaviors is negatively associated with drug use (Barrera et al. 2001; Miller and Volk 2002). Adolescents who receive inadequate monitoring are more likely to report drug use than adolescents who are monitored adequately (Barrera et al. 2001; Miller and Volk 2002). Flannery et al. (1999) found that adolescents who received poor parental monitoring or adult supervision were four times more likely to engage in drug use during their lifetime than those who received adequate parental monitoring and supervision. In another study, positive parental monitoring by fathers decreased the likelihood that their children would engage in drug use (Brook et al. 2001).

The role of parental attitudes toward adolescent drug use has been studied by many researchers (e.g., Brook and Brook 1987; Wen et al. 2005). Yu (2003) found that adolescents' perceptions of their parents' attitudes toward underage drinking influenced their lifetime drinking, but not current drinking or initiation of alcohol. According to SAMHSA (2005), adolescents who felt that their parents did not strongly disapprove of their marijuana use were six times more likely to use marijuana than adolescents who felt their parents disapproved. McDermott (1984) found that perceived parental drug attitudes had stronger effects on adolescent drug use than parental drug use.

Peer Domain

Although the family is important in adolescent drug use, peer influence is a primary predictor and risk factor for adolescent drug use (Bahr et al. 2005; Reinherz et al. 2000), and is a stronger predictor of drug use among older (e.g., high-school students) than younger adolescents (e.g., middle-school students) regardless of race/ethnicity (Windle 1996). Affiliation with peers that engage in risky behaviors, such as drug use and truancy, increases the likelihood of an adolescent engaging in drug use (Beauvais and Oetting 2002; Hawkins et al. 1992). This is true for most drugs. Peer alcohol use is associated with adolescents' own alcohol use (Hawkins et al. 1992). Likewise, peer

cigarette and illicit drug use are associated with adolescent cigarette and illicit drug use (Lynskey et al. 1998).

School Domain

School risk factors can include academic failure, truancy, and special placements (Clark et al. 2008; McCluskey et al. 2002). High academic performance and school involvement are associated with lower levels of drug use (Dekovic 1999; Wallace and Muroff 2002). The adolescent drug use literature has explored school risk and protective factors, to include the school's climate, resources, and the relationship between the student and teacher. However, more recently the role of school transitioning upon adolescent drug use has been given more attention. Given the nature of the developmental process, this relationship is important and is briefly described next.

Youth experience stressors partially due to developmental changes that typically coincide with their transition from elementary school to middle school, middle school to high school, and high school into college or a vocation. Puberty and school transition usually occur simultaneously for girls and both may produce stressors that contribute to the onset of adolescent drug use (Khoury 1998; Petersen et al. 1991). Youth involved in transitions (e.g., new schools) may be particularly susceptible to risks because of pressures to develop new peer relationships. Petersen, Sarigiani, and Kennedy found that transition from a relatively safe and closely monitored elementary school environment into a larger, less intimate middle school in sixth grade may be stressful. Multiple stressors that co-occur with school transitions, such as developmental changes and relocating to a new neighborhood or city, may lead to drug use, particularly among adolescents who lack adequate coping skills.

Community/Neighborhood Domain

In contrast to family, peer, and school contexts, the neighborhood as a social system has been understudied in relation to adolescent substance use (Lambert et al. 2004). However, although a proximal factor, the neighborhood context may be important in understanding adolescent drug use. Neighborhood protective factors for adolescents substance use include neighborhood cohesion, neighborhood resources, and economic viability in neighborhoods (Plybon et al. 2003).

Neighborhood risk factors for adolescents substance use include neighborhood disorganization, low neighborhood attachment, high rates of residential mobility, high levels of crime, and high population density (Gruenewald et al. 2000). Social disorganization theory suggests that the lack of formal and informal institutions, structured activities, and intra-community relationships reduce social capital. This reduction of social capital negatively impacts a community's capacity to reinforce positive behaviors or sanction negative behaviors (Rose 2000; Veysey and Messner 1999). Consequently, limited community resources may contribute to lowered motivation to avoid behaviors that have negative consequences (Corneille and Belgrave 2007).

Gender Differences in Youth Drug Use

Over the past 30 years, there has been an increasing drug use convergence among boys and girls with the prevalence rates for females becoming comparable to or, in some instances, higher than males (Johnston et al. 2005; National Center on Addiction and Substance Abuse at Columbia University 2005). For instance, in 2004, more girls than boys reported that they initiated use of cigarettes, alcohol, and marijuana, and girls surpassed boys in their misuse of prescription drugs (SAMHSA, 2005). One explanation that accounts for the increase in female drug use is the changing roles of females in the USA. More females reject traditional feminine roles for androgynous gender roles, are entering the work force, and are more likely to remain single or divorce than in the past (Robbins and Martin 1993; Barber and Eccles 1992).

Exploring gender differences in adolescent drug use is salient because the consequences of drug use are more severe for girls than boys. For instance, once girls begin to use drugs, they are more likely to become drug dependent and do worse in drug treatment (Moochan and Schroeder 2004; Rowe et al. 2004). Furthermore, girls are more likely to experience poor nutrition, risky sexual behavior, pregnancy, and domestic violence than their male counterparts (U.S. Department of Health and Human Services 1994).

Miller and Stiver's (1997) relational theory can be used to understand gender differences in motivation to use drugs. Relational theory emphasizes the importance of others in the development of self. The assumption is that adolescent girls initiate and maintain drug

use within the context of relationships with their family and peers. Boys are less relationally oriented and therefore may be less susceptible to peer pressure when compared to girls. For example, adolescent girls are more likely than adolescent boys to drink alcohol to fit in with their friends, while boys typically drink for other reasons and subsequently, select friends that also drink (Donovan 1996).

Populations Generally Studied

Although adolescent drug use affects diverse groups, the groups studied tend not to be diverse. Adolescent drug use has typically been investigated using white, middle-class adolescents. Recently, researchers have begun to articulate the limitations of primarily focusing on this population. As a result, more studies are including other populations that differ according to race/ethnicity, socioeconomic status, and geographic locale, for example. In addition, adolescent drug use studies normally use public school student samples. School-based samples provide a normative basis for examining problem behavior and providing comparisons with other studies. However, a consequence of using school-based samples is that these studies likely exclude students who are consistently suspended or chronically absent. These studies also exclude students who have dropped out of school and those who are home schooled. In addition, private schools are disproportionately studied as compared to public school students; therefore, private school students are also typically excluded. Consequently, many existing findings cannot be generalized to the larger population of all adolescents to include adolescents who have dropped out of school, are chronically truant, are home schooled, and are enrolled in private schools.

Measures and Measurement Issues

Current measurement issues in the adolescent drug use literature primarily relate to the overuse of self-report measures; focus on white, middle-class adolescents; and scale coarseness. Many studies of adolescent drug use continue to rely exclusively on self-report. Advantages of the self-reporting process is that it is less costly, less time consuming, and participants might be more likely to reveal undesirable behaviors. A disadvantage of the self-reporting process is response bias. Response

bias may limit the ability to gather honest data that accurately reflects participants' attitudes and behaviors. Participants responding to drug use questions may be particularly reluctant to disclose their true attitudes and behaviors and, therefore, may answer in a way that is more socially desirable.

Many empirical studies on adolescent drug use are limited by their focus on white, middle-class adolescents. Consequently, the findings of these studies may not be generalizable to African American adolescents. Likewise, many measures were developed using white, middle-class adolescents. As a result, many measures may not be valid for African American adolescents.

When a construct is continuous but is measured by a measurement scale that uses items that collapse true scores into a category (e.g., Likert scales), the scale is considered coarse (Aguinis et al. 2009). That is, scales are coarse when dependent variables are measured using scales that do not have sufficient response options to reflect the interaction. Consequently, nonlinear and systematic errors are introduced because continuous constructs are collapsed (Bollen and Barb 1981) and power is lost (Russell et al. 1992). Although coarse scales are common, they are undesirable because they do not allow an understanding of the true relationships among variables. Many studies, including those that focus on adolescent drug use continue to use coarse measures.

Future Research

Although there is substantial research in the area of adolescent drug use, more research is warranted. As noted, many studies continue to rely exclusively on self-report methods. Future research should triangulate using multiple sources, to include the use of administrative data and parents, school officials, and peers' report. In addition, many studies continue to use cross-sectional designs. Although cross-sectional studies are appropriate for many exploratory research questions, the use of longitudinal studies could provide greater insight into the adolescent drug use phenomenon. As previously noted, research has been done on risk and protective factors. However, more research that investigates the differences and similarities according to race/ethnicity and community type is warranted. Additional research is needed that would focus on the barriers to implementation of effective preventive interventions. In addition, research that

examines the barriers to retention in prevention interventions is warranted, and may be particularly important for urban minority youth, who may be more transient than other populations.

Cross-References

- ▶ [Alcohol Use](#)
- ▶ [Alcohol Use Disorders](#)

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Suicidality

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Suicidality is the state of being suicidal (O'Carroll et al. 1996). Suicidality typically is described along a spectrum of behaviors and thought. Among the most common aspects of suicidality considered are suicidal ideation (thinking about suicide), suicide plans (taking concrete steps toward suicide and having the intent to die), suicide attempts (going through with suicide plans that are not lethal), and completed suicide (intentionally self-inflicted death). Suicidality has become an increasingly important area of research relating to adolescents. Annually in the United States, approximately 8% of adolescents attempt and 17% consider suicide; such findings have led to important efforts to recognize the significance of suicidality and attempt to understand patterns (see King and Merchant 2008; Connor and Rueter 2009) as well as prevention efforts relating to it (Muehlenkamp et al. 2010).

Cross-References

► Suicide

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Suicide

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Overview

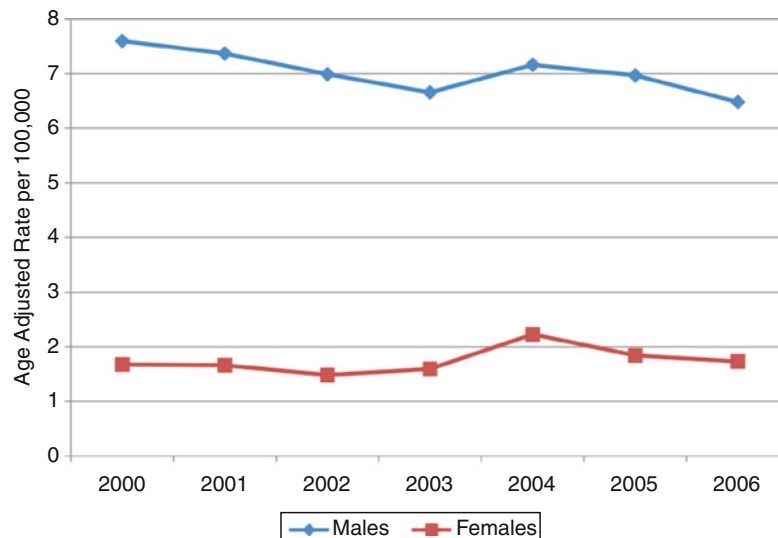
This essay provides an epidemiological overview of recent literature on the correlates and predictors of adolescents suicidal behaviors in the United States. The essay is not an exhaustive overview of adolescent suicide (c.f. Bridge et al. 2006). Rather, it highlights key research findings in this area and focuses on factors most likely to be relevant to those who work with adolescents in various settings.

Suicidal Behaviors and the Adolescent Period

Suicidal behaviors exist on a continuum, from suicidal thoughts or suicidal ideations, to making a suicide attempt, which could result in a nonfatal injury or

suicide. The research relating to these behaviors is complex and only understandable in light of how these behaviors are defined. The Centers for Disease Control (2010a) offers the following definitions to help provide consistency in understanding the data and trends reported for suicide. "Suicidal ideation" is understood as thoughts of harming or killing oneself, and the severity of suicidal ideation can be determined by assessing the frequency, intensity, and duration of these thoughts. "Suicide attempt" is a nonfatal, self-inflicted destructive act with explicit or inferred intent to die. Suicide is a fatal self-inflicted destructive act with explicit or inferred intent to die. These standard definitions will be used throughout this essay, with the term suicidal behavior encompassing suicidal ideations, suicide attempt, and completed suicide.

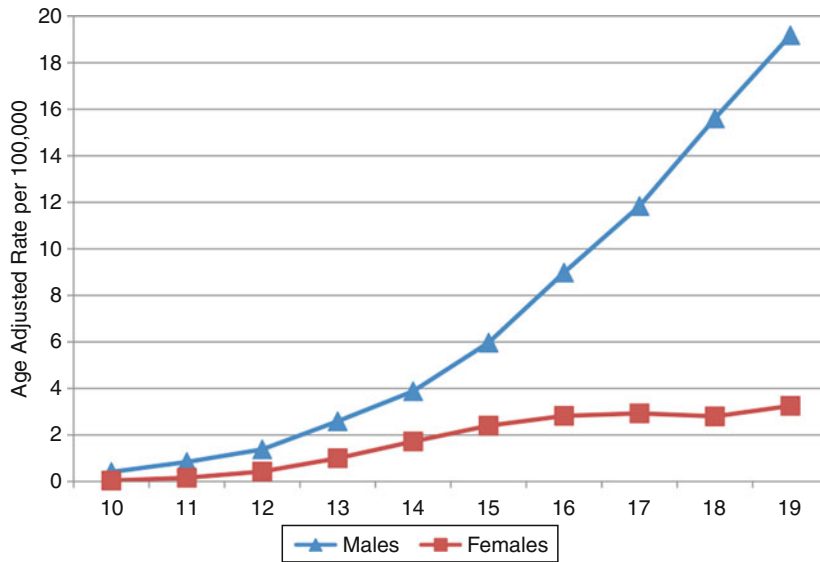
Suicide among adolescents aged 10–19 years is the third leading cause of death in the United States, following unintentional injury and homicide (CDC 2010; MMWR 2007). From 1990 to 2003, suicide rates for young persons ages 10–24 were declining; rates decreased from 9.48 to 6.78 per 100,000 persons (–28.5%). The change in suicide deaths from 2003 to 2004 however increased from 6.78 to 7.32 per 100,000 persons, representing an 8% increase (MMWR 2007). The 2003–2004 suicide rate increase is the largest single year increase in more than a quarter century and does not appear to be a single year anomaly (Bridge et al. 2008; see Fig. 1).



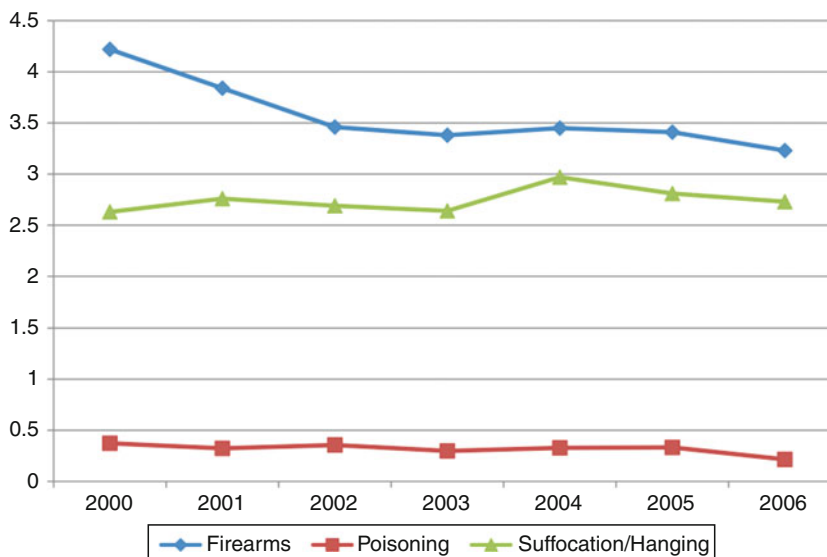
Suicide. Fig. 1 US adolescent suicide injury deaths ages 10–19 years old by gender (2000–2006)

A gender paradox exists where adolescent females have higher rates of suicidal ideation and suicide attempts than males; however, males are more likely to complete suicide (see Figs. 2, 3, and 4). This differentiation appears during the adolescent period. Although many children under the age of 12 years threaten to commit suicide, relatively few make suicide

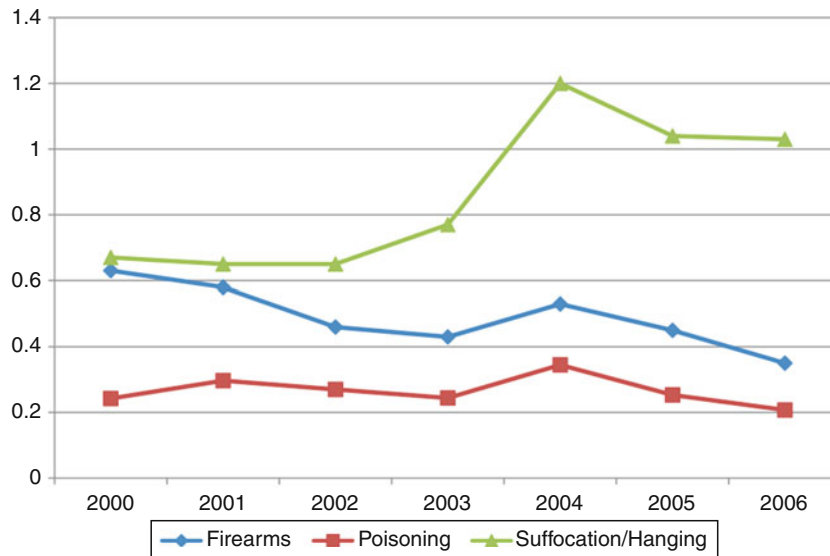
attempts, and completed suicide is extremely rare (Shaffer 1988). In fact, throughout the twentieth century, approximately 0–10 suicides occurred per year among 5–9-year-olds in the United States (Holinger 1994). After puberty, however, suicide becomes increasingly more common with suicide rates increasing in each of the teen years (Fig. 2). Figure 2 also



Suicide. Fig. 2 US adolescent suicide injury deaths for males and females ages 10–19 years old (2000–2006)



Suicide. Fig. 3 US suicide deaths for males ages 10–19 by method (2000–2006)



Suicide. Fig. 4 US suicide deaths for females ages 10–19 by method (2000–2006)

demonstrates that suicide rates increase from childhood through adolescence with a significant difference between males and females as they age. Bridge et al. (2006) stated that the gender difference in youth suicide is most likely due to the greater likelihood of males having multiple risk factors, such as comorbid mood and alcohol abuse disorders, greater levels of aggression, and choice of more lethal suicide attempt methods, which make them more likely than females to make a lethal suicide attempt.

Figure 3 illustrates changes in methods of suicide over time for males ages 10–19 years old (age-adjusted rates), where the decrease in rates of suicide completion by firearms and an increase in suicide by hanging/suffocation from 2003 to 2004 is evident.

Figure 4 highlights the age-adjusted suicide rates for females ages 10–19 years old. Similar to the males (Fig. 3), there was an increase in the suicide rate from 2003 to 2004. There has also been an increase in completed suicide by hanging/suffocation as compared to suicide from firearms.

Levels of Risk Relating to Adolescent Suicide

The CDC (2010) identifies several risk factors for adolescent suicidal behavior. The first level is that of the individual. This level includes the following factors: previous suicide attempt, history of mental disorders (particularly depression), history of alcohol and

substance abuse, feelings of hopelessness, impulsive or aggressive tendencies, experience of loss (family or social losses), and mental health stigma and unwillingness to seek help. The family constitutes the second level, with key factors including a family history of suicide, history of child maltreatment, and rejection of children for their being gay or lesbian. The school provides another level of factors, with the most dominant factor in this arena being peer violence, including bullying. The last level is that of the community, and this level includes local epidemics of suicide, isolation, and barriers to mental health treatment. All of these levels are important to consider, and the following discussion highlights research relating to them.

Individual Risks

Development

Using the National Longitudinal Study of Adolescent Health (Add Health) data, Thompson et al. (2009) examined a developmental model of suicide transition risk over time. Suicide risk was measured through a latent class variable with the following indicators (measured dichotomously): ideation, depression, hopelessness, and family and friend history of suicidal behaviors. Based on the adolescent's response to these items, they were placed into three categories of risk: low, medium, and high risk. They found that adolescents, who are at low risk, will remain at low risk for

suicide as they transition to adulthood. Youth who were at high risk of suicide during adolescence were likely to either remain at high risk or to have a decrease in their suicidal risk as they transitioned to adulthood.

Psychiatric Risks

Psychiatric disorders are present in over 90% of all suicide victims (Bridge et al. 2006). Specific psychiatric disorders have been found to be more associated with suicidal behavior than others. Major depressive disorder has been intrinsically linked to suicidal behavior with those who have an adolescent onset of MDD being at a greater risk of a suicide attempt later on in life (Bridge et al. 2006; Weissman et al. 1999). Goldstein et al.'s (2005) study of suicide attempts among 7–17-year-olds who were diagnosed with Bipolar Disorder I, Bipolar II, or Bipolar NOS found the following factors associated with suicide: mixed bipolar episodes, substance use, panic disorder, greater levels of psychosis, more frequent psychiatric hospitalizations, and self-harm behaviors. Renaud et al. (1999) found that adolescents who were diagnosed with a conduct disorder were three to six times more likely to complete suicide. This area of research reveals how psychiatric comorbidity increases the risk that adolescents will engage in suicidal behavior.

Alcohol and Substance Use

Swahn and Bossarte (2007) examined the relationship between initiation of alcohol use and suicidal behaviors using the 2005 Youth Risk Behavior Survey. They found a robust relationship between preteen alcohol use and suicidal behaviors, both for ideations and attempts. When comparing drinkers to nondrinkers, they found that youth who had experienced sexual assault, carried weapons, history of fighting, and expressed sadness were at a higher risk for suicide ideations and attempts. Those students who were in the ninth grade were more likely to make a suicide attempt. In general, alcohol use by teenagers, regardless of when they had started using, was significantly related to suicide ideations and attempts. When comparing nondrinkers to preteen drinkers, earlier alcohol use was associated with an increase in suicidal behaviors later in life.

Aseltine et al. (2009) found that older adolescents (>18) who participated in heavy episodic drinking (HED) were 1.2 times more likely than those who did not participate in HED to report a suicide attempt.

They also found that HED also may be related to impulsivity and aggression, especially among males, and is a greater risk factor for younger adolescents than compared to those who are 18 years or older. The authors hypothesized that HED among younger adolescents may be more related to social reasons than for managing stress (Aseltine et al. 2009). Schilling et al. (2009) analyzed the relationship between HED and suicide attempt. They found that teens who reported that they drank alcohol when they were down were three times more likely to have a self-reported suicide attempt.

Cognitions

Recent research on adolescent suicide has revealed associations between four different types of cognitive behaviors and adolescent suicidal behavior: poor decision making, poor problem-solving skills (Speckens and Hawton 2005), a deficit in ability to reflect on situations (Oldershaw et al. 2009), and the adolescent's appraisal of a traumatic life event and a negative outlook after the traumatic event (Hirsch et al. 2009). Hirsch et al. (2009) found that the way in which an adolescent processes a stressful, traumatic event may influence their level of suicidal ideation. If the youth has a more optimistic view on life, can avoid self-blame behaviors, and can realistically reflect on the event as being an isolated event, then he or she is less likely to have suicidal thoughts and behaviors. A youth's ability to solve problems and make informed decisions may serve as a buffer for reducing suicidal behaviors.

Sexual Orientation

Russell and Joyner (2001) found that adolescents who self-reported as being gay or lesbian were two times more likely to attempt suicide. Ryan et al. (2009) examined the relationship between family rejection and poor health outcomes among a sample of lesbian, gay, and bisexual white and Latino adolescents. Specifically, 11.8% of those with suicidal ideation had low rejection scores, 21.6% with suicidal ideation had moderate rejection scores, and 43.2% with suicidal ideation had high rejection scores. The same nature of relationship was found between suicide attempts and level of family rejection. Among those that had a suicide attempt, 19.7% had low rejection scores, 35.1% had moderate rejection scores, and 67.6% had high rejection scores. In this study, a family's type of response to an

adolescent disclosing their sexual orientation had a significant impact on their suicidal behaviors.

Parent and Family Risks

A number of risk factors are found at the parent and family level that contribute to an increased risk of adolescent suicidal behaviors. Reisch et al. (2008), using a social disintegration model, found the following family characteristics associated with a youth reporting thoughts of committing suicide ($n = 179$ later elementary school-aged children): low family functioning, poor communication with family members, poor family cohesion, and poor parental supervision. There were no statistically significant differences between adolescents with suicidal ideations and those without in regards to high levels of family conflict or low parental involvement in the child's daily life.

Child maltreatment can lead to negative mental health outcomes, including suicidal behaviors (Afifi et al. 2009; Fergusson et al. 2008; Logan et al. 2009). In families where child abuse occurs, researchers have found an increased risk that the individual will attempt suicide at some later point in their life (Afifi et al. 2009; Logan et al. 2009; Salzinger et al. 2007). Research has found differing effects of different types of maltreatment and suicide risk. Fergusson et al. (2008) found that exposure to child sexual abuse was more predictive of future mental health problems than was exposure to child physical abuse/punishment. Those who experienced child physical abuse also experienced more negative mental health outcomes than those who did not experience physical abuse or who experienced less severe physical punishment. Children who experience both sexual abuse and physical abuse were at the highest risk to develop future suicidal behavior (Brezo et al. 2008). However, poor mental health outcomes associated with exposure to child physical abuse/punishment were related to the "the social and family context within which the CPA [child physical abuse] occurred" (p. 617). Brezo et al. (2008) also found that repeated events of child sexual abuse were more predictive of suicidal attempts as compared to single events. The relationship between the perpetrator and the child has an impact on suicide attempts; when the perpetrator was a family member, there was a greater risk of suicide attempt as compared to unrelated perpetrators.

Afifi et al. (2009) examined the effect of child abuse and parental divorce. They found that when a child

experiences both child abuse and parental divorce there is a statistically significant increase in the likelihood that an individual will have a lifetime attempt of suicide (Afifi et al. 2009). Parental divorce without any type of abuse, however, does not result in an increase in suicidal attempt later in life.

School Risks

School-related issues, including environment, academic success, and peer violence/bullying have an impact on adolescent suicide. For example, Riesch et al. (2008) found that a student's perception of an unsupportive school climate, poor academic achievement, and poor school connectedness were associated with an increase in suicidal ideation. These research findings are mirrored in research relating to bullying.

A working definition of bullying is needed to provide the context for the research findings. Bullying is defined as an act (covert or overt) towards another individual with the goal of inflicting physical or emotional harm towards another individual. Bullying can take the forms of intimidation, harassment, embarrassment, and/or physical violence. Bullying is not limited to one-to-one interactions, but can also be between groups of individuals (e.g., *The Outsiders*, the Socs bullying and attacking the Greasers) (Srabstein 2009). Wyatt Kaminski and Fang (2009) analyzed the relationship between peer victimization and suicidal behaviors using three large longitudinal datasets. They found that, among all three datasets, when controlling for age, sex, ethnicity, and depressive symptoms, adolescents who experience peer victimization are more likely to report suicidal behaviors.

While not a study conducted in the United States, Klomek et al. (2009) findings from the Finland birth cohort study contribute to a better understanding of bullying behaviors and adolescent suicide. Klomek et al. (2009) examined the relationship between bullying and victimization in a population-based birth cohort study in Finland. They found that the effect of bullying and being bullied on suicidal behavior is different for boys as compared to girls. Girls who were bullied were at greater risk of being suicidal as compared to those girls who were neither bullies nor bully-victims. Among boys, those boys who both engaged in bullying and were bully-victims were at greater risk of suicidal behavior than those boys who weren't victims or perpetrators of bully behaviors.

High-profile media reports have documented a new trend in bullying: cyber bullying. Hindjuga and Patchin (2010), in their study of 2,000 middle school youth, compared non-bullied and non-bullying adolescents and found that victims of cyberbullying were almost two times more likely to attempt suicide and those who cyberbullied others were 1.5 times more likely to have attempted suicide compared to those who neither experienced cyberbullying nor perpetrated cyberbullying. Hindjuga and Patchin (2010, p. 2) write "... it is unlikely that experience with cyberbullying *by itself* leads to youth suicide. Rather, it tends to exacerbate instability and hopelessness in the minds of adolescents already struggling with stressful life circumstances." Recent cases of adolescents who were bullied and later committed suicide highlight the need for additional research in this area.

Community Risks

Thorlindson and Bernburg (2009) examined the relationship between community structural characteristics and individual characteristics on adolescent suicidal behaviors. They found that higher levels of community and family instability (e.g., high family mobility) were related to an increased risk of adolescent suicide attempts. They state that community instability demonstrates "how disruptions in social relationships that stem from the structural characteristics of communities can have harmful effects on adolescents" (p. 241). They hypothesized that it is the role of anomie and an adolescent's lack of social ties to positive norms that promotes the acceptance of adolescent suicide as normal and a way of coping with life. Swahn and Bossarte (2009) found a clustering effect of negative risky behaviors based on where a youth lived. Those youth who lived in urban/high risk neighborhoods were more likely to have suicidal ideations, attempted suicide in the last 12 months, carry guns, have poor school performance, currently use alcohol, and have experienced sexual victimization than those who lived in diverse and less risky urban settings.

Access to quality mental health care should, theoretically, reduce suicidal behaviors (Campo 2009). However, several factors are related to barriers associated with accessing care. First, are there empirically based and adolescent tested interventions available? Second, does the adolescent have access to a knowledgeable health-care provider who will

prescribe antidepressants, and will the adolescent take such medications? Third, is the parent/caregiver willing to have their child take antidepressants? Stevens et al. (2009) found that parental perceptions about the benefits and risks of antidepressant medications may influence future medication use. The use of these medications can have direct effects on suicidal behavior. The "black box" warning for adolescent antidepressant, issued by the Federal Drug Administration (FDA) in 2004, for example, led to a decrease in the use of antidepressants in the adolescent population (Libby et al. 2007). Research has since shown that after the decrease in the use of antidepressants, there was an increase in suicide rates in the US, Canada, and the Netherlands (Gibbons et al. 2007; Katz et al. 2008).

Conclusion

Research on suicidal behavior confirms that suicide remains a major preventable cause of adolescent death in the United States. Recently, there has been an increase in suicide rates for adolescents and a change in the means that adolescents use to commit suicide. The current research highlights the importance of identifying risks, not only at the individual level but also at several other levels as well, especially at the parent/family, school, and community levels.

Key research findings identify numerous factors for suicidal behavior risks during the adolescent period. Among the important individual risk factors are major depressive disorder, bipolar disorder, and conduct disorder, preteen use of alcohol, and heavy episodic drinking. Individual risks also include poor decision-making skills, poor problem-solving skills, inability to reflect on situations, and a negative and pervasive appraisal of traumatic life events. Gay and lesbian adolescents can also be especially vulnerable. Parental and family risks for suicidal behaviors include child maltreatment (physical and sexual abuse), and low levels of family functioning, including poor parental supervision. School risk factors include both bullying and being bullied (e.g., bully-victim) and a perception of an unsupportive school climate. Community risk factors include family instability, a lack of prosocial norms in the community, and poor access to care. No one risk factor individually makes one suicidal; the culmination of risks, however, certainly increases the chances that youth will engage in suicidal behavior.

Individuals who work with adolescents can benefit from the current knowledge about adolescent suicide and use it to inform their responses to adolescents, and this includes practitioners in their assessment and treatment of the adolescents' experiences. The current trends in adolescent suicide (the increase in suicidal behaviors and change in methods used to complete suicide) make it even more important that these risk factors be identified and explored. Connecting youth to prosocial support systems that encourage adolescents to learn problem-solving skills can help reduce many of the other risk factors. The role of substance use and suicide needs to be included in any assessment and intervention. Practitioners and others who work directly with youth can serve as a vital link between resources and supports to help adolescents create new coping mechanisms that promote their well-being.

Cross-References

► Suicidality

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These pacts are different from more popular phenomenon of cluster suicides or suicide outbreaks, which occur after a popular figure (e.g., a role model or celebrity) or when peers in similar environments commit suicide (see Brent et al. 1989). Researchers know much less about pacts than clusters, but they still do not know much about clusters either. Still, researchers have now well documented the suicide clusters and the phenomenon of contagion in adolescent age groups. Only a very small percentage of all suicides occur in clusters; it accounts for 1–13% of teen suicides and is two to four times more common among teenagers than in other age groups (Gould et al. 1990). That it is more common among adolescents shows how the occurrence of one adolescent suicide is known to be a contextual or population-based risk factor for additional suicides (Askland et al. 2003).

Cross-References

- ▶ [Suicidality](#)
- ▶ [Suicide](#)

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Suicide Pacts and Suicide Clusters

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A suicide pact is a pledge of two or more people to take their own lives at the same time. Although these pacts typically are done by older couples, they sometimes do occur during adolescence (Ryabik et al. 1995).

Summer Camps

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Summer camps provide children with many psychological and social benefits seen by parents, staff, and campers themselves. Research by the American

Camping Association (ACA) (2010), for example, has demonstrated that self-esteem, independence, exploration, and social relationship building are only a few of the common areas of growth seen in children attending summer camps. These positive results are the outcome of numerous decades of learning about camps and the results of several social forces converging to support the development of camp experiences. As a result of many historical movements, over 12,000 summer camps have blossomed in the USA alone, attended by over ten million children annually.

Educators conceived of and directed the earliest camps as not-for-profit experiments designed to provide opportunities to teach children in ways schools did not (see Thurber et al. 2007). For example, in the USA, educators found that the corrupt and depraved nature of the cities failed to educate children successfully in many important ways. This led, as early as the mid-1800s, to programs created to bring children into the New England countryside. These programs were based on three essential components believed to be lacking in schools: community living, novel environments, and outdoors settings. Children participated in physical activity, social skill development, and spiritual events. Soon after, summer camps' potential for minority groups were realized, which spread quickly to the potential benefits that other groups could receive from participating in camp experiences. As early as 1876, camps were being formed specifically to benefit disabled, poor, and ill children. Today, this movement is realized in camps devoted to AIDS, cancer, diabetes, sports, mental illness, addiction, and educational interests. Although there has been a steady growth of what could be deemed therapeutic camps, camps also have emerged to address a wide variety of interests ranging from culinary interests, to theater, to music and dance. Camps continue to take on a wide variety of missions to address youths' social, medical, emotional, intellectual, spiritual, and vocational needs.

Summer camps take the form of many different organizational styles. Of the 12,000 camps in the USA, about 4,000 are for profit, while the remainders are run by nonprofit organizations. About 5,000 are day camps and 7,000 are residential camps, with the average stay of a camper being around 2 weeks for a residential camp. Around 2,300 camps choose to comply with the 300 health, safety, and program quality regulations put forth by the ACA and thus receive

their accreditation. Some camps offer year-round programming for diverse experiences, while trip camps are more focused on camping while traveling, and travel camps offer to take campers to geographical places of interest. The International Camping Fellowship provides an umbrella to unite camps in different countries. Although these camps remain true to the US camping model, they also bring in local culture and religion. Some camps focus on issues related to particular regions, such as Seeds of Peace, a camp created to unite Arab and Israeli youth. Importantly, these camps may well be a fraction of the camps that youth attend, as many undoubtedly attend day camps associated with social organizations, most particularly, for example, universities and other educational institutions. Clearly, since their inception, summer camps have been continually evolving.

The more traditional summer camp movement has been marked by a move toward greater unification. The unification of the summer camp movement came as the result of controversies associated with differing educational and developmental philosophies. The decision to hire cooks, for instance, came at the expense of an entirely egalitarian camp. When the ACA formed in 1910, controversy over the for-profit nature of some of the camps, the religious exposure, daily structure, contact with the outside world, inclusion of military traditions and Indian lore, and federational or associational nature of the ACA were debated. Today, these debates continue along with additional points such as the use of electronics, coed camps, and whether competition is healthy.

Despite their popularity, and with some notable exceptions, summer camps have not been subjected to rigorous empirical scrutiny to confirm their apparent abilities to foster positive youth development. The first systematic research was conducted in the 1920s, by Dimock and Hendry (1929), who provided several informative but still tentative conclusions, such as the findings that camp effects were idiosyncratic in that they depended on such factors as the type of program, peer pressures, quality of leadership, and prevailing attitudes. Since then, numerous studies have examined the nature and effects of camp experiences, but they are remarkable for their focus on short-term effects and incredible variety. Findings, however, do tend to be impressive for the breadth of areas reporting positive effects, such as studies of camp interventions to address

the effects of traumas associated with grief (Searles McClatchey et al. 2009), encourage weight loss (Quinlan et al. 2009) and foster emotional self-regulation, and reduce peer rejection and antisocial behavior (Trentacosta and Shaw 2009). Despite the wide variety in camp quality and program offerings, the major recurring theme in research supports the conclusion that camp experiences contribute to positive youth development. This general finding gains support from what currently is deemed the largest, longitudinal study of camps, a study that identified important variation but a general consistency between programs and positive youth development (Thurber et al. 2007).

Despite the above positive findings, camps still tend to not be subjected to vigorous empirical research that would confirm conventional wisdom about the power of camp experiences on adolescents' development. One of the major concerns that summer camps must contend with, for example, is homesickness. Research on how to best overcome homesickness has uncovered ways of preventing deep homesickness as well as to determine who would be at risk for experiencing severe homesickness (see Thurber and Sigman 1998). That research reveals that parents can let their children practice time away from home. Also, youth can rehearse coping strategies, and, once they arrive at camp, familiarization with camp culture, structure, and routines can enhance a child's attitudes about camp. Still, even this aspect of camps remains highly unexamined by researchers. Numerous other areas of camping experiences remain to be investigated rigorously, such as the effects of peers, leaders, and types of camps.

Even if success could be documented to support conventional wisdom, the reality is that summer camps must continue to evolve. Summer camps have developed in many ways since their creation in the mid-1800s, and social change is likely to foster continued changes. As a result, camp programs must address changing social environments. Questions such as how to best complement the ever-changing school system, the ways of learning, the new and emerging technologies, the new demands that youth face, and the best methods of program implementation remain. Directors, researchers, and funding organizations wonder how to deal best with the inherent risks of camping, and how fully to accommodate campers with medical, physical, emotional, and behavioral issues. Finally,

complying with the ever-increasing number of laws and regulations affecting youth, including the protection of the length of summer vacation, remains an issue. No doubt remains that while these questions are not easily answered, campers will continue to enjoy the fundamentals on which the camping movement were based, especially friendship, learning, and opportunities for positive youth development.

Cross-References

► [Homesickness](#)

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Synapse

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A synapse is the junction between two nerve cells (known as neurons) or between a neuron and a gland or muscle cell. The junction serves to relay information. Neurotransmitters carry impulses across the tiny gap between the cells, which is called the synaptic cleft. The synaptic cleft is the target of medications for

disorders, such as bipolar disorder, depression, and schizophrenia; the medications change the activity or availability of neurotransmitters.

How synapses develop, as well as their function, is of significance to adolescence. The disorders mentioned above, for example, often have their first symptoms during adolescence, and those symptoms are often linked to brain development. For example, adolescence has been shown to reveal a loss of approximately 30% of the synapses formed in the visual cortex during childhood. This loss of synapses appears to occur because synapses with low efficacy for transmission are eliminated in favor of those with higher efficacy. Theoretically, the loss enhances the function of neural networks. However, large synapse losses are linked to a failure of network functions. It has been shown that relevant parts of the prefrontal cortex of individuals suffering from schizophrenia is very low, approximately 60% lower than that observed in normal childhood. It is not known whether this relatively low percentage is due to additional losses that occur

during normal adolescence or to a failure to form a normal complement of synapses during childhood (see Bennett 2008). Although the mechanisms remain complex, changes in synapses have long been viewed as prime suspects in the cause of schizophrenia (see Mirnics et al. 2001), which makes the period of adolescence quite important to the study of these diseases and to understanding the role of synapses in them.

Cross-References

► [Brain Maturation](#)

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