B

Babysitting

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For much of the last half of the prior century, babysitting (watching someone's child while they are away) was the primary mode of part-time employment for adolescents, especially girls. Babysitting functioned as an agent of gender-role socialization for girls, as well as an opportunity for them to learn about money and job management (Forman-Brunell 2008). In addition to opportunities to benefit financially from their work, babysitting was viewed as a way to help youth develop parenting skills and experience early independence from adult supervision (Kourany and LaBarbera 1986). Despite these positive views of babysitting, adolescent babysitters appear increasingly difficult to find. That is the case because of girls' increasing involvement in other activities, such as after-school sports, music, socializing, and other employment. As a result, even though babysitting has been portrayed as functional and beneficial for adolescents and preadolescents, adolescent girls tend to be dissatisfied with babysitting, which leads to the conclusion that babysitting may offer more independence to those who do not have access to more formal extracurricular and employment opportunities, and may provide those girls with more financial and personal independence.

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Bail

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Bail typically refers to security, such as a sum of money, exchanged for the release of an arrested person as a guarantee that the person will appear at trial (for a review, see Lindermayer 2009). Decisions regarding whether a suspect will need to post bail, or even be allowed to do so, arise between arrest and trial. Most defendants are released on their own recognizance or have the opportunity to post bail. To persuade a court that they will appear in court, the accused also may need to agree to conditions such as electronic monitoring, drug testing, or a curfew. At the completion of trials, individuals receive what they had posted for bail if they have appeared in court and fulfilled their bail obligations; but they can forfeit what they had posted if they did not abide by the court's stipulations for bail. Since bail is meant to ensure appearance at trial, it is not a criminal process. Instead, it is deemed a civil procedure. Thus, if bail is denied, the detention is civil; and detentions without bail are meant to be prospective and preventative and not subject to the same restrictions as they otherwise would if the detentions involved the criminal justice system. Still, bail tends to be the default based on the rationale that individuals are presumed innocent and the belief that being free before trial permits individuals to mount their best defenses. Despite this default, bail is likely to be denied if individuals are deemed too dangerous or are likely to flee the court's jurisdiction.

When juveniles are awaiting trial, they tend to be released to their parents upon being given assurance

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that the juvenile will appear for trial. Bail, however, generally is not provided for in state juvenile codes. Importantly, most state courts conclude that juveniles have no right to bail. They reach the conclusion on the grounds that minors are unable to enter into bail agreements, that juvenile crime is a civil and not a criminal proceeding, or that release to parents is favored by state detention criteria (see Baldi 1996). Given the significance attached to bail in adult proceedings, it can be somewhat surprising that it is a system that may not be provided to juveniles. One of the reasons that the right has not developed as applied to juveniles is that the Supreme Court has made clear that due process does not require states to provide bail, much as it does not require the right to a jury trial, on the grounds that the constitutional protections afforded youths in juvenile court need not replicate those offered defendants in criminal trials. The Court, in *Schall v. Martin* (1984), reasoned that requiring such safeguards would undermine the purposes of the juvenile justice system and that they were not essential to obtaining fair processes in the juvenile setting. State courts have tended to follow suit, with the notable exception that Louisiana has long recognized a juvenile's constitutional right to bail (Markman 2007).

The effects of not providing a constitutional right to bail to juveniles have not been the subject of much empirical concern. Research investigating the effects of denying bail to adults, however, reveals a slew of negative consequences. Among several other negative effects of being denied bail are the increased risk of being found guilty, getting a custodial sentence, losing employment and family ties, increasing the costs of legal representation, and increasing the risk of harm such as sexual assault and suicide (for a review, see Allan et al. 2005). The research in this area remains considerably persuasive but how the failure to provide bail for juveniles potentially has an effect on outcomes of juvenile proceedings remains unknown.

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Bariatric Surgery

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Bariatric surgery, broadly defined, denotes any surgical procedure intended to promote weight loss. This form of treatment, long viewed as appropriate for adults, increasingly is being used to address adolescents' problems regarding weight. Adolescents' severe weight problems typically involve being ► Obesity and Overweight or obese. In the USA, the prevalence of ► Obesity and Overweight among adolescents and children continues to increase dramatically, with current estimates indicating that 15.5% of children and adolescents are obese, and that an estimated 50–77% of them will carry their obesity into adulthood (Inge et al. 2004). These are significant findings in that being obese or overweight can carry several accompanying risks of negative health, such as type 2 diabetes mellitus, heart disease, obstructive sleep apnea, and mental health issues (see Helmrath et al. 2006). The treatment of adolescent obesity presents important challenges in that, as with adults, obesity is highly resistant to therapeutic interventions. Although behavior modifications (such as through diet and exercise) are important, only a small minority of obese children succeed in achieving desired weight loss, and the loss may not be sustained (Xanthakos et al. 2006). The challenges of addressing overweight problems and its potentially debilitating effects continue to lead youth and their parents to seek more effective treatments, with bariatric surgery being among the most invasive and risky but potentially successful.

Although specialists have developed several types of bariatric surgical procedures, most of the procedures have fallen into two general categories. The procedures are either malabsorptive or restrictive, although some now are a mixture of both (Buchwald et al. 2004).

Malabsorptive procedures cause food to bypass a portion of the small intestine. This approach works by limiting the amounts of nutrients that are absorbed since it is the small intestine that would have the body absorb nutrients; as a result, the body receives less sustenance from the food. Restrictive procedures limit the capacity of the stomach, which causes individuals to feel satiated more quickly and thus eat much less than they normally would. The most popular bariatric procedure mixes both methods and is known as Roux-en-Y gastric bypass (Inge et al. 2004). Although not without risk, this gastric bypass approach has been deemed the safest and, in the USA, is the most popular approach currently approved for adolescents (Xanthakos et al. 2006).

As with the rise in overweight prevalence rates, there is a rise in the number of bariatric surgical procedures, including a rise in adolescent patients receiving them (Schilling et al. 2008). Despite this rise, and in contrast to numerous published reports investigating the outcome of bariatric surgery in adults, researchers have yet to examine as closely the application of bariatric surgery in adolescents (Xanthakos et al. 2006). Currently, the overall morbidity and mortality of bariatric surgery are better defined in adults, and this is due to the higher number of procedures, which allow researchers to estimate risk more effectively. Although research examining the complications of adolescent bariatric surgery are less extensive than those dealing with adults, reports are increasingly favorable as they reveal low rates of surgical or medical complications, especially after the introduction of laparoscopic techniques (Stanford et al. 2003). That adolescents may not fare worse than adults, at some level, is not surprising given the intense scrutiny that goes in selecting adolescent patients for this type of surgery. But leading commentators caution that the rise in popularity provides important incentives for more high-risk procedures being done at centers with insufficient experience in the medical, dietary, and social dimensions of the care needed both before and after surgeries, and that adolescents are a group that has been targeted for these procedures (Steinbrook 2004). Overall, these are quite important developments given that this form of surgery historically has been reserved for adults.

Health professionals may view this procedure as a viable avenue for addressing adults' serious weight issues, but whether they should be used with adolescents is somewhat controversial. Controversy surrounds the appropriateness of submitting adolescents to bariatric surgical procedures. Many concerns have been noted. There is concern that adolescents and their parents may be seeking a quick fix and that they may not be ready to take on the responsibility of the lifetime adjustments that these surgeries require, especially in terms of drastic dietary changes along with regular exercise (Barlow 2004). As with other treatments involving specialized care, adolescent patients may be noncompliant and resist interventions that they will need due to the necessity for meticulous, lifelong medical supervision (Klish 2004). The lack of long-term studies involving adolescent patients also obviously raises important issues; researchers do not know the effects of the surgery on adolescents' eventual reproductive ability and pubertal development, both of which require appropriate nutrition. Neither last nor least, adolescents' ability to assent to treatment with such life-changing effects may be questionable since especially younger adolescents may not be able to give full consideration to this major, life-altering decision (Klish 2004). These serious concerns, despite the increasing efficacy of treatments, help ensure that the rise in bariatric surgeries involving adolescents is not as steep as those involving adults.

To address some of the above concerns, the American Pediatric Surgical Association Clinic Task Force on Bariatric Surgery (Inge et al. 2004) announced guidelines to help facilities and physicians select appropriate adolescent patients and increase the chances of the most positive outcomes. The guidelines reveal how the selection of patients for surgical treatment involves a very deliberate consideration of multiple clinical and social factors. In addition to setting the need for an appropriate body mass index coupled by relevant comorbidities, the task force also presented key indicators for surgery. Those indicators included the failure to lose weight after at least 6 months of organized weight-loss attempts, a commitment to medical and psychological evaluations before and after surgery, a commitment to avoid pregnancy for 1 year after the surgery, the intention and ability to follow postoperative nutritional guidelines, the ability to provide informed consent, and the availability of a supportive family environment. These important guidelines have been roundly accepted by institutions that would support bariatric surgeries.

Commentators agree that the increased knowledge of bariatric surgery's indications, risks, and benefits likely will make it the standard of care for morbidly obese individuals (Santry et al. 2005). Bariatric surgery has emerged very quickly as a promising, but still controversial, treatment for carefully selected adolescents who do not respond well to conventional medical and behavioral therapy for obesity. Despite documented successes, the increase in this surgical procedure among adolescents still raises important health and social issues precisely because they deal with adolescents. Adolescents' physical and social responses to the surgeries may be similar to those of adults, but adolescents are differently situated and are still developing in different ways. Despite those challenges, current research reveals that bariatric surgery presents itself as an important, viable tool if managed appropriately.

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► Obesity and Overweight

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Battered Child Syndrome

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The term "Battered Child Syndrome," coined by pediatric radiologist C. Henry Kempe (Kempe et al. 1962), refers to the collection of injuries children sustain as a result of repeated mistreatment or beatings. Kempe and colleagues argued that the syndrome should be suspected as occurring in children who exhibit evidence of fracture of any bones, subdural hematoma, failure to thrive, soft tissue swellings, or skin bruising where the degree of trauma varies with the history given regarding the trauma or where the child suddenly dies. In addition to the immediate dangers resulting from physical abuse, abuse is expected that it will result in predisposing children to long-term negative outcomes, such as delinquency and violence. Importantly, research reveals that maltreatment during childhood alone, versus maltreatment during adolescence, contributes to different outcomes. Childhood-limited maltreatment tends to be more likely to lead to internalizing problems; adolescent maltreatment appears to have a stronger and more pervasive effect on later adjustment. For example, childhood-limited maltreatment significantly relates to drug use, problem drug use, depressive symptoms, and suicidal thoughts. On the other hand, maltreatment that occurs during adolescence significantly effects a much broader range of outcomes, such as official arrest or incarceration, self-reported criminal offending, violent crime, problem alcohol use, problem drug use, risky sex behaviors, self-reported sexually transmitted disease diagnosis, and suicidal thoughts (see Thornberry et al. 2010).

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► Physical Abuse

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B

Belief in a Just World

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The concept of a belief in a just world represents a conviction that good individuals are rewarded and bad individuals are punished (see Lerner 1971). The central hypothesis guiding this concept is that individuals need to create order in an otherwise chaotic world. The belief provides psychological buffers against the world's harsh realities and gives individuals a sense of control over their own destiny. As a result, the belief promotes not only good behavior, by encouraging individuals to behave justly, but also the derogation of victims because individuals seek to eliminate the belief that their world is unjust. Victim derogation alleviates the aggressor's cognitive dissonance, making it seem as though victims are worthy of their bad circumstance due to flaws in their moral characters. As such, the belief in a just world is considered not only a positive force but also a negative one that promotes antisocial behavior and prejudice. The belief, then, can be a healthy coping mechanism that buffers against stress and increases achievement; but it could be quite negative. Still, the maintenance of a belief in a just world is evidence of its benefit, although what is deemed benefit may differ depending on whether an individual is, for example, the victim in a circumstance.

The potential complexity of this belief has not resulted in relatively complex and nuanced ways to index it. The leading measure in this area was developed by Rubin and Peplau (1973, 1975) who created a Likert-scale-based survey, one based on a unitary dimension of global belief in a just world. A conceptual dimension and a personal dimension have been distinguished by later measures (for reviews, Hellman et al. 2008; Furnham 2003), but their approach remains the most widely used. Despite some progress in measuring individuals' relative belief in a just world, then, efforts do lag behind conceptualizations and related theories.

Despite the above developments in this area of study, researchers have tended to ignore the concept's developmental roots. The leading examination in this area dates back to several decades ago, to Jean Piaget's (1965) work on moral development. Piaget argued that one of the earliest cognitive concepts to emerge is the belief that fault brings its own punishment. This belief that there is a direct relationship between what people deserve and their behavior rests on the notion of "immanent justice," which is characteristic of the stage of heteronomous morality that arises before adolescence (Piaget 1965). Under this model, children under the age of 10 perceive contiguity between a transgression and punishment, and that perception declines as youth are able to understand more realistic and relative explanations (Karniol 1980). This decline may indeed exist but social psychologists continue to find that adults also have a tendency to view misfortunes as deserved, which is what led to considerable research on the belief in a just world hypotheses. Regrettably, and despite the need to address both negative and positive outcomes as well as their developmental roots, developmental research in this area remains strikingly sparse, especially as it would relate to the period of adolescence.

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Bereavement

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Bereavement refers to an individual's reaction to a loss by death, which is differentiated from grief that is

a reaction to any loss (see Hensley and Clayton 2008). Much of the research in this area tends to focus on ► parental bereavement, and to some extent, on the death of siblings. Both these types of bereavements have similar rates of occurrence, with about 5% of adolescents experiencing either a parental or sibling death before the age of 18 (Harrison and Harrington 2001). The theoretical frameworks in this area focus either on psychological theories of child development or on normal grief processes (McCarthy 2007). Not surprisingly, research relating to parental death finds that it leads children to experience grief, sadness, and despair; but it also finds that only a small percentage of children who are bereaved experience significant psychiatric symptomatology (Cerel et al. 2006). Importantly, reviews of research relating to interventions reveal that bereavement interventions with children tend not to have a significant influence on their adjustment, which is consistent with bereavement interventions in general (see Currier et al. 2007), although it is important to note that some interventions, especially with youth presenting symptoms or impairment, tend to show greater effects, from small to moderate (see Rosner et al. 2010).

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► Parental Bereavement

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Best Friends

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A hallmark of adolescence is an increase in the breadth and intimacy of social relationships outside of the nuclear family, and especially close same-sex friendships and romantic relationships (Buhrmester and Furman 1987). Improved abilities in logical and abstract reasoning, as well as differentiation of self and others (Keating 1990) promote adolescents' recognition that individuals both within and outside of their families have the capacity to meet varying aspects of their social, emotional, and physical needs. Different figures may be key in satisfying emerging social needs during different stages of development. During infancy and preschool, parents provide companionship and security, while during the school years, peers are important sources of companionship and acceptance. From late adolescence to adulthood, romantic relationships become the greatest focus. Thus, adolescence may be the most important time across the lifespan for close same-sex friendships. The particular contribution of close friendships during this period is the subject of this essay.

Characteristics of Close Friendships During Adolescence

Friendship is generally defined as a voluntary dyadic relationship characterized by reciprocity in attraction, companionship, and support. Best friendships are generally measured by asking participants to indicate those individuals they judge to be their best friends, or by requesting that participants select those persons they are closest to/like best often from a list of classroom peers. Mutual, reciprocal choices where each member chose the other are used to identify reciprocated best or close friendships.

In his seminal work on the importance of friendships for youth, Sullivan (1953) proposed that the "chumships" of preadolescents are the earliest relationships

in which children show genuine caring and sensitivity to others, and that the intimacy, collaboration, and lack of competitiveness of these relationships contribute to the adolescents' self-esteem and general adjustment. Research on adolescent friendships supports aspects of Sullivan's views about close friendship qualities, and sheds light on the role of best friends in adolescent development.

Best friends offer opportunities for extensive self-disclosure and validation of one's perspectives, values, and general identity. Best friendships seem to differ from other close friendships only with respect to the degree of interdependence and intimacy (Fehr 1996). That is, best friends are usually the ones to whom the partner turns most often for support, sharing confidences, and companionship, and from whom loyalty is most expected (Newcomb and Bagwell 1996). They are also likely to be perceived as unique and special (Wright 1985). Friendships tend to be moderately stable during adolescence. One study found that best friends nominated in the fall were still very good or best friends in the spring of that year (Degirmencioglu et al. 1998). By middle to late adolescence (15–18 years), same-sex best friendships were reported to be very stable, lasting 3–6 years on average (Doyle et al. 2009).

Adolescent friendships provide emotional and instrumental support, and facilitate the process of becoming more autonomous from parents (Furman and Buhrmester 1992). Most adolescents turn to friends for support and encouragement (Allen and Manning 2007; Rosenthal and Kobak 2010; Waters and Cummings 2000). Consistent with this, Furman and Buhrmester (1992) found that adolescents (compared with preadolescents) reported same-sex friends as more important providers of affection and intimacy. In addition to the increased receipt of care from friends during adolescence, youth must learn to provide care to their friends, reflecting the reciprocal nature of these relationships.

Intimacy in friendships increases from childhood through adolescence (e.g., Sharabany et al. 1981), and may be an important factor in the intensity of these relationships. The use of friends as confidants reaches its highest levels by middle adolescence, and then declines as romantic relationships begin to eclipse close same-sex friendships (Buhrmester 1996). By early adolescence and subsequently, girls rate their friendships as more intimate than do boys (e.g., Brendgen et al. 2001). In addition, girls rate their positive friendship qualities as higher than do boys, although boys and girls do not differ in their ratings of conflict (e.g., Berndt and Keefe 1992).

Adolescents become increasingly aware that because of the voluntary nature of friendships, conflicts in these relationships must be managed effectively, or the relationships could end (Laursen 1996). They tend to have fewer conflicts with their friends than with family members, and they use more compromise and negotiation, and less coercion, in conflicts with friends than with family members. In addition, conflict with same-sex friends decreases across adolescence, and friendships are characterized by less conflict and more use of compromise/negotiation compared with non-friend relationships (Laursen 1996).

Adolescents tend to select as friends others who are similar to themselves, for example, with respect to academic achievement (Epstein 1983), delinquent behaviors (Kandel 1978), smoking and peer involvement (Tolson and Urberg 1993). Recently, Linden-Andersen et al. (2009) found that early adolescents (mean age = 13) rated themselves and a nominated friend as more similar on developmentally relevant personality items assessing autonomy, prosociality, and responsive caregiving, compared with non-friends. Greater perceived similarity tended to be positively associated with more favorable ratings of the friendship quality, and significantly negatively related to conflict in the dyad. Reciprocated friendships were associated with more favorable friendship quality and greater similarity than non-reciprocated ones. These results are consistent with the view that similarity in these characteristics increases the likelihood of friends validating each other, and that this similarity facilitates harmonious interactions.

Does Having a Best Friend Contribute to Adolescents' General Adjustment?

Considerable research demonstrates that having a reciprocated best same-sex friend is correlated with better adjustment for children and adolescents; however, having a friend may only be a marker of more general adjustment issues, rather than clearly playing a causal role (Newcomb and Bagwell 1996). In addition, the finding is not always consistent. The presence

of a best friend in early adolescence was not found to be associated with emotional and behavioral adjustment, whereas involvement in romantic relationships was for those poorly accepted by their same-sex peers (Brendgen et al. 2002). In another study with older adolescents (17 years), attachment quality with best friends (an index of relationship quality) was not associated with depression, although comparable measures with mothers and with romantic partners were (Margolese et al. 2005). Moreover, variables other than the presence or absence of a best friend, such as the quality of the relationship and the characteristics of the friend, likely moderate this effect.

For example, in a large sample of adolescents, those without reciprocated friendships reported more delinquency and addictions and were perceived by peers as less competent academically, socially, and emotionally than those with friendships (Guroglu et al. 2007). However, adolescents without friends did not report more internalizing problems (e.g., self-esteem, loneliness, etc.) Furthermore, the adolescents' own characteristics, as well as the best friends' qualities made a large difference in which measures of adjustment were significantly correlated. When friendships were categorized by cluster analyses of behavioral patterns, three types of patterns were identified: prosocial, withdrawn, and antisocial. Adolescents without friends were judged to be as competent as those in "withdrawn" or "antisocial" types of reciprocated friendships. As expected, adolescents in reciprocated dyads with bullying, antisocial patterns were higher on measures of delinquency, drug, alcohol, and cigarette use (even than those without friends.) Thus, only those in the "prosocial" type of mutual friendship were clearly better adjusted both with respect to internalizing, externalizing, and peer judgments of competence. Thus, having a best friend per se is not necessarily associated with better adjustment. Nevertheless, Bukowski et al. (1993) found that having a good quality best friendship predicted lower levels of loneliness in early adolescents 1 year later.

Although best friends may provide one another with support and care, they may also be a source of difficulty/discomfort with closeness/interdependence or greater fear of abandonment by friends compared with mothers, due to the reality that best friendships end relatively often in adolescence (Doyle and Markiewicz 2009). Overall, having a good quality, reciprocated best friend is generally associated with better adjustment, but we must be careful not to overgeneralize or to assume that the friendship necessarily contributes to adolescent well-being. In addition, Markiewicz (2002) suggests that increasing adolescents' self-awareness of expectations and behavioral patterns in their close family and friendship relationships, using various experiential exercises, should contribute to improving the quality of their close friendships.

The Influence of the Quality of Child–Parent Relationships on Close Friendships in Adolescence

The quality of relationships with parents is associated with the quality of relationships with close friends (Furman et al. 2002). Parent–child relationships, such as attachment security, provide behavioral and emotional skills needed for close friendships, and the skills learned in these friendship relationships in turn promote positive intimate romantic relationships (Collins and Sroufe 1999; Scharfe and Mayseless 2001).

Attachment theory provides an explanatory framework for why the quality of parental attachment contributes to close extrafamilial relationships. Bowlby (1969, 1973) suggests that internal working models of attachment (IWM's) become more organized and complex as the child develops, and their influence becomes more habitual and automatic; and that people tend to assimilate new experiences into existing IWM's. Thus, early attachment patterns are likely to be more resistant to change by adolescence and to generalize to other close relationships. Consistent with this view, the quality of attachment with mothers is associated with the quality of attachment with close friends in childhood and adolescence (Markiewicz et al. 2001). Security of attachment with mothers was associated with closer, more secure friendships in late childhood and early adolescence (Lieberman et al. 1999). In both this and a separate diary-based study (Ducharme et al. 2002), security with father was associated with less conflict with friends. With a sample of three cohorts ages 13, 16, and 19 years followed for 2 years, Doyle et al. (2009) found that attachment quality was quite stable across adolescence, particularly with parents, though less so with best friends and romantic partners. They also found that attachment insecurity with parents predicted insecurity with best friends 2 years

later, with attachment insecurity with fathers predicting uniquely. Some research suggests that if the parent–child relationship is inadequate, adolescents may turn to peers to compensate for this. For example, Markiewicz et al. (2006) found that adolescents who reported more insecure attachment to mothers turned to romantic partners at an earlier age to fulfill attachment functions. Rosenthal and Kobak (2010) also found that using friends as important attachment figures was associated with less parental acceptance.

Despite the significant associations among the quality of parent and peer attachment, important differences between these two types of relationships necessitate some different skills. While parent–child relationships tend to be hierarchical, with parents in the care giving roles and children in the roles of care recipients, peer relationships are reciprocal, involving both care giving and receiving. Thus, children and adolescents must learn skills for giving care and for determining when appropriate to depend on peers. However, prematurely relying on this reciprocal process may not result in healthy adjustment for these teens. Adolescents, particularly young ones, probably do not yet have sufficient maturity, experience, or resources to provide adequate security/protection to their close friends in emergency situations. This concern is expanded below in our distinction between attachment and affiliation in relationships.

The Difference Between Attachment and Affiliation in Best Friendships

Several studies (Fraley and Davis 1997; Hazan and Zeifman 1994; Trinke and Bartholomew 1997) suggest that attachment functions are transferred from parents to peers, with the order of these attachment functions being proximity-seeking first, followed by safe haven, and finally secure base. However, it is important to distinguish between the concepts of attachment and affiliation. Attachment is characterized particularly by its emphasis on seeking security and protection from the attachment figure, while affiliation seems to involve the exploratory system, including seeking stimulation, fun/pleasure, expansion of interests, and companionship/alliance.

One issue is whether or not close friends are attachment figures for adolescents. How much adolescents use parents and peers to fulfill attachment needs was examined with a large sample of participants from three cohort groups ages 12–15, 16–19, and 20–28 years old (Markiewicz et. al. 2006). The three components of attachment needs assessed included proximity-seeking (i.e., seeking physical closeness and resisting/expressing distress at separation), safe haven (i.e., seeking the other for support, reassurance,) and secure base (i.e., using the other for a core sense of security). Results indicated that best friends were used most and more often than others (mothers, fathers, romantic partners) for safe haven, (i.e., comfort, support, reassurance, guidance.); but less often by young adults and by older adolescents who had romantic partners. That is, adolescents turned to friends for reassurance and guidance, probably particularly with respect to aspects of peer relationships, but still generally used parents as a source of secure base, i.e., security and unconditional availability – core aspects of the concept of attachment. Best friends were used less for all attachment functions by the middle adolescent and particularly the older adolescent/emerging adult groups. Consistent with the gender differences noted above, girls turned to best friends for attachment functions more than did boys, especially for safe haven. Overall, close friends seem to become important for social and emotional adjustment, and might also provide a soothing function when the friend is distressed and thus help reduce anxiety to a level where more effective problem solving is likely.

That best friends are turned to for safe haven, i.e., support and comfort, is consistent with the view that they are used for more than affiliation in relationships. Adolescents' improved cognitive abilities and more extensive social experiences may enable them to seek only some attachment functions from particular individuals, recognizing that they are only able or willing to provide those. For example, best friends may be sought out for support with particular issues (safe haven), but are not expected to be available unconditionally (secure base).

However, since the secure base function of attachment is most clearly tied to the core conceptual definition of attachment (Waters and Cummings 2000), the extent to which best friends are attachment figures for adolescents may be limited. This view is consistent with the findings of Rosenthal and Kobak (2010) who differentiated between attachment bonds, support-seeking behaviors and affiliation, in a study of adolescents in grades 9 &10, 11 & 12, and college. They argued

that the secure base function is closest to Bowlby's definition of an attachment bond. Proximity-seeking, however, may be the product of the activation of other behavioral systems, such as affiliation or (with romantic partners) sexual systems. They also suggested that safe haven may operate during non-emergency situations such as having a "bad day," a social rejection, or an anxiety-provoking challenge, which would be unlikely to elicit the attachment behavioral system. The affiliation system would be linked to preferences about with whom to share fun and general enjoyment. Factor analyses supported the distinction among these three factors. Specifically, the correlation between the attachment bond and affiliation subscales was very low (i.e., 0.14). The correlations between support-seeking with affiliation and with attachment were somewhat higher (i.e., 0.40–0.54). Consistent with Markiewicz et. al. (2006), Rosenthal and Kobak (2010) found that adolescents relied on friends for support and affiliation. However, while turning to friends for safe haven and proximity-seeking seemed normative for the adolescents, placing friends higher in the attachment hierarchy, such as for help in emergencies, was associated with more internalizing and externalizing behavioral problems. This is consistent with the view that prematurely replacing parents with peers for basic attachment needs is a risk factor for the development of problematic behaviors, such as aggressive and/or delinquent behaviors (e.g., Dishion et al. 2004). Rosenthal and Kobak (2010) also suggest that support-seeking behaviors (i.e., safe haven) may be a necessary but not sufficient condition for the formation of an attachment bond.

Overall, these studies are consistent with the view that attachment (e.g., secure base) and affiliation (e.g., proximity-seeking) are distinct behavioral systems. The function of support-seeking (i.e., safe haven) in this process merits further study, and likely helps contribute to the development of attachment bonds. Overall, the use of best friends as important attachment figures in adolescence seems to be relatively rare.

Best Friendships and Romantic Relationships

In early and middle adolescence, only 20–40% of adolescents report having steady romantic relationships, and even these tend to be of relatively short duration (Connolly and Konarski 1994; Doyle et al. 2003). Romantic relationships become more common and important in late adolescence and emerging adulthood. Early adolescent romantic relationships tend to be based mainly on companionship and friendship, while later these relationships also serve as sources of support, caregiving, and sexual fulfillment (Furman and Wehner 1994; Shulman and Scharf 2000).

Whether or not adolescents have romantic relationships plays a large role in the centrality of their close friendships. The importance placed on the friendships is lower for those with romantic involvements than for those without them. If adolescents and young adults had a romantic partner, they used best friends less for proximity-seeking and safe haven than if they did not have a romantic relationship (Markiewicz et al. 2006). University students with romantic partners ranked best friends lower on safe haven compared to those without these partners (Trinke and Bartholomew 1997). Rosenthal and Kobak (2010) also found that those adolescents with romantic partners (versus those without) ranked friends lower on their attachment hierarchies. For young adults without long-term romantic partners, Fraley and Davis (1997) found that close friends sometimes served as primary attachment figures. The special status of best friends seems to be replaced by emerging romantic relationships.

The quality of close relationships with friends may serve as a prototype for later romantic relationship quality. That is, close friendships provide adolescents with opportunities to develop relevant skills (e.g., intimacy, caregiving, cooperation, conflict management) for later romantic relationships (Furman and Buhrmester 1992; Furman et al. 2002; Scharfe and Mayseless 2001). Consistent with this view, attachment style with best friend significantly predicted attachment quality in later romantic relationships. Insecure attachment with best friends predicted attachment insecurity with romantic partners 2 years later (Doyle et. al. 2009). The emotional intensity of close same-sex friendships predicted the affective intensity of the romantic relationships of adolescents, whereas the affective intensity of the parent–adolescent relationships did not (Shulman and Scharf 2000). However, some of these findings tend to be of modest magnitude, and some studies have found that quality of attachment to parents compared with friends is a stronger predictor of romantic relationship outcomes (e.g., Miller and Hoicowitz 2004). Thus, it is likely that close friendships

offer opportunities to practice relevant skills and to develop attitudes and expectations concerning romantic partnerships, but other factors (e.g., relationships with parents and other significant persons, media representations of romances, age and dating experiences, and the like) also play an important part.

Summary

Best friendships become increasingly important in early adolescence and provide teens with a context for developing competence in self-disclosure, support-seeking and giving, and effective conflict management. The emotional intensity of these relationships combined with their voluntary nature challenges adolescents to develop appropriate emotion-regulation strategies essential for close interpersonal relationships. Although having a best friend (versus not having one) tends to be associated with better adjustment on measures of internalizing or externalizing, the quality of the friendship and the characteristics of the friends are likely to moderate this effect. The quality of child–parent relationships predicts success in close friendships, and successful close relationships also predict better quality romantic relationships, suggesting that intergenerational transmission of relationship quality likely plays a role in close relationship characteristics.

Cross-References

▶ Friendship Characteristics
▶ Friendships and Adjustment

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Best Interests of the Child

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The legal system, through its courts, routinely makes a variety of decisions that affect adolescents. For example, decisions can involve their placement when they are removed from their parents; they can involve whether to terminate their parents' parental rights; and they can involve a host of decisions where there could be potential conflicts between adolescents and their families (such as whether children should be allowed to abort a fetus or be allowed to refuse life-saving treatments) (see Levesque 2002, 2008). Whenever courts make these determinations, they typically use the "best interests of the child" standard, especially if the adolescents are not deemed mature enough to make decisions on their own.

Despite its being a very widely used standard, the best interests of the child generally lacks an acceptable standard definition. Generally, the term refers to the deliberations that a court undertakes when it determines the services, actions, and orders to make in

its effort to serve the child as well as who is best suited to care for the child (including potentially making decisions for the child). These deliberations generally follow several guiding principles, such as the preference of avoiding the removal of the child from their home, the child's safety, health and needed protection, the significance of establishing permanence in their relationships, and the need to ensure the child's proper development. Those general principles are then typically guided by a number of factors that relate to the child, the child's circumstances, the child's capacity, the child's caregivers, and concern placed on the child's safety and well-being. Importantly, some states require courts to consider a child's wishes when making a determination of best interests, although whether a need exists to consider those wishes (and how much weight to place on them) may hinge on the child's age and level of maturity, as well as the nature of the decision itself.

The standard is widely accepted, but it also has been widely criticized. Among the most important criticisms is that it is non-determinative. That is, since it permits courts to take different factors into account, the outcomes are often not assured and reasonably determinable in advance. This becomes especially problematic in instances where there may be room for bias, particularly in terms of race, sex, and socioeconomic status (see, e.g., Jacobs 1997). Although important progress has been made toward addressing these concerns, they still continue to plague legal systems' responses that involve intervening in children's lives (Levesque 2008).

When considering the child's best interests standard, it is important to recognize its relationship to parental rights. Unlike for the child's best interests standard, the Supreme Court has recognized and given great weight to parental rights, and it even has seen them as fundamental and firmly rooted in constitutional protections. Indeed, in affirming parents' constitutional rights, the Court often has relied on the presumption that the best interests of the child inherently will be guarded by parental responsibility to their children. The most recent example, *Troxel v. Granville* (2000), reveals the importance of parental rights and its relationship to a child's apparent best interests.

In the *Troxel* case, a Washington state law read: "Any person may petition the court for visitation rights at any time including, but not limited to, custody proceedings. The court may order visitation rights for any person when visitation may serve the best interest of the child whether or not there has been any change of circumstances" (Id., p. 93). Under that law, grandparents sought visitation rights with their grandchildren after the mother had curtailed their visitation. Importantly, the grandparents had been regularly visited by the children before their son – the father of the children – had committed suicide. In finding for the mother, the Court glossed over the question of the best interests of the child as it underscored the presumption that fit parents generally act in their children's best interests and that parents decide what is in their child's best interests in such matters unless the parents are proven unfit. This was not the first time that the Court had elevated the rights of parents, or even the rights of others, over a child's potential best interests. In an important immigration case, for example, the Court explicitly noted that "[s]o long as certain minimum requirements of child care are met, the interests of the child may be subordinated to the interests of other children, or indeed even to the interests of the parents or guardians themselves" (Reno v. Flores 1993, p. 304). Although the best interests of the child standard has infiltrated many areas of law, then, it is clear that it may not always take precedence.

The concept of the best interests of the child reflects important developments. It clearly shows a concern for children's interests and recognition that they are worth protecting. This concern is of significance in that the concept can be found in many different situations involving the care and treatment of youth. On the other hand, however, these developments remain quite muted to the extent that they may not be relevant at all to children's everyday lives given that their parents retain the presumptive and generally plenary right to raise their children as they deem fit.

Cross-References

► Parental Rights

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Betrayal

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Betrayal, generally understood as a violation of a presumptive agreement (such as confidence, trust, or even a contract) and expectations that produces relationship conflict, is a particularly difficult human experience, especially when emerging from personally significant relationships. The chances of feeling betrayed are rather likely given the potentially wide range of important relationships individuals can have, ranging from friends, family members, colleagues, to teams, and authority figures. The pervasiveness of these relationships that may lead to betrayal means that all likely have experienced and committed betrayal, but all respond to it differently. This variation, and its ubiquitousness, makes this aspect of human relationships particularly difficult to investigate. Still, some important findings do emerge from existing research.

Betrayal, although often studied in the context of sexual or marital infidelity (see, e.g., Miller and Maner 2008; Feldman and Cauffman 1999), actually can involve a variety of actions, motivations, and effects. It can involve, for example, lying, criticism, broken promises, intentional embarrassment, humiliation, belittlement, and gossip. The severity of betrayal also likely varies, although even small betrayals may damage relationships over time. Betrayal also may be unintentional or intentional, and even if intentional the purpose for the betrayal may vary. Regardless of motives, betrayal often results in a loss of trust, friendship, security, time, energy, and self-esteem. Betrayal fundamentally signifies rejection and devaluation and likely influences both the relationship and each individual's sense of self.

Individuals who have experienced betrayal report a wide range of emotions (see Haden and Hojjat 2006). Many report feeling let down and subsequently search for the meaning for the betrayal. Individuals' sense of identity may be affected depending on the nature of the relationship; and reactions also depend on what attributions the individual makes for the betrayer (Finkel et al. 2002). Trust is difficult to regain, and lack of trust often extends to others. Victims can perceive the betrayers' future behaviors as negative, even when betrayers are innocent. Consequences of betrayal often depend on the emotional response to the betrayal. Feelings of dejection may be followed by withdrawal, hatred, or aggression. Although anger is a common response, most individuals simply fantasize about revenge instead of taking action. The ability to forgive depends on many factors, including the length of time between transgressions and apologies, the intensity of the betrayal, and the complexity of the betrayal (Hannon et al. 2010). Betrayers often feel differently about the transgression (Kowalski et al. 2003). Because they view the betrayal as less negative, betrayers might feel angry at being continually mistrusted. They also may feel shame and guilt. Guilt might lead a betrayer to confess, empathy to seek forgiveness, and shame to change behaviors.

Betrayals may have significant effects on relationships, but how they do so, and under what conditions, only recently has been the subject of empirical research. Emerging findings reveal that multiple factors determine the vitality of relationships after betrayal, including the nature of the betrayal, commitment and investment in the relationship, level of remorse, and forgiveness. Larger personal investment in the relationship negatively correlates to the likelihood of relational dissolution, and some relationships even report increased cohesion after betrayal. Despite this, betrayal is still a difficult transgression for relationships to overcome and the vast majority of research focuses on adults.

Cross-References

► Forgiveness
► Revenge

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Bicultural Stress

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Overview

Central to the experience of many adolescents is how they navigate between multiple cultural contexts in a pluralistic environment (Garcia Coll et al. 1996; Romero and Roberts 2003a; Stanton-Salazar and Spina 2003). Today's youth may be encountering individuals from different cultures on a firsthand basis at earlier ages than ever before, given the globalized environments that youth are exposed to via transnational media and worldwide immigration (Arnett 2002; Zagefka and Brown 2002). When adolescents encounter bicultural contexts, they may experience unique and interesting new social interactions and fusions; however, these multiple cultural contexts also shape the experience of stress. Bicultural contexts will impact adolescents' types of stress, appraisal of stress, and coping mechanisms (Aldwin 1994; Donnelly 2002; Walters and Simoni 2002). The bicultural context of stress describes how different cultural environments may be subjectively perceived by individuals to be stressful due to social interactions that result from cultural conflicts within families, between peers, and in community contexts (e.g., police, schools, businesses) (Romero and Roberts 2003a). Bicultural stress is reported widely by adolescents of ethnic minority groups, as well as by ethnic majority groups; moreover, bicultural stress is significantly associated with more depressive symptoms, less optimism, and more risky behaviors among adolescents of diverse backgrounds (Romero et al. 2007a; Romero et al. 2007b). A greater understanding of bicultural stress may lead to research on bicultural strengths and bicultural navigation skills that may improve positive youth development (Pedrotti et al. 2009).

Adolescent Bicultural Context of Stress

Central to the experience of many modern adolescents is how they navigate between multiple cultural contexts in a pluralistic environment (García Coll et al. 1996; Romero and Roberts 2003a; Stanton-Salazar and Spina 2003). Today's youth may be encountering individuals from different cultures on a firsthand basis at earlier ages than ever before, given the globalized environments that youth are exposed to via transnational media and worldwide immigration (Jensen-Arnett 2002; Zagefka and Brown 2002). When adolescents encounter bicultural contexts, they may experience unique and interesting new social interactions and fusions; however, these multiple cultural contexts also shape the experience of stress. In pluralistic environments, culture is an important context of stress and coping for adolescents across all of their ecodevelopmental contexts of family, peers, schools, and neighborhoods (Gergen et al. 1996; Folkman et al. 1986; Walters and Simoni 2002; Youngblade and Theokas 2006). The bicultural context of stress describes how different cultural environments may be subjectively perceived by individuals to be stressful due to social interactions that result from cultural conflicts within families, between peers, and communities (e.g., police, teachers, store clerks) (Romero and Roberts 2003a). Bicultural contexts will impact adolescents' types of stress, appraisal of stress, and coping mechanisms (Aldwin 1994; Donnelly 2002; Walters and Simoni 2002) Understanding stress among adolescents is important because of the well-established negative impact of stress on mental and physical health (Lazarus 1997; Karlsen and Nazroo 2002). However, from a strengths perspective, it is also important to understand specific factors that lead to stress that are amenable to modification through prevention, intervention, or mental health services (Pedrotti et al. 2009). In particular, greater knowledge of stressors associated

with navigating between cultures can lead to more awareness of necessary skill sets in bicultural contexts that may improve not only individual mental health, but also social interactions between different cultural groups. This essay begins by describing the theoretical foundations of bicultural stress found in orthogonal acculturation theory and stress and coping models. Then, it will summarize the extant research on bicultural stress among adolescent populations and its relationship to mental and physical health.

Where It Started: Acculturative Stress and Assimilation Models

The concept of bicultural stress is derived from early research on acculturative stress, which was defined as stress due to the process of acculturation (Berry 1980, 2003, 1989). The classic definition of acculturation, according to Redfield et al. (1936), considered the bidirectional nature of cultural change for both minority and majority cultural groups that arises from continuous firsthand contact over time. Given the melting pot beliefs of the United States in the early 1900s, it was assumed that "melting" or assimilating into a new culture would, and should, require letting go of one's native culture (Keefe and Padilla 1987). Another assumption was that trying to maintain one's culture of origin would be detrimental to assimilation and lead only to more cultural stress and mental health complications for immigrants (Stonequist 1961). Thus, native cultures were often generally viewed as deficits that contributed to disparities in health and adaptation, as described in the Cultural Deficit Model (Pena 2003; Ramirez 1998). As such, psychologists were likely to assume that complete assimilation to the dominant culture and letting go of the native culture were essential for positive mental health; this model was referred to as the Assimilation Model (Keefe and Padilla 1987; Pena 2003).

Additionally, the majority of research on acculturative stress assumed that stress was inherent in the acculturation process and that the experience was similar for all individuals. However, these assumptions oversimplified the complex process of acculturation that occurred not just among immigrants, but also for Native Americans and ethnic minorities who have resided in the United States for many years, such as Mexican Americans or Puerto Ricans (de la Torre and Estrada 2001; LaFromboise et al. 1993). Furthermore, empirical research findings did not corroborate the theoretically anticipated linear association between assimilation and better mental health. In fact, reviews of the literature demonstrated that the associations between acculturation and mental health were equivocal and did not support the Assimilation Model or Acculturative Stress Model (Rogler et al. 1991). Thus, one turns to the concept of bicultural stress to extend the psychological research on acculturative stress, but also to address these basic assumptions of the Cultural Deficit Model and Assimilation Model.

The assimilation model, and the Acculturation Model have the following assumptions: (1) stress is inherent in the acculturation process for all immigrants and ethnic minorities, (2) acculturative stress is the same for immigrants and ethnic minorities, (3) maintaining native culture is detrimental to healthy development and impedes assimilation, (4) assimilation to the dominant culture is necessary for positive health, and (5) ethnic majority groups experience little or no stress from acculturation. The concept of bicultural stress addresses these assumptions because it is based on a bicultural model of acculturation, Orthogonal Cultural Orientation, and is combined with Stress and Coping Models. The Orthogonal Cultural Orientation Model recognizes that individuals may identify with more than one culture at the same time without necessarily sacrificing one cultural identity for another (Oetting and Beauvais 1990–91). Drawing on this model, bicultural stress acknowledges pluralistic cultural environments and the stress that may result from navigating between more than one cultural context while trying to maintain both cultural orientations. Bicultural stress also draws on classic definitions of stress and fundamental elements of stress and coping models that describe the importance of the subjective appraisal of stress in order to understand the link between stressful events and mental health. Thus, bicultural stress addresses one of the earlier assumptions—that stress is inherent in the acculturation process and is the same for everyone—by identifying and quantitatively assessing an individuals' agency in perceiving and interpreting stress due to navigating between more than one culture. This essay further elaborates on these theoretical foundations and how they led to the concept of adolescent bicultural stress.

Theoretical Foundations in Orthogonal Cultural Orientation and Stress and Coping Models

The Orthogonal Cultural Orientation Model acknowledges that youth live within pluralistic contexts in which multiple cultures exist simultaneously. Culture can be defined here as the shared set of learned experiences that include norms, values, language, subjective experiences, physical objects, and shared symbols (Foster and Martinez 1995). Thus, culture is more than just a one-dimensional, static backdrop for adolescent development; instead, adolescents are active agents who are fully interacting with culture (García Coll et al. 1996). The Orthogonal Cultural Orientation Model did not assume that maintenance of the native culture would impede acculturation to the dominant culture; rather, it emphasized that maintenance of one's native culture was independent of adopting another culture (Oetting and Beauvais 1990–91). In this way, the model acknowledges the bidirectional process of acculturation in which individuals of both cultures are influenced by acculturation, and both are maintained (LaFromboise et al. 1993; Oetting and Beauvais 1990–91). For example, just because an individual begins to speak more English does not necessarily mean that they will in turn speak less Spanish; rather, they may become bilingual. Orthogonal models of acculturation elucidate that cultural maintenance is not necessarily pathological; rather, it can be highly adaptive and a form of positive youth development, in part because it increases youth resilience to interact with more than one set of cultural norms and languages on a regular basis (LaFromboise et al. 1993; Oetting and Beauvais 1990–91).

This early work on orthogonal models and biculturalism was based on research with Native American adolescents, whose familial developmental contexts on the reservation were multigenerational and bilingual (LaFromboise et al. 1993; Oetting and Beauvais 1990–91). For Native American youth who lived betwixt both US and native culture on a daily basis, it was clear that adopting the US culture and maintaining native culture was beneficial to overall mental and physical health.

Clearly, the Orthogonal Cultural Orientation Model has important implications for understanding acculturation as a bidirectional process in pluralistic contexts for immigrant, ethnic minority, and ethnic majority adolescents. Contemporary multicultural contexts that are highly integrated through cell phones, Internet, and transnational media further increase regular exposure between different cultures and also may increase the ability of immigrants to maintain their native cultures even over wide distances. The maintenance and valuing of native cultures among immigrants and minorities may also influence the experience of bicultural stress among ethnic majority groups who live in pluralistic environments and interact on a regular basis with individuals who have a different cultural context than their own. Research based on Orthogonal Cultural Orientation Models demonstrates that when individuals were able to successfully integrate being bicultural, they reported better mental health (Haritatos and Benet-Martínez 2002; LaFromboise et al. 1993). At the same time, this research has not yet addressed differences in success rates among individuals in bicultural contexts at integrating both cultural identities; in fact, research has not investigated the developmental process of becoming an integrated bicultural person, and there is a need to understand the bicultural process that is experienced by children and adolescents. Given the reality of pluralistic nations, that not all cultures are equal in power and privilege, it is necessary to understand the process of moving between these different cultures that have power differentials and how this process may be perceived as stressful, especially among young people. Thus, in order to understand the potential process of stress involved in navigating between more than one culture, one turns toward models of stress and coping to advance the understanding of the relation between bicultural contexts and mental health.

Lazarus (1997) argued that, in order to truly understand the relation between acculturation and mental health, acculturation researchers needed to adopt a stress and coping model approach that would more directly link acculturation experiences to mental well-being. Specifically, in response to reviews of the literature that reported equivocal results between acculturation and mental health, Lazarus (1997) argued that the experience of stress involved with acculturation would vary by each individual's subjective appraisal of stress. He suggested that acculturative stress research needed to utilize cutting-edge stress and coping approaches to quantitatively measures stress in order to detect individual differences at a psychological

level. It is necessary to know more than just whether the event occurred; it is critical to know the individual subjective perception of the level of stress due to an event (Aldwin 1994; Folkman et al. 1986). Based on Stress and Coping Models, stress is defined as the external or internal demands that an individual cognitively appraises as taxing or exceeding their existing resources (Folkman et al. 1986; Selye 1980). This individual level variation component to understanding bicultural stress is partly attributed to youths' active engagement with the environment around them, because not all youth will have the same skills or resources to cope with the stressor, or the same perception of what is taxing. This theoretical stress approach of subjective cognitive appraisal of stress ensured that it was not assumed that *all* individuals equally experience stress as part of the acculturation process. Furthermore, it led to advanced measures of acculturative stress that were able to detect differences between immigrants and ethnic minorities and were found to be significantly associated with depressive symptoms (Cervantes et al. 1990, 1991).

In sum, the study of bicultural contexts of stress was theoretically based on Orthogonal Cultural Orientation and Stress and Coping Models and has extended research on acculturative stress by both acknowledging the maintenance of minority cultures, as well as by measuring the individual subjective appraisal of stress. Thus, this essay addresses the assumptions that assimilation is the only healthy option, that stress is experienced by all immigrants and ethnic minorities, and that ethnic majority groups do not experience bicultural stress. Bicultural stress acknowledges that adolescents may perceive moving between more than one culture as stressful, particularly when they feel that they do not have sufficient resources to cope with external demands of the different cultural contexts. Not only can firsthand social interactions with individuals of different ethnic groups be stressful simply by the sheer act of taking in different cultural values, norms, or languages, but also prejudice or discrimination may occur between ethnic groups due to differences in power and privilege between different cultural groups. The authors explore the bicultural contexts of stress during the unique period of adolescence when young people are beginning to assert their independence from their family and develop their own unique ethnic identities; at the same time, they are also more likely to have firsthand contact that is not mediated by parents with peers and community contexts (e.g., police, border patrol, schools, and businesses). They further elaborate on bicultural stress in ecodevelopmental adolescent-specific contexts and how bicultural stress relates to mental and physical health of adolescents.

Ecodevelopmental Contexts of Bicultural Stress

Before detailing more descriptions of bicultural stress, it is important to note that one does not assume that all youth will experience all of the bicultural stressors all of the time. In fact, some youth may have these experiences of navigating between more than one culture, yet report little to no stress. Other youth may report high levels of stress from even a few experiences that may negatively impact mental health outcomes. It can be the chronic nature of daily hassle stressors that builds up stress over time and over multiple contexts. The cumulative effect of stress over time can have a strong negative influence on mental well-being (Folkman et al. 1986). Thus, it is argued that it is critical to consider the holistic environment of adolescents that includes multiple components of bicultural stress within multiple contexts. The primary documented subcomponents that contribute to bicultural stress are monolingual stress, discrimination, prejudice, and differences in cultural values (Romero and Roberts 2003a; LaFromboise et al. 1993). The following sections will describe how each of these subcomponents of bicultural contexts may create stress within each of the primary ecodevelopmental adolescent contexts, including family, peers, and communities (Bonfenbrenner 1979, 1986). It is argued that each of these stressors due to monolingualism, discrimination, and differences in cultural values may be experienced at each ecodevelopmental level (family, peers, and communities) and it is the cumulative effect of stress over time that will negatively impact adolescent health.

Family. Family contexts are the primary means for socializing children into their ethnic minority culture and language (Hughes et al. 2006; Romero et al. 2000; Padilla 2006; Umaña-Taylor et al. 2006), and the pressure to maintain native languages within family contexts may be strong for adolescents. Being bilingual in bilingual contexts may be important in order to communicate with monolingual family members or even to feel comfortable in bilingual conversations

(Romero and Roberts 2003a). Adolescents report feeling bicultural stress from needing to fluently speak both their native language and the dominant culture language (Romero and Roberts 2003a; Romero et al. 2007a; Romero et al. 2007b). Additionally, language differences within family contexts may lead to unique family-based stressors. For example, youth may learn to speak the dominant language quicker than their parents as a result of school, peer, and media exposure to the dominant language. Subsequently, youth may find that they are asked to translate for their parents in order to help them negotiate interactions with dominant cultural institutions, such as medical, financial, or other adult responsibilities. While some youth may feel proud and gain self-esteem from stepping into this critical family role, other youth without resources to translate effectively may feel stress. Some youth may feel stress translating only at certain times or in certain situations, despite the fact that overall they may feel pride in their family role as translator or proud to help family members when they need it most. However, some youth report that they feel stress because they are not fluent in both languages or do not have the authentic accents in both languages (Romero and Roberts 2003a; Romero et al. 2007a). Immigrant Latino youth were more likely than later generation Latinos to report stress from having to translate for parents or having to help parents, whereas, US-born Latino adolescents have been found to be more likely to report stress from the need to speak better Spanish (Romero and Roberts 2003a). No significant differences were found between Latino and Asian youth for reporting stress from having to translate for their parents, arguing with family about cultural traditions, feeling family is not united, and feeling like they cannot be like American kids; however, both groups reported significantly more of these stressors compared to European American youth (Romero et al. 2007a). European American youth often reported bicultural stress due to family obligations and stress from parents saying that teens don't respect elders, there were no significant ethnic differences for these stressors compared to Latino or Asian youth.

Within nuclear and extended families, it is highly likely that family members will be at different stages of acculturation; moreover, they may have different immigration or documentation status, and they may have different levels of interactions with out-group members. Adolescents are likely to acculturate faster than their parents, grandparents, or other siblings; these family intergenerational differences may cause family conflict and stress (Gil et al. 2000; Szapocznick et al. 1978). When adolescents do not agree with all the same values or have the same experiences as other family members, they may feel stress due to lack of resources in minimizing family tension. One specific source of intergenerational acculturation conflicts has been documented among Latino families in mental health counseling sessions and is termed "cultural freezing," which is described as when individuals become culturally "frozen" in a previous time period from their native country and idealize the culture and gender patterns from that time period (Flores-Ortiz 1993). Cultural freezing may be accompanied by a fear of losing one's culture, and results in becoming more rigid about maintaining cultural norms, values, languages, and behaviors. This rigidity may lead to family conflicts around issues of cultural traditions. Immigrant Latino youth specifically have been more likely to report that they feel that they cannot be like American kids because of their parents' values (Romero and Roberts 2003a). It has also been found that cultural-value gaps between parents, their children, and their children's peers heighten within family conflicts (Baptiste 1993; Coatsworth et al. 2000). Conflict over peer relationships has been linked with more depressive symptoms not only for adolescents, but also for their mothers (Coatsworth et al. 2000). Parents may perceive that peers with different cultural values may influence their own child's acculturation and some parents may want to limit the firsthand contact intercultural contact for their children due to rigidity in maintaining cultural values and norms.

Peers. Peer contexts are becoming increasingly relevant during adolescence, even for adolescents of collectivistic ethnic groups who tend to continue to place a high value on family relations (Cuéllar et al. 1995; Jensen-Arnett 1999). Peers may have strong influences on adolescents' healthy development, identity, and values (Jensen-Arnett 1999). However, during middle school and especially during high school, young people also begin attending larger school contexts, in which they are more likely to be exposed to more heterogeneous demographics among their peer groups. For some youth, it may be the first time in their life where they begin to have continuous firsthand contact with

individuals from a different cultural background than their own. Latino, Asian, and European American adolescents all report at some level that they feel stress from being uncomfortable around people from different cultures and from not understanding how people from different cultures act (Romero et al. 2007a). This is a commonly reported stressor among all ethnic groups, and in part may be because adolescents may be interacting for the first time with people from different cultures. Not all within-ethnic peer groups will have the same level of acculturation or be from the same ethnic or linguistic background; thus, peer conflicts may arise due to cultural differences in norms, values, languages, or shared symbols. For example, arguing with romantic others over cultural norms of dating or sexual behavior has been documented among Latino, Asian, and European American youth, although they were more common among Latinos (Romero et al. 2007a).

During adolescence, peer discrimination may be particularly stressful because positive acceptance by peers is highly salient and the perception of rejection, or the negative appraisal of one's ethnic group by others, may have a strong impact on the mental health of adolescents (Arnett 2002; Romero and Roberts 1998; Spears-Brown and Bigler 2005; Williams-Morris 1996). Researchers define prejudice as the everyday negative interactions between ethnic groups that may result from ethnocentrism, and suggest that it may be a major source of stress for many minority groups (Allison 1998; Clark et al. 1999; Meyer 2004; Sellers and Shelton 2003). In fact, in a longitudinal study of diverse adolescents, Greene et al. (2006) found that peer discrimination had the most negative impact on self-esteem as compared to discrimination in general. Although a significant amount of research has investigated racial discrimination among African American adolescents, limited research has been conducted on the impact of negative stereotypes, prejudice, and discrimination among other ethnic minorities (e.g., Latino or Asian Americans) or ethnic majority groups (Romero and Roberts 2003a; Umaña-Taylor et al. 2008). In one study, male adolescents were significantly more likely to report more stress due to being uncomfortable around ethnic jokes, which may suggest that some of these stressors have a gendered component in terms of frequency of experiences and degree of stressfulness (Romero et al. 2007a). Acculturative stress and assimilation models assumed that prejudice would be perpetuated by ethnic majority groups onto ethnic minorities; however, ethnic majority groups also experience stress from negative stereotypes or derogatory jokes about their ethnic group as well (Romero et al. 2007a; Romero et al. 2007b).

Through bicultural stress, youth also report stress within peer contexts from pressure to maintain their native culture. Thus, youth may also feel stress among their same-ethnic group peers to maintain the cultural values and language of their own ethnic group (Romero and Roberts 2003a). Another example of within-ethnic group stress is the use of derogatory terms to refer to within-group members who are perceived as "too assimilated" to the dominant culture and seem to be forgetting/losing their ethnic culture (LaFromboise et al. 1993; Oetting and Beauvais 1990–91). Commonly used derogatory terms such as "oreo" (Black on the outside, and White on the inside) indicate that, despite exterior racial phenotype, individuals are really more oriented to the dominant white culture and may even be turning their backs on their own culture and within-ethnic group members. Similar sentiments and examples exist among other ethnic minority groups in the United States, including "apple" (Native American), "banana" (Asian), or "coconut" (Latino) (LaFromboise et al. 1993; Oetting and Beauvais 1990–91). Latino youth were more likely than Asian or European American youth to report stress from friends thinking that they "act White" (Romero et al. 2007a); this type of derogatory term may be used to try to maintain within-group culture by putting down the dominant group culture. Another source of within-group ethnic pressure may be to join a gang to represent one's ethnic background or neighborhood; it is common for some gangs to have strong affiliations with their native countries, languages, or customs. Stress to join a gang to represent one's ethnicity was reported by youth from Latino, Asian, and European ethnic backgrounds, but was significantly more often reported by Latinos and Asians (Romero et al. 2007a). For ethnic majority adolescents who are numerical minorities in some peer settings, they may also feel pressure to adopt the minority culture or learn the native language so that they can communicate with peers and understand shared cultural symbols (Romero et al. 2007a; Romero et al. 2007b).

Community. Community contexts for adolescents will most likely include schools, but may also include police, border patrol, and neighborhood stores. In schools, youth may experience language and prejudice issues from teachers and administrators. Asian youth report that they feel stress because of being treated poorly in school due to poor English fluency (Romero and Roberts 2003a; Romero et al. 2007a). Latino immigrant youth were significantly more likely than US-born Latinos to report that they have problems at school because they are not fluent in English (Romero and Roberts 2003a). There is also the potential that, within school settings, language issues and prejudice may lead to discrimination or unfair treatment based on ethnicity or race that may impact adolescents' grades, disciplinary results, or access to school services (Cammarota 2004). Discrimination and prejudice may also occur for adolescents during interactions with police or border patrol (Fisher et al. 2000). Neighborhood stores are another setting where adolescents may experience bicultural stressors with store clerks; in some communities, youth may feel the need to be able to effectively interact in a language other than English in order to obtain services. Youth also report that at times they are followed in stores and made to feel uncomfortable because of their race, phenotype, or accent. Community level discrimination may have serious implications for adolescents because it may result not only in negative interactions, but also in arrests. Additionally, research has documented how community expectations of adolescents may result in self-fulfilling prophecies (Niemann 2004), such that stereotypes that criminalize adolescents may influence adolescent risk behaviors (Romero et al. 2007b). In fact, the authors have found that more bicultural stress is significantly associated with more risky behaviors that range from substance use to violent behavior among adolescents from European American and Latino backgrounds (Romero et al. 2007b).

Bicultural Context and Ethnic Majority Groups

While many acculturation models emphasize exchange between cultures (see van de Vijver and Phalet 2004; Zagefka and Brown 2002), most acculturation research has focused on the one-way acculturation of minority groups to the majority culture (Carvajal et al. 2002). In the past, it had been argued that minority ethnic groups experience unequal pressure to assimilate due to less power and lower status, whereas majority ethnic groups have minimal or no pressure to acculturate to the minority culture (Berry 2003). Thus, acculturative stress from navigating between more than one culture would be predominantly experienced by minority groups. The bidimensional aspect of orthogonal acculturation theory makes investigating bicultural stress more applicable to majority groups. Furthermore, demographics are rapidly changing on a worldwide basis such that societies are no longer as homogeneously stable as they once were, and the lack of numerical majorities can shift the power dynamics of cultural exchange (Pedrotti, et al. 2009). However, culturally dominant groups who retain privilege in terms of norms, values, and politics will not experience acculturative stress in the same manner as numerical minorities because there is likely to be significantly less pressure to adopt new cultural ways of being. So, although ethnic majority groups may experience acculturative stress to adopt aspects of the minority culture, they may not feel as much pressure to adopt cultural values and norms. Thus, acculturative stress may be more frequent among ethnic minority groups, although such stressors have also been reported among European American individuals (Romero et al. 2007a; Romero et al. 2007b). For example, one study found that, while not as many European Americans reported experiencing the stressor, ethnic differences on degree of stressfulness only occurred for 2 out of 20 items. This finding may indicate that while bicultural stress may not be as prevalent for ethnic majority groups, when they do experience bicultural stressors, it can have a stressful impact that is similar to that experienced by ethnic minorities. However, given that scales of bicultural stress were created and normed based on ethnic minority samples, it is possible that unique types of bicultural stress experienced by ethnic majority youth have not yet been captured in existing quantitative measures; perhaps qualitative research would be useful to further investigate the experiences of navigating between more than one culture among ethnic majority groups.

It is believed that a broad perspective on acculturative stress is an important contribution to the understanding of youth stressors globally, not only for immigrants, but also for minority and majority groups

(e.g., Bourhis et al. 1997). While not all types of bicultural stress may be as relevant for ethnic majority groups, one that is more often reported is that of prejudice/discrimination. In a previous study of discrimination among a multi-ethnic group of adolescents, perceived racial prejudice reports were generally higher for African American and Latino youth, even though all ethnic groups, including European Americans, reported some level of perceived prejudice. Negative stereotypes of ethnic minority groups have been well documented; yet, little research has considered the existing stereotypes of ethnic majority groups. For example, popular culture stereotypes such as "white men can't jump" or "white men can't dance" are perpetuated by ethnic minority communities in the United States. In fact, one of the most frequently reported bicultural stressor for European American adolescents was derogatory ethnic jokes (Romero et al. 2007a; Romero et al. 2007b). Power and privilege does impact the tenor of these types of stereotypes, such that the stereotyping of a Latino or African American as a criminal may lead to fear, racial profiling, and criminalization; serious impacts from the type of stereotypes about ethnic majority groups are less likely (Niemann 2004).

Bicultural Stress and Mental/Physical Health

Adolescents' mental health and externalizing, or risk behaviors, are central indicators of their health during this developmental period (CDC 2004; Jessor 1998). Epidemiological reports indicate that ethnic minority youth have disparate rates of depressive symptoms, suicide, and an array of risk behaviors (Eaton et al. 2008). One way to advance health disparities research is by examining plausible psychosocial factors that may better explain disparities than broad ethnic labels (e.g., Bradby 2003; Nazroo 2001; Walsh et al. 2000). Stress has been found to be associated with more risky behaviors in multiple studies (Bennett et al. 2005; Booker et al. 2004; Krieger et al. 2005). Scholars have increasingly articulated the negative impact of stress on health outcomes, particularly stress related to discrimination and prejudice (Karlsen and Nazroo 2002; Mays et al. 2007; Williams et al. 2003). Understanding risk factors that are amenable to change can improve the efficacy of prevention, intervention, and mental health services for adolescents.

Latino adolescents who experience acculturative stress and/or discrimination report more negative mental health outcomes (e.g., Cervantes et al. 1991; Hovey 2000; Krieger et al. 2005; Samaniego and Gonzales 1999; Szalacha et al. 2003; Vega et al. 1998). Moreover, measures of subjective bicultural stress and/or bicultural conflict have been examined in Mexican American and Chinese American samples and were positively associated with depressive symptoms among both immigrants and US-born individuals (Benet-Martínez et al. 2002; Romero and Roberts 2003a). The combined additive nature of bicultural stress is important to explore in terms of the negative effect on mental health among adolescents. In a study with Latino, Asian, and European American adolescents, bicultural stress was found to be associated with depressive symptoms for all ethnic groups, even after accounting for gender, socioeconomic status, and language (Romero et al. 2007a). Furthermore, bicultural stressors have been empirically linked with more risky behaviors among both Latino/a youth and White youth, including smoking, drinking, drug use, and violence (Romero et al. 2007b).

Bicultural stress has been found to have similar effects on mental and physical health among Latino and Asian adolescents, who are ethnic minorities; moreover, it has also been found to have similar significant associations with mental and physical health with White adolescent populations, who are ethnic majorities in the United States (Romero et al. 2007a; Romero et al. 2007b). In fact, in two studies on bicultural stress, most ethnic differences between Latinos and Whites were no longer significant after accounting for sociodemographic factors. These findings support arguments that ethnic labels need to be contexualized within sociodemographic factors in order to capture the multiplicity of social positions; for example, socioeconomic status and gender may also contribute to stress (e.g., Phinney 1996). Bicultural stress has implications for individuals from a variety of ethnic backgrounds, and has been considered in health research with ethnic groups that include European American, Mexican American, Latino, Asian American, American Indian, Muslim Americans, French-born US immigrants, Soviet Union immigrant girls, and Chinese Americans (Benner and Kim 2009; Chédebois et al. 2009; Jeltova et al. 2005; LaFromboise et al. 2007; Sirin and Fine 2008). This research may lead to

a better match between prevention, intervention, and mental health services for *all* adolescents that meet their needs while considering bicultural contexts.

Predictive Differences by Immigrant Status and Gender

Bicultural stressors have been found to be most prevalent among adolescent immigrants (Berry 2003; Cervantes et al. 1991; Hovey 2000); immigrating during the adolescent developmental period has been associated with the worst mental health and educational outcomes compared to immigration during earlier childhood periods (Padilla et al. 1986). Youth may directly experience issues of immigration, or native-born adolescents may indirectly experience immigration stressors through their family members, romantic partners, or friends (Romero and Roberts 2003a). Young people, immigrant or not, may also be experiencing effects of anti-immigrant sentiment which is shaped by national and local rhetoric connected to immigration policy (O'Leary 2009). Immigrant youth were significantly more likely to report a high level of stressfulness due to immigration concerns with friends and family (Romero and Roberts 2003a). Immigrant youth may have less proficiency in the dominant language, and youth speaking less English have been found to report more bicultural stressors compared to bilingual or English speaking youth (e.g., LaFromboise et al. 1993; Romero and Roberts 2003a; Romero et al. 2007a; Romero et al. 2007b). Given the worldwide increases in immigration, issues of healthy development for immigrant youth are important at a global level; yet there is minimal research with this population. More investigations with immigrant youth that consider individual and ecological context theories with longitudinal methodological approaches are much needed in this area.

Although gender differences are minimal in the reporting of bicultural stressors or in the intensity of stressors, males were more likely than females to report frequency of stress due to discrimination resulting from being treated badly because of accent, problems at school because of poor English, and significantly more intense stress due to derogatory ethnic jokes (Romero et al. 2007a). Previous studies have not reported gender differences in acculturative stress or its relation to mental well-being (Cervantes et al. 1991; Hovey 1998; Romero and Roberts 2003a). In terms of the relation between bicultural stress and mental well-being, Latina girls who reported more bicultural stressors were significantly more likely to report less optimism, whereas this relation was not found for boys (Romero et al. 2007a). Given that Latina girls also have the highest national rates of depressive symptoms, suicide plans, and suicide attempts compared to other ethnic/gender groups, it may be worthwhile to further investigate the gendered differences of experiences of bicultural stress (Zayas et al. 2005). The work of Zayas et al. (2005) describes an ecodevelopmental approach to understanding family interactions for Latina girls and the impact on their mental well-being as a way to capture both family conflict and family support and coping. By integrating multiple elements of girls' ecologies within bicultural and family contexts, researchers and mental health service providers may be able to create more effective prevention strategies and services. There is a need to further investigate cultural strengths that exist within ethnic minority groups as well as understand the effective strategies that adolescents develop to navigate more than one cultural context and that can be generalized to other adolescents.

Conclusions

Bicultural stress is the subjective appraisal of stress that may result from social interactions in family, peer, or community contexts that require consideration of different cultural norms, values, languages, or shared symbols. Bicultural stress has been found among adolescents of ethnic minority and ethnic majority groups. Furthermore, bicultural stress has been found to be associated with more depressive symptoms, less optimism, and more risky behaviors. Clearly, the consideration of bicultural contexts on the experience and perception of stress among adolescents of *all* ethnic backgrounds is relevant for their mental and physical health. Additionally, given the increased globalization of societies across the world with transnational media and immigration, it is more critical than ever to understand adolescents' ability to effectively navigate between more than one culture – among both ethnic minority groups as well as ethnic majority groups (Compas, Davis et al. 1987; Haritatos and Benet-Martínez 2002; LaFromboise et al. 1993). It is hoped that, by articulating the specific details of bicultural experiences of stress, the work will lead to elucidating the type of bicultural skill building necessary for

healthy development of adolescents in bicultural contexts. Future research can advance the understanding of adolescents in bicultural contexts from a strengths approach that can lead to improved adolescent health and improved social interactions between different cultural groups (Pedrotti et al. 2009).

Cross-References

- ▶ Acculturation
- ▶ Assimilation
- ▶ Immigration
- ▶ Language Brokering
- ▶ Multiracial Identity

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Bilingual Education Programming

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Bilingual education, the use of two languages to impart educational curriculum upon students, has a long history, and one that has been marked by considerable controversy related to how societies are to integrate nondominant speakers into mainstream society. The rise and fall of bilingual education and programs appears to follow broad societal forces. For example, although it was common to see bilingual education in the US before World War 1, efforts to maintain fluency in any language other than English was perceived as a disloyalty to the nation and, as a result, the provision of bilingual education dissipated until the 1960s. In the 1970s and 1980s, policies and practice favored bilingual education, which involved teaching youth either partially or entirely in their native language and then transitioning them during the elementary grades to English-only instruction (see Slavin and Cheung 2005). But, from the 1990s to the present, the political tide has turned against bilingual education. Questions about bilingual education being an impediment to

learning English and a disruption of societal cohesion still remain dominant, and these controversies focus on providing youth with ways to learn a dominant language rather than the other way around, as ways to increase their biliteracy skills and understanding of other societies and their institutions. Considerable controversy exists among policymakers, researchers, and educators about how best to ensure the reading success of dominant-language learners.

Although controversies about nondominant groups learning the dominant language remain at the forefront of political agendas in the United States, it is important to consider that bilingual education has been common in many other countries. Over 5,000 languages are spoken around the globe, and roughly two thirds of all children grow up with multiple languages in their everyday environment. Countries such as Switzerland, Singapore, India, and most countries in Africa recognize multiple national languages and regulate the use of these languages in their education system. In many Scandinavian countries, bilingual education has become a common method of educational instruction. Although common, it is important to note that the nature of bilingual education varies, as exemplified by the Canadian example (see Poissant 2005). Even in Canadian bilingual education programs, the dominant languages of French and English are far more common than bilingual programs in a minority language, and, in fact, some provinces have outlawed the use of any language besides French and English in educational instruction. Indeed, educational instruction in the dominant language detaches any minority-language group from the resources that education confers. The diversity and breadth of bilingual education efforts reveal how bilingual education can be seen as both a good and a liability. In a real sense, bilingual education for dominant groups of society, those whose primary language is the dominant language, is seen as beneficial and enriching. But that is not the case for minority groups; for them, enrolling in the same program in order to maintain their native language skills while developing bilingual skills is met with opposition. Bilingual education, then, is quite common but can take different forms, reach for different goals, and be subjected to considerable criticism and disapproval depending on those forms and goals.

Understanding the nature of bilingual education requires examining it from a variety of perspectives and the purposes bilingual education is meant to serve. By focusing on the goals of the program, characteristics of the students, or the organizational structure, bilingual education can serve many purposes. Different types of bilingual educational programs emerge based on the goals of the program. Enrichment programs offer to enhance a child's education, while remedial programs attempt to compensate for bilingual children's presumed language deficits. Maintenance programs allow students from a minority language to maintain their language, while transitional programs use the secondary language to ease students into dominant-language classrooms. Transitional programs can further be parsed into separate categories based on when the student is transitioned into the dominant-language classroom; early-transitional programs aim to shift students by second or third grade, while late-transitional programs do so around fifth or sixth grade. As these examples reveal, variations in the nature and implementation of bilingual education abound.

Demographics also can influence the type of bilingual education program implemented. Programs can differ if the students are members of the numerical minority or majority, or whether they are part of the dominant or subordinate social groups. Bilingual education for minority or indigenous groups usually aims to maintain or revitalize the minority language. For the dominant group, the goal of bilingual education is usually to enhance education. Another demographic group that utilizes bilingual education is the immigrant group, in which remedial or transitional programs are used most often. Finally, deaf or hard-of-hearing students may utilize bilingual education to learn sign language and the dominant language of their society.

Another useful distinction in bilingual education involves the differing organizational structures. Immersion is a method of instruction meant to support comprehension of a second language (see Poissant 2005). For example, students in Canada whose primary language is English are placed in a French immersion school for two or three years prior to being taught in English. In these French-based schools, children are taught in a specific way to help them become fluent in both English and French. In opposition is the concept of submersion, in which students from the minority language are placed in dominant-language schools with minimal emphasis on language transition; these

students receive little support in the way of learning the language of instruction.

The various ways of categorizing bilingual education, and the very existence of bilingual education itself, has led many to speculate as to its consequences (for a review, see Genessee et al. 2006). One of the key findings to emerge is that research tends not to find long-term adverse effects on students' academic development in their dominant language if they take part in bilingual programs. This finding is seen despite minority or majority status, sociolinguistic or sociopolitical contexts, or organizational structure of the education. Research also has found that knowledge is transferable across languages, such that academic proficiency in one language can be just as proficient in an academic ability in a second language. This is true even for dissimilar languages such as English and Chinese or Dutch and Turkish. Yet another key finding from research is that the development of bilingualism and biliteracy together in a longer-term program promote better literacy in both the first and second languages. Finally, providing minority-language students with bilingual education instead of submersion in a dominant-language classroom may more effectively teach them their second language. Studies reporting these findings often report that caution is warranted in that simply providing bilingual instruction will not transform the educational outcomes of a child in the absence of addressing other key social issues, such as discrimination, poverty, or poor nutrition. Although the general findings have gained currency, it is important to note that much research in this area is not as robust as would be hoped, and much of it involves young children. Still, the persistent findings remain quite suggestive and reviews conclude that existing evidence favors bilingual approaches for learning a new language like English, especially paired bilingual strategies that teach reading in the native language and English at different times each day (see Slavin and Cheung 2005). What effects these programs have on youth development beyond language (such as self-esteem, as well as personal and social identity), however, remains a subject that is even less explored (for a notable exception, see Wright and Bougie 2007).

Researchers have found for quite some time that bilingual education is a legitimate medium of educational instruction (for meta-analytic reviews, see Greene 1997; Rolstad et al. 2005). But, researchers have yet to determine the best models and practices for its implementation. Importantly, even if models and practices could be identified, their implementation likely would depend on several factors not directly related to their effectiveness given the much larger implications of bilingualism that extend beyond education. Indeed, bilingual education is only one facet belonging to the controversy of any diverse nation attempting to crystallize its identity and those of its citizens. This reality makes important not only research on the nature of bilingual education and its outcomes but also on the factors influencing the implementation of particular types of bilingual education.

Cross-References

► Bilingual Education Rights

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Bilingual Education Rights

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One of the most heated debates involving minority youth centers on their language education. US school systems, for example, have been affected by the consistent increase of ethnically and racially diverse students and

a dramatic growth in the number of students exhibiting limited English language abilities (see Ovando 2003). This increase has resulted in controversy regarding how best to address those abilities. Some argue for the need to maintain native languages as they recognize the important role language serves as it links individuals to their cultures, helps maintain their ethnic participation, and provides increased access to their ethnic community. Others focus on English-language acquisition, particularly English emersion, which would replace the native language in students' formal educations and serve as a way to promote advancement and integration for all children. Although controversies are likely to continue in terms of which approaches best address youth's needs, social policies and laws clearly favor emphasizing the acquisition of English, and they do so at the expense of formally maintaining native languages.

The language rights of immigrants settled in the United States have a long history, but the 1960s provide the starting point for modern discussions on foreign language and education issues. Congress ushered in the modern approach when it enacted the *Bilingual Education Act* (1968). The Act created a limited grant program to provide support for schools with large limited English proficient (LEP) student populations and to encourage research and experimentation. In 1970, the Office of Civil Rights in the Department of Health, Education, and Welfare (HEW) (Office of Civil Rights 1970) issued a memorandum recognizing that school districts were engaging in practices that had the effect of denying equal opportunities to non-English students and called for affirmative steps to rectify the language when students from a foreign national origin were being denied effective participation due to their inability to understand English. These efforts granted school districts the opportunity to provide bilingual education programs without violating segregation laws that had emerged in the wake of the Civil Rights movement. Importantly, although the new legislation sought to promote flexibility and take multicultural awareness seriously, they still sought to encourage instruction in English rather than foster full bilingualism.

In *Lau v. Nichols* (1974), the Supreme Court dealt, for the first time, with the rights of LEP students. *Lau* involved students from the San Francisco School District who were of Chinese ancestry and did not speak English. Some of the students received supplemental classes in English, but over half of the students did not receive any instruction. The students initiated a class action against the school system. The appellate court held that all students had different educational advantages and disadvantages, and that no rights had been violated. The students won on appeal to the United States Supreme Court. The Court relied on the HEW memorandum and held that Title VI of the Civil Rights Act of 1964 or its accompanying regulations required the school district to remedy the language barrier for students who did not speak English. The Court concluded that the school system violated § 601 of the Civil Rights Act, which prohibited discrimination based upon race, color, or national origin in any program receiving federal financial assistance. It found that, by not providing adequate English courses, the school system denied the students the opportunity to obtain the education received by the English-speaking majority within the school system. The Court refrained from endorsing a particular program as an appropriate remedy. Although the Court did not take a position on controversies surrounding what method was best to address bilingual education, the case was nonetheless quite momentous in the manner it legitimized and gave impetus to the notion that students who do not speak English deserved an equal educational opportunity. By doing so, the Court helped raise the nation's consciousness about the need for bilingual education. *Lau* formally recognized that bilingualism could be supported.

Despite *Lau's* prominent place in the history of language rights in education, the case was essentially superseded by the *Equal Educational Opportunity Act* (EEOA) of 1974 (1974). The EEOA, specifically section 204, remains the primary source of LEP rights today. The EEOA mandates, that "no State shall deny equal educational opportunity to an individual on account of his or her race, color, sex, or national origin, by . . . the failure by an educational agency to take appropriate action to overcome language barriers that impede equal participation by its students in its instructional programs." Importantly, and much like *Lau* had done, the statute leaves open for interpretation of key concepts like "appropriate action" and "equal participation." In important regards, then, these federal mandates still have their limitations, but they still support the recognition that educational systems must take steps to ensure equal opportunities for youth who have limited English language skills due to bilingualism.

In the decades since *Lau*, courts and federal administrative agency officials have battled over how best to fulfill obligations to students and have disagreed on whether bilingual education should include native-language instruction or whether English immersion classes are sufficient. More recently, however, states have moved toward language emersion. States have begun prohibiting schools from using LEP students' native languages in teaching them English and other subjects (see Depowski 2008). Although there are notable exceptions, courts continue to assume that retaining the native language is not relevant to youth's rights and hold that children will be best served by being given access to the American mainstream through the English language. Given how language is so central to the transmission of cultures, as well as family relationships and the cultural resources provided children, it is difficult to underestimate the importance of these developments.

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▶ Bilingual Education Programing

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Bill of Rights

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The term "Bill of Rights" refers to the first ten amendments to the United States Constitution. These amendments are a series of limitations on the power of the United States' federal government. The protected rights include, for example, the freedom of speech, freedom of assembly, freedom of religion, and freedom of association. The amendments also contain important protections in criminal cases, as they require indictment by a grand jury for any capital or "infamous crime," guarantee a speedy and public trial with an impartial jury, and prohibit double jeopardy as well as cruel and unusual punishment. They also reserve for the people any rights not specifically mentioned in the Constitution and grant to the people or the states all powers not specifically granted to the federal government. Although the protections take the form of restrictions against the federal government, the Supreme Court subsequently interpreted the Due Process clause of the Fourteenth Amendment as supporting the application of most of the restrictions against states (see Levesque 2006). Importantly, the Bill of Rights sets a floor of protections; states are free to enact laws and interpret their own constitutions more liberally than the federal constitution as long as they provide more protections to their citizens.

The Bill of Rights plays a key role in US law and its government, and it relates closely to adolescents' rights. In terms of adolescents' rights, a key concern is whether the rights recognized in the Bill of Rights actually apply to them. Several Supreme Court opinions have granted minors significant protections under the Bill of Rights. Important examples include protections against searches and seizures, both against law enforcement (Levesque 2006) and others acting on behalf of states (such as school officials, Levesque 2002a). In addition, the Court has granted minors important free speech protections (see Levesque 2007), religious freedoms (Levesque 2002b), and a slew of protections relating to their privacy (Levesque 2000). Importantly, some of these new recognitions relate to protections from not only those acting on behalf of governments but also others such as parents and service providers. The potential expansiveness of these protections makes it difficult to underestimate the potential depth and breadth of rights that can be developed and granted to adolescents. That potential expansiveness helps confirm the immense power the Bill of Rights has had and can have in shaping adolescent life.

Much of the above protections, as well as their limitations and promise for future developments, came after the groundbreaking case, *In re Gault* (1967), establishing that juveniles accused of offenses in delinquency proceedings must be afforded many of

the same Constitutional rights accorded to adults in criminal proceedings. It was in *In re Gault* (1967, p. 13) that the Court decreed that “neither the Fourteenth Amendment nor the Bill of Rights is for adults alone.” The Supreme Court would use that language repeatedly to develop adolescents’ rights. Despite these important developments, the right of adolescents to have and exercise their own rights remains strikingly limited. Indeed, it also was in *In re Gault* (1967) itself that the Court limited its reach by noting that the case addressed only some of several due process rights relevant to juveniles in delinquency proceedings; and cases since then have rejected many efforts to garner additional protections (see Levesque 2000). Much of the limitations placed on adolescents’ rights are due to the rights of parents to control their children’s upbringing as well as the government’s obligations to protect youth from others and themselves, both in the name of youth as well as broader societal interests (see Levesque 2000, 2008). The Bill of Rights, then, has profound significance to adolescents either in the manner adolescents control their own rights or in the manner that they shape the rights and responsibilities of those charged with adolescents’ upbringing.

The above examples highlight central points about the Bill of Rights. The legal system continues to attach considerable significance to the enumerated rights as well as those that they are interpreted as protecting. Indeed, the Bill of Rights actually serves as the foundation and guide for the US legal system. Still, deep disagreement continues as to the meaning of particular rights in certain circumstances and as to whom they should protect. As a result, sometimes youth gain protections while they do not at other times. Equally importantly, the restraints are directed to the government and not to the individuals who are the governed. In a real sense, the laws only indirectly protect from individuals. For youth, this means that parents and others have considerable freedom to guide minors’ upbringing and control the exercise of their rights. Thus, youth depend both on restraints placed on the government as well as the government’s fulfilling its function of protecting individuals from impositions by other individuals. Supported by the Bill of Rights, the legal system’s tasks, then, necessarily involve dealing with private and public (governmental) powers, including protections of a nonconstitutional order that can influence powerfully adolescents’ everyday experiences in their families, schools, communities, and other institutions.

Cross-References

► Fundamental Rights

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Binge Drinking

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The period of adolescence is known as one that involves experimentation and the desire to associate with peers. That combination has resulted in practices that lead youth to engage in problematic activities. The episodic consumption of large amounts of alcohol, known popularly as binge drinking, certainly constitutes one of those activities. This method of consuming alcohol leads to behaviors linked to numerous negative psychological, physical, and social consequences, including risky sexual behaviors, violence, suicide, alcohol dependence, injuries, and fatal vehicle accidents (Courtney and Polich 2009). These consequences have placed binge drinking at the forefront of public health concerns regarding adolescents’ drinking of alcohol. Despite continued concerns, considerable controversies still remain, especially in terms of what constitutes binge drinking, the nature of its effects, and prevention. Still, important research trends do emerge, and those highlight the seriousness of binge drinking.

While what constitutes "binge drinking" remains debatable, the phrase is commonly used in adolescence to describe a single occasion of risky drinking, generally defined as more than four or five drinks in a row. This definition is what researchers typically use, although leading journals now take a much more narrow view of what would constitute binge drinking. Most notably, *The Journal of Studies on Alcohol and Drugs* (Editorial 2009) now uses the term "binge drinking" to describe an extended period of time, typically two or more days, during which a person repeatedly uses alcohol to the point of intoxication and gives up usual activities and obligations in order to use alcohol. Rather than use the term to describe sustained, heavy drinking, others suggest that risky, single-occasion drinking, or episodic heavy drinking, would be more appropriate (Murgraff et al. 1999). Studies focusing on adolescents tend to use a more lenient definition, with the focus on counting the number of drinks within a short specified time frame (see Hill et al. 2000), while studies focusing on young adults still use a variety of definitions (Courtney and Polich 2009).

Definitions that count drinks over a short period of time appear to be more useful for studying adolescents, but it must be kept in mind that what they are indexing may not be binge drinking but another phenomenon that seems to have merit as an indicator of problem behavior and negative outcomes. Approaching binge drinking by counting drinks appears to be an important measure of alcohol use given that its consequence, intoxication, presents specific health and psychological risks not associated with more occasional drinking with fewer drinks. This view of binge drinking also appears to reflect the reality in which adolescents find themselves in that they may have less access to a steady supply of alcohol and, as a result, engage in heavy drinking when they do have access. For adolescents, then, "binge drinking" involves the intensity of alcohol use, although it does not necessarily translate into alcohol abuse or alcohol dependence, at least during adolescence.

Even studies that count drinks over a short period of time report important consequences of drinking. These studies show that adolescent binge drinking associates with significant later adversity and social exclusion. For example, Vinor and Taylor (2007) reported the results of a 30-year longitudinal study of over 11,600 individuals who were 16 when they first participated. They defined binge drinking as two or more episodes of drinking four or more drinks in a row in the previous 2 weeks. They found that 17.7% of participants reported binge drinking at the age of 16. They also found that binge drinking predicted an increased risk of adult alcohol dependence, excessive regular consumption, illicit drug use, psychiatric morbidity, homelessness, convictions, school exclusion, lack of vocational qualifications, accidents, and lower adult social class. Importantly, the results had adjusted for adolescent socioeconomic status and adolescent baseline status of the outcome under study. Also importantly, the authors had measured habitual frequent drinking, and they found that their overall findings were largely unchanged regardless of how they measured drinking (either as adolescent binge drinking or habitual frequent drinking). The authors concluded that binge drinking may contribute to the development of health and social inequalities during the transition from adolescence to adulthood.

The current understanding of binge drinking suggests the need to consider its social dimensions. In the United States, for example, binge drinking is more common among college students than their similar-aged peers. A careful analysis of binge drinking over the past 27-year period revealed that binge drinking among college students exceeded that of similarly aged peers who were not attending college; and it showed reductions in binge drinking among noncollege peers (Grucza et al. 2009). The study also found an overall decrease in relative risk for binge drinking among 12–20-year-old males, but not females. The trends show progress in reducing the rates in binge drinking among males, especially noncollege males. But college-aged students of both sexes continue to drink more than their peers who are not attending college.

The significance of the college environment raises the need for a greater understanding of environmental conditions that foster binge and irresponsible drinking. It has been noted that social systems, such as fraternities and sororities, as well as academic and sports cycles, contribute to the desire to drink in bursts (e.g., celebratory post examination parties and tailgating at sport events). These are likely to be problematic in environments where supervision involves the transition to adulthood and the need to learn how to behave responsibly. They also are likely to be problematic in contexts where individuals are under high levels of

stress and view alcohol as a way to self-medicate; and there is no reason to doubt that drinking can be used to deal with ongoing psychiatric problems exacerbated by the transition to college life. This understanding of the college environment's effects on binge drinking has led to considerable programs aimed at addressing the social milieu and increasing personal responsibility through, for example, peer counseling and other college-specific interventions (see Mastroleo et al. 2008).

Research that has focused on why students do engage in binge drinking in college reveals an important mix of environmental and individual characteristics. Students who report more exposure to "wet" environments, in which alcohol is cheap, prevalent, and easily accessed, are more likely to engage in binge drinking (Weitzman et al. 2003). Students who binge also have inflated definitions of binge drinking and more permissive attitudes about appropriate ages for legal consumption (Weitzman et al. 2003). Binge drinkers tend not to perceive its negative risks and, when they are perceived as risky, they play down the risks, all of which results in a very low percentage of binge drinkers perceiving the need for help to drink less and even fewer wishing to not engage in binge drinking (see Murgraff et al. 1999). Importantly, exposure to information about the mortality-related risks of binge drinking has been found to result in greater willingness to binge drink among binge drinkers as well as an increase in the willingness of non-binge drinkers who perceived the behavior to benefit self-esteem (Jessop and Wade 2008). Although some prevention programs have shown some effectiveness (see Murgraff et al. 1999; Mastroleo et al. 2008), these studies highlight how some campaigns may inadvertently precipitate the very behaviors that they aim to deter. Programs aimed at reducing binge drinking certainly face strong challenges, but available evidence does show the importance of maximizing substance-free environments and associations.

Perhaps even more problematic for those who would seek to prevent binge drinking are studies finding neurocognitive deficits for frontal lobe processing and working memory operations in binge drinking compared with non-binge alcohol drinkers (Courtney and Polich 2009). These studies show that binge-drinking behavior may be detrimental to adolescents' brain structure; or, perhaps equally plausible and equally troublesome, the brain structures of those who binge drink already were different. To further complicate matters, alcohol expectancies have been shown to be a genetically influenced characteristic having a heritability between 0.4 and 0.6 (Schuckit et al. 2001). These associations support research seeking a binge-drinking gene, which may well have been identified. Most notably, college students with the short version of the serotonin transporter gene (5-HTT) have been found, compared to college students without the gene variant, to consume more alcohol per occasion, drink more often to become inebriated, and become more likely to engage in binge drinking (Herman et al. 2003). These findings reveal how simply changing environments may not suffice to reduce binge drinking for at least some groups of drinkers.

Problems encountered by efforts to address drinking have led to controversial efforts to reduce the drinking age to enable youth to learn to drink alcohol responsibly. There may be support for the belief that benefits could result from lowering the age at which one can gain legal access to alcohol. It is not clear that the reduction in drinking by noncollege youth has been related to the increase in minimum drinking ages. But, it is clear that developmental science would suggest that the brain is not developed fully until the third decade of life (Steinberg et al. 2006), that adolescents may not be responsible enough, and that inability to be more responsible may be exacerbated by alcohol that further compromises cognitive functioning, especially when consumed through binges. Indeed, it may well be that considerations of developmental science in this policy arena would likely result in increasing the minimum drinking age. There is substantial evidence indicating that the uniform minimum legal drinking age of 21 years has resulted in reduced traffic fatalities and numerous other favorable public health outcomes (Wagenaar and Toomey 2002; Fell et al. 2008).

Binge drinking has become an increasingly important topic in the study of adolescence as well as in alcohol research. Regrettably, the field lacks empirical cohesion and definitional precision. In addition, research in this area remains considerably limited, as most research has been conducted among particular groups in specific situations, in particular North American college students (c.f., Kuntsche et al. 2004). Still, research has identified a variety of social and individual characteristics associated with binge drinking. Further, regardless of definitional and sampling

controversies, research does reveal that binge drinking links to important challenges. This type of drinking associates with numerous negative consequences, such as unintentional injuries, suicide, and sexually transmitted diseases; and it underlies many negative social costs, such as interpersonal violence, drunk driving, lost economic productivity, as well as personal human costs to those who engage in it. The public health concerns about adolescent binge drinking have helped to motivate interest in this area of research which has, so far, confirmed the need for concern and revealed many complexities that can help reduce the risks that increasingly are linked to negative outcomes.

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► Alcohol Use

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Binge Eating

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Overview

Binge eating, defined as the consumption of an objectively large amount of food while experiencing a sense of loss of control over eating (American Psychological Association 2000) is a relatively common phenomenon during adolescence. There is further evidence that the experience of loss of control (LOC), independent of the amount of food reportedly consumed, is a salient marker of disordered eating behavior in youth. During adolescence, both binge and LOC episodes are associated with overweight, disordered eating cognitions, symptoms of depression and anxiety, and social difficulties, and prospectively predictive of excess weight gain over time. The following essay will begin by defining the constructs of binge and LOC eating as they apply to adults and adolescents. Then, assessment methodologies and related challenges will be discussed. Data on prevalence, correlates, and potential

consequences will be reviewed. Throughout this section and the remainder of the essay, the term "LOC" will be used to refer to both LOC and binge eating, and the term "binge" will be used when discussing only classic binge episodes that involve a large amount of food. In addition, since many studies include both children and adolescents, those reviewed are primarily based on either sole inclusion of adolescents (i.e., 12–17 years), or samples that include a broad range of adolescent-aged participants (i.e., ages 7–18 years). In the case that data with adolescent samples are not available, research with adult or child samples will be discussed. Brief descriptions of existing theoretical/etiological models of LOC eating are provided, and relevance to treatment development is discussed. The final section suggests future research directions for the field of LOC eating in adolescence.

Introduction

Binge eating is defined as the consumption of an objectively large amount of food while experiencing a sense of loss of control over eating (American Psychological Association 2000). Loss of control (LOC) over eating is the experience of not being in control of what or how much one is eating, or the feeling of being unable to stop eating, regardless of the reported amount of food consumed. Binge Eating Disorder (BED), a putative diagnostic category in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders Text Revision* (DSM-IV-TR), is characterized by recurrent binge eating episodes accompanied by dysfunctional eating behaviors and marked distress regarding binge eating. Persons with BED do not engage in regular inappropriate compensatory behaviors, such as self-induced vomiting, excessive exercise, fasting, or laxative/diuretic use (American Psychological Association 2000). BED is further associated with a variety of maladaptive eating patterns, such as eating in response to negative emotions (Wilfley et al. 2003). As a result, BED is often associated with excess body weight and obesity (Yanovski et al. 1993), as well as weight gain over time (Fairburn et al. 2000). Within the adult population, the prevalence of BED ranges from 20% to 30% among weight-loss treatment-seeking adults (Spitzer et al. 1991, 1993). Lifetime prevalence rates among women and men in the general population are 3.5% and 2%, respectively (Hudson et al. 2007). Among adults, BED is often associated with mood and anxiety disorders, as well as interpersonal difficulties (Hudson et al. 2007; Wilfley et al. 2003).

The amount of food that constitutes a binge eating episode during adolescence is less clear, given the varying nutritional needs at different stages of growth (Kroke et al. 2004), as well as the differing caloric requirements from physical activity (Hill et al. 1995; Inge et al. 2004). In addition, there is increasing evidence that, during youth, the experience of loss of control, rather the amount of food consumed, may be a salient marker of disordered eating (Tanofsky-Kraff 2008). Assessing binge eating during youth is further complicated by inconsistency across assessment methods. Comparisons of common assessment approaches, including self-report, parent-report, and interview method, suggest that, during adolescence, responses differ based upon the type of measure used and the particular respondent. Among samples of nontreatment-seeking adolescents of all weight strata, comparisons of self-reports of binge eating to parent-reports of their children's binge eating (Johnson et al. 1999) and self-reports to interview methodology (Decaluwé and Braet 2004) have found that the identification of binge eating presence is inconsistent across measures. In recent years, specific attention has been given to the utility of the Eating Disorder Examination (Fairburn and Cooper 1993) and the child adaptation (Bryant-Waugh et al. 1996), a semi-structured interview that assesses LOC eating during youth (Decaluwé and Braet 2003; Eddy et al. 2007; Tanofsky-Kraff et al. 2004). The Eating Disorder Examination is considered an improvement over past assessment techniques in that it queries in greater detail about the experience of LOC behaviors. However, while interview-based methodologies, as opposed to self-report questionnaires, are recommended and considered the optimal means to assess binge eating behaviors among adults (Bryant-Waugh et al. 1996; Wilfley et al. 1997b), it remains unclear if this recommendation holds true for youth. Ideally, interview methods, including probes to explicate the concept of loss of control while eating, are recommended (Tanofsky-Kraff 2008). Furthermore, it may be useful to ask families about constructs that may be associated with binge eating, such as eating in response to both negative and positive emotions, eating in the absence of hunger or past satiation, and the individual child's feelings about his or her eating patterns.

Binge Eating During Adolescence

Prevalence and Course

During adolescence, the prevalence of BED is low. Rates range from approximately 1% in adolescent community samples (Stice et al. 2009) to over 6% among obese teenagers seeking weight-loss therapy (Glasofer et al. 2007). Studies examining the prevalence of BED among nontreatment-seeking teenagers indicate that full-syndrome BED is uncommon (Johnson et al. 2001; Stice and Agras 1998). However, subthreshold BED (defined as at least two binge episodes per month, for 6 months) may be more common. Stice and colleagues found that lifetime prevalence of subthreshold BED by age 20 years among adolescent girls (ages 12–15 years at baseline) was 5%, compared to lifetime prevalence of full-syndrome BED (by age 20 years), which was only 1% (Stice et al. 2009). Indeed, a large body of research indicates that binge eating is prevalent during adolescence. School and community studies of adolescents using survey measures have reported high rates of binge eating in the absence of full-syndrome BED, ranging from approximately 6% to almost 40% across samples (Croll et al. 2002; French et al. 1997; Greenfeld et al. 1987; Johnson et al. 2002; Neumark-Sztainer et al. 1997). However, making use of interview methodology, Stice and colleagues found only 4% report binge eating (Stice and Agras 1998). Similar to the adult population, findings generally suggest that subthreshold binge eating (<2 binge episodes/week over 6 months) is most prevalent among overweight adolescents, with estimates ranging from 20% (Isnard et al. 2003) to approximately 35% (Decaluwé et al. 2003) among weight-loss treatment-seeking samples.

There is evidence to suggest that binge eating appears to be more common in girls compared with boys. Using interview methodology, Decaluwé and Braet found that, among overweight, treatment-seeking adolescents, girls were more than twice as likely as boys to report binge eating (Decaluwé and Braet 2003). Similar results have been found using self-report (Goossens et al. 2009) and survey measures (Croll et al. 2002). By contrast, only one study found no significant gender difference with regard to the prevalence of binge eating (Field et al. 1997).

In addition, binge eating prevalence also appears to differ between racial and ethnic minority groups. In a large community sample of 9th through 12th graders, Croll and colleagues found binge eating to be most commonly reported by Hispanic females (Croll et al. 2002). Moreover, Hispanic boys have been found to be twice as likely to report binge eating as Caucasian boys (Field et al. 1997). Using a questionnaire to assess binge eating in African-American and Caucasian male and female teenagers, Johnson and colleagues found that binge eating was most commonly reported by African American males (Johnson et al. 2002). In contrast, in two multiracial cohorts of adolescent females, differences in binge eating with regard to ethnicity or race were not detected (Field et al. 1997; French et al. 1997).

The prevalence of binge eating has also been studied in relation to sexual orientation. French and colleagues found a relationship between sexual orientation and binge eating; male homosexual and female heterosexual adolescents were more likely to report binge eating than heterosexual males and homosexual females, respectively (French et al. 1996). In another study examining sexual orientation, Austin and colleagues replicated these findings in males, and also reported that compared to heterosexual females, "mostly heterosexual" (individuals who defined themselves as neither heterosexual nor bisexual, but somewhere in between) girls were more likely to binge eat (Austin et al. 2004).

There are few prospective studies on the course of binge eating among adolescents only. Among 8–13–year-olds, binge eating appeared to be relatively transient, with only 2 of 17 youth who reported binge eating at baseline reporting binge eating 1 year later. In this same study, persistence of binge eating over time was most common among obese, treatment-seeking youth (Allen et al. 2008). By contrast, in an 8-year longitudinal study of adolescent girls, 13% of girls reporting subthreshold binge eating at baseline developed full-syndrome BED over the follow-up interval (Stice et al. 2009). Given the limited number of studies examining the course of binge eating during adolescence, a clear understanding of the stability and outcome of binge eating requires additional investigation.

Psychosocial Correlates

Similar to the adult literature, LOC eating during adolescence is associated with a variety of adverse psychosocial and physical health problems. Treatment and nontreatment-seeking adolescents of all weight strata

who report LOC eating are more likely than their peers without LOC eating to present with disordered eating cognitions, such as concerns over eating, weight, and shape, emotional eating, eating in the absence of hunger, depressive symptoms, poorer family and social functioning, and emotional distress (Glasofer et al. 2007; Goossens et al. 2009; Shomaker et al. 2009a). Similarly, in a study that examined adolescents with full-syndrome BED, subthreshold binge eating, and no binge eating, youth with full threshold and subthreshold BED reported greater emotional distress and functional impairment relative to non-disordered eating participants, but did not differ significantly from each other on these measures (Stice et al. 2009).

Prospective research suggests that development of binge eating may be predicted by eating disordered cognitions, as well as general affective states. In a longitudinal investigation of adolescent boys and girls (10–15 years), Field and colleagues examined the emergence of unhealthy behaviors including smoking, alcohol intoxication, and binge eating and purging (Field et al. 2002). While these three behaviors were associated with one another prospectively, the construct "weight concerns" was predictive of the emergence of binge eating, as well as smoking, and drinking alcohol to a state of inebriation. Including a number of weight- and shape-related variables in addition to measures of depressive and anxiety symptoms, anger, self-esteem, and social support, Stice et al. prospectively studied 13–17-year-old girls over a 2-year period (Stice et al. 2002). Binge eating onset was predicted by increased dieting, pressure to be thin, modeling of eating disturbances, appearance overvaluation, body dissatisfaction, depressive symptoms, emotional eating, body mass index (kg/m^2, BMI), low self-esteem, and social support with 92% accuracy. In summary, symptoms of general psychopathology and weight- and body-related attitudes and behaviors are associated with binge eating, and may be prominent factors related to the development of binge eating patterns.

Binge Eating and Overweight

There is further evidence that, similar to the adult population, binge eating during adolescence is associated with overweight. For example, several studies among adolescents found that overweight participants self-report binge eating more frequently than do their normal weight peers (Field et al. 2002; Neumark-Sztainer et al. 1997; Neumark-Sztainer et al. 2002). Similar findings have been reported by a number of studies, in that older and heavier teens report a higher prevalence of binge eating as compared to their younger and leaner counterparts (Ackard et al. 2003; Field et al. 1997). However, there are data to suggest that the relationship between binge eating and overweight may differ by gender. In a study of adolescents by Field and colleagues (Field et al. 1997), overweight was associated with binge eating in girls but not boys. By contrast, Ackard et al. reported a relationship between binge eating and obesity among boys, but not girls (Ackard et al. 2003). Among treatment-seeking adolescent samples, differences in BMI between binge eaters and non-binge eaters have generally not been found (Berkowitz et al. 1993; Decaluwé and Braet 2003; Glasofer et al. 2007; Goossens et al. 2007; Isnard et al. 2003), with the exception of one study (Decaluwé et al. 2003). While LOC eating may be related to elevated BMI among community samples, given the vast array of factors contributing to excess body weight gain in the modern cultural milieu, treatment-seeking samples consisting of overweight children only may be less likely to exhibit differences in body weight based on the single factor of LOC eating.

Notably, longitudinal research suggests that binge eating is predictive of excess weight gain over time. Studies of adolescents who self-report binge eating episodes gain more weight and fat compared to youth who do not report binge eating. In a large study of boys and girls (9–14 years), Field and colleagues found that binge eating (as assessed by survey reports) independently predicted weight gain among boys (Field et al. 2003). Similarly, binge eating predicted elevated weight gain (Stice et al. 1999) and obesity onset (Stice et al. 2002) among adolescent girls followed over a 4-year period. However, this finding was not replicated in a third study (Stice et al. 2005).

A few studies have examined mechanisms by which LOC eating may lead to excess weight gain and/or obesity. In a sample of obese, treatment-seeking children and adolescents, youth reporting binge eating were more likely than those without binge eating to have a carbohydrate-rich diet (Lourenco et al. 2008). In a laboratory assessment of nontreatment-seeking children and adolescents of all weight strata, Tanofsky-Kraff and colleagues bolstered this finding, and further found that youth reporting LOC tend to consume more

high-calorie snack and dessert-type foods, and less protein-rich foods than do youth not reporting LOC (Tanofsky-Kraff et al. 2009a). Such dietary patterns may be associated with less post-meal satiety, and hence, increased caloric consumption and weight gain over time. Tanofsky-Kraff and colleagues also showed that, when instructed to binge eat, but not when instructed to eat normally, overweight girls with LOC consumed more calories than did overweight girls without LOC. In sum, these data suggest that engaging in binge and LOC episodes may contribute to excessive caloric intake, leading to weight gain over time.

There is further evidence that youth who report LOC eating may engage in other disordered eating behaviors resulting in increased weight with age. More specifically, youth who experience binge eating are more likely to eat in the absence of physiological hunger, and in response to both emotional and environmental cues (e.g., sight or smell of food) (Goossens et al. 2007; Tanofsky-Kraff et al. 2007b, 2008). Such eating behaviors have been linked cross-sectionally with overweight and adiposity among boys (Faith et al. 2006; Hill et al. 2008) and girls (Fisher et al. 2007; Moens and Braet 2007). Although more research is required to understand the link between LOC eating and overweight, these data suggest that among youth reporting LOC eating, dietary patterns and behaviors may contribute to weight gain with age.

There are data suggesting that binge eating may be a moderating factor in weight-loss treatment outcome. Among adults, some (Blaine and Rodman 2007) but not all (Marcus et al. 1988; Sherwood et al. 1999) data suggest that binge eating and BED may hinder weight-loss treatment outcomes. A more recent study examining binge eating at baseline and follow-up found that adults with Type II Diabetes who reported never experiencing binge eating or stopping binge eating during treatment experienced greater weight loss compared to participants who either started binge eating or failed to stop binge eating during the course of treatment (Gorin et al. 2008). To date, no study has specifically examined the impact of binge eating on treatment outcome among a sample of adolescents. However, similar to the adult literature, investigations among samples including children or a mixed group of children and adolescents have evidenced mixed results. An inpatient study of 7–17-year-olds participating in an intensive, 10-month inpatient weight-loss program found no between-group differences in overall weight loss when comparing youth who reported at least one binge eating episode to youth who reported no episodes (Braet et al. 2004). This study also found that degree of binge eating was reduced from 56% to 19% by posttreatment. Similarly, a study of 8–13-year-olds found that LOC episodes had no impact on the outcome of a family-based behavioral treatment program; however, those with LOC eating were less likely to complete treatment (Levine et al. 2006). In contrast, a randomized trial of family-based treatment for severe pediatric obesity, which included mostly children (ages 8–12 years) found that, among children receiving a behavioral intervention, those without binge eating lost significantly more weight during treatment, while youth reporting binge eating gained weight, on average (Wildes et al. 2010). However, these differences did not persist at follow-up. Future research aimed at better elucidating the impact of binge eating at baseline or at the end of treatment on weight-loss outcome among overweight adolescents is required.

Development of Binge Eating: Theory and Research

A number of theories have been proposed to describe the development and maintenance of binge eating. Restraint Theory posits that cognitive preoccupation with food and eating, in combination with caloric deprivation from restrained eating (i.e., dieting) leads to binge eating. After a binge, in an effort to compensate, individuals revert to a dieting mentality, restarting the diet-binge cycle (Polivy and Herman 1985). In support of restraint theory, retrospective studies with adults (Grilo and Masheb 2000) and prospective studies with adolescents (Stice and Agras 1998; Stice et al. 1998) have reliably found that restraint appears to play a role in the development and maintenance of binge eating in some individuals. While such findings would suggest that efforts to decrease binge eating might focus on decreasing dieting behaviors, between 33% and 55% of adults with BED retrospectively recall engaging in binge eating behaviors prior to initiating their first diet (Grilo and Masheb 2000; Marcus and Kalarchian 2003; Marcus et al. 1995; Spurrell et al. 1997). These data suggest that dieting may not be a precipitant to binge eating for some adults with BED. Although adolescent data is sparse, research with child samples also indicate that dieting does not always precede LOC eating

behaviors (Claus et al. 2006; Tanofsky-Kraff et al. 2005), suggesting that factors other than restraint may also be salient.

Alternative theories propose that binge eating serves as a maladaptive mechanism for coping with negative affect. According to Escape Theory (Heatherton and Baumeister 1991), individuals who binge eat have unattainably high standards, which they inevitably fail to meet, leading to a negative view of the self and feelings of inadequacy. These feelings manifest as negative affective states, such as depression and anxiety. To avoid these aversive feelings, individuals shift from a high level of self-awareness to a low level of self-awareness and focus on an immediate cue: food. Disinhibition occurs at this low level of self-awareness, and a binge episode ensues (Heatherton and Baumeister 1991). In broad support of affect theories in youth, cross-sectional data indicate that negative emotion commonly precedes LOC eating behaviors during youth (Tanofsky-Kraff 2007a). Further, in an 8-year longitudinal study, binge eating predicted an increase in depressive symptoms, and depressive symptoms reciprocally predicted an increase in binge eating, suggesting that negative affect and binge eating may interact cyclically to maintain binge eating behaviors (Presnell et al. 2009).

Extending on theories of negative affect, Interpersonal Theory proposes that difficulties with social functioning precipitate low self-esteem and negative affect, which trigger LOC eating behaviors in an attempt to cope with emotional distress (Wilfley et al. 1997a). In support of the interpersonal model, in a study examining youth ages 8–18 years, social problems were positively associated with both negative affect and LOC. Further, negative affect mediated the relationship between social problems and LOC eating (Elliott et al. 2010). Another study similarly linked adolescent girls' social difficulties to negative emotion and a cluster of disordered eating patterns including binge eating (Schutz and Paxton 2007). Further, in longitudinal investigations of adolescent girls, both negative affect and low perceived social support predicted binge eating onset over time (Stice and Agras 1998; Stice et al. 2002; Van Strien et al. 2005).

In summary, there is evidence that both restraint over eating and negative mood states are related cross-sectionally and longitudinally to binge eating behaviors during youth, and corresponding treatment strategies are currently being investigated. Data supporting the increasing saliency of peer interactions throughout adolescence (Smetana et al. 2006) suggest that addressing the impact of social relationships on mood and eating may be a particularly promising intervention strategy (Furman and Buhrmester 1992; Tanofsky-Kraff et al. 2007c). In support of this concept, a pilot study of 12–17-year-old girls found that interpersonal psychotherapy targeting links between relationships/interactions, mood, and eating, was effective at reducing LOC eating episodes (Tanofsky-Kraff et al. 2009b).

Challenges and Future Directions

Given the adverse correlates and outcome of LOC eating during adolescence, a number of areas warrant future investigation. Greater clarity with regard to the course and consequences associated with LOC eating during adolescence is required. Specifically, data on the physiological effects of LOC eating, independent of those associated with obesity, is particularly sparse and in need of investigation. Moreover, research is needed to design and implement effective prevention and treatment strategies. Particular areas for intervention research include the composition (e.g., racial, ethnic, body weight strata) of target populations for treatment and prevention, as well as appropriate strategies for addressing LOC eating among underserved populations.

Physiological Consequences of Binge Eating

Research to date has clearly identified that LOC eating is linked to weight gain with age (Field et al. 2003; Stice et al. 1999; Tanofsky-Kraff et al. 2006; Tanofsky-Kraff et al. 2009c). Such data may point to the possibility that LOC eating is a risk factor for the development of adverse health consequences, such as cardiovascular disease and Type II Diabetes (Kopelman 2000). In support of this notion, there is evidence that, among adults, psychological distress occurring co-morbidly with binge eating (e.g., depressive symptoms) (Wilfley et al. 2003) may confer additional risk for negative health outcomes beyond those associated with overweight. Theoretically, it is suggested that binge eating and negative affect might induce a prolonged stress reaction, resulting in increased baseline cortisol levels, which, in turn, result in a negative metabolic state. Indeed, research with adults indicates that symptoms

of depression and psychosocial distress are associated with (Okamura et al. 2000) and predictive of (Raikkonen et al. 2007) negative physiological factors related to poor health outcomes, such as cardiovascular disease and Type II diabetes. Among adolescents, after accounting for body weight, symptoms of depression have been associated cross-sectionally with higher fasting insulin and decreased insulin sensitivity (Shomaker et al. 2009b). Negative affect has similarly been predictive of increased insulin resistance over time among youth (Raikkonen et al. 2003; Ravaja and Keltikangas-Jarvinen 1995). Research specifically examining binge eating is limited to one cross-sectional study that indicated a nonsignificant association between binge eating and fasting insulin in a sample of children ages 8–13 years (Lourenco et al. 2008). Current understanding of the relationship between LOC eating and associated psychosocial distress and physiological outcome among adolescents is limited. Future research is required to determine if, and the extent to which, LOC eating significantly increases the risk of future health comorbidity beyond that associated with obesity.

Treatment and Prevention

There are no current treatment recommendations specific to LOC eating or BED during adolescence (Rutherford and Couturier 2007). Among adults, common treatment modalities for BED include traditional (behavioral) weight-loss therapy, as well as psychotherapeutic approaches. Cognitive behavior therapy, which focuses on changing maladaptive cognitions to shape more adaptive feelings and behaviors, and interpersonal psychotherapy, which targets the role of relationships in influencing mood and subsequent behavior, have both demonstrated superior outcomes to traditional weight-loss programs in the treatment of BED during adulthood (Wilfley and Cohen 1997; Wilson et al. 2010).

Although binge eating naturally remits among some youth, children and adolescents who experience recurrent binge eating are more likely to develop full-syndrome BED as they grow older (Stice et al. 2009). Further, possible risk factors for the development of exacerbated disordered eating, such as overconcern with body weight and shape, negative affect, and social problems (Killen et al. 1996; Stice et al. 2002; The McKnight Investigators 2003) are often elevated among youth with LOC (Tanofsky-Kraff 2008). Thus, early intervention may be particularly beneficial for youth reporting LOC as well as disordered eating attitudes and cognitions (e.g., weight and shape concerns, social problems).

To date, there are few studies examining the efficacy of treatment and prevention interventions for LOC eating among adolescents. Jones and colleagues studied a 16-week Internet-based intervention for both weight maintenance and reducing frequency of LOC eating episodes, and found it to be superior when compared to a wait-list control group (Jones et al. 2008). Similarly, brief cognitive behavioral therapy interventions targeting body dissatisfaction (Bearman et al. 2003) and depression (Burton et al. 2007) exhibited short-term efficacy in reducing a composite of disordered eating symptoms, including binge eating. Finally, a pilot study of interpersonal psychotherapy appeared to reduce LOC eating episodes and promote weight stabilization over 1 year among adolescent girls at high risk for excessive weight gain (BMI 75th-97th percentile) (Tanofsky-Kraff et al. 2009b).

In summary, although treatment strategies for adults with BED are well-established, recommendations for adolescents are limited. Future research is needed to identify who is at greatest risk for persistence of LOC eating behaviors and which treatments are most effective. Subsequently, treatment guidelines specifying the appropriate population and timing of intervention, and which interventions should be implemented, require further investigation and development.

Conclusions

LOC eating among adolescents is common, especially among overweight youth seeking weight-loss treatment. During adolescence, LOC eating is further associated with a range of adverse psychosocial and physical health factors, including eating pathology, depressive symptoms, and overweight status. Etiology of LOC eating is not fully understood, although restraint and negative affect models propose that disordered eating cognitions and negative affect, respectively, contribute to the development and maintenance of LOC eating behaviors. Empirical data also suggest that dieting and negative emotions are significant predictors of the development of LOC eating, lending support to each of these models. A current challenge includes limited knowledge regarding appropriate strategies for

intervention. Future research directions should therefore include illuminating the natural course of these behaviors and developing intervention strategies for adolescents engaging in LOC eating. Such interventions may serve as a viable approach toward preventing the progression of disordered eating and weight gain with age among adolescents reporting LOC eating.

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Cross-References

► Eating Disorders
► Obesity and Overweight

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Bipolar Disorder

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Overview

Bipolar spectrum disorders affect many adolescents and their families, causing impairment in functioning at home, school, and with peers. These disorders can be challenging to assess, diagnose, and treat due to the nature of the disorder as well as several developmental factors (Danner et al. 2009). This essay describes diagnoses included in the bipolar spectrum and prevalence rates of these disorders in the adolescent population. Assessment issues such as developmental considerations, differential diagnosis, patterns of comorbidity, and appropriate assessment measures are discussed. Treatment options such as psychotropic medication, psychotherapeutic interventions, and alternative treatments are explored as well as educational difficulties and potential classroom interventions. Lastly, areas for future research are suggested, including refinement of assessment measures and utilization of neuroimaging technology and genetic testing to better understand the biological bases of bipolar spectrum disorders.

Background

Bipolar spectrum disorders [BPSD; Bipolar Disorder-I (BP1), Bipolar Disorder-II (BP2), Cyclothymic Disorder (CYC), and Bipolar Disorder-NOS (BP-NOS)] are challenging to diagnose and treat in adolescents. A variety of related issues must be considered, including developmental level, influence of family environment, age-related differences in symptom presentation, medication use and side effects, comorbid youth disorders, age-appropriate assessment tools, and limited diagnostic modifications and treatment guidelines (Danner et al. 2009). Much of what is known comes from longitudinal research studies of BPSD in youth. The Phenomenology and Course of Pediatric Bipolar Disorders project and the multisite Course and Outcome of Bipolar Youth (COBY) study are two such studies that have shed light on the clinical presentation and course of pediatric BPSD. A third research project,

the multisite Longitudinal Assessment of Manic Symptoms (LAMS) study, is currently underway to improve understanding of the development, presentation, course, and outcomes of pediatric-onset BPSD.

Spectrum Diagnoses

BPSD are characterized by episodic periods of mania and usually, depression. Symptoms cause marked impairment in functioning at home, in school, and with peers and tend to have a chronic, life-long course. BP1 consists of a full manic episode (M) and typically, a depressive episode (D). BP2 consists of a hypomanic episode (m) and a depressive episode (D). CYC requires a year of mood instability, characterized by mild manic (m) and depressive (d) symptoms more often than not throughout the 12-month period. BP-NOS refers to a constellation of impairing manic and depressive symptoms that do not qualify for one of the above diagnoses. Most commonly, BP-NOS is diagnosed when symptom duration is insufficient for a manic or hypomanic episode (e.g., a 2-day manic episode followed by a 2-week depressive episode).

Episode Criteria

Manic episodes consist of elevated or irritable mood plus at least three of the following symptoms (four if only irritable mood): inflated self-esteem/grandiosity, decreased need for sleep, increased or pressured speech, racing thoughts/flight of ideas, distractibility, psychomotor agitation/increased goal-directed activity, and/or excessive involvement in pleasurable activities with high potential for negative consequences (APA 2000). Mania lasts at least 1 week or requires hospitalization while hypomania lasts at least 4 days.

Major depressive episodes require at least five symptoms, one of which must be depressed mood (or irritable mood in youth) and/or anhedonia. Additional symptoms include: significant changes in weight/appetite, insomnia/hypersomnia, psychomotor agitation/psychomotor retardation, fatigue/loss of energy, feelings of worthlessness/excess or inappropriate guilt, decreased concentration/decision-making ability, and recurrent thoughts of death or suicide or a suicide attempt (APA 2000).

Mood episodes may include psychotic features (i.e., delusions and/or hallucinations) and may be mixed or rapid cycling, which complicates diagnosis (Youngstrom 2009). Mixed episodes occur when the polarity of mood shifts multiple times within a single mood episode. Adolescents who develop BPSD during childhood may be more likely to display this type of oscillating mixed episode, which is the most common episode type of pediatric BPSD. Those who develop BPSD symptoms for the first time during adolescence are more likely to have bipolar symptom presentations similar to adult-onset BPSD. Rapid cycling occurs when there are several separate mood episodes within a year and is not common in youth with BPSD (Youngstrom 2009).

Prevalence

Adolescent prevalence rates vary from approximately 1% for BP1 in community samples with another 5.7% of teens reporting discrete episodes of abnormal mood (Lewinsohn et al. 1995) and 20% of adolescents admitted to psychiatric hospitals (Hunt et al. 2005). Up to 60% of adults with BPSD retrospectively state their symptoms began in childhood or adolescence (Chengappa et al. 2003; Leverich et al. 2007; Perlis et al. 2005), and incidence of bipolar disorder spikes during adolescence for both genders (Lewinsohn et al. 2002). Among outpatient youth diagnosed with a BPSD, 58% meet criteria for BP1, 7% for BP2, and 35% for BP-NOS (Axelson et al. 2006).

Heritability

BPSD are highly heritable (Faraone et al. 2003). Collecting family mental health history, especially for the adolescent's first- and second-degree relatives, is very important and can help inform clinicians to what an adolescent may be vulnerable. Approximately 10–33% of youth born to parents with BPSD will develop a BPSD and about 50–78% will develop some type of psychiatric disorder (Chang et al. 2000). Monozygotic twins are at three times greater risk for BPSD compared to dizygotic twins (Smoller and Gardner-Schuster 2007). Clinicians may use the Family History Screen (Weissman et al. 2000) to gather specific information about symptoms of various mental disorders and psychiatric hospitalizations in a family. Placing this information in a three-generation genogram can help organize and clarify the various diagnoses to which an adolescent may be genetically predisposed (Wozniak et al. 2001).

Neurocognitive Functioning

Impairments in emotion and cognitive processing and regulation are typical in youth with BPSD, and neurocognitive research suggests emotion and cognition are critically linked (Dickstein and Leibenluft 2006; Leibenluft et al. 2003; Phillips et al. 2003; Phillips et al. 2008). Neurocognitive testing shows youth with BPSD may misinterpret emotions and facial expressions in social interactions (McClure et al. 2003; Rich et al. 2006). They may also have a variety of cognitive impairments in attention and working memory, response flexibility, executive functioning, processing speed, set shifting, interference control, and verbal and visuospatial memory (Dickstein et al. 2004; Doyle et al. 2005; Green et al. 2007; Kyte et al. 2006; Pavuluri et al. 2006b).

Neuroimaging may help target areas of structural and functional abnormalities in brains of youth with BPSD to better understand and treat deficits in emotional and cognitive control (Keener and Phillips 2007). Recent neuroimaging studies have found increased activity in the amygdala and striatum accompanied by lowered activity in the lateral prefrontal cortex during viewings of happy faces in youth with BPSD compared to controls (Dickstein et al. 2007; Pavuluri et al. 2007). Similar studies show lower levels of activity in the lateral prefrontal cortex during the Stroop color-word cognitive control task in adolescents with BPSD compared to controls (Blumberg et al. 2003). Neuroimaging studies also suggest structural abnormalities in cortical and subcortical brain regions, particularly the amygdala, in youth with BPSD (Frazier et al. 2005; Kaur et al. 2005; Pfeifer et al. 2008). This body of research indicates some dysfunction in the structure and function of neural networks responsible for cognitive and emotional processing in individuals with BPSD.

Controversy Regarding Diagnosis

Controversy exists regarding recent increases in the number of youth being diagnosed with BPSD. Some label the rise in pediatric BPSD diagnoses a “fad” (Hammen and Rudolph 2003). While overdiagnosis may exist, reasonable explanations for this increase include heightened public interest and awareness of signs and symptoms of the disorder (Blader and Carlson 2007; Harpaz-Rotem and Rosenheck 2004; Moreno et al. 2007), decreases in stigma toward mental illness, better mental health insurance, and advances in research leading to improved diagnostic assessment of BPSD in youth (Danner et al. 2009). Recognition of many disorders in children such as depression, obsessive-compulsive, and panic disorders led to increases in these diagnoses in the past (Pavuluri et al. 2005), and current improvements in accurately recognizing BPSD in youth likely contribute to higher rates of pediatric bipolar diagnoses today. Accurate diagnosis of BPSD and any comorbid diagnoses are critical for successful treatment planning and intervention (Fields and Fristad 2009a). Increased risk for suicidal behaviors, hospitalizations, and poorer social adjustment have been demonstrated for adults with longer delays between bipolar symptom onset and treatment of their disorder (Goldberg and Ernst 2002). Such research suggests early identification and treatment of BPSD in youth may lead to improved course and outcome (Birmaher et al. 2007; Kowatch et al. 2005).

General Assessment Issues

Assessment of BPSD in adolescents should be longitudinal and comprehensive, including adolescent, parent, and teacher information to obtain a picture of the adolescent’s mood and behavior across home, school, peer, and work (if applicable) settings over an extended period of time (Fields and Fristad 2009a). Adolescents can provide information about internal symptoms such as racing thoughts, which may be hidden to parents and teachers (Tillman et al. 2004). When interviewing adolescents, it is important to consider their cognitive, social, and physiologic developmental level, level of insight, and the context in which they are reporting symptoms (Fristad et al. 2003a, b). Parental input regarding the adolescent’s current and historical mood and behavior is critical. Teacher reports provide insight into how the adolescent functions outside the home and with peers. As situational differences in symptom presentation are not unusual in youth with BPSD, it is necessary to capture the adolescent’s mood and behavior across settings (Wozniak et al. 2003).

Developmental Differences in Symptom Presentation

When assessing grandiosity, it is important to clarify what might be the product of a younger adolescent’s imagination or budding narcissistic personality traits (Youngstrom et al. 2008a). Adolescents who develop symptoms of bipolar disorder as children are more

likely to also have ADHD compared to teens, while those who develope BPSD symptoms in adolescence are more likely to also have conduct, panic, and substance use disorders (Birmaher et al. 2009).

Comorbidity and Differential Diagnosis

Adolescents with BPSD often also have behavior disorders such as ADHD, oppositional defiant disorder (ODD), and conduct disorder (CD) as well as anxiety disorders. As many as 60% of adolescents diagnosed with BPSD are also diagnosed with ADHD, up to 30% are diagnosed with ODD, and up to 60% are diagnosed with CD (Kowatch 2009a). Rates of anxiety disorders in those diagnosed with BPSD range from 30% to 40%, learning disorders range from 30% to 40%, and rates of substance abuse in adolescents with BPSD are as high as 50% (Kowatch 2009a). Comorbidity between BPSD and ADHD is particularly difficult to differentiate due to the number of symptoms that overlap between these diagnoses, including increased speech and distractibility, impaired attention, poor judgment, and motor hyperactivity (Fields and Fristad 2009a). Therefore, differential diagnosis can be difficult in youth with these symptoms. Longitudinal assessment is critical to determine the onset, offset, pattern, and duration of symptoms over an extended period of time in several different situations, (Danner et al. 2009; Youngstrom 2009).

Medical conditions that may mimic BPSD and require a rule-out include epilepsy, head injury, thyroid problems, multiple sclerosis, hormone imbalances, and drug abuse, particularly cocaine and amphetamine abuse (Kowatch et al. 2005). Illicit and prescription medication history are critical to obtain as mood swings and psychotic symptoms can occur due to drug use. In addition to iatrogenic responses to illicit drugs, stimulant medication often produces irritability as part of a rebound effect (Sarampote et al. 2002) and stimulants and antidepressants both have been implicated in inducing manic symptoms in certain individuals (DelBello et al. 2001; Faedda et al. 2004).

Assessment Measures

It is important to gather lifetime and current information to thoroughly evaluate an adolescent for BPSD. Establishing a baseline level of functioning as well as symptom onset is important (Fields and Fristad 2009a). Timelines that organize onsets and offsets of mood episodes and other psychiatric symptoms (behavior, anxiety, psychosis, substance abuse, etc.), treatment and medication history, stressful life events (accidents, injuries, deaths, moves, etc.), pregnancy/birth history and early development, school and peer functioning over the life course, and major medical history allow for an integrated understanding of current and lifetime diagnoses (Danner et al. 2009). Mood logs are helpful to track the frequency, intensity, and duration of mood episodes over time and to monitor functional impairment. Adolescents with BPSD and their families may complete mood logs to chart changes in mood, energy, sleep, and any abnormal behaviors to help illustrate the adolescent's illness and/or treatment response (Young and Fristad 2009; for samples, see www.moodychildtherapy.com).

Interviews. To complete the process of differential diagnosis and to determine what comorbid disorders are present, it is important to complete a comprehensive evaluation. This may be done informally or with the aid of a structured or semi-structured interview. The semi-structured Schedule of Affective Disorders and Schizophrenia for School-Age Children (K-SADS) is commonly used in pediatric BPSD research. Its semi-structured format requires significant training to administer reliably. The structured Diagnostic Interview for Children and Adolescents (DICA; Costello et al. 1982) has lowered training requirements. However, these assessments are both lengthy and may not be practical in clinical settings (Frazier et al. 2007). The structured Children's Interview for Psychiatric Syndromes-Child and Parent Forms (ChIPS/P-ChIPS; Weller et al. 1999a, b) requires less training to administer reliably and is brief, usually administered in less than an hour.

Clinical rating scales. The K-SADS Mania Rating Scale (KMRS; Axelson et al. 2003) is designed to monitor manic symptom severity and its counterpart, the K-SADS Depression Rating Scale (KDRS) rates depression symptom severity. Although other clinical rating scales have been used commonly in research [the Young Mania Rating Scale (YMRS; Young et al. 1978) and the Children's Depression Rating Scale-Revised (CDRS-R; Overholser et al. 1995)], the KMRS and KDRS provide more thorough coverage of the DSM symptoms that comprise BPSD.

Self-report measures. Self-report instruments are useful as diagnostic screeners but are not suitable as diagnostic instruments (Youngstrom et al. 2005). They also provide a mechanism to obtain information from ancillary sources, such as teachers. Examples of self-report instruments with adequate psychometric properties include Achenbach's Child Behavior Checklist (CBCL; Achenbach and Rescorla 2001), Youth Self Report (YSR; Achenbach and Rescorla 2001) and Teacher Report Form (TRF; Achenbach and Rescorla 2001), the Adolescent General Behavior Inventory (A-GBI; Depue et al. 1989), and the Parent General Behavior Inventory (P-GBI; Youngstrom et al. 2001). Outpatient examination of a ten-item short form of the P-GBI showed discriminative ability for distinguishing bipolar disorder from unipolar depression and ADHD, which may provide a quick and easy screening measure to determine if further evaluation of adolescent BPSD is necessary (Youngstrom et al. 2008b).

Treatment

Psychotropic medication. The first-line treatment for BPSD is psychotropic medication. Common medications used in treating BPSD include mood stabilizers, atypical antipsychotics, and antidepressants in conjunction with a mood stabilizer (Kowatch 2009b). Mood stabilizers may be effective in treating youth with BPSD and may have a neuroprotective influence on the central nervous system (Chuang 2004; Rowe and Chuang 2004). Of the common mood stabilizers used to treat youth with BPSD, lithium is the most studied. Open-label and placebo-controlled trials of lithium in youth with BPSD suggest 40–50% of youth will respond to this treatment as monotherapy (Findling et al. 2003; Geller et al. 1998; Kowatch et al. 2000). Valproate, another potentially effective mood stabilizer, had an average 54% response rate in a review of five controlled trials in adults (McElroy and Keck 2000). However, the one double-blind, placebo-controlled trial of valproate in youth that has been released showed no significant differences in treatment outcome between valproate and placebo after a 4-week active treatment period (Abbott Laboratories 2006). Another double-blind trial in youth aged 7–17 compared treatment response to divalproex, lithium, or placebo. After 8 weeks of treatment, 54% of youth taking valproate were rated as much or very much improved compared to 42% of youth taking lithium and 29% of youth on placebo (Kowatch et al. 2000). Support for the use of other mood stabilizers to treat pediatric bipolar disorder is lacking. One open-label trial of lamotrigine in 20 adolescents showed 84% of participants were rated much or very much improved after 8 weeks of monotherapy or adjunctive treatment (Chang et al. 2006). While carbamazepine has shown some efficacy in treating adults with BPSD, there are currently no controlled trials of this medication in youth with BPSD (Kowatch 2009b). Lastly, gabapentin may be used as secondary treatment to reduce symptoms of anxiety in youth with comorbid BPSD and anxiety but does not seem to be effective in treating symptoms of BPSD (Kowatch 2009b).

Combining a mood stabilizer with an atypical antipsychotic may be helpful for treating youth with bipolar 1 disorder (Kowatch 2009c). Atypical antipsychotics help quell psychotic symptoms, stabilize mood, and effect depressive and manic symptoms. The US Food and Drug Administration has approved the use of risperidone, aripiprazole, and olanzapine for youth aged 10–17 with bipolar 1 disorder, and it appears likely that they will add quetiapine and ziprasidone to this list following results of controlled trials in youth (Kowatch 2009c). One randomized controlled study of risperidone in youth 10–17 showed significant decreases in manic symptom severity after a 3-week trial (Pandina et al. 2007). A large randomized, controlled study of olanzapine in youth age 10–17 also showed significant decreases in manic symptoms in the olanzapine group compared to placebo after 3-weeks of treatment (Tohen et al. 2007). Three controlled trials exist indicating possible efficacy of quetiapine as treatment for youth mania (DelBello et al. 2002, 2006, 2007). First, a study examining the efficacy of quetiapine in conjunction with divalproex in adolescents found significantly lower levels of manic symptoms in the combination divalproex plus quetiapine group compared to the divalproex only and placebo groups (DelBello et al. 2002). A follow-up double-blind study comparing efficacy of divalproex versus quetiapine in adolescents found adolescents taking quetiapine showed faster decreases in mania symptoms and higher remission rates compared to adolescents taking divalproex (DelBello et al. 2006). Third, a large, double-blind trial of quetiapine showed active treatment outperformed placebo after 3-weeks (DelBello et al. 2007). One large

controlled trial comparing aripiprazole and placebo showed the active treatment outperformed placebo after 4 weeks, and 45% of participants taking a low dose of aripiprazole and 64% of participants taking a high dose experienced greater than or equal to a 50% decrease in mania symptom severity over the course of the trial (Wagner et al. 2007). Lastly, one large double-blind trial comparing ziprasidone and placebo found ziprasidone had a clinically and statistically significant treatment effect for reducing mania symptom severity in youth with bipolar 1 disorder (DelBello et al. 2008).

Although the atypical antipsychotics and mood stabilizers have demonstrated efficacy, they carry with them significant risk for side effects. In addition, their long-term impact on developing brains and bodies is unknown. Studies have shown links between BPSD and cardiovascular disease and diabetes in youth (Scheffer and Linden 2007). In a study monitoring side effects of atypical neuroleptics, participants experienced drowsiness, weight gain, and decreased motor activity. Thirty to sixty percent of youth experienced constipation, increased salivation, orthostatic hypotension, and nasal congestion. Five to fifteen percent of participants suffered from rigidity, tremor, and dystonia (Fleischhaker et al. 2006). Additional research has shown mean total cholesterol, triglycerides, non-high-density lipoprotein (non-HDL) cholesterol, and triglyceride-to-HDL-cholesterol ratio increased significantly in youth taking olanzapine and quetiapine, and triglyceride levels were significantly higher after taking risperidone (Correll et al. 2009).

Psychotherapeutic Interventions

While medication can decrease symptoms of BPSD, it is also important to teach adolescents compensatory skills to help manage their disorder and improve their psychosocial functioning (McClellan et al. 2007). Research supports the efficacy of therapy approaches that educate adolescents and their families about bipolar disorders and the symptoms, treatments, and psychosocial difficulties inherent to the disorder, build skills in coping, problem-solving, relapse prevention, and communication, and incorporate advocacy efforts with the adolescent's school, insurance company, and treatment providers to help make families better consumers or care (Fristad et al. 2009; Miklowitz et al. 2006; Pavuluri et al. 2004). Treatments that are considered "probably efficacious" according to standard guidelines for empirically supported treatments (Chambless and Ollendick 2001; Norcross et al. 2005) include Family Focused Therapy for Adolescents (FFT-A) and Multi-Family Psychoeducational Psychotherapy (MF-PEP). Treatments considered "possibly efficacious" include individual-family psychoeducational psychotherapy (PEP), child- and family-focused cognitive behavioral therapy (CFF-CBT), and dialectical behavior therapy (DBT). All of these treatments share an element of psychoeducation, which appears to be a critical component of psychosocial intervention for youth with BPSD. Additionally, all incorporate some form of problem solving, learning to recognize and immediately address signs of mood episodes, and committing to taking prescription medications (Miklowitz and Johnson 2009).

FFT-A is conducted with an adolescent and his/her parent(s) and sibling(s) shortly after the adolescent experiences onset of a mood episode. During this intervention, therapists assess the adolescent and family, provide psychoeducation regarding prevention of the escalation of mood and how to cope with symptoms, communication skills, and problem-solving skills. This treatment provides individual and family interventions and works to reduce negative interactions among family members. Randomized controlled trials of FFT-A as an adjunct treatment to psychotropic medication showed reduced time to recovery from depression, decreased amount of time with acute mood symptoms, and increased time spent feeling well (Miklowitz et al. 2008).

MF-PEP involves three components: psychoeducation, support, and skills development. Parents and children each are supplied with a workbook and families receive project handouts at the end of each session. The children explain their session's topic and discuss that particular week's projects with the parent group. Initial MF-PEP sessions are more didactic in nature, with topics yoked in parent and child groups. Families learn about: mood symptoms and comorbid conditions including ADHD, anxiety disorders, and psychotic symptoms; how to differentiate the child from his/her symptoms using the "Naming the Enemy" exercise (Fristad et al. 1999); and medications and side-effect management. Families set unique treatment goals for themselves. Parents learn about mental health, school and community-based treatment teams and services,

and how to work effectively with service providers. Then, treatment shifts to skill-building with a focus on communication and problem solving in regard to symptom management. Children's sessions also address affect regulation, basic cognitive behavioral principles (i.e., how thoughts, feelings, and behaviors are related and can be modified: Fristad et al. 2007), problem-solving and communication skills (Fristad and Goldberg-Arnold 2003; Fristad et al. 2003a, b; Goldberg-Arnold and Fristad 2003). Results of a randomized controlled trial found children in the MF-PEP group showed lower clinician-rated mood scores at the end of treatment compared to controls (Fristad et al. 2009). PEP is an individualized adaptation of MF-PEP conducted in one-on-one sessions with parents and youth. Clinical trials have not yet been conducted for MF-PEP or PEP in adolescent samples.

Child- and family-focused CBT for pediatric BPSD emphasizes six main intervention areas. First, therapists teach psychoeducation to help families better understand the etiology, symptoms, and course of bipolar disorder. Adolescents then work on developing affect regulation skills such as monitoring their mood, recognizing different feelings, and using coping skills to help regulate extreme moods. In addition, adolescents are taught cognitive restructuring techniques such as thought stopping and modifying and/or reframing thoughts. Both adolescents and their parents practice problem-solving skills and social skills to improve their ability to deal with BPSD symptoms, improve communication and listening in the family, increase empathy for one another, and decrease interpersonal conflict. Lastly, parents are advised on behavioral management techniques to help prevent and better deal with mood episodes and the disruptive behavior that often accompanies these episodes (Pavuluri et al. 2004; West et al. 2009).

DBT teaches adolescents skills of mindfulness, distress tolerance, emotion regulation, interpersonal effectiveness, and walking the middle path. It focuses on regulating emotional, interpersonal, self, behavioral, and cognitive aspects of the adolescent. Therapy is conducted in family skills training sessions and individual sessions. Telephone coaching sessions are also provided for in the moment instruction. A 1-year open pilot trial of this treatment in ten adolescents resulted in improved emotion regulation and decreased depressive symptoms, suicidality, and non-suicidal self-injury (Goldstein et al. 2007).

Alternative Treatments

Light therapy. If adolescents experience depressive episodes during winter months when there is less natural daylight, light therapy might be an effective adjunctive treatment (Swedo et al. 1997). This involves sitting in front of a special light box once or twice a day for 20–40 minutes at a time.

Omega-3 fatty acids. Ω3 may improve symptoms in a variety of psychiatric disorders including mood disorders. Open-label trials in youth with depression and BPSD and one randomized controlled trial in youth with BPSD have been reported. These studies found significant reductions in clinician-rated depression and mania symptoms, parent-rated internalizing and externalizing behavior problems, and significant increases in global functioning (Clayton et al. 2009; Nemets et al. 2006; Wozniak et al. 2007). In a related randomized, placebo-controlled study of 81 13–25 year olds with high risk for psychotic disorder, participants who took omega-3 fatty acids showed significantly fewer positive, negative, and general symptoms of psychosis and displayed improved functioning compared to participants receiving placebo (Amminger et al. 2010).

Multinutrient supplements. Increasing evidence suggests nutrition affects the structure and functioning of the brain, and research on diet and nutrition suggests that multinutrient supplements may have a beneficial effect on mood without the side effects of currently available pharmacologic interventions for children suffering from mood dysregulation (Frazier et al. 2009; Kaplan et al. 2001, 2002, 2004, 2007; Popper 2001). Preliminary case studies and open-label trials have been conducted in youth and adults, and results suggest some benefit for depression, irritability, mood stability, and anxiety, which might provide either a primary or adjunctive treatment with a more favorable risk-benefit ratio for youth suffering from mood dysregulation than currently available pharmacologic interventions.

Educational Issues

Adolescents with BPSD tend to have high rates of academic and behavioral difficulties in school (Fields and Fristad 2009b). As many as 46% of youth with BPSD have reading and writing trouble, 29% have math difficulties, 14% qualify for a learning

disability, and 79% have behavioral problems (Pavuluri et al. 2006a; Geller et al. 2002). These issues may lead to poor academic marks, remedial classes, and grade retention (Fields and Fristad 2009b). The neurocognitive deficits in attention, memory, and processing speed likely contribute to these academic struggles. Interventions can target these cognitive deficits to reduce their impact on the adolescent's functioning (Pavuluri et al. 2006a).

Adolescents experiencing a manic episode may be impaired in the classroom by increased energy, irritability, racing thoughts, distractibility, pressured speech, elated mood, decreased need for sleep, and grandiosity. These symptoms may not just be impairing for the individual but also for the classroom, which can contribute to poor peer relations. At severe levels, manic symptoms may lead to suspension or expulsion of an adolescent from his/her school (Fields and Fristad 2009b). Adolescents experiencing a depressive episode may be impaired by poor concentration, fatigue, insomnia or hypersomnia, irritability, loss of interest, decreased productivity, sadness, psychomotor agitation or retardation, and poor self-esteem. These symptoms may manifest as an oppositional or unmotivated student, or they may be overlooked as students with more disruptive behavior problems attract the attention of the classroom teacher. In addition to the effects of mood symptoms on academics and school behavior, it is likely that an adolescent with bipolar disorder will be taking medication, which may cause side effects that further impair the adolescent's ability to perform in the classroom (Fields and Fristad 2009b).

Special education may be an appropriate intervention for adolescents struggling with symptoms of bipolar disorder in the classroom, particularly because of additional academic stressors linked with learning disabilities and ADHD, which are highly comorbid with BPSD (Fields and Fristad 2009b). It is important for parents to understand how to effectively advocate for accommodations for their children in school. Accommodations may be as basic as allowing extra time on tests, sitting in the front of the class, and reducing course load/homework or they may involve initiation of an inclusion tutor in a mainstream classroom or placement of the adolescent in a special education classroom. Adolescents may qualify for special education under the Individuals with Disabilities Education Act (IDEA) or Section 504 of the Rehabilitation Act. Each has separate criteria and different processes. Requesting a multifactor evaluation (MFE) from the adolescent's school in writing is the first step in school-based planning. The school will then conduct the MFE, assessing various aspect of the adolescent's functioning to determine if he/she meets criteria required by IDEA for any emotional disturbance, learning disability, or other health impairment that negatively impacts school performance. If the adolescent qualifies for special education services under these requirements, the school will meet with the parent(s) to develop an individualized education plan (IEP) outlining the services the adolescent will receive. If the adolescent does not meet the IDEA requirements, he/she may still qualify for a 504 plan, which covers any physical or mental disability that causes impairment in certain domains of functioning. While special accommodations under IDEA are funded by the government, services under Section 504 are not and do not require strict guidelines for schools to follow (Fields and Fristad 2009b).

Areas for Future Research

As public and research interest in pediatric BPSD continues to grow, the field uncovers as many new questions as it does answers. While assessment methods for diagnosing BPSD exist, there is much room for improvement in accuracy and functionality, both to prevent underdiagnosis as well as overdiagnosis (Danner et al. 2009). There is a particular need for cost- and time-effective assessment measures that focus on pediatric presentations of BPSD. Advancements in neuroimaging, neurocognitive testing, and genetic research should contribute to improved understanding of pediatric BPSD in subsequent years. Exploration of neurocognitive correlates and endophenotypes may ultimately aid differential diagnosis, resulting in early identification and treatment for youth with BPSD (Danner et al. 2009). Genetic research and neuroimaging may help researchers understand the biological bases of BPSD and also improve early identification of individuals at high risk of developing BPSD (Danner et al. 2009).

Great strides have been made in developing psychotropic medications that reduce symptom severity in youth with BPSD (Kowatch 2009b, c). However, effective treatments are associated with adverse events (Kowatch 2009b, c). Continued attention to developing interventions that promote positive functioning and

decrease the recurrence of mood episodes is critical (Youngstrom et al. 2008a). As children and adolescents with BPSD have different clinical presentations and developmental considerations, treatments will require tailoring for these differing age groups. Alternative, complementary treatments for pediatric BPSD show promise and warrant further investigation. Scientifically rigorous placebo-controlled randomized trials are needed to determine whether or not these interventions are effective as adjunctive interventions or monotherapies.

Treatment for adolescents with BPSD can be further enhanced by disseminating the current methods that research shows to be beneficial. A major challenge for pediatric BPSD research is to bridge the gap between science and practice and inform treatment providers of the best available ways to identify, diagnose, and treat youth with BPSD. Future effectiveness studies will help determine which interventions will successfully treat adolescents with BPSD in community settings (Danner et al. 2009).

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Birth Control

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Birth control refers to the regulation of the number or spacing of offspring. The control is achieved either by preventing conception or by terminating pregnancy once conception has taken place. The extent to which, as well as how, adolescents should engage in birth control raises some of the most contentious issues facing adolescents, families, and broader society (see Levesque 2000). Controversies regarding how best to approach adolescent sexual behavior, especially their education about sexual matters, help explain why adolescents are known to not make effective use of birth control, even when they might want to do so.

The majority of adolescent pregnancies are unintended, with those figures ranging from 75% to 86% (Coleman 2006). Although important controversies surround what constitutes “unintended,” our best research reveals that adolescents are known for making inconsistent contraceptive decisions and use. For example, studies conducted in the United States reveal that 21% of teens do not use contraceptives in their first sexual relationships; and 16% are inconsistent contraceptive users, using a method only occasionally (Manlove et al. 2003). Importantly, inconsistent or occasional use of contraceptions in first relationships likely transfers to other relationships (Manlove et al. 2004). Adolescents’ choice of sexual partners and the type of sexual relationships they have with these partners influence their contraceptive use and consistency (Levesque 2000). In addition, perceptions and knowledge of contraception, even before meeting a sexual partner, and underlying motivations to use birth control influence contraceptive choices (Ryan et al. 2007). Studies also reveal that early age of sexual intercourse relates to risky sexual behavior and those risks are due to a lack of knowledge about contraceptives and the reduced ability to negotiate contraception (Buston et al. 2007).

Statistics relating to pregnancies and eventual childbirth suggest that the majority of adolescents who are pregnant choose to give birth. For example, in the United States, which has pregnancy and childbirth rates higher than those in all other developed countries, studies reveal that nearly 10% of adolescent girls become pregnant each year and that 60–65% choose to give birth (Buston et al. 2007). Those statistics suggest that large percentages abort, but it is important to keep in mind that even wanted pregnancies do not necessarily result in live births. Research continues to examine adolescents’ decision making regarding their willingness to abort or continue pregnancies, and that research indicates that both adolescent males and females who seek to continue pregnancies have much in common in terms of their attitudes toward parenthood, careers, and future aspirations (see, e.g., Corkindale et al. 2009).

Cross-References

▶ Abstinence Education
▶ Condom Use
▶ Emergency Contraception
▶ Sexuality Education

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Bisexuality

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In the classical sense, a bisexual or hermaphroditic person is one who has the gonads and external genitalia of both sexes and is capable of living as either a man or a woman. That definition and view of bisexuality has since expanded to describe persons who consciously feel, think, and alternately react psychically, erotically, or orgiastically to members both of the same and of the opposite sex. In this sense, bisexuality involves a commitment to ► Sexual Orientation and Identity Labels that somewhat equally involves heterosexuality (attraction to members of the opposite gender) and homosexuality (attraction to members of the same gender), with the use of the term "somewhat" being of significance given that sexual orientation appears to not be fully dichotomous. As with other sexual orientations, bisexuality constitutes a consistent and enduring pattern of behaviors, attractions, and affections that constitute a sense of identity relating to them.

Although the more common view of bisexuality has gained increased acceptance, defining bisexuality still remains problematic. It remains problematic even despite the impressive amount of research on sexual orientation that has been conducted over the past decades (see Diamond 2008). The failure to develop an agreed-upon definition of bisexuality creates many challenges and adds to the many others that limit support for research on sexual-minority youth (indeed, even that label is problematic). As a result of these challenges, many studies of same-sex sexuality specifically have excluded bisexually identified individuals for the sake of conceptual and methodological clarity (Russell and Seif 2002). Despite that exclusion, studies that do exist, including nationally representative studies, reveal that bisexual sexual attraction and behavior are more common than previously thought (Diamond 2008). In addition, sexual-minority youth increasingly adopt bisexual and "unlabeled" identities rather than lesbian/gay identities (Savin-Williams 2005).

This aspect of development has yet to attract as much research as would have been expected given interest in understanding sexual development, minority orientations, and societal influences on identity. In addition to definitional issue noted above, arguably the most influential factor contributing to the stifling of research in this area may be a distinct stereotyping and disapproval associated with bisexual identity when compared to others. Some of these stereotypes question the legitimacy of bisexuality, suggesting that it merely reflects flings or exists as an intermediate step between heterosexuality and homosexuality rather than as its own orientation, or that it simply is not prevalent. Although these stereotypes continue, each of them continues to be challenged. For example, early research has indicated that rates of bisexuality appear as prevalent as those relating to homosexuality; bisexual individuals participate in lasting monogamous relationships and few have been found to be involved with both men and women concurrently. These findings, however, notably focus on adults rather than youth.

Although research has focused considerably on adults, the available research still offers important insights relevant to adolescents. Stereotypes, for example, gain significance in that they may contribute to biphobia, which is deemed rather important for adults and even more so for adolescents. Individuals with bisexual orientations are in a unique position in terms of prejudice; when perceived as an out-group to both heterosexual and homosexual individuals, bisexual individuals may be discriminated against by members of both orientations. This, combined with the myth of bisexual invisibility, has been deemed as contributing greatly to the stress endured by bisexual individuals. Though society is replete with heterosexual role models and homosexual role models are becoming more prevalent, there are comparatively few bisexual role models. The invisibility and stereotypes make it more difficult for bisexual individuals to build confidence in their sense of self.

These challenges faced by individuals with a bisexual identity appear even more important for adolescents, given that sexual-minority youth also must navigate the developmental challenges faced by all youth as well as the challenges that sexual-minority youth must face in a society deemed characterized by pervasive homophobia and ► Sexism. Most notably, consciousness of collective social stigma associated with nonheterosexual identity, internalized homonegativity (internalized negative attitudes reflecting negative societal views), lack of social support (as can be had from confidants), and unsupportive social interactions all can contribute particular stresses on bisexual youth and link to their negative mental health outcomes (see Berghe et al. 2010). Not surprisingly, then, the bulk of research relating to adolescents and bisexuality examines the effects of that identity on mental health. Notably, it has been found that bisexual adolescents tend to have fewer protective factors than their heterosexual peers due to lack of family, school, and social support. Youth often find that neither families nor peers and teachers accept, support, or nurture their development (see D'Augelli and Hershberger 1993). This lack of support has been linked to their engaging in more common risk-taking and negative behaviors (Saewyc et al. 2009). Sexual-minority youth engage in increased health-risk behaviors and have higher risks of poorer health outcomes including substance use, eating disorders, suicidality, risky sexual behaviors, exposure to violence, victimization, and homelessness (Coker et al. 2010). The lack of support also may translate into youths' adopting coping strategies are not all positive. For example, an important study found that bisexual youth adopt several strategies to counter the lack of common protective factors, such as seeking out support, passing, selective listening to negative conversations, reinterpreting heterosexist attitudes, suppression, and substance use (McDavitt et al. 2008). Importantly, some youth may have strong support systems that can buffer the negative effects that societal stigmatization can have on them, but the best evidence indicates that, more often than not, youth who have adopted or seek to adopt a bisexual orientation lack access to such support systems.

In addition to understanding the nature and effects that bisexual identities can have on individuals who adopt them, research has examined how individuals can develop a bisexual identity. Three dominant models of bisexual identity development have been suggested, with each being distinct from homosexual as well as from heterosexual identity development. The Weinberg et al. (1994) and Brown (2002) models are similar for the first three of their four stages. First is *initial confusion*, a stage in which individuals realize that their desires conflict with heterosexual norms. The second stage is *finding and applying the label*. In that stage, individuals learn of bisexuality and begin applying it to themselves. Accepting bisexual identity and incorporating it as a permanent fixture of one's life is the third stage, called *settling into the identity*. Weinberg et al.'s model views the last stage as *continued uncertainty*; that stage involves individuals' ongoing doubts about their identity due to a culture hostile toward their orientation. Brown's model describes the final stage as *identity maintenance*, a stage wherein individuals may question their orientation, but overall embrace it. The third model of identity development, championed by Bradford (2004), is similar to the other two with the exception that it focuses on social advocacy rather than uncertainty. Although research relating to bisexuality may be scarce, then, important theoretical analyses do exist and can serve guide the emerging understanding of developmental experiences relating to bisexual identity. These are important developments, but the models of bisexual identity development, like much of the research in this area, focus on adults. When considering the development of adolescents, it is clear that existing models are likely to deem them as undeveloped and, in some ways, unable to truly adopt the label of bisexuality.

Research and theories examining the nature of bisexuality as it relates to adolescence is relatively new and scarce. Still, existing findings and commentaries, coupled with more general research involving adults, are of significance to efforts seeking to understand bisexuality during adolescence. They confirm the need for more research that would focus on the adolescent experience, a focus that likely will include challenges, not the least of which will involve the need to deal with discrimination and articulate definitions and labels at a time when youth themselves reject many of them.

Cross-References

► Coming Out as Lesbian, Gay, Bisexual and Transgender

► Coming Out Process

► Sexual Minority Youth
► Sexual Orientation and Identity Labels
► Transgender Youth

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Blindness and Visual Impairment

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Blindness is a difficult term to define because it represents a vast range of ability to perceive the outside world (Warren 1994). For example, the term legally blind describes many people, however only 25% of the legally blind see little or no light. Yet, of all the definitions of blindness, legal blindness is perhaps the most agreed upon. This definition encompasses people who, with correction, have a vision of 20/200 or less in their better eye or/and a visual field of less than 20°. While these criteria were developed for purposes of aid distribution, children with the same vision can have vastly different visual experiences. In schools, a visual acuity of 20/60–20/70 is required to receive special education and between 20/60 and 20/200 a child is said to be visually impaired.

Blindness can result from many factors. The most fundamental causes are seen most notably in third-world countries where things such as nutritional deficits, bacteria, and infections cause between one third and one half of all childhood blindness. In these countries, 6–15 in 10,000 children are blind. Not having access to medical care turns uncorrected refractive errors into amblyopia (lazy eye), another common type of blindness in third-world countries. In places such as Japan, the USA, and Western Europe, advances in sanitation, nutrition, immunizations, medical care, and pharmaceutical treatments have rendered these issues of developing nations a thing of the past. In developed countries, 1–3 in 10,000 children are blind, and in 50–75% of these cases, blindness is accompanied by other neurological or medical problems.

In developed countries, many visual impairments are caused before birth or develop early. Genetic impairments usually create noticeable symptoms such as both eyes moving together in a jerky motion, clouded corneas, less interest in objects or faces around the child, or less reaching for objects or faces around the child. Some genetic disorders, however, do not become apparent until later in life. In the USA, about half of all childhood blindness is caused by a genetic inheritance. In the USA, the most common cause of visual impairment is cortical visual impairment, in which the visual cortex is affected by a neurological disorder before, during, or after birth. The second most common cause of visual impairment, retinopathy of prematurity, occurs in premature infants whose blood vessels begin to grow abnormally in the retina. Finally, optic nerve hyperplasia is characterized by insufficient numbers of nerves leading from the eye to the visual cortex and is acquired sometime before birth. Unlike the previous two, optic nerve hyperplasia is not usually accompanied by other disabilities. Other less common

causes of visual impairment, many genetically caused, are albinism, coloboma, diseases of the cornea, glaucoma, retinal dystrophies, and disorders of the photoreceptors.

Blindness is a major concern because it has been estimated that between 75% and 80% of a child's early understanding of their environment and eventually basic cognitive concepts are based on their ability to see. The depth at which a child's development is affected by blindness will depend on several key aspects of their impairment. A child's age, cause of impairment, additional neurological disabilities, learning ability, educational opportunities, environmental adaptations, and attitudes of people surrounding the child all influence their developmental outcomes.

Development of a child with blindness depends on many factors. If a child becomes blinded before the age of 5, prior vision or memory will not likely be useful in their development. If the blindness is caused by an abnormality in the eye only, children will generally reach developmental milestones within a normal timeframe, but if blindness is due to eye and brain disorders, children will not develop as quickly. A child with severe visual impairments will have developmental differences from their sighted peers. Incidental learning will be decreased, developmental milestones may be reached in nonsequential order, and some skills and concepts may take longer to develop. For example, a sighted child can use incidental learning to easily understand that an egg is an egg, regardless of whether it is scrambled, boiled, or poached. On the other hand, a blind child may not as easily understand why such different substances are all grouped under the same concept. Lingually, these children also tend to have longer periods of pronoun confusion and verbatim repetition. Educational adaptations for blind students can include learning brail, using auditory software, and using tactile models while studying the physical sciences.

Visually impaired children must also become oriented to three-dimensional space, which can be done with the assistance of an orientation and mobility expert. This not only is a requirement for safety, but a necessity for exploration and movement. Blind children do not automatically have increased ability in their other senses, so often times exploration using all of their senses must be encouraged, aided with verbal descriptions and explanations of these experiences.

Other phenomena unique to blind children include repetitive, stereotypical movements. This can include body swaying, flapping of the arms, gazing at lights, or pressing on the eyeballs, and the behavior often can increase if the child becomes stressed. These movements can sometimes impede socialization at younger ages; however, these behaviors usually dissipate as the child grows. Although the cause is unknown, it is theorized that blind children seek exaggerated sensory stimulation. Pressing of the eyeballs is particularly dangerous as it can potentially damage the eyeball further, as well as the surrounding tissues. Severely blind children may press particularly hard. One theory is that the pressing causes phosphenes to appear, and that these dancing lights stimulate the child. Blind children can also develop a preoccupation with textures in their skin or mouth, as well as develop bad body posture and sleep difficulties. Although it is true that 50–60% of children with visual impairments have co-occurring disorders such as autism, behavioral oddities should be assessed within the context of blindness. A specialized interdisciplinary team can evaluate whether the behavior is interfering in the child's development and then recommend strategies to focus the child on outward stimulation, such as socializing, rather than internal stimulation such as eye pressing.

Children who are considered to have low vision are those whose better eye has a visual ability of 20/70 through 20/200. While these children may have some abilities beyond children who see little or no light, they present unique factors to learning. Low vision children need to be evaluated for their seeing ability so that appropriate services and teaching strategies can be applied. Delays in diagnosis, misunderstanding about the child's visual abilities, and inappropriate or insufficient classroom modifications are only a few of the obstacles that low visually impaired children must face.

Children with residual vision also require special attention. With the help of a medical doctor, a teacher of the visually impaired, and an orientation and mobility expert, a child's range of visibility can be determined and along with cognitive and language competency scores, an educational curriculum can be created. A child with residual blindness should be reevaluated as they grow older because changes in the eye or disability may change the modifications they require.

Research on the role that visual impairment plays a role in adolescent development has focused on its

effects on social relationships. Impairments are seen as particularly important to study in this regard in that they threaten the quality and maintenance of relationships with friends and family when these relationships play an important role in coping with impairment. During the adolescent period, peers groups gain significance, and research shows that individuals with visual impairments experience more difficulties and obtain less support, especially in the relationship with peers (see Kef and Dekovi 2004; Rosenblum, 1998; Sacks et al. 1998). This general finding also transfers to romantic relationships, which have been deemed limited due to negative societal attitudes, feelings of dependence, environmental barriers, and general feelings of insecurity (Kef and Bos 2006). Despite these findings, the general conclusion from studies reveals that visually impaired youth generally score within normal or high levels of self-esteem, with the degree of impairment factoring in determining self-esteem (Bowen 2010).

Cross-References

► Chronic Disabilities

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Boarding Schools

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The term boarding school refers to residential schools where some or all pupils study and live during the school year, and sometimes summers. The classic boarding school is modeled after British schools that were youth of elite families attended and were educated in expectation to become their society's upper class. Although the classic image may come to mind, there are many other types of boarding schools. Among the most common are military boarding schools as well as therapeutic schools that provide inpatient services for students in need of special care. Importantly, there are also specialist schools that are devoted to particular academic disciplines, such as math or the performing arts. These are but some of several other important variations in schools that "room" and "board" their students (see, e.g., Arieli et al. 2001).

The classic boarding school arguably receives the most attention but, like other schools, it has not been the subject of much empirical inquiry (for a review, see Cookson and Persell 1985). Boarding schools, however, are a phenomenon of a very distinctive population demographic, with less than 3% of American secondary students attending elite private residential schools. Sociologists have argued that boarding schools are a place in which predominantly affluent children are groomed to take on leadership roles in society. The most selective schools, such as Phillips Academy, Phillips Exeter Academy, St. Paul's School, St. Mark's School, Lawrenceville School, Groton School, Woodbury Forest School, Choate School, St. George's School, and Middlesex School, are a significant force in US and international economy, culture, and society. Graduates from these institutions tend to come from families whose sense of solidarity and earned privilege are perpetuated by their lifestyles. This small demographic of society often share the same interests, attitudes, and ambitions and reproduces itself through social unions such as in education, clubs, or marriage. The curriculum of these schools often implies that the elite of the nation are meant to command others, and although many of these school's philosophies revolve around service, it is meant more in a sense of leadership. These schools essentially possess a culture that maintains the American class system by internalizing within their students a sense of entitlement and privilege. Deep structure regulation is a process by which not only are the student's physical lives closely managed, but also their emotional lives. An almost obtrusive watch is kept on students in order to graduate students who have internalized the values of the elite

class. Indeed, 90% of boarding school graduates feel that it has changed how they relate to peers and their understanding of the world. Even beyond the structure regulation of the school, the student culture pushes adolescents to a mindset in which the exercise of power and legitimating power through experience creates an interesting contradiction. Thus, students learn not only to gather academic credentials, but also to prepare for power at a latent level through their choices of personal and class interests.

Boarding schools become a feeder system to the most prestigious colleges and universities (Cookson and Persell 1985). Since the 1980s, lower socioeconomic strata have faced a gradual weakening of their ability to succeed, however this is not the case with the upper socioeconomic class. As a result, students who attend elite boarding schools who have low grade point averages and mediocre SATs will still attend prestigious colleges regularly, the favorites being Brown, Princeton, Harvard, and Yale. Clearly, elite boarding school graduates have an advantage in the race for social and economic rewards. However, these rewards do not come without effort. Vigorous and demanding curricula in math, science, history, art, and language coupled with high standards of performance create an atmosphere of severe competition with little room for failure. Stress is compiled by students' living, studying, and sleeping in the same environment and is expressed through many outlets. Hypercompetitiveness, drug and alcohol use, sexual experimentation, and even depression, attempted suicide, or completed suicide all result from the extreme environment created in the selective boarding schools. Despite these dark outcomes of elite boarding schools, many students go on to become prominent people of society, networking with other elite boarding school graduates, and creating a bond among the upper socioeconomic class of society. Indeed, boarding schools are a birthing place of class consciousness and elite socialization that shapes the social world in many seen and unseen ways.

Cross-References

► Academic Achievement: Contextual Influences
► Affluent Youth
► Homesickness
► SES

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Body Image

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This essay reviews current research addressing adolescents' body image. The correlates and consequences of body image are described, as is the significance of body image to other areas of development including puberty, identity, media consumption, family, peer, and romantic relationships. The historical context of body image research is reviewed in addition to the contemporary importance of understanding body image given rising concerns about adolescents' vulnerability to both obesity and eating disorders.

There are many reasons why it is important to understand adolescents' body image. One only needs to pick up a newspaper, turn on the television, or glance at the magazines in the checkout line at the grocery store to be reminded of our cultural obsession with the appearance of our bodies. Advice on how to improve one's physical appearances abounds – from how to lose weight to how to surgically alter one's appearance. It is no wonder that young people today are concerned with how they look, seemingly more so than any past generation.

An attempt to understand physical appearance concerns, especially with respect to body-related concerns, is often the work of body image researchers. Body image is the self-evaluative component of self-image that focuses on physical attributes and appearance. It functions as a dynamic force and does not merely denote a static image of the self as "something attractive" or "something fit," but rather, body image

represents the power, confidence, and sense of agency that is derived from one's physical being (D. Newman, personal communication, July 12, 2005). Interest in body image has come to researchers' attention most often under conditions of extreme distortion or dissatisfaction. Body dysmorphic disorder, anorexia nervosa, and bulimia nervosa represent psychiatric disorders hallmarked by negative body image. However, the range of normal and pathological body image experiences is broad and has psychological, behavioral, and developmental consequences all along its spectrum (D. Newman, personal communication, July 12, 2005). In this essay, the history of body image research, current trends and statistics regarding adolescents' body image, the contemporary importance of body image research, the developmental significance of body image in terms of adolescents' pubertal, identity, social, and psychological development, as well as future directions for the study of adolescents' body image are discussed.

Historical Understanding of Body Image

A recent (June, 2009) literature search in PsycInfo for the key words "body image" produced 6,968 articles, books, chapters, and dissertations addressing this topic. Dating back to 1903, "body image" research originally focused on self-image or self-concept and usually examined samples of mentally retarded or otherwise psychologically ill or impaired individuals' sense of self (not necessarily their physical body). This early research differs from contemporary body image research in its relatively general approach, psychoanalytic undertones, and scarcity (<1% of body image research was published before 1970). The majority (90%) of body image research has been published since 1980, paralleling an increase in research addressing eating disorders in the last 3 decades. What may be most striking is not the relatively recent proliferation of research addressing body image, but the predominantly clinical nature of this research. Of all the body image publications, the vast majority can be found in abnormal, clinical, health/medical, or social/personality journals. Only a minority (<1% it appears) can be found in developmental psychology journals and even fewer are longitudinal studies in peer-reviewed journals. And yet, presumably, everyone has a "body image" and understanding what this means – particularly during adolescence – is significant not only because of the clinical ramifications associated with body dissatisfaction, but also because of the relevance of body image to so many other areas of adolescents' lives.

Adolescents' Body Image: Recent Trends and Statistics

When adolescents are asked about their thoughts and feelings about their bodies, the result is often discouraging. Generally, adolescents are quick to point out flaws with their bodies, are not happy with the appearance of their bodies, and report body-related concerns and dissatisfaction (Shapiro et al. 1997; Wertheim et al. 2009). However, concerns regarding body image clearly develop prior to adolescence, particularly among girls. Some research suggests that girls as young as 5 years old begin to express dissatisfaction with their bodies (Davison et al. 2000; Smolak 2004). These early signs of body dissatisfaction are, predictably, associated with weight status such that girls who weigh more (even taking height into account) are more dissatisfied with their appearance (Davison et al. 2000). Further, personality (e.g., self-esteem) and sociocultural influences (e.g., media exposure) are demonstrated predictors of the development of body dissatisfaction (Clark and Tiggemann 2008; Wertheim et al. 2009). Girls' concerns about body and weight issues do not subside from childhood to early adulthood, but instead appear to intensify with age (Cash and Henry 1995; Striegel-Moore et al. 1986). Measures assessing body image and statistics determining body satisfaction versus dissatisfaction vary from study to study (with findings ranging from 24% to 90% of girls dissatisfied with their bodies; D. C. Jones, personal communication, July 16, 2009; Neumark-Sztainer et al. 2002; Presnell et al. 2004; see Yanover and Thompson 2009 for a review of assessment issues), however reports seem to indicate that at least half of girls report dissatisfaction with their bodies by mid-adolescence (Casper and Offer 1990; D. C. Jones, personal communication, July 16, 2009; McCabe and Ricciardelli 2003a; Paxton et al. 1991). Further, Paxton et al. (1991) report that adolescent girls believe that improving the appearance of their bodies would make them happier, healthier, and better looking.

The majority of research on body image has focused on girls and women; fewer studies have addressed these

issues among boys and men. However, Smolak (2004) has suggested that during adolescence boys become concerned with both their body size and muscularity, which causes them to experience levels of body dissatisfaction that are comparable to adolescent girls' body dissatisfaction. Further, McCabe and Ricciardelli (2004) have suggested that boys may develop greater body image concerns during adolescence due to an increased interest in emulating male body ideals. Consistent with this notion, some estimates indicate that 10–75% of preadolescent and adolescent boys are dissatisfied with their bodies (Collins 1991; Ericksen et al. 2003; D. C. Jones, personal communication, July 16, 2009; McCabe and Ricciardelli 2004). Similar to research addressing girls, different measurement tools and standards used to calculate body satisfaction versus dissatisfaction likely account for a portion of the variability in body dissatisfaction across studies. Regardless, boys are clearly not immune to concern about their bodies. However, with limited research addressing the developmental trajectory of boys' body image through adulthood, it remains somewhat unclear whether or not boys' body image concerns intensify into adulthood or as one study suggests, may actually decrease by the end of adolescence (Bearman et al. 2006).

Contemporary Importance of Understanding Adolescents' Body Image: Obesity

The striking statistics concerning adolescents' susceptibility to body dissatisfaction in combination with recent secular trends regarding obesity makes understanding adolescents' body image particularly important. It is unlikely a coincidence that the current "era of appearances" is also the "era of obesity." These days, it is difficult not to be aware of the growing obesity "epidemic" (Centers for Disease Control and Prevention 2009; World Health Organization 2009) affecting American adults and an increasing number of children and adolescents. As Americans grow heavier, they also appear to grow increasingly afraid of food and more worried about their appearance. As noted by others (see Irving and Neumark-Sztainer 2002), there seems to be an association between our march toward obesity and our love of an emaciated female body and a fit male physique. Indeed, research seems to clearly suggest that body dissatisfaction and weight concerns are forerunners to dieting and other body-change strategies (Lowe et al. 2006; Markey and Markey 2005; Stice et al. 1999; Tomiyama and Mann 2008). However, the efficacy of most weight-loss approaches is highly questionable, with weight gain being a likely outcome of most attempts to lose weight (Polivy and Herman 2002; Stice et al. 1999). Consistent with these findings is additional research indicating that self-restriction and external attempts to control food intake tend to result in increased food consumption, binge eating, and higher weight status (see Polivy and Herman 2002, for a review). Thus, it appears that the cultural focus on being thin and fit may indirectly fuel the obesity crisis. In order to ameliorate adolescents' health, and help them to maintain a healthy weight status, it is important to help them redirect their energy away from efforts to maintain an unrealistic, idealistically thin and/or muscular physique and toward feeling positive about their bodies and making healthy long-term choices about food and physical activity.

Contemporary Importance of Understanding Adolescents' Body Image: Disordered Eating

In addition to links between body image and obesity, research has established links between body image concerns and disordered eating. Body dissatisfaction has been found to consistently predict disordered and maladaptive eating behaviors as well as other psychological problems (e.g., clinical eating disorders, depression) among girls (Smolak 2004, Stice and Bearnman 2001; Stice and Shaw 2002). In fact, Stice's (2002) meta-analysis suggests that body dissatisfaction is one of the most significant predictors of disordered eating. Different elements of body dissatisfaction (e.g., general appearance concerns versus weight and shape concerns) appear to have different predictive power in determining girls at risk for disordered eating. Usually, more specific body concerns are more predictive of disordered eating (e.g., Shaw et al. 2004; Wertheim et al. 2001). Among boys, body image concerns appear to be concurrently associated with dieting, weight-loss strategies, low self-esteem, depression, eating disorders, and the adoption of maladaptive body-change strategies (e.g., steroid use; see Cafri et al. 2005; McCabe and Ricciardelli 2004). However, the dearth of studies examining the consequences of body dissatisfaction longitudinally contributes little to our understanding

of boys' and men's body dissatisfaction and even suggests that longitudinal relations between body dissatisfaction and consequences such as disordered eating may not exist among boys (Ricciardelli et al. 2006).

As mentioned above, weight status plays a role in the development of body image; it has also been found to be associated with eating disorder risk. In one recent study (Babio et al. 2008), girls determined to be "at risk" for the development of disordered eating were not only dissatisfied with their bodies but more likely to be relatively heavy (assessed using body mass index), more calorie-restrictive, and more vulnerable to sociocultural emphasis on thinness. Thus, contemporary models of the etiology of eating disorders should include not only body image, but biological (e.g., weight and pubertal status) as well as sociocultural influences (e.g., parent and peer influences; Wertheim et al. 2009). Body dissatisfaction is clearly a primary predictor, but it is not the only factor contributing to disordered eating; body dissatisfaction in combination with other risk factors heightens the likelihood of adolescents' vulnerability to disordered eating.

Developmental Significance of Body Image

Although research examining body image has increased in recent years due to concerns regarding the consequences of body dissatisfaction (Smolak 2004), it is not just the clinical consequences of body dissatisfaction that warrant developmental researchers' contributions to body image research. Psychologists who study adolescents are uniquely suited to understand body image in the context of other physical, psychological, and social experiences that accompany the adolescent years.

Puberty. The physical development that accompanies the adolescent years is more extensive than that experienced at any other time of life (aside from infancy). As children grow into adults, they must adjust to a new physical form that may seem desirable, strange, and awkward to them all at the same time. Developmental research (see Archibald et al. 2003) elucidates the significance of puberty as a physical change and as a socially embedded experience with implications for body image.

Girls' physical changes that accompany puberty often bring them further from the cultural ideal of beauty (which is, essentially, prepubertal in appearance; Brumberg 1997). Girls typically gain a significant amount of weight (∼ 25 lbs) during puberty (Warren 1983), and weight status is often viewed as the most reliable correlate of body dissatisfaction (McCabe and Ricciardelli 2003a). Although different studies suggest the effects of these physical changes vary in severity and importance relative to other factors (e.g., sociocultural influences) in predicting girls' body image, most studies reveal puberty as a risk factor for girls' body dissatisfaction (O'Dea and Abraham 1999). The timing of girls' pubertal development relative to their peers also appears to be significant, with earlier developers more inclined to gain more weight and most likely to report greater body dissatisfaction (Ackard and Peterson 2001; Archibald et al. 2003). Further, some research supports mediation models indicating that puberty predicts body dissatisfaction, which in turn predicts depression and/or lowered self-esteem (Siegel et al. 1999; Williams and Currie 2000). One exception to these findings concerns girls' breast development, which appears to be positively associated with girls' body image (Brooks-Gunn and Warren 1988).

Research focusing on links between boys' pubertal experience and body image is not abundant and does not present conclusive findings. In contrast to research addressing girls, some body image research suggests that puberty may present a risk factor for boys' body image because during the transition to puberty, boys tend to desire to be *larger* (i.e., more muscular) and more developed than they perceive themselves to be (Yuan 2007). Further, boys' attempts to change their bodies (i.e., through weight lifting, food supplements use, or even steroid use) have been linked with their pubertal status (Ricciardelli and McCabe 2003). However, post-pubertal boys tend to have higher body satisfaction than do boys who are prepubertal or currently experiencing puberty (O'Dea and Abraham 1999). Thus, although puberty may present a body image challenge for many boys, the ultimate result of puberty appears to be favorable for most boys.

Identity. Identity development has long been viewed (see Erikson 1968) as a central task of adolescent development. Body image is an aspect of identity and as such, its development is particularly salient to adolescents. Researchers such as Harter (1988, 2003) have described different constructs that contribute to adolescents' sense of self including academic competence, popularity and social acceptance, romantic appeal, and

physical appearance. Relevant to researchers' understanding of body image development, Harter's work (e.g. 2001, 2003) suggests that adolescents' perceptions of their physical appearance contributes most significantly to their overall sense of self. With changing bodies to make sense of, adolescents' views of their bodies no doubt contribute to their physical appearance self-concepts and, in turn, to their identity development (Frost and McKelvie 2004; Rosenblum and Lewis 1999).

Identity exploration can be a confusing process for adolescents and seems to parallel, especially for girls, a decrease in self-esteem during this developmental period. As mentioned earlier, pubertal development may contribute to this decrease in both body satisfaction and self-esteem (Siegel et al. 1999; Williams and Currie 2000). However, some research suggests that relatively high self-esteem may protect girls from experiencing body dissatisfaction and adolescents who have positive feelings about their appearance tend to have relatively high global self-worth (Mendelson et al. 2000; Paxton et al. 2006).

Identity development does not take place in a vacuum but is believed to be heavily influenced by cultural context (Shweder et al. 1998). Further, research suggests the importance of considering adolescents' cultural and ethnic background in efforts to understand their body image (Markey 2004). Unfortunately, research addressing links among body image, ethnic identity, and general identity development remains limited (in part, by relatively homogenous samples and samples too small to allow for cross-ethnic comparisons) and somewhat inconclusive. Cultural constructs have been viewed as both protective and harmful in the development of both identity and body image. Researchers (see Altabe 1998; Wildes et al. 2001) have suggested that African American girls are protected from body dissatisfaction and disordered eating because African American cultural ideals have historically been more robust and voluptuous than "main stream, white" ideals. However, some research (see Poran 2006) suggests that African American girls are at increasing risk of body and appearance-related concerns. Further, the process of acculturation and loss of ethnic identification have been discussed as risk factors for body dissatisfaction among Asian American and Latina girls (Iyer and Haslam 2003; Miller and Pumariega 2001). Similar to much of the body image literature, research addressing issues of body image and identity development is biased in its focus on girls and women and leaves questions about associations among adolescent boys. However, some research (e.g., Miller and Pumariega 2001; Shaw, Ramirez et al. 2004) suggests body image concerns are central to identity development, regardless of gender or ethnic background.

Family Relationships. Adolescents' relationships with their family members, particularly their parents, change during this developmental period. Research suggests that adolescents' and their parents' physical intimacy decreases and communication patterns shift to include both increasing emotional connectedness and increasing conflict (Larson and Richards 1994). These relationship changes are speculated to be linked with physical changes accompanying puberty (see Steinberg 1987) and have the potential to impact parents' influence on their adolescents' developing body image (McCabe and Ricciardelli 2003b). Specifically, certain elements of family functioning have been linked to adolescents' body image and disordered eating behaviors. Low levels of family expressiveness have been found to predict body dissatisfaction (Babio et al. 2008), most likely indicating that families relatively low in qualities including warmth and emotional support are more apt to raise adolescents who are insecure in general and worried about their appearance more than are other adolescents. Longitudinal research examining both adolescent girls and boys further shows a link between parental support deficits and future increases in body dissatisfaction (Bearman et al. 2006).

Some research addressing family influences on body image highlights the gendered nature of these associations. In particular, mothers' influences appear more consequential for girls' body image development and fathers' influences appear more consequential for boys' body image development (Davison et al. 2000; Ericksen et al. 2003; McCabe and Ricciardelli 2005). This influence begins prior to adolescence, but may become more salient to adolescents as their bodies take their adult form. Parents' influences may be most significant when they are explicit, such as actively encouraging their adolescent to try to lose weight or participate in particular dieting techniques (Benedikt et al. 1998; Wertheim et al. 1999). Some research suggests that adolescents who report receiving messages from their parents regarding food restriction or

exercise behaviors were likely to participate in the prescribed behaviors (McCabe and Ricciardelli 2005; Ricciardelli et al. 2000). Further, this research suggests that messages from fathers are predictive of both strategies to lose weight and increase muscles among boys, with girls' mothers being primary influences on their body-change strategies.

Some research suggests that parents may indirectly teach their adolescents to be dissatisfied with their bodies. Parents' behavioral correlates of their *own* body dissatisfaction (e.g., dieting, complaining about their appearance) are associated with similar attitudes and behaviors among their children (Fisher et al. 2009; Haines et al. 2008). Further, parents' dominant role in food socialization is relevant to our understanding of adolescents' body image development given findings linking children's weight status, parental regulation of children's food intake, and both parent and child weight concerns (e.g., Davison et al. 2000; Fisher et al. 2009). Although the majority of this research seems to indicate that parents are not necessarily positive influences on body image development, it is important to note that when parents convey *positive* body image messages, their adolescents are found to report feeling more positively about their bodies (Ricciardelli et al. 2000).

Peer Relationships. The adolescent years are an important developmental period for the establishment and alteration of relationships with peers. Recent research (e.g., Jones and Crawford 2006) suggests the important role peers may play in shaping adolescents' feelings about their bodies. This research indicates that both adolescent girls and boys talk with their friends about their appearances and changing their appearances (e.g., dieting, muscle building) and peers' feedback is associated with adolescents' behavioral attempts to alter their bodies (see Clark and Tiggemann 2006; McCabe and Ricciardelli 2003b). Girls appear somewhat more likely than boys to compare themselves to both their same-sex peers and other models in appraising their appearance (Jones 2004), but social comparison has negative body image consequences for both boys and girls (Jones 2001). Some research (e.g., Jones and Crawford 2006) suggests that boys may experience more pressure from peers to change their bodies than girls do. Other research highlights girls' friends as among the most consequential influences on adolescents' body image and attempts to change their bodies, with peers being more influential than parents (Hutchinson and Rapee 2007; McCabe and Ricciardelli 2005). Additional research that examines the ways in which both boys and girls deflect and/or internalize the messages they receive from their peers about their bodies will extend current findings and help clarify discrepancies across studies.

Explicit negative feedback from peers in the form of appearance-related teasing has been found to be particularly detrimental to the development of body image (e.g., Davison and Birch 2002). A large portion of adolescents (approximately 33% of boys and 50% of girls; Eisenberg et al. 2006) report being teased about their bodies. Teasing often begins prior to adolescence and has been shown to be associated with weight status at both extremes (Kostanski and Gullone 2007). Girls are more likely to be teased about their appearance when they are overweight, but boys who are either overweight or underweight are vulnerable to peer teasing (Kostanski and Gullone 2007). Regardless of the focus of peers' teasing, correlates of adolescents' experiences of teasing include low body esteem, body dissatisfaction, and an interest in changing their physical appearance (Davison and Birch 2002; Eisenberg et al. 2006; Markey and Markey 2009). Of course, peers are not the only source of appearance teasing; family members are often implicated in this research as well (e.g., Keery et al. 2005). The extent to which peer influences are significant predictors of adolescents' body images relative to other influences (e.g., family) or in combination with other influences requires additional exploration.

Romantic Relationships. The development of romantic relationships typically begins during the adolescent years. However, little research addresses potential links between romantic relationship experiences and the development of adolescents' body image. As might be expected, adolescent girls with higher weight statuses have been found to be less likely to report romantic relationship experiences and a sense of romantic competence than are those with lower weight statuses (Halpern et al. 2005; Mendelson et al. 2000). Further, some research suggests that adolescent girls who are in romantic relationships may be more likely to try to change their bodies via dieting than are their peers who are not in relationships (Halpern et al. 2005) and perceived pressure to be thin from romantic partners has been associated with body dissatisfaction and

disordered eating across time (L. Shoemaker, personal communication, August 5, 2009).

The mating literature (which, typically focuses on adults) suggests the importance of physical appearance (including body shape; see Singh 1993) in mate selection and relies heavily on evolutionary theory to explain men's greater concern than women's about partners' physical appearance. Once in romantic relationships, young men's and women's own body satisfaction has been found to be correlated with their perceptions of their romantic partners' satisfaction with their bodies (Goins and Markey 2009; Markey and Markey 2006). Tantleff-Dunn and Thompson (1995) go as far as to suggest that romantic partners may not only shape women's feelings about their bodies, but may influence their vulnerability to disordered eating and their general psychological health. One study addressing romantic partners' influence on young men's body image suggests positive associations between body image and sexual intimacy in romantic relationships (Goins and Markey 2010). Thus, although current research in this area focuses mostly on adults and requires speculation about the parallel experiences of romantic relationship development and body image development during adolescence, it appears that this may be a fruitful avenue for future research.

Media Influences. Adolescent development is unquestionably influenced by media culture, especially as the twenty-first century presents an ever-increasing number of options for engaging with various forms of the media ranging from the Internet to cell phones (Levesque 2007). Although it has long been suggested that idealized media images may negatively influence impressionable youths, research now provides evidence to support the negative effects of the media on body image (Clay et al. 2006; Durkin et al. 2007; Markey and Markey 2009). Not surprisingly, this research is limited by its almost exclusive focus on adolescent girls, but it does utilize diverse methodologies that are both correlational and experimental in nature (e.g., Harrison and Fredrickson 2003).

Research examining links between adolescents' media exposure and their body image suggests that exposure to idealized media images leads to decreased body satisfaction (e.g., Durkin et al. 2007; Hofschire and Greenberg 2002). Some research (e.g., Mooney et al. 2009) suggests that media celebrities are particularly influential on girls' feelings about their bodies and their attempts to alter the appearance of their bodies through dieting. As girls proceed through adolescence, they appear to become increasingly aware of sociocultural messages regarding thinness presented in the media, internalize these messages, and compare themselves to beauty ideals presented in the media. This may contribute to body dissatisfaction, decreases in self-esteem, and increases in depression (Clay et al. 2006; Durkin et al. 2007). Although the majority of this research examines culturally homogeneous samples, research examining ethnic samples (e.g., Latina girls) presents similar findings: media exposure is associated with the development of body dissatisfaction during adolescence (Schooler 2008). One recent study suggests that the messages about physical attractiveness that youths derive from the media are similar, regardless of their ethnic background (Gillen and Lefkowitz 2009). Further, boys (although understudied) do not appear to be immune to the effects of the media. In one study, preadolescent boys' concerns about their muscularity were linked to their exposure to video gaming magazines (Harrison and Bond 2007).

Body dissatisfaction among adolescents could be expected to be even higher than it is if all adolescents were equally vulnerable to the media messages they receive about what constitutes an attractive physique in most western cultures. However, some research suggests that adolescents who are more concerned about their appearance or value their appearance relatively more than their peers may be especially vulnerable to media influences (Durkin et al. 2007). Research addressing both boys and girls suggests that adolescents' media exposure triggers perceptions of their own bodies as discrepant from the ideal, which may increase susceptibility to disordered eating (Harrison 2001; Harrison and Hefner 2006). Adolescents' internalization of media messages begins prior to adolescence and may be encouraged by other socialization agents, particularly peers. For example, some research suggests that even young girls are susceptible to media influences on body dissatisfaction, but that media influences may not be direct, and are instead mediated by peer appearance conversations (Clark and Tiggemann 2006; Dohnt and Tiggemann 2006). In other words, peers may play an integral role in deciphering media messages and valuing them in terms of their importance and relevance (Krayer et al. 2008). Consistent with research

suggesting the potential interactive and cumulative effects of the media and other socializing agents, Levesque (2007) has cautioned that simple interpretations of media influences may be incomplete and that future research is needed to understand how the media interacts with other sociocultural and personality influences in shaping adolescent development.

Research has yet to clearly determine how adverse effects of the media may be avoided or ameliorated to support positive body image development among adolescents. Schooler et al. (2006) suggest the potentially important role of parents in restricting access to some media. Further, parents who use media (e.g., television coviewing) with their adolescents may be able to improve adolescents' healthy attitudes and behaviors (Schooler et al. 2006). Research assessing the efficacy of educational interventions focusing on media literacy among children and adolescents will further contribute to our understanding of the development of healthy body images among adolescents (Clay et al. 2006).

Conclusions and Future Directions

Research consistently suggests that adolescents are at risk for body dissatisfaction and that this dissatisfaction has the potential to negatively impact their social relationships, health, and well-being. As this essay indicates, body image is an important construct for researchers (as well as health care providers and laity) to consider even if they are not necessarily concerned with the clinical ramifications of body dissatisfaction. It is critically important that future research helps to clarify factors that could help *improve* adolescent girls' and boys' body image so that they can grow up to become happy and well-adjusted men and women.

The current trend in body image research is toward a contextual understanding of body image among both girls and *boys*. Specifically, longitudinal research that follows children and adolescents into adulthood is needed to discern the long-term correlates and consequences of body dissatisfaction. Further, although a great deal of progress has been made toward understanding how cultural and ethnic background contributes to the development of body image (e.g., Gillen and Lefkowitz 2009), additional work remains. Finally, experimental designs, interventions, and creative methodologies that move beyond the survey-based designs that have been so popular in this area of research should enhance our understanding of the development of body image and improve our ability to positively impact adolescents' body image.

Cross-References

► Body Image Assessments
► Cosmetic Surgery

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Body Image Assessments

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Overview

This essay focuses on the assessment of body image in adolescents. Assessment instruments that measure the attitudinal component of body image are discussed first followed by behavioral and perceptual measures. Software programs, measures of muscularity dissatisfaction, and clinical interviews are also reviewed. A selection of measures and their general psychometric properties are described. Limitations of the instruments are also discussed. Sample findings are discussed as appropriate. General trends in the assessment of body image in adolescents are discussed. Some general issues related to the selection of an assessment measure are outlined.

Body Image Assessment

Body image refers to one's subjective attitude toward one's own physical appearance. It can include both one's own mental images or perceptions of his or her body as well as the feelings one has toward his or her body (Slade 1988). Research has shown that body dissatisfaction is a risk factor for eating disorders (Smolak 2009), and it is also one of the key criteria in the diagnosis of both anorexia nervosa and bulimia nervosa (APA 2000). In fact, Polivy and Herman (2002) have identified body dissatisfaction as an "essential precursor" (p. 192) to the development of an eating disorder. Eaton et al. (2005) also identified poor body image as a risk factor for adolescent suicide. Males and females tend to experience body dissatisfaction in different ways. Females tend to become dissatisfied with their weight and shape while males tend to become dissatisfied with their overall muscularity (McCreary and Sasse 2000). Research has also shown that adolescence is a key period when there is a risk for developing body dissatisfaction. Prevention programs have been developed and targeted specifically at adolescent females. One goal of some these programs is to increase body satisfaction, thereby reducing the risk of developing an eating disorder.

This essay will focus on the assessment of body image in adolescents. Assessment is important for

a number of different purposes. In research, assessment can be used in epidemiological studies to help assess the degree of body dissatisfaction in a population. Sound assessment instruments also allow for the evaluation of the efficacy of prevention programs. Assessment is also useful in clinical contexts to aid in planning and evaluating treatment.

Adolescents are between childhood and adulthood. The temptation in the past has often been to ignore this distinct developmental stage and to apply measures designed for children or adults without knowing whether their psychometric properties apply to adolescents. In recent years, many researchers have begun to test existing measures in adolescents to evaluate their psychometric properties or to develop new measures geared specifically to individuals in this stage of development. There are a number of types of instruments used to assess body image in adolescents. The following sections describe subjective and attitudinal self-report measures, figure rating scales, software programs, measures of muscularity dissatisfaction, and clinical interviews.

Subjective and Attitudinal Self-Report Measures

Because of their nature as self-report scales, subjective and attitudinal measures of body image are among the simplest to use. They can be mass administered or administered to a single individual. The scoring also tends to be straightforward; items are summed or a mean is taken. For these reasons, these scales tend to be commonly administered measures of body image satisfaction.

Subjective and attitudinal measures tend to focus on one's satisfaction with body weight, size, and/or shape. These scales vary in the specific domain of body image that they assess. Some measures provide an overall rating of dissatisfaction with size, weight, or shape. Others assess affective reactions toward the body (e.g., Body Shape Questionnaire, Cooper et al. 1987). Still other questionnaires try to tap into specific aspects of body dissatisfaction, such as concern about overweight or body shame (e.g., Objectified Body Consciousness–Youth, McKinley and Hyde 1996). Choice of which measure to use depends on the purpose for which it is being used.

Many subjective and attitudinal measures were developed and validated in other populations (i.e., children or adults) but have been examined and found to be sound for use in adolescent populations. For example, an adolescent version of the Shape and Weight-Based Self-Esteem Inventory (Geller et al. 1997) was examined in a non-clinical sample ranging in age from 13 to 18 years (Geller et al. 2000). The wording was revised to make it more understandable for this age group. The measure had good test-retest reliability over 1 week and good predictive and discriminant validity.

An interesting and important issue to consider when taking an extant measure and using it in the group other than the one for which it was designed is whether the factor structure remains constant in the new group. The original Body Esteem Scale (BES; Franzoi and Shields 1984) had a three-factor solution in the adult sample in which it was devised. Cecil and Stanley (1997) reexamined the scale in adolescents in grades 5 through 12. They found that, while the factor structure in male adolescents matched the adult factor structure, the same was not true in females. In female adolescents, there was an additional factor related to sexuality. Cecil and Stanley (1997) argue that this additional factor makes sense in this population given their changing, developing bodies, and the concern that they have about the appearance of their primary and secondary sex characteristics. In a similar study, Lynch and Eppers-Reynolds (2005) examined the factor structure of the Children's Eating Attitudes Test (Maloney et al. 1988) in adolescent girls. They found that there was variation in the model fit based on age. In other words, body image concerns were not universal across adolescence. They found the most dramatic increase in body image concerns between grades 5 and 8.

Another issue, brought forward by Banasiak et al. (2001), is the level of comprehension that adolescents have in the measures they are asked to complete. Banasiak et al. (2001) were evaluating a number of body image measures in adolescent samples in order to validate their use in these groups. They found that the test administrators had to respond to quite a number of definitional questions during administration of the questionnaires. When they added a glossary that defined the key terms, they found that administration went much more smoothly. This study raises the question of whether adolescents truly comprehend the measures they complete in research and clinical

settings. Just because they do not ask for clarification does not mean that they fully understood the questionnaire. The addition of a glossary to the standard administration of body image instruments in adolescents might be a reasonable way to ensure that the assessments are completed as intended. Assuring that the measures have an appropriate reading level is also important.

One emerging trend in the use of subjective and attitudinal measures of body image is that many researchers are beginning to translate these measures into other languages and evaluate their use in other populations. For example, the Body Attitude Test (Probst et al. 1995) has a Japanese version (Kashima et al. 2003) that was evaluated in a sample of 46 adolescent females with an eating disorder diagnosis. The reliability in this sample was excellent. The Body Dissatisfaction subscale of the Eating Disorder Inventory for children (Garner 1991) has been translated into Swedish (Thurfjell et al. 2003), and the Body Esteem Scale (Franzoi and Shields 1984) has been translated into Italian (Confalonieri et al. 2008). Translation of measures into other languages allows researchers to examine the same phenomenon in other cultures and to examine whether there are differences between groups. For example, researchers are often interested in whether the arrival of Western media in non-Western countries changes attitudes. Baranowski et al. (2003) compared Scottish and Yugoslavian adolescents to see whether they differed in their body image. They found that there was, overall, less dissatisfaction in the Yugoslavian adolescents. They also found that the Scottish females were the most dissatisfied with their bodies overall. The researchers' aim is to examine these groups longitudinally and study differences over time as Yugoslavia becomes more Westernized. Such studies are improved by the use of questionnaires that have been validated in the specific population of interest.

Figure Rating Scales

Figure rating scales are considered by some to fall into the category of subjective and attitudinal measures. An argument can also be made, however, for including them in the perceptual measures category because they present stimuli and ask individuals to rate how similar they are to these stimuli. Figure rating scales consist of a row of line drawings representing bodies increasing in size. Individuals are most often asked to choose the figure that they believe represents their current body size and their ideal body size. The difference between these two figures, often referred to as the current-ideal discrepancy, is considered a measure of dissatisfaction.

One of the earliest figure rating scales was developed by Stunkard et al. (1983) and consisted of a row of nine figures. This scale was originally developed for use in adults but has since been tested in adolescents and found to possess adequate reliability in that age group (Banasiak et al. 2001; Tiggeman and Pennington 1990). The difficulty with using an adult figure rating scale with adolescents is that adolescents' bodies do not look exactly like those of adults. Sherman et al. (1995) therefore created two new series of figures designed to more closely represent the body shapes common in preadolescents and adolescents. This is a particular strength of this scale as it allows individuals to rate figures that most closely approximate their own stage of development. This also makes these scales particularly useful for the longitudinal examination of body image. The Sherman et al. (1995) figures were evaluated in an adolescent sample and were found to have sound psychometric properties. One limitation of their scales, however, is that they were designed solely for females.

One of the primary limitations of figure rating scales is that they do not differentiate fat from muscle. These scales tend to vary only along the dimension of adiposity, rendering it difficult to know if a particular body has been chosen due to its overall size or due to its degree of adiposity. The Somatomorphic Matrix (Gruber et al. 1999) has been designed to take both of these dimensions, muscularity and adiposity, into account when assessing body size. Another interesting approach has been taken to creating realistic stimuli. Aleong et al. (2007) created a software tool that allows photographs of bodies to be digitally manipulated. Their program is discussed below; however, they have used their program to create an online database containing a catalogue of images of both male and female bodies that have been morphed to different shapes and sizes. They presented their morphed figures to a sample of adolescent males and females and asked participants to rate how odd they found the figures. One interesting finding that emerged from this study was that females rated overweight figures as significantly odder than smaller body sizes. Because of their increased ecological validity, these figures could be

useful for creating new figure rating scales that might appeal to today's digitally savvy adolescents.

Behavioral and Perceptual Measures

A valid form of behavioral body image assessment has not yet been identified. In adults, researchers have tried to create an escape button task wherein participants must press a button to escape from exposure to body-related stimuli intended to provoke anxiety; images of increasing size (Thompson et al. 1994). Unfortunately, the demand characteristics of the research were high and participants did not use the escape button. No such task has been developed for or evaluated in adolescents.

It is important to note the distinction between behaviors and attitudes. It is easy to assume that because someone is on a diet, she must be dissatisfied with her weight. While this may be true, assessment of dieting behavior cannot be used as a proxy for assessment of body image. Lau and Alasker (2000) tested adolescents in grades 4–9 and found that behavioral items related to dieting belonged to a different factor than did items related to satisfaction with body image. Such findings support the notion of body image as an independent construct, separate from behaviors such as dieting.

There are questionnaires that purport to be behavioral measures of body image, such as the Body Image Avoidance Questionnaire (BIAQ; Rosen et al. 1991) and the Body Uneasiness Test (BUT; Cuzzolaro et al. 2006). The BIAQ (Rosen et al. 1991) assesses avoidance of mirrors and social situations due to dissatisfaction with appearance. The BUT (Cuzzolaro et al. 2006) has similar items assessing mirror avoidance and avoiding being seen by others. However, because these measures are self-report, they cannot, by nature, be considered behavioral measures. They measure self-reported tendencies to engage in behaviors indicative of body dissatisfaction. As noted above, a recent trend has been the translation of measures into other languages to assess different populations. The BIAQ (Rosen et al. 1991) has taken part in this trend. It has been translated into French and tested specifically in an adolescent sample (Maïano et al. 2009). Its psychometric properties in this sample were good.

The use of perceptual measures has many limitations (see Gardner 2001 for a summary), particularly in young populations and is, therefore, seldom used. In particular, the psychometric properties of these methods are uncertain (Gardner 2001). There are nevertheless a number of methods that bear mentioning. Some computer software discussed below makes use of whole-body distortions. One whole-body technique is known as the staircase method (Cornsweet 1962; Gardner and Boice 2004) in which a distorted photograph is presented. The photograph is then made wider or thinner at a constant rate and the participant must stop the change when the photograph resembles their perception of themselves.

The following methods are used to evaluate perceptual distortion of specific body sites. The earliest form of site-specific measurement was the movable caliper technique (Slade and Russell 1973). Participants must adjust the distance between two lights mounted on a horizontal bar to reflect the perceived size of the body part. Other techniques involve making marks on paper attached to the wall (Askevold 1975) and adjusting the width of a horizontal light band projected onto the wall in a darkened room (Ruff and Barios 1986).

Software

One of the most recent innovations in the assessment of body image is the use of computer software. Some programs have not published psychometric evaluation and should, therefore, be used with caution. They do, however, provide an exciting new way to evaluate the perceptual aspect of body image. Many of these programs work by allowing participants to digitally manipulate images of themselves to match their self-perceptions (e.g., Benson et al. 1999; Gardner and Boice 2004; Shibata 2002). Tovée et al. (2003) evaluated the test-retest reliability of their program on a sample of females with anorexia nervosa, with bulimia nervosa, and controls. The age of the sample was not specified, but the test-retest reliability was found to be adequate.

Aleong et al. (2007) argue that the extant software programs are flawed in that each body part must be morphed separately. They argue that certain body parts, such as hips and thighs, often covary in size and, as such, should be manipulated together. Their program allows for the co-morphing of body parts that covary in size in real bodies.

Muscularity Measures

There are several scales designed to assess muscularity satisfaction. The Drive for Muscularity Scale (DMS; McCreary and Sasse 2000) was originally validated on 197 males and females between the ages of 16 and

24 years. It should be noted that the original validation sample consisted exclusively of high school students despite the wide age range. The authors noted the wide range in their original paper but stated that they decided to include the older individuals in their sample because they were subject to the same pressures as the younger high school students (see McCreary and Sasse 2000). The scale's psychometric properties were later reexamined in a sample of 296 males between the ages of 13 and 18 years (Cafri et al. 2006). In all cases, the reliability estimates were satisfactory. In its entirety, the DMS (McCreary and Sasse 2000) cannot be considered a pure measure of body image because it assesses specific behaviors engaged in to build more muscle. For example, the scale asks about weight lifting and protein shake consumption. The DMS (McCreary and Sasse 2000) does, however, contain a seven-item subscale that assesses one's overall satisfaction with muscular appearance. This subscale can be considered a body image assessment instrument because it taps into the attitudinal component of body image.

It is interesting to note that McCreary and Sasse (2000) found that the DMS shows good divergent validity with the Body Dissatisfaction subscale of the Eating Disorder Inventory (Garner et al. 1983). In other words, these two measures are uncorrelated. Therefore, the argument that muscle dissatisfaction is simply a different expression of a desire for a thin body or that it is the opposite of the same phenomenon seems untenable (McCreary and Sasse 2000). The research seems to support the construct of muscularity satisfaction as a distinct aspect of body image, separate from size and shape satisfaction. The Muscle Appearance Satisfaction Scale (Mayville et al. 2002) has also been validated for use in adolescent populations and shows satisfactory reliability in this age group.

Clinical Interviews

There are many clinical interviews designed to assess for the presence of an eating disorder. These are not specifically designed to be measures of body image but because body dissatisfaction is a key criterion of the disorders, these interviews include items designed to assess the presence of body dissatisfaction. The eating disorders module of the Structured Clinical Interview for DSM-IV (SCID; First et al. 1997) is a semi-structured interview that provides initial questions and then the interviewer must probe further to determine the extent of the dissatisfaction and whether the individual meets the threshold for the criterion. The difficulty with this measure is that the interviewer must be quite familiar with the nature of eating disorders to be able to accurately probe for the intensity of the body image disturbance. The SCID can be difficult for novice interviewers to administer well.

The Interview for the Diagnosis of Eating Disorders–IV (IDED-IV; Kutlesic et al. 1998) has several items designed to assess fear of weight gain. For example, interviewees are asked what emotional reaction they would have to a weight gain of 2 lbs, 5 lbs, and 10 lbs. Disturbance of body image is also assessed. Interviewees are asked, for example, to rate how important shape and size are to their self-evaluation. This interview also contains other questions designed to get at the nature of the body image distress. One of the limitations of the IDED-IV is that it was primarily evaluated on adults. The validation sample included adolescents, but the mean age was over 30 years.

The Eating Disorder Examination (EDE; Fairburn and Cooper 1993) is a widely used clinical interview for the diagnosis of eating disorders. It contains a number of sections devoted to evaluating body image including dissatisfaction with weight and shape, desire to lose weight, preoccupation with weight and shape, fear of weight gain, sensitivity to weight gain, feeling fat, discomfort seeing body or exposing body, and the importance of shape and weight in one's self-evaluation. These items are summed into two relevant subscales: shape and weight concern (Fairburn and Cooper 1993). The EDE has been examined in a sample of children and adolescents aged 7 to 14 years. Its reliability was adequate in this age group, although its use with older adolescents has yet to be clarified. Limitations of this interview include that it requires training to be able to properly administer and its administration can be lengthy.

General Issues

Several issues must be taken into consideration when selecting an assessment measure for use in adolescents (Yanover and Thompson 2009). Researchers should take into account the psychometric properties of the scale in question. Efforts should be made to select scales with reliability coefficients (e.g., test-retest, split-half, internal consistency) of at least .70, which is considered to be minimally acceptable. Scales should also have

adequate convergent validity with other measures of body image. The standardization sample used in the development of the scale should also be considered. The age, sex, ethnicity, and language spoken are all elements to be accounted for. If a researcher wants to use a scale on a sample that differs from the standardization sample, they must be aware that the pre-established norms of the scale may not apply.

Conclusion

The assessment of body image disturbance has attracted a great deal of research attention (Stewart and Williamson 2003; Thompson et al. 1999). It is encouraging that researchers are engaging in scale development with younger populations with greater frequency. There is, however, still much work to be done. There has been less attention paid to the assessment of body image disturbance in adolescents. Much of the work that has been done has been the adaptation of adult measures for use with adolescents. A key goal in this field is to encourage more work in the development of scales designed specifically for use in adolescents. Qualitative methods and focus groups can be used in the creation of quantitative, questionnaire measures (Yanover and Thompson 2009).

Cross-References

► Body Image

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Boot Camps

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Overview

Boot camps are short-term incarceration programs that are modeled after military basic training facilities.

Boot camps typically emphasize structure, physical training, drill, ceremony, and strict adherence to rules. Some programs also offer rehabilitation services, educational, or vocational programming, but there is considerable variation in both the extent and quality of these services across facilities. Camp participants are treated similarly to new military recruits and assigned to squads or platoons. Residents are generally housed in dormitories that resemble military barracks. In most camps, residents are awoken early in the morning and subsequently subjected to a rigorous daily schedule of activities that are closely monitored by staff. Staff members typically behave like drill instructors and are often addressed by military titles. Punishment for institutional misconduct is swift, certain, and usually involves some form of physical exercise. Programs usually last between 90 and 180 days, and participants who successfully complete the program are typically rewarded during a graduation ceremony that often includes their parents and other family members.

Boot camps are operated by either state correctional departments or private providers. Facilities are designed to house adult offenders, juvenile delinquents, or other troubled youth. Boot camps have the explicit goal of reducing participants' problem behaviors. Correctional boot camps also have the goals of reducing institution populations and correctional costs. This essay will focus on facilities for adolescents, including young adult offenders (less than 25 years old), juvenile delinquents, or other troubled youth.

History

The origins of boot camps can be traced as far back as the 1800s. Many of the early reform schools and juvenile correctional facilities adhered to a quasi-military regime, attempting to instill discipline and personal control in their residents. However, boot camps formally emerged as a response to problem behavior and correctional facility overcrowding in the early 1980s. The development of boot camps was part of a larger movement in the United States to establish or expand existing intermediate sanctions, defined as punishments that fall somewhere in between probation and imprisonment (commitment in the juvenile justice system). The development of intermediate sanctions was driven by the need to address overcrowding in adult and juvenile correctional facilities and a desire for punishments that could be tailored more precisely to the seriousness of the offenses that offenders were committing.

In response to increases in crime rates, particularly rates of violent crime that occurred between the late 1960s and early 1990s, the United States began to "get tough" on offenders by incarcerating more offenders and/or confining them for longer periods of time. During the period between the mid 1970s and 2000, the rate of incarceration in the United States increased by four times what it had been in the previous 50-year period (Blumstein and Beck 1999). The unprecedented growth in the United States prison population was mirrored in other areas of corrections (e.g., probation), across most states, and in the juvenile justice system.

The increased use of incarceration contributed to overcrowding in many state correctional facilities and county jails. At the same time, many academics and practitioners decried the expansive use of incarceration. They argued for punishments that were not viewed as a mere "slap on the wrist" like probation, but were not as harsh as imprisonment either. In response to these concerns and the overcrowding in many correctional facilities, most states began to experiment with the use of intermediate sanctions. However, the public sentiment toward offenders was still steeped in the get-tough rhetoric that contributed to the increased use of incarceration in the first place, and so the intermediate sanctions that most states developed were primarily oriented toward punishment and control. Intensive supervision probation, drug courts, day reporting, house arrest, and boot camps were among the most popular of these sanctions. Boot camps were extremely well-liked because they seemingly addressed the public's desire to punish by keeping offenders behind bars and subjecting them to stringent, physical exercise, drill, and regimen. At the same time, boot camps could address correctional crowding by typically limiting periods of incarceration to less than 6 months.

The first boot camps were opened in Oklahoma and Georgia in 1983 and Louisiana opened the first camp for juveniles in 1985. During the following decade, the use of boot camps became widespread, and by 1995, most states operated at least one camp. Many counties also began operating boot camps in local jails and/or juvenile detention facilities (Parent 2003). Additionally, the number of privately run camps increased. However, the private facilities varied by the types of individuals they admitted. While some privately run facilities

contracted with states and/or counties and only admitted delinquent youth, a number of privately run facilities marketed themselves to frustrated parents and school administrators. Administrators of these facilities encouraged parents to place their troubled, although law abiding, youth with them in hopes that the boot camp regime would change their child's behavior, making them more obedient and respectful toward authority.

Controversies

The increased use of boot camps for adolescents prompted a number of criticisms from both academics and practitioners. First, critics have argued that, counter to their intent, many boot camps have contributed to increases in institutional populations through a process called net widening. Once the sentencing option of a boot camp became available in some jurisdictions, judges often sentenced juvenile delinquents to boot camp in lieu of probation. Additionally, many camps were designed to house first-time, low-risk delinquents who normally would not have been sent to prison. These processes widened the net of control over juvenile delinquents by subjecting more of these youth to institutional confinement even if only for the shortened duration of the boot camp program.

Second, the goals of boot camps may conflict with one another. Within individual, change generally requires time. However, a goal of boot camps is to reduce the institutional population by reducing the length of stay for some offenders. As such, the typical stay in a boot camp is between 90 and 180 days. Many academics and practitioners have argued that this is not enough time to achieve the other goal of boot camps, reducing participants' problem behaviors.

Third, critics charged that the design of boot camps was not based on a sound theoretical model of delinquent behavior. Boot camps were modeled after military basic training, which is designed to teach new military recruits how to carry out the job duties of a soldier and function within a unit contained in the structural parameters of the United States military. Thus, critics have argued that boot camps do not target the causes of delinquency. Boot camps have also been criticized for being less flexible than traditional facilities for adolescents. In boot camps, residents are grouped into units or platoons. Activities are performed with the group and punishments are often inflicted on the entire group. Although this structural arrangement may teach certain values such as teamwork and cooperation, it allows for little opportunity for individualized treatment. Therefore, critics suggest that the boot camp regime is too inflexible to address the adolescents' individual needs.

Related to the idea that boot camps were not based on a theory (or theories) of delinquency, are criticisms surrounding the conduciveness of boot camp environments for rehabilitation or behavioral change. For example, Cullen et al. (2005) argued that the typical boot camp environment, which often includes exhausting physical demands, planned and repeated humiliation, and authoritarian staff, is not conducive to reform and can actually serve to model and reinforce antisocial behaviors. Boot camps may also reject values that promote conformity, like empathy or compassion, and boot camps seemingly rely more heavily on negative reinforcement (e.g., running, push-ups, sit-ups) as opposed to positive reinforcement. Cullen et al. (2005) argue that rehabilitative treatment requires positive and supportive environments, not the confrontational characteristics of boot camps.

Some commentators have argued that the environments of boot camp can be psychologically and even physically harmful to adolescents. For example, Lutze and Brody (1999) observed that many boot camps adhere to the philosophy of "tearing them down to build them up." Tearing them down typically involves degradation, humiliation, and other forms of psychological intimidation that may have a dramatic impact on the mind and emotions of adolescents. Cullen et al. (2005) argued that the structure of boot camps is one where adult bullies are given unfettered power over vulnerable charges, potentially encouraging physical abuse and neglect. Critics have argued that these conditions foster a threatening environment for youth and induce dysfunctional stress. Juveniles exposed to this stressful environment may experience depression, anxiety, and other adjustment problems.

Finally, even if boot camps can provide a safe environment capable of inducing short-term positive change, critics suggest the changes will not be sustained over the long term. For example, many commentators have observed that boot camps are successful for the military because the boot camp is followed and reinforced by the military career. Adolescents who successfully graduate from boot camp are not embraced

into an organization that can reinforce the skills they have learned. Instead they are released back into society, a society that typically offers little structure, support, or direction.

Theoretical Perspectives on the Effect of Boot Camps on Problem Behavior

The traditional boot camp model was not based on a sound theory of delinquent behavior. However, both academics and practitioners have considered the potential effects of boot camps on problem behavior within several theories of delinquency. For example, scholars have suggested that boot camps are loosely based on deterrence theory. Underlying the design and implementation of many boot camps was the idea that if participants, who were often first-time offenders, were subjected to a rigorous daily schedule of exercise and drill they would be "scared" straight or "shocked" into behaving in a respectful and obedient manner, making them more likely to comply with rules or laws in the future. In other words, the "shock" delivered by the boot camp regime would deter them from exhibiting problem behavior upon release. In fact, correctional boot camps have also been referred to as shock probation or shock incarceration programs.

Researchers have also suggested that boot camps could be framed with perspectives on social control. The strict rules and structure of boot camps could provide external social control that may coerce offenders into altering their behavior. Boot camps could also teach skills to offenders that enable them to control their behavior. Finally, boot camps could "shock" offenders, motivating a turning point in their life. The boot camp experience could turn youth away from drugs, crime and other antisocial behavior, and point them toward more prosocial behaviors like employment and/or family involvement.

The potential effect of boot camps has also been considered within social learning theories. While in the camps, participant may learn skills that aid them in living a prosocial life in the community upon release. Participants are also expected to learn and practice prosocial behaviors (e.g., obedience, respect) and demonstrate impulse control. Boot camp staff members generally reinforce positive behaviors and punish negative behaviors. Staff may also act as role models for participants (see MacKenzie 2006 for an elaboration of these theoretical perspectives).

Effects on Recidivism

Studies of the impact of boot camps on adolescent behavior have primarily involved the examination of boot camps designed to house juvenile delinquents or youthful offenders. Several of the privately operated camps that house privately placed youth have reported results from internal evaluations or testimonials. However, very few of these camps have been the subject of objective, independent evaluations that were subsequently published in a report or academic journal. The studies of boot camps for juvenile delinquents and youthful offenders have either involved examination of the effects of boot camps for delinquents committed to state custody or delinquents still under county jurisdiction. The distinction between adolescents in county/state and private custody is important because adolescents committed to state custody would seemingly be more deviant because they generally have committed more serious offenses or have lengthier delinquent or criminal histories. Regardless of the population (state or county) examined, most of the existing studies have examined the effects of boot camps on lower-risk delinquents because the boot camps were not designed to house youthful offenders who commit serious offenses or have extensive delinquent histories.

The evaluations of boot camps have typically involved comparing adolescents placed in boot camps to a comparable group of adolescents that were given an alternative sanction such as probation or placement in another secure facility. Most studies did not involve the use of random assignment to select boot camp and control group participants. Instead, the researchers who carried out the studies relied on the use of control variables to rule out potential confounding influences on the outcome(s) that may have resulted from differences between the adolescents in the boot camp group and the adolescents in the control group. Although most of these studies included a number of control variables, all the researchers conducting the studies have typically acknowledged that any differences in the outcomes between the boot camp and control group that were observed may have been attributed in part to unmeasured differences between the two groups.

The majority of the evaluations of boot camps for juvenile delinquents or youthful offenders have focused on the effects of boot camps on recidivism. Recidivism can be conceived of as an adolescent's

return to delinquent behavior after he or she has been adjudicated/convicted of an offense and punished. In studies of boot camps, researchers have generally focused on whether a juvenile was subsequently returned to the attention of the justice system within a restricted period of time after their release from the boot camp. Measures of recidivism have varied across studies (e.g., rearrest, reincarceration), as have the follow-up periods examined in the studies (e.g., 1 year after release, 2 years after release).

Findings have been relatively consistent across studies. Although a few studies have found that boot camps reduce adolescents' odds of recidivism, several studies have also revealed that adolescents sent to boot camps have a higher odds of recidivism. Most studies, however, have not revealed a statistically significant difference between the recidivism rates of the boot camp group versus the control group. These results have generally held regardless of how recidivism was measured, the follow-up period examined, and regardless of whether the sample consisted of delinquents or young adults. The results from a study conducted by Bottcher and Ezell (2005) are illustrative. Bottcher and Ezell (2005) examined the effect of California's LEAD (leadership, esteem, ability, and discipline) program on recidivism. Consistent with the design of most boot camps, the LEAD program was structured similar to military basic training. The camp offered little in the way of rehabilitative treatment and was accompanied by intensive parole supervision upon release. As a part of the study, over 600 nonviolent, nonserious juvenile court commitments were randomly assigned to either the LEAD program or a control group. The juveniles in the control group were placed in standard custody. Recidivism was measured by whether a juvenile was rearrested within 2–9 years. Findings revealed that there were no significant differences in the time to rearrest between the juveniles placed in the LEAD program and the juveniles placed in the control group. Similarly, there were no significant differences in the number of rearrests accumulated by the youth placed in the two groups.

The LEAD program is in many respects representative of other boot camps for juvenile delinquents, and the results of Bottcher and Ezell's (2005) evaluation reflect findings from other studies of similar camps. These findings have led some commentators to suggest that boot camps may not be successful in reducing recidivism because they do not include a rehabilitative treatment component and/or rehabilitation-oriented aftercare services. Indeed, some boot camp programs have been modified to incorporate rehabilitative services and/or aftercare treatment. Parent (2003) referred to these programs as second-generation boot camps. Very few of the second-generation camps have been evaluated.

Wells et al. (2006) evaluated the effect of Kentucky's Cadet Leadership Education Program (CLEP) for juvenile offenders. In addition to the military regime common to most boot camps, the CLEP program contained educational and vocational services, along with individual and group counseling. Further, the graduates of the program were subsequently placed in a 4-month treatment-oriented aftercare program. Wells et al. (2006) compared camp graduates to a control group comprised of juvenile offenders matched on gender, age, race, prior offenses, and release date. The juveniles in the control group were placed in either group homes or youth development centers. Both groups were followed for 1 year after their release from their respective facilities. Findings revealed that CLEP program graduates had significantly fewer reconvictions than the juveniles in the control group during the first 4 months after their release (the duration of the aftercare program). These differences between the two groups' reconviction rates were no longer statistically significant 1 year after release; however, Wells et al. (2006) did find that recommitments were significantly lower among CLEP program graduates than among members of the control group.

Effects on Perceptions, Attitudes, and Institutional Adjustment

Researchers have also examined the effect of boot camps on other outcomes besides recidivism, although to a lesser extent. These studies have typically involved the analysis of data obtained from surveys of adolescents placed in boot camps and key personnel (e.g., staff, parents). Some researchers have examined participants' perceptions at intake and compared them to their perceptions after completion of the boot camp. Other researchers have collected similar data from a control group of similar adolescents who received an alternative sanction (e.g., traditional facility) and compared the responses of boot camp participants to the responses of the control group.

Findings from the majority of the existing studies have revealed that juveniles report better institutional adjustment (e.g., self-esteem, anxiety, depression, attitudes) in boot camps compared to more traditional correctional facilities for juveniles. For example, MacKenzie et al. (2001) compared changes in the adjustment of youth housed in boot camps to changes in the adjustment of youth housed in more traditional facilities. The results of their analyses revealed both groups had reductions in their levels of anxiety and depression; however, the reductions observed among boot camp participants were significantly greater. MacKenzie et al. (2001) also reported that juveniles housed in boot camps reported decreases in dysfunctional impulsivity and antisocial attitudes; however, similar effects were not observed among the juveniles placed in more traditional facilities.

Researchers have also discovered that adolescents housed in boot camps perceive their environment more favorably than adolescents housed in traditional facilities. For instance, MacKenzie et al. (2001) also compared juveniles' perceptions of the institutional environment of boot camps to juveniles' perceptions of the environment of more traditional facilities. Compared to the juveniles housed in traditional facilities, juveniles housed in boot camps perceived their environment as more structured, active, controlled, fair, and caring. Juveniles housed in boot camps also perceived that their environment had more therapeutic programming and better prepared them for release. Further, juveniles housed in boot camps perceived their environment as less dangerous, with fewer general risks to their safety.

Findings from surveys of key personnel have also been supportive of boot camps. Boot camp staff have generally reported that boot camp environments are more supportive, structured, active, caring, and have more therapeutic programming than traditional facilities for juveniles. Staff also perceived that boot camp environments are safer for both participants and staff (see, e.g., MacKenzie et al. 2001). Studies have also revealed that key personnel report improvements in behavior among boot camp participants. For example, Trulson et al. (2001) surveyed parents and teachers regarding their perceptions of the Specialized Treatment and Rehabilitation (STAR) program, a nonresidential boot camp implemented in a school setting in Texas. Most parents agreed that their child exhibited improvements in their attitude and behavior as a result of their participation in the STAR program. Similarly, most teachers reported that STAR participants performed better in school. Further, both parents and teachers typically agreed that the STAR program had achieved its intended goals (e.g., improve school performance, reduce disruptive behavior).

Effects on Institutional Crowding

Boot camps were designed to reduce institution populations by shortening the length of time that camp participants would otherwise serve. By reducing the population of institutions, corrections officials can reduce costs and preserve bed space for more serious offenders. The effectiveness of boot camps in reducing institution populations, however, is contingent on a coordinated systemic effort. Boot camps can only be effective in reducing confinement population if the offenders who are placed in the camp would have otherwise been placed in correctional institutions. If individuals who would have otherwise been placed on probation are sent to boot camps, the use of the camps actually increases the institutionalized population through net widening.

According to Parent (1994), boot camps can reduce institution populations if they (1) select offenders who would have a high probability of being institutionalized if the boot camp did not exist, (2) significantly reduce the length of confinement for the individuals placed in the camp, and (3) maintain high graduation rates. Although most commentators agree that boot camps can achieve the latter two objectives, many academics and practitioners have argued that boot camps do not select individuals who have a high probability of imprisonment. At least three reasons why boot camps cannot recruit individuals with a high rate of imprisonment have been offered. First, boot camps were designed to achieve other goals (e.g., deterrence) besides reducing facility populations. The other goals of boot camps often conflict with the goal of reducing the institution population. For example, many camps had the explicit goal of deterring first-time offenders from returning to the attention of the justice system. As such, many first-time offenders were sent to these camps in an effort to achieve this goal. Yet first-time offenders are rarely sent to correctional institutions, they are typically given probation. By placing first-time offenders in boot camps, the use of the camps

may have contributed to an increase in facility populations. Second, and related to the first reason, judges often control who is sent to boot camps. Jurisdictions differ with regard to who controls where offenders are sent. In some jurisdictions, judges control the decision, while other states permit corrections officials to make the decision or allow for some combination of the two. If judges are afforded the discretion to choose whether offenders are placed in boot camps, there may be a lower probability that the offenders who are sent to boot camps would have otherwise been sent to prison. Finally, concerns regarding facility security often restrict corrections officials from placing certain types of offenders in boot camps. Many boot camps are located within minimum or medium security correctional facilities. These facilities generally cannot house offenders who do not meet the minimum security criteria according to their own internal classification system. Since security classification instruments generally contain dimensions reflecting offenders' committing offense type and prior criminal history, security placement is also related to offenders' length of imprisonment. If boot camps cannot accept higher-risk offenders (i.e., offenders who would typically be sent to institutions for longer periods of time) then they will be less likely to have an effect on facility populations.

There have been relatively few studies on the effects of boot camps on juvenile institutional populations. In conducting these studies, researchers generally compare the number of bed spaces required to operate the boot camp with the number that would be required to house those offenders eligible for the boot camp if the camp did not exist. The studies also take into account the probability of imprisonment, length of stay, and odds of revocation or recommitment upon release. Findings from these studies have generally revealed that boot camps do reduce the institutionalized population of juvenile offenders. In one of the more detailed studies, Parent et al. (2001) evaluated the impact of South Dakota's Patrick Henry Brady Boot Camp for juvenile offenders on South Dakota's Department of Juvenile Corrections' institutional population. They found that the operation of the camp reduced the number of bed spaces required by 148. Due to existing overcrowding in South Dakota's facilities, this reduction in the number of required bed spaces translated into an annual saving of approximately $3.75 million. Once the overcrowding was reduced, however, the savings was reduced to approximately $80,000 a year. Parent et al. (2001) reported that South Dakota was able to funnel these savings back into intervention and treatment programs.

Most studies have revealed that boot camps for juvenile delinquents can reduce the number of bed spaces required, although the observed reductions have not been quite as substantial as those Parent et al. (2001) found in their study of the Patrick Henry Brady Boot Camp. A potential explanation for the encouraging findings could be the control juvenile justice officials have over the selection process. In the majority of the studies, juvenile justice officials have selected boot camp participants from committed youth, thereby ensuring that all the youth placed in the boot camps were diverted from the traditional confinement population. Relatedly, juvenile justice officials have generally designed programs that could accommodate most committed youth. For example, 90% of the population of committed youth in South Dakota met the eligibility requirements for the Patrick Hendry Brady Boot camp (Parent et al. 2001). Findings regarding the effects of boot camps on populations of institutions for adults have not been as encouraging, and this could be due in large part to the reduced ability to individualize dispositions in the criminal justice system versus the juvenile justice system. An additional problem for both adult and juvenile facilities is that most boot camps have not been designed to accommodate a large number of participants. Therefore, even when the camps are operated successfully, their impact on the overall institutionalized population has not been very large.

Summary and Conclusion

Boot camps for adolescents are short-term incarceration programs that incorporate aspects of military basic training, and in some cases educational and/or rehabilitative services. The intent of boot camps is to reduce adolescents' problem behaviors and decrease institutional populations by shortening the length of incarceration for some offenders. Although the evidence suggests that boot camps provide a more positive environment for adolescents and help to facilitate their institutional adjustment, more studies are needed to substantiate the findings from the few existing studies of these issues. The extant research has provided

virtually no evidence that suggests boot camps, by themselves, reduce adolescent offenders' odds of recidivism. On the other hand, boot camps do not make recidivism more likely either. There is also some evidence to suggest that boot camps, when combined with effective correctional treatment and/or rehabilitative aftercare services, can reduce adolescent offenders' odds of recidivism. However, additional examinations of the impact of these second-generation boot camps are needed in order to confirm (or disconfirm) the findings from the few existing studies. Finally, boot camps have also been shown to reduce facility populations; however, much more research is needed before this information can reliably be used to inform juvenile justice policy.

Although the use of boot camps increased during the 1980s and 1990s, the number of boot camps for adolescent has been declining in the 2000s. Sharp criticisms from both academics and practitioners regarding the effectiveness of boot camps have been paired with the empirical evidence regarding the failure of boot camps to reduce recidivism, contributing to the perception that boot camps do not work. Critics have also argued that boot camps have the potential for inducing psychological and physical harm. These criticisms have been supported in part by several highly publicized cases of abuse and neglect, some of which have even resulted in death. For instance, M.L.A. was a 14-year-old male who died in 2006 as a result of injuries sustained from a beating applied by several staff at a Florida boot camp. The "punishment" was inflicted after M.L.A. collapsed during regularly scheduled exercise. The state of Florida subsequently stopped using the boot camp program and instituted a more treatment-oriented program in the facility. In Texas, a pastor was charged with aggravated assault for tying a young girl to the back of a van with a rope and dragging her behind the vehicle because she could not keep up with a running exercise. The running exercise was a component of the daily routine in the privately run boot camp that the pastor operated. Although the charge was reduced, and a mistrial was ultimately declared, the case received considerable attention nationally, possibly contributing to the closing of additional boot camps. For example, Bottcher and Ezell (2005) reported that Arizona, Georgia, and Maryland have all closed boot camps for juvenile delinquents.

Many boot camps have been closed even though there is no evidence to suggest that the harms and incidents of abuse are unique to boot camps. Other facilities for troubled adolescents have also documented instances of abuse and even deaths. The facility closings have also come despite the promising findings regarding the effects of boot camps on institutional adjustment and facility populations. Facilities that have remained open, however, have for the most part ignored the evidence regarding the effects of boot camps on recidivism. Very few boot camps have incorporated a treatment component into their program and a national level study revealed that only a handful of boot camps for juvenile delinquents have specialized aftercare services (Bourque et al. 1996). Researchers have suggested that if the operation of boot camps is continued, facility administrators should incorporate a treatment component into the boot camp curriculum and allow for specialized aftercare. Based on the available scientific evidence, the combination of the boot camp model with rehabilitative treatment and aftercare may be able to provide a supportive, active environment that facilitates adolescents' institutional adjustment, assists in changing their problem behaviors, and also reduces facility populations.

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Borderline Personality Disorder

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Borderline Personality Disorder in Adolescents

Borderline personality disorder (BPD) is characterized by instability across multiple areas of psychological functioning, often reflected in unpredictable emotional fluctuations, conflicted relationships, impulsivity, behavioral acting-out, and a poor sense of self. Although BPD is largely thought of as an adult psychiatric disorder, research has estimated the rates of BPD to be higher among adolescents than in adult populations. The higher rates identified in adolescent groups may be due to the nature of the samples studied, the possibility that adolescents have been found to "mature out" of the disorder, or the fact that some of the key features of development during adolescence may mimic BPD symptoms. For some adolescents, this developmental time period is experienced as tumultuous, characterized by fluctuations in identity, emotional intensities, impulsive behaviors, and relationship difficulties – all core features of BPD.

Due to the potential similarity between some of the normative aspects of adolescent development and BPD symptoms, many remain skeptical about the ability to reliably differentiate typical adolescent erratic behavior from BPD. However, longitudinal studies do suggest that core personality patterns remain stable even within the fluidity of adolescent development, suggesting that adolescents who exhibit a pervasive pattern of disruption across the emotional, interpersonal, cognitive, and behavioral domains of BPD can be accurately identified. Regardless, there appears to be a growing consensus among mental health professionals that any adolescent presenting with many of the core features of BPD be referred to therapy in order to ward off further solidification of the symptoms into adulthood. Some research exists to support this recommendation, as adolescents with strong features of BPD who received treatment were significantly less likely to meet BPD diagnostic criteria as young adults (see Miller et al. 2008a).

While research on adolescent BPD remains limited, there is growing support within the adult BPD literature that the disorder results from an interaction between various biological vulnerabilities and a rejecting, invalidating environment. It is largely believed that an invalidating environment makes it difficult for children and adolescents to acquire the self-confidence and self-regulating skills needed to navigate the adult world. Therefore, the erratic behaviors, unpredictable emotionality, and unstable interpersonal relations develop out of attempts to adapt to the unpredictable and largely chaotic environment in which the person was raised. Viewing the development of BPD from this interactionist perspective also helps to explain why persons with BPD also experience a high degree of comorbidity with other disorders such as depression, post-traumatic stress disorder, substance abuse, and for many adolescents, conduct disorder.

Fortunately, the field has advanced to a place where reliable assessments of adolescent BPD, mostly self-report and interview-based, have been created and are in use. In addition, there are a growing number of psychosocial therapies available that have demonstrated short- and long-term success in reducing both the severity and number of BPD symptoms present in adolescents, so that many adolescents no longer exhibit the disorder. Despite the research supporting the existence of BPD in adolescents, there remains enough inconsistency and lack of information within the literature to keep the issue of BPD within adolescents as a controversial debate.

Defining Borderline Personality Disorder

Among the many definitions possible, personality can be defined as a unique grouping of behavioral, emotional, and cognitive traits or characteristics that collectively form a pattern of perceiving, relating to, and navigating the internal and external environment of an individual. In some individuals, personality traits can develop over time to form a maladaptive, inflexible, and chronic pattern of functioning, more formally referred to as a personality disorder.

According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Text Revision (DSM-IV-TR), a personality disorder is defined as, "An enduring pattern of inner experience and behavior deviating markedly from the expectations of the individual's culture" (American Psychiatric Association 2000, p. 685) that is manifested in two or more of the following areas: cognition, affect, interpersonal, and impulse control. This pattern is evident across a wide range of contexts and interpersonal situations, and leads to significant functional impairment or distress. Furthermore, this pattern is consistent and can be detected across the life span, beginning as early as adolescence (APA 2000). The DSM-IV-TR defines three distinct groupings of personality disorders (to be coded on Axis II), the second (Cluster B) of which contains four personality disorders characterized by personalities that are dramatic, emotional, and erratic in presentation: Antisocial, Histrionic, Narcissistic, and Borderline Personality Disorder.

The construct "borderline" was initially defined by Stern (1938) to describe a subset of adult patients whose clinical presentation did not fit into the existing classification system, then separating patients into neurotic and psychotic groups. Ekstein and Wallerstein (1954) further coined the term in children whose clinical presentation fluctuated between neurotic and psychotic. Advances in the development of the diagnosis began in the late 1960s with the work of many investigators, including Otto Kernberg and Roy Grinker (Gunderson and Links 2008). For an in-depth review of the historical context of the BPD diagnosis, please refer to the Gunderson text. The diagnosis was formalized with the publication of the DSM-III in 1980 (APA 1980), and adapted for inclusion in the ICD-10 of the World Health Organization (1992).

Borderline Personality Disorder (BPD) constitutes a pattern of functioning characterized by unstable emotions, chaotic interpersonal relationships, unstable self-perception, and significant problems with impulse control that are evident in multiple contexts (APA 2000). Overall instability is the hallmark of the disorder (Sharp and Romero 2007) and it is characterized by severe psychosocial impairment (Skodol et al. 2002). It is currently, the most commonly used diagnosis among all of the personality disorders (Loranger et al. 1997).

BPD is a severe mental health problem that causes significant human suffering (Bleiberg 2001) with considerable financial expense and above average use of mental health services, including emergency treatment (Zanarini et al. 2001). The disorder is predominant in females (70%) versus males (Widiger and Weissman 1991), and has been identified throughout the world. Estimation of the prevalence of BPD has been widely reported, with most estimates approximating 1–2% of the population (e.g., Torgersen et al. 2001). Furthermore, the APA (2000) indicates that 10% of psychiatric adult outpatients and 20% of adult inpatients are diagnosed with BPD. In terms of mortality, 10% of patients with BPD die from suicide, a rate that is 50 times that of the general population (APA 2001). Because of the prevalence estimates and established severity of the disorder, some mental health professionals cite the need for identification and intervention early in the life span for individuals demonstrating symptoms of BPD (Sharp and Romero 2007).

In children and adolescents, BPD prevalence rates are variable, and depend on the sample characteristics and design of the study. Nevertheless, the rates are often higher than in adult samples. For example, among adolescent inpatients, Levy et al. (1999) found that 43% of the sample met criteria for BPD. Eleven percent of the community sample in (Bernstein et al. 1993) longitudinal investigation met criteria for BPD (based on DSM-III-R), while Zanarini et al. (2003) reported a more conservative estimate of 3.3%. Nevertheless, all of these rates are still higher than the estimated prevalence rate in adults, thus suggesting the potential for some youth to "age out" of the diagnosis when they are adults, particularly with accompanying treatment (Miller et al. 2007). In contrast to adult findings, there is some evidence that BPD is equally representative among male and female adolescents (Bernstein et al. 1993; Chabrol et al. 2004); however, the majority of

findings regarding sex differences support the adult research (Miller et al. 2008a).

Symptoms and Diagnostic Criteria

In terms of symptom criteria, the DSM-IV-TR indicates that of the nine possible diagnostic criteria, five or more must be present in order to make the diagnosis. They include the following as quoted:

1. Frantic efforts to avoid real or imagined abandonment.
2. A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.
3. Identity disturbance: markedly and persistently unstable self-image or sense of self.
4. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). *Note*: Do not include suicidal or self-mutilating behavior covered in Criterion 5.
5. Recurrent suicidal behavior, gestures, threats, or self-mutilating behavior.
6. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
7. Chronic feelings of emptiness.
8. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).
9. Transient, stress-related paranoid ideation or severe dissociative symptoms (APA 2000, pg. 710).

These nine criteria can be further organized into four main symptom clusters that can aid proper diagnosis (Lieb et al. 2004): affective (intense anger, affective instability, and feelings of emptiness), behavioral (impulsiveness, non-suicidal self-injury, and suicidal gestures), interpersonal (fears of abandonment, unstable relationships), and cognitive (paranoid ideation, dissociation, and identity disturbance). Individuals who exhibit impairment simultaneously in all four areas can be successfully discriminated as having BPD as opposed to other personality disorders (Zanarini et al. 1990).

Diagnosing Adolescents

Historically, the diagnosis of BPD in adolescents has been controversial and widely debated. Research cites a long history of hesitation in diagnosing children and adolescents with BPD, in part due to the fact that many clinicians and mental health professionals believe that an individual's personality lacks cohesion and durability prior to 18, the recognized age of adulthood (Crick et al. 2005). Freeman et al. (2007) review some of the arguments against diagnosing personality disorders in children and adolescents, including the stigma and burden of carrying a psychiatric diagnosis, the rapidly changing bodies and personalities of youth, and the hopelessness attached to a personality disorder diagnosis, especially BPD. The authors then debunk these arguments, highlighting the importance of assessing and treating BPD (in addition to any mental health disorder) as early as possible, and the need for comprehensive and ongoing assessment and review of symptoms over the course of adolescence and adulthood. In fact, the absence of treatment for BPD in adolescents could lead to an exacerbation in symptomology and increase in the severity of the illness (Kernberg et al. 2000).

Another argument against diagnosing BPD in adolescents is centered around the "illegality" of making such a diagnosis in terms of DSM criteria, as a general assumption among mental health professionals is that a personality disorder diagnosis cannot be made until age 18. Nevertheless, the DSM-IV-TR states, "Personality disorder categories may be applied to children or adolescents in those relatively unusual instances in which the individual's particular maladaptive personality traits appear to be pervasive, persistent, and unlikely to be limited to a particular developmental stage or an episode of an Axis I disorder. It should be recognized that the traits of a Personality Disorder that appear in childhood will often not persist unchanged into adult life. To diagnose a personality disorder in an individual under 18 years of age, the features must have been present for at least 1 year" (APA 2000, p. 687). Therefore, the DSM does permit the diagnosis of BPD for adolescents, although as Miller et al. (2008a) state, the wording is somewhat vague and open for interpretation.

At this point in time, there is evidence supporting the construct of BPD for adolescents, as well as the reliable and valid diagnosis of BPD in adolescents (e.g., Chanen et al. 2004; Sharp and Romero 2007; Miller et al. 2008a). Yet, the difficulty remains in distinguishing the difference between typical

adolescent development and behavior from the symptoms of BPD and other personality disorders. Some researchers argue that the developmental processes of children and adolescents are fluid as opposed to the pervasive and enduring patterns of behavior observed with personality disorders (Bleiberg 1994). Furthermore, there is evidence that the BPD diagnosis is not stable throughout adolescence (Bernstein et al. 1993) and that there are shifts in the symptom profiles of adolescents meeting criteria for BPD when assessed at different periods (Meijer et al. 1998). Nonetheless, in a longitudinal study, McCrae et al. (2002) found results indicating both the fluidity of personality characteristics during adolescence, as well as the stability of core personality traits.

Crawford et al. (2001) state that the confusion over the stability of BPD symptoms in adolescents may lie in assessing BPD as a categorical diagnosis, in that a certain threshold of criteria must be reached in order for the diagnosis to be made. They propose instead that the stability of BPD symptoms in adolescents, as well as personality dysfunction, may be more effectively detected using a dimensional approach in which personality disorders, including BPD, are seen as an extreme and dysfunctional expressions of personality traits. Other studies (Livesley 1998) have also proposed the use of dimensional models. Miller et al. (2008a) infer that different subsets of adolescents presenting with BPD symptoms may in part account for the instability of the diagnosis in adolescents. In particular, there may be a group of adolescents for which the diagnosis develops and stabilizes as opposed to another group in which BPD symptoms may be more transient. Furthermore, they note that any adolescent presenting with BPD behavioral criteria, even at a specific point in time, should be referred for treatment to decrease the likelihood that the symptoms will further solidify in adulthood.

Comorbidity

In a majority of cases, individuals with BPD are diagnosed with comorbid psychiatric disorders. For example, Zimmerman and Mattia (1999) found that every participant in their study of adults with BPD, except one, had a comorbid Axis I disorder, and more than half the sample had three or more diagnoses on Axis I. Estimates of cormorbidity percentages vary across studies; nevertheless, individuals with BPD are commonly comorbidly diagnosed with mood disorders including major depressive disorder (most often) and bipolar disorders, post-traumatic stress disorder, other anxiety disorders including panic disorder, social phobia, and obsessive-compulsive disorder, and all types of eating disorders (Oldham et al. 1995; Zanarini et al. 1998a). With regard to mood disorders, there is evidence that co-occurring mood and personality disorders is a strong risk factor for suicidal behaviors (Blumenthal and Kupfer 1986). BPD is strongly linked to substance disorders, with one estimate indicating that 57% of individuals with BPD also have a substance use disorder diagnosis (Trull et al. 2000). Furthermore, BPD is also commonly cormorbid with other personality disorders (Gunderson and Links 2008), including most notably avoidant, dependent, and paranoid personality disorder (Zanarini et al. 1998b), and antisocial personality disorder (Becker et al. 2000).

Most of the estimates of cormorbidity have been conducted with adult samples, and there are few comorbidity studies with adolescents. Nevertheless, BPD in adolescents appears to be highly connected to antisocial behavior, particularly conduct disorder, in both incarcerated adolescents (Eppright et al. 1993) and adolescent inpatients (Myers et al. 1993). BPD has also been linked with Attention-Deficit/Hyperactivity Disorder (ADHD). For example, Miller et al. (2008b) demonstrated that adolescents and young adults diagnosed with ADHD in childhood are at increased risk to develop a personality disorder by late adolescence, including BPD. Other childhood mental disorders may also increase the risk of developing BPD by adulthood. For example, Goldberg and Garno (2009) recently found that early onset bipolar disorder increases the likelihood of developing BPD, regardless of a history of childhood trauma or abuse.

Causal Factors

Although the cause of BPD is not fully understood, researchers have investigated several types of factors, including genetic, neurobiological, and environmental, that have been implicated as having a role in the development of the disorder. Genetic studies, which have been conducted using adult samples, have demonstrated evidence of the heritability of certain personality features associated with BPD symptomology. For example, Siever et al. (2002) found that BPD clusters in families, with relatives of patients with BPD

demonstrating higher rates of the diagnosis, as compared to subjects without the diagnosis. Twin studies have also investigated genetic contributions. For instance, Torgersen et al. (2000) found that the concordance rate for monozygotic twin pairs was 35%, as opposed to a 7% rate in dizygotic twin pairs. These results strongly highlight a potential genetic effect in the development of BPD. Twin studies have also demonstrated evidence that there may be several traits, as opposed to a single heritable trait, which in combination and with influence from genetic and environmental factors, may lead to borderline pathology (Livesley et al. 2003).

Studies on the potential causes of BPD have focused on neurobiological vulnerabilities surrounding the key features of the disorder – affective dysregulation and impulsivity – using a variety of assessment techniques. The following include a sampling of the work accomplished thus far. For instance, functional imaging studies have identified brain abnormalities in the frontolimbic network, consisting of the anterior cingulate cortex (ACC), orbitofrontal and dorsolateral prefrontal cortex, hippocampus, and amygdala (Lieb et al. 2004). In addition, Juengling et al. (2003), among others, revealed altered baseline metabolism in the prefrontal network. Structural brain studies have demonstrated reduced volume in the hippocampus and amygdala (Driessen et al. 2000; Schmahl et al. 2003), the latter of which plays a key role in emotion regulation (Fanselow and Gale 2003). In another study with adolescents, Houston et al. (2005) found that females with BPD showed a deviant brain maturation pattern. Endocrine investigations focused on the cortisol system note hyperresponsiveness of the hypothalamic-pituitary-adrenal (HPA) axis in individuals with BPD and a history of trauma in childhood (Rinne et al. 2002). Furthermore, multiple neurotransmitter systems have been implicated as playing a role in the symptomology of BPD, including serotonin (e.g., Kamali et al. 2002), dopamine (e.g., Skodol et al. 2002), and vasopressin (Gurvits et al. 2000) among others.

Many environmental risk factors, particularly early adverse events during childhood, have been identified as a correlate or potential contribution. The importance of environmental factors cannot be underscored as studies have shown that they substantially increase the likelihood that a child or adolescent diagnosed with BPD will retain the diagnosis as an adult (Zanarini et al. 2006). One widely researched environmental factor is a history of childhood neglect and abuse, especially sexual abuse. For example, Zanarini (2000) demonstrated that adults diagnosed with BPD endorse a high percentage of neglect (92%), physical abuse (25–73%), and sexual abuse (40–76%) in childhood. Studies with children and adolescents (e.g., Goldman et al. 1992) have also highlighted the potential impact of physical and sexual abuse. Furthermore, increased severity of childhood sexual abuse has been shown to be connected with the increased severity in symptom presentation (Silk et al. 1995).

The quality of early attachment patterns in individuals is also considered an important risk factor that has been researched mainly with adult samples. Insecure and disrupted attachments in childhood have been repeatedly linked with the development of borderline pathology (e.g., Agrawal et al. 2004; Levy et al. 2005). Recently, Crawford et al. (2009), in a prospective study with children and mothers, found that BPD symptoms were higher than average for the children with early separation from their mothers, and that the same symptoms remitted at a significantly slower rate than in children without early separation. The authors did note that early separation by itself may not increase risk for BPD.

According to Linehan (1993), BPD, in both adults and adolescents, develops in part due to an invalidating environment, of which abuse, neglect, and poor childhood attachments are associated. In particular, Linehan posits that a persistently invalidating environment, including one's family, interferes with or prevents a child from learning the needed skills to regulate their emotions and tolerate stressful events. Other risk factors that make up an invalidating environment may also include parental psychopathology (Goldman et al. 1993) and socioeconomic status (Cohen et al. 2008).

Course and Prognosis

Most of the available knowledge of the long-term course and prognosis for patients with BPD comes from retrospective studies of adults (Zanarini et al. 2006). In fact, few prospective studies of children and adolescents have been conducted (Cohen 2008) and the developmental course that leads to adult BPD is still unclear (Crowell et al. 2009). Nevertheless, research has demonstrated that the symptoms of BPD can be detected as early as childhood, but that individuals do

not typically begin treatment until well into adolescence (Zanarini et al. 2001). Cohen et al. (2008) showed that in early adolescence, average symptom levels are at their peak, and then tend to decrease over time. The same eventual decline in symptom levels over time has been demonstrated in adult patients as well (Shea et al. 2002). In a prospective longitudinal study with adolescents who aged into adulthood, Winograd et al. (2008) found that overall, borderline symptomology improved with time as well, but that higher symptom levels in early adolescence were indicative of poorer outcome in adulthood.

Longitudinal studies have indicated considerable heterogeneity in the course of BPD (Grilo et al. 1998; Skodol et al. 2002). Zanarini et al. (2003) showed that 69% of the adults followed during a 6-year period met criteria for remission, while 25% of the sample never met remission. Recurrence rates were low among those who achieved remission. By the 10-year mark, 88% met criteria for remission (Zanarini et al. 2006). In a community-based study with children and adolescents (Johnson et al. 1999), participants with a BPD diagnosis were significantly more likely to retain the diagnosis when reassessed 2 years later.

In terms of prognosis, several variables have been associated with poorer outcome including childhood sexual abuse (Paris 1993), family history of mental illness, maternal psychopathology, and negative mood symptoms (Paris et al. 1987; Paris et al. 1988). In contrast, variables associated with a better outcome include a high intelligence quotient (Stone 1990), absence of parental divorce, and an absence of narcissistic entitlement. Furthermore, Zanarini et al. (2006) demonstrated predictors of earlier remission, including younger age, absence of sexual abuse during childhood and family history of substance use, absence of an anxiety disorder, and low neuroticism and high agreeableness scores on personality measures.

Assessment

The diagnosis of BPD in adolescents can be accurately achieved through the use of questionnaires or semistructured interviews. A complete review of the available instruments is beyond the scope of this essay; however, many of the assessment measures, including the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II) (First et al. 1997), originated with use in adults and have been used for adolescents in both unadapted and adapted forms (Sharp and Romero 2007).

Most of the assessment measures available are based on the current categorically based conceptualization of BPD. Currently, there is one-dimensional assessment measure for children, developed by Crick et al. (2005), called the Borderline Personality Features Scale-Child (BPFS-C) normed on a sample of fourth through sixth graders. Sharp and Romero (2007) cite that the development of dimensional measures such as the BPFS-C is essential for increasing knowledge of BPD in childhood and adolescence.

Treatment

Individuals with borderline personality disorder, including children and adolescents, are high frequency consumers of medical and psychiatric services (Zanarini et al. 2003). Over the life span, BPD patients receive outpatient mental health care from an average of six psychotherapists (Perry et al. 1990). The primary intervention recommended for treating BPD is psychotherapy (Oldham et al. 2001), sometimes in combination with other interventions including psychopharmacology (APA 2001). Modalities of treatment include individual and family therapy, group therapy, day treatment or partial hospitalization, and inpatient treatment (Lieb et al. 2004).

Several therapeutic approaches are prominent in the treatment of BPD in both adults and adolescents, which generally recommend ongoing and regular intervention for at least 1 year, with many patients requiring longer-term treatment (APA 2001). Treatment-as-usual has been shown to be only marginally effective (Tucker et al. 1987), while two other interventions have demonstrated evidence as effective interventions through randomized controlled trials – Dialectical Behavior Therapy (DBT) (Linehan 1993) and Bateman and Fonagy's (1999; 2001) psychodynamic partial hospital program. Other promising treatment approaches for the treatment of BPD include transference-focused therapy and dynamic supportive therapy (Clarkin et al. 2007).

DBT is a variation of cognitive-behavioral therapy (CBT) that was originally developed for chronically suicidal patients (Dimeff and Linehan 2001), and has the most empirical support from randomized controlled trials (Lieb et al. 2004). DBT combines strategies from behavioral and cognitive-behavioral therapy with

Buddhist tenets, including mindfulness, in order to address the skills deficits in interpersonal relationships, emotional and self-regulation, and distress tolerance found in individuals with BPD. DBT consists of four primary treatment modalities, including individual therapy, group skills training, telephone consultation, and a therapist consultation team meeting. DBT has also been adapted for treatment of adolescents with BPD (Miller et al. 2007). Modifications to the treatment, among many, include inclusion of families in group skills training, and the addition of a skills training module to address problematic family interactions.

The psychodynamic partial hospital program described by Bateman and Fonagy (1999; 2001) is a long-term treatment for adults with BPD; like DBT, it consists of intensive treatment with multiple modalities. The program has demonstrated significant symptom improvement over a long-term period, and includes weekly individual psychoanalytic therapy, analytic group therapy three times per week, weekly psychodrama techniques, a weekly community meeting, as well as monthly adjunctive medication review.

Significant numbers of patients with BPD, including adolescents, take psychotropic medication (Zanarini et al. 2004) to aid in the treatment of prominent symptoms falling in three behavioral dimensions – affective dysregulation, cognitive-perceptual, and impulsive-behavioral dyscontrol (APA 2001). Affective dysregulation, which includes mood lability, is generally addressed by antidepressants (SSRI's and Venlafaxine) and mood stabilizers. Cognitive-perceptual symptoms are targeted by traditional neuroleptics and more recently, atypical neuroleptics. Finally, symptoms of impulsivity and behavioral dyscontrol, including suicidal gestures and non-suicidal self-injury (NSSI), are also treated by SSRI's, with some evidence for the use of mood stabilizers and atypical neuroleptics, (APA 2001). In addition, more recent attention has focused on targeting single symptoms, such as dissociation (and related NSSI) by the opiate receptor agonist, naltrexone (Bohus et al. 1999).

Conclusions

Borderline personality disorder is a complex and serious psychiatric condition that has been widely studied and researched. The diagnosis of the disorder in adolescents has been controversial, with evidence supporting the viewpoint that the symptoms of BPD cannot adequately be distinguished from normal adolescent development, as well as support for the reliable and valid existence of a BPD diagnosis in adolescents. In addition, recently proposed DSM-V criteria (for the new edition to be published in 2013) highlight potential significant changes to the understanding and conceptualization of the disorder (APA 2010). Despite these controversies, many mental health practitioners recommend that personality disorders, including BPD, or features of the disorder, be formally assessed and treated in adolescents in order to increase the possibility of remission and prevent dysfunctional behaviors from becoming an ingrained pattern of functioning in adulthood.

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Boredom

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Overview

Parent observations and scientific studies attest to the fact that adolescents appear to be more easily bored than virtually any other age group. Of course there are differences between individuals, but as a group, adolescents appear to frequently be at a loss in finding something stimulating, entertaining, fun, and sustaining to do, and they lose interest in whatever they've chosen fairly quickly. The result can be engaging in risky behaviors that have the potential for illegal activities, or those that might prove harmful to themselves or others. This essay introduces the reader to what is known about boredom in adolescents. It begins with an introduction about the importance of studying boredom in this age group, then presents theories about why boredom occurs and its resulting implications, and concludes with strategies for coping with boredom, such as viewing it as a positive feeling rather than a tortuous one, or seeking possibilities for introducing changes into the environment.

Boredom in Adolescence

It is hard to imagine that teens today could be bored with all of the electronic devices, interactive games, and online networking so readily available. There seems to be endless opportunities to explore a diverse and rapidly changing world within one's current neighborhood or across thousands of miles to the opposite side of the planet. From one week to the next, the number of attractions, gadgets, and expansions to existing technology grows tremendously. And yet, research on adolescents in many countries shows that on a typical day they report being bored as much as 30–40% of the time (Csikszentmihalyi and Larson 1984; Farrell et al. 1988; Gjesme 1977; Robinson 1975; Vandewiele 1980; Wegner et al. 2006; Wegner et al. 2008). They attest to being bored both in and out of school (Caldwell et al. 1999; Larson and Richards 1991; Vandewiele 1980), across a variety of activities of their own choosing (Caldwell et al. 1999; Larson and Richards 1991; Vandewiele 1980), and regardless of their gender, social class, grade level, or their parents' educational background or occupation (Barnett and Klitzing 2006; Gordon and Caltabiano 1996; Larson and Richards 1991; Newberry and Duncan 2001; Vandewiele 1980; Wegner et al. 2006).

The experience of boredom is not solely confined to adolescents – it is one of the most common emotions people experience, and can be found in writings dating back to the fourth century (Healy 1984). It has been described by individuals of all ages as an unpleasant affective state – one of malaise, tedium, monotony, frustration, and sometimes depression, anxiety, anger, and hostility (Blaszczynski et al. 1990; Farmer and Sundberg 1986; Fisher 1993; Perkins and Hill 1985;

Sundberg et al. 1991; Vodanovich et al. 1991). Healy (1984) stated that "to feel bored is to suffer" (p. 42), and Berlyne (1960) described the "torments of boredom" (p. 192). Clearly, then, boredom is aversive and often compels one to try to introduce novelty, variety, or excitement into an environment that is perceived as dull, repetitious, sterile, or uninteresting.

The focus on boredom in adolescents is due in large part to the fact that boredom is often cited as an instigating factor in teens turning to drugs, alcohol, delinquency, vandalism, truancy, and dropping out of school (Caldwell and Smith 1995; Farrell et al. 1988; Fogelman 1976; Gilvarry 2000; Irving and Parker-Jenkins 1995; Iso-Ahola and Crowley 1991; Johnston and O'Malley 1986; Maroldo 1986; Orcutt 1985; Robinson 1975; Tidwell 1988; Wasson 1981). The cause of boredom is sometimes blamed on the school environment or classroom teacher – criticizing one or the other for its failure to provide interesting, stimulating, or meaningful sessions (Healy 1984; Robinson 1975). Adolescence is typically a time when negative motivation toward school does increase and relationships between students and teachers can be perceived as more adversarial (cf. Eccles and Midgley 1990). However, while research has shown that students experience more boredom during school and homework sessions, they still report being bored to almost the same extent during their freely chosen recreational activities and during unstructured leisure time (Csikszentmihalyi and Larson 1984; Larson and Richards 1991; Shaw et al. 1996). Adolescents often report that there is "nothing to do," that they cannot identify an activity that would find to be satisfying, or that they must do things they do not want to do (Caldwell and Darling 1999; Caldwell et al. 1999; Dankert and Allman 2005; Drob and Bernard 1987). Clearly, then, the causes of boredom are more complex, and a number of explanations have been offered.

Theoretical Explanations of Boredom

The Understimulation Model

Boredom has been characterized as a response to a repetitive, monotonous situation that the individual finds to be lacking in stimulation (Berlyne 1960; Fiske and Maddi 1961; Geiwitz 1966; Mikulas and Vodanovich 1993; O'Hanlon 1981). This has been termed the "understimulation model" (Larson and Richards 1991) and it suggests that adolescents may become bored in any aspect of their life in which they perceive a situation to be unchallenging, simplistic, monotonous, or one to which they have become habituated (Hill and Perkins 1985; Perkins and Hill 1985; Smith 1981; Thackray 1981). This model predicts that students of higher ability would be bored most often because they would find schoolwork to be easier and less challenging than those of lesser ability. It also explains why activities that have been previously enjoyed might lose their attraction as we age. As cognitive abilities increase, the types of interactions that are perceived to be novel, varied, difficult, or complex also become more differentiated. Situations and objects thus lose their ability to hold and sustain attention, and to provide a challenge to powers of thought and reasoning. Adolescents are thus aroused by very different objects and situations than they were just a year or two earlier, and will readily become bored without ongoing change. Adolescence as a time of change, growth, and transitions, supports the reports of boredom that seem to characterize this life stage more than any other.

Consistent with this model is the observation that boredom is contrary to feelings of "flow" (Csikszentmihalyi 1975, 1990; Csikszentmihalyi and LeFevre 1989) – the exhilarating affect individuals experience when they are thoroughly absorbed in an intrinsically enjoyable activity. According to the flow paradigm, there must be an equal match between the skills of the individual and the perceived challenges presented within the environment. If the person perceives their skills to be greater than the situational challenges, they will feel bored; if they think their skills are less they typically will become anxious. Boredom is viewed as a state of suboptimal arousal – one in which the lack of stimulation, or information flow, is highly unpleasant – and the individual will feel compelled to alter the situation to increase the level of challenge to match his or her abilities. This model has been offered as an explanation for why adolescents appear to undertake risks without seeming regard for their own safety or legal ramifications. It is supported by research that has found that a lack of stimulation was primarily responsible for ratings of boredom, and that the frequency of reported boredom increased as the number of recreational activities decreased (Caldwell and Baldwin 2005; Fogelman 1976; Gordon and Caltabiano 1996; Larson and Richards 1991; Ziervogel et al. 1998).

The Forced-Effort Model

Adolescents (and others) often find themselves in situations that they are unable to escape. The most obvious examples are classrooms and related schoolwork, outside employment, household chores, religious services, and personal hygiene, among others. However, there are even aspects of activities in which they typically enjoy participating that are unpleasant and required, such as in rehearsals for a school play, or drills and practices for a sport team. If permitted to leave a dull or unstimulating situation, boredom would immediately cease. However, it is those situations in which they are forced to expend a great deal of effort to attend when escape is not possible that activate feelings of boredom. The "forced-effort" model (Hamilton 1981; Hamilton et al. 1984; Larson and Richards 1991; Leary et al. 1986; O'Hanlon 1981) espouses that boredom stems from the frustration and large amount of effort that the individual must expend in understimulating tasks or environments in which there is no escape. In some situations, it may be easy to maintain attention to a particular stimulus, while in others, sustained attention is possible only with a great deal of concerted effort. According to this model, boredom is the affective consequence of having to exert effort to maintain attention to a particular stimulus or event. Boredom is more than just a lack of interest in something – if a person is not interested in listening or seeing or doing something he or she simply does not attend to it and does not become bored. Boredom occurs only as a result of having to attend to something that is not seen as intrinsically captivating, and the level of boredom experienced is a direct function of the cognitive effort that is required to sustain focused attention on it.

This model would anticipate that adolescents will report the highest frequency of boredom in school situations that require the most mental effort, such as in classes with difficult or abstract material, and in situations where they perceive they have little control, such as in teacher-directed (rather than self-directed) activities. Boredom could result from either the content or the style by which the content is delivered. For example, it may be difficult to attend to someone else's enthusiastic monologue about a trivial or an esoteric topic (content), or while trying to follow a long-winded, rambling, or tedious exposition on an otherwise interesting subject (style). This model explains the findings wherein adolescents typically report being bored during extracurricular activities – on closer inspection, the boredom relates more to the drills and rehearsals that are preparatory to the actual performance (which is the aspect deemed enjoyable). Research generally supports the efficacy of the forced-effort model in explaining and predicting boredom, by demonstrating connections between boredom and difficulties in sustaining attention and on the degree to which individuals find materials and events to be intrinsically interesting and enjoyable (Fisher 1993; Hamilton 1981; Hamilton et al. 1984; Larson and Richards 1991). In addition, empirical findings demonstrate that in situations where choice is largely absent, adolescents are more likely to experience boredom in contrast to activities that are more self-determined (Caldwell et al. 1999; Fogelman 1976; Larson and Richards 1991).

The Resistance/Oppositional Model

Another perspective, the Resistance/Oppositional Model (Larson and Richards 1991), posits that adolescence is a time during which the individual adopts the view of their subculture that resistance to adult authority is both necessary and desirable to explore and ultimately decide upon their unique individual identity. By resisting authority figures in their life – from parents to teachers to coaches to other adult leaders – adolescents are able to view their search for identity as holding no restrictions or bounds. They can feel free to explore and experiment, without being tethered to traditional roles and societal expectations. By labeling themselves as "bored" they can recast schoolwork as tasks that lack meaning and purpose for them, in contrast to having to admit they simply cannot perform or refuse to do them. According to this model, adolescents should declare they are bored wherever and whenever they are in the presence of adult authority. Previous research has supported these hypothesized relationships (Wegner et al. 2006), finding evidence that boredom among high school students is related to alienation (Tolor 1989), hostility toward school (Robinson 1975), disregard for school rules (McGiboney and Carter 1988), dissatisfaction with school (Gjesme 1977), and deviant behavior in school (Fogelman 1976; Wasson 1981). More recent research, however, has cast doubt on this model as a viable explanation for much of adolescent boredom (Caldwell et al. 1999; Larson and Richards 1991).

Boredom as a Personality Trait

Although boredom is an emotion experienced by almost everyone throughout their life, research indicates that some people seem particularly prone to boredom. The tendency to be easily bored can be viewed as a personality characteristic (Barnett and Klitzing 2006; Sundberg et al. 1991; Vodanovich et al. 1991; Watt and Ewing 1996) that differs from one individual to the next. Several authors have speculated about the presence of this trait, labeling it as "boredom proneness" (Farmer and Sundberg 1986), or "boredom susceptibility" (Zuckerman 1979). Both of these constructs have received a great deal of empirical attention. Scholars have tried to determine what predisposes some individuals to be bored more often and to a greater extent than others, and what the components and correlates of the trait are. While boredom susceptibility has been viewed as one component of the sensation-seeking personality, boredom proneness has been viewed as a predisposition in its own right. Research has differed in determining the factors that comprise boredom proneness (McLeod and Vodanovich 1991; Rupp and Vodanovich 1997; Vodanovich 2003; Vodanovich and Kass 1990), yet two factors have been replicated in virtually every one of these studies (Vodanovich et al. 2005., but see Melton and Schulenberg 2009): Internal Stimulation and External Stimulation. External Stimulation deals with individual differences in the need for external novelty and excitement; it measures an individual's need for excitement, challenge, and change in their external environment. In contrast, Internal Stimulation taps individual differences in the ability to keep oneself entertained and interested – it measures a person's ability to generate adequate internal stimulation (i.e., to keep oneself interested or entertained), and individuals high on this characteristic experience boredom due to a lack of internal stimulation (Vodanovich and Kass 1990). Research describing and comparing these two dimensions has found there to be different correlates of each (Kass et al. 2001; Rupp and Vodanovich 1997; Watt and Blanchard 1994), thereby supporting the contention that boredom proneness is multidimensional.

People who are more likely to experience boredom tend also to be more anxious, depressed, aggressive, impulsive, unassertive, unmotivated, have trouble controlling their anger, and generally display more negative affect (Culp 2006; Dahlen et al. 2004, 2005; Farmer and Sundberg 1986; Maroldo 1986; Leong and Schneller 1993; Rupp and Vodanovich 1997; Tolor 1989; Vodanovich et al. 1991; Watt and Vodanovich 1992, 1999). They tend also to have problems relating to others – often feeling shy, alienated, and unsociable (Leong and Schneller 1993; Maroldo 1986; Tolor 1989). They are more likely to view their relationships (Watt and Ewing 1996) and their life in general (Farmer and Sundberg 1986) more negatively. In addition, people who are likely to experience boredom tend to engage in more antisocial behaviors, such as drug use (Johnston and O'Malley 1986; Leifer 1974; Samuels and Samuels 1974), truancy, and hostility toward school (Paulson et al. 1990; Robinson 1975; Wasson 1981).

The antithesis of boredom proneness, or boredom susceptibility, is the ability to manipulate a situation (in reality or in one's mind) to make it more interesting, stimulating, enjoyable, or exciting. Several authors have suggested that, just like boredom proneness is a personality disposition, so is the ability to generate and introduce stimulation to keep oneself from feeling bored. The labels for just such a trait have been variously applied, ranging from "autotelic" (Csikszentmihalyi 1975, 1990) to "playful" (Barnett 2007; Bozionelos and Bozionelos 1999), to "the ability to become absorbed" (Tellegen and Atkinson 1974), and to "self-as-entertainment" (Mannell 1984, 1985) personality characteristics. Whatever the terminology, they all hypothesize that individuals have varying abilities to generate their own stimulation in the presence of a sterile environment, with the primary driving goal to be eluding or transforming feelings of boredom. If one is not fortunate enough to possess the internal ability to self-generate stimulation in a deficient environment, other methods have been identified as ways in which the unpleasant effects of boredom can at least be mitigated.

Coping with Boredom

The old adage that "time flies when you're having fun" may be a particularly appropriate strategy for adolescents seeking to avoid or escape boredom. Iso-Ahola and Weissinger (1990) argued that leisure and recreational opportunities figure prominently in the experience of boredom with this age group. They postulated that "leisure boredom" occurs when adolescents' opportunities for leisure and recreational

engagement are far from satisfying, when their needs are not met by the activities in which they engage, that they perceive insufficient challenge or excitement in those activities, or when they believe they lack the requisite skills to participate. Several studies have sought evidence for the role of leisure activities in either contributing to, or mitigating against, feelings of boredom by adolescents (Caldwell and Darling 1999; Iso-Ahola and Crowley 1991; Iso-Ahola and Weissinger 1987, 1990; Larson and Richards 1991; Shaw et al. 1996; Ziervogel et al. 1998). Consistent findings emerged from these studies, indicating that adolescents who do not participate in activities either in or out of school, or those in communities where there is a lack of recreation programs or facilities, are significantly more bored than their more active and involved peers. In addition, there is evidence that this consistent heightened level of boredom could be instrumental to the adolescent feeling alienated or disconnected, and committing delinquent activities or dropping out of school (Fogelman 1976; Newberry and Duncan 2001; Wegner et al. 2008). A number of authors have advocated for increased variety in one's leisure repertoire – occupying one's time by generating and engaging in interesting and challenging leisure activities – that is the key to eliminating boredom in free time (Csikszentmihalyi 1975; Fiske and Maddi 1961; Hamilton 1981; Iso-Ahola and Weissinger 1987, 1990; Mikulas and Vodanovich 1993; Watt and Blanchard 1994).

Other strategies have been offered for coping with boredom – by either trying to prevent its emergence, or by escaping the ravages of its effects. In a review article, Smith (1981) delineated techniques for coping with boredom, including daydreaming, motor activity, exploration, response variability, and withdrawal from the situation. Watt and Blanchard (1994) found that daydreaming was an optimal strategy for many individuals, since it required no materials or resources (other than our natural inner ones), particularly if it included planning and organizing. In a similar vein, others have focused on the practice of meditation or mindfulness, which could lead to heightened powers of absorption and self-awareness (Hamilton 1981; Kabat-Zin 2005; Tellegen and Atkinson 1974). Hamilton argued that meditation techniques require sustained, absorbed attention to either internal or external stimuli, and this might be helpful particularly in situations where an individual is having difficulty maintaining his or her interest. Other authors have argued that to search for an effective technique in staving off boredom might first require that the individual identify whether the problem is due to Internal or External Stimulation. For example, if it is more a case of high Internal Stimulation (indicating difficulty generating interest), he or she might maximally benefit from being taught skills that improve internally focused attention. Rather, if a person is high in External Stimulation (reflecting a need for variety and change), he or she might be better served if skills that improve externally focused attention are taught.

Concluding Comments

With the notable exception of President Harry Truman, who said, "I've never been bored in all my life" (Gabriel 1988), most people have experienced episodes of boredom. For adolescents, boredom has been found to occur across all times and settings in their life: from the classroom to social outings to extracurricular activities to their bedroom, and all places in between. The vast majority of research that has investigated boredom has found that adolescents view boredom as a state to be avoided at all costs, characterizing it as engendering feelings of listlessness, restlessness, loneliness, frustration, depression, and sometimes anxiety, anger, and hostility. Teens report trying to anticipate a situation that might become boring to them, and making efforts to plan their means of escape, such as bringing reading materials or puzzles to divert and capture their attention (Harris 2000; Vandewiele 1980).

In contrast, some high school students view boredom in a positive light, reporting that it presents opportunities for quiet thought and reflection (Harris 2000), or creativity (Schubert 1978). Still others describe all-too-rare opportunities for relaxation and escape that are afforded by finding oneself in a boring circumstance. Some authors have written of the importance of experiencing moments of boredom, reasoning that it could be viewed as a source of information to oneself (Geller 1994), particularly for adolescents who are in the throes of forging their identity and searching for meaning in different environments. Indeed, there is some evidence to support this contention, in that relationships have been discovered between boredom and self-awareness (Seib and Vodanovich 1998), feeling a purpose in one's life (Fahlman et al. 2009;

Weinstein et al. 1995), and self-actualization (McLeod and Vodanovich 1991).

While the scientific study of boredom has been prolific over many years, studies addressing ways of escaping it have not. Theoretical explanations that posit that a state of boredom can exist in virtually any situation perceived by an individual to be absent of meaning, content, or at least moderate stimulation, suggest that boredom can be minimized by altering the characteristics of the environment. Alternatively, if attention is focused instead on the characteristics of individuals that predispose them to view situations as boring, or on those who do not possess internal resources allowing them to generate their own stimulation, an altogether different path of inquiry is mandated. In the absence of research that more clearly explicates what boredom is or is not, study of the phenomenon of boredom will proceed along both trajectories. And the many negative outcomes of boredom will position the adolescent years as an important focus for further in-depth study.

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Brain Maturation

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The period of adolescence involves changes in almost every brain structure (Luciana 2010). Numerous studies have been able to identify how these changes link to cognitive, behavioral, and emotional changes (see Steinberg 2008). Although reviews and analyses tend to weave narratives that show consistent findings, some studies continue to offer mixed and contradictory results that challenge efforts to discern what neural and other changes cause particular cognitive, behavioral, and emotional changes (Spear 2000; Luciana 2010). This essay summarizes important emerging findings in this area of research as it underscores that this highly active area of research continues to present new findings that push the field in many different and innovative directions that often challenge earlier findings and offer new understandings of previously unknown phenomena. The essay ends by noting some key areas for future research.

Researchers have reported that while there seems to be large amounts of growth in childhood and subsequent synaptic pruning in gray matter during adolescence (Giedd et al. 1999), cognitive maturity increases during adolescence (Spear 2000). This pruning is especially seen in the cortex (Sowell et al. 1999), the frontal lobes (Giedd et al. 1999), and parietal lobes (Giedd et al. 1999). Instead of causing malfunction, pruning serves to refine connections that are overproduced (Purves 1998; Whitford et al. 2007). In their impressive review, Gogtay et al. (2004) report, for example, how gray matter develops in what appears to be an evolutionary-based sequence, namely, the sensorimotor cortex, frontal, and occipital lobes developing first, followed by a back-to-front maturation in the cortex. Finally, the superior temporal cortex develops an area that integrates object- and space-related information (Karnath 2001).

White matter, especially in the frontal lobe and hippocampus, also increases (Benes 1989; Benes et al. 1994), a development thought to reflect an increase in myelination (Paus et al. 2001). Paus et al. (2001) also documented an increase in myelination in a segment of the brain that connects Broca's and Wernicke's areas. These together have been associated with an increase in language and memory abilities in adolescence (Nagy et al. 2005; Paus et al. 2001). In addition, researchers also have noted an increase in myelination in the prefrontal cortex, a development thought to be associated with increased cognitive functioning (Paus et al. 1999). This process is similar to synaptic pruning, where

highly used pathways become myelinated (Bengtsson et al. 2005).

As the brain matures, that maturity links to adolescents' ability to engage in increasingly complex cognitive and emotional processes important for managing more effective social relationships. Maturation in the superior temporal sulcus may be seen, an area that influences the processing needed for various body movements (Paus 2005). Findings of fMRI studies corroborate electrophysiological evidence of maturation of nonverbal processing circuitry, which follows closely with the increase seen in an adolescent's ability to process social cues (Paus 2005). For example, an increase in activity in the amygdala is seen in adolescence (Baird et al. 1999), which is responsible for the processing of emotions. Change in the prefrontal cortex also has been noted. Casey et al. (1997) demonstrated a refinement in functioning between children and adults in the dorsolateral prefrontal cortex, which is associated with planning and impulse control, while Galvan et al. (2006) demonstrated low activity in the orbital-frontal cortex, which is implicated in impulsivity (Galvan et al. 2006) and reward evaluation (Steinberg 2008). Functional maturity has been seen in the ventromedial prefrontal cortex (Hooper et al. 2004), which is responsible for decision-making and connected to the emotional center of the brain, the limbic system (Steinberg 2008).

Along with the amygdala, other changes in the limbic system occur, including myelination in the hippocampus (Benes 1989). Increases in levels of neurotransmitters in the limbic system are thought to influence social information processing, supporting the increase in peer interest during adolescence (Steinberg 2008). Researchers suggest that, because the limbic system matures quicker than the prefrontal cortex, adolescence is a time of increased risk-taking and behavioral problems (Steinberg 2008). Although it is important not to link certain brain developments to specific outcomes, it certainly does appear that brain maturation can play an important role in increasing certain vulnerabilities. And, of course, that vulnerability also means that the adolescent brain does have a high level of plasticity that makes this period a time of considerable opportunity for intervention.

Hormones are thought to play an integral role in adolescent brain development, although not much is known about the connection between behavior and pubertal changes (Luciana 2010). Dopamanergic systems undergo a significant increase in developmental changes, including the prefrontal cortex, striatum, and nucleus accumbens (Spear 2009). GABAergic circuits in the prefrontal cortex also appear to decrease during adolescence (Spear 2000). Some studies also indicate that changes in dopamine system activity may account for adolescents' increases in reward seeking behavior (Luciana 2010). The strongest evidence examining the effects of hormonal changes emerges from research examining how pubertal changes influence behavior or vice versa. That research suggests that hormonal changes at puberty activate specific motivational tendencies that lead adolescents to pursue social experiences, such as increases in sensation-seeking as well as social reorientation toward peers (for a review, see Forbes and Dahl 2010). This line of research highlights how pubertal development may be central to understanding emotional and social development during adolescence.

Two other areas of research relating to brain maturation are important to highlight. The first involves reports that a number of sex differences characterize structural brain development during adolescence (for a review, see Lenroot and Giedd 2010). That research reveals, for example, that gray matter volumes peak earlier in males in the frontal, temporal, and parietal regions; it also reveals sexual dimorphism in white matter development, with males showing steeper increases in white matter volume across adolescence. The second key point relating to brain maturation and adolescent development is the well-established finding that adolescence is clearly a risk period for the emergence of clinical disorders (Paus et al. 2008). The risk for disorders may not be equivalent for all individuals, but links exist between brain development and schizophrenia, substance abuse, and affective pathology (see Gogtay and Thompson 2010). Importantly, the risks relate closely to sex differences as well, as shown in research on the rates and developmental peaks of depression and schizophrenia (see Lenroot and Giedd 2010).

No doubt exists that the brain matures quickly during the adolescent period, but how that development influences other aspects of development remains a challenging area to research. Much research has

sought to identify specific links between parts of the brain and social, cognitive, or emotional outcomes. Research does show that the entire brain is maturing during adolescence as functional networks become more efficient in the processing of information, among other critical changes. The recent trend in research, however, increasingly focuses on viewing the widespread changes characteristic of adolescents' brain organization in a more integrative fashion. As a result, research now aims to examine how structural changes relate more closely to functional changes and behaviors. Other important research seeks to understand the importance of hormonal changes' interactions with structural brain changes and subsequent behavior. Still other areas focus on the importance of social contexts, as highlighted by research on social cognition and vulnerability to psychopathology. These avenues of research are but a few examples of efforts to understand how, and to what effect, dramatic changes in brain maturation occur during the period of adolescence.

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Bullying and School Violence Interventions

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Overview

After the rampage school shootings of the mid- to late 1990s, considerable political attention was directed toward understanding the causes of these events. Politicians and the public, in an effort to understand how a child could gun down other students and school personnel, wanted a quick and simple answer. If only one could identify that one golden key that would unlock the secrets behind this heinous violence, then maybe the problem could be fixed they hoped. Perhaps fueled by this desire, by early news reports, and by the statements of the school shooters themselves, the simple explanation for these acts of violence emerged: bullying. It seemed that these school shooters were the victims of bullying; they withstood the torment for as long as they could, and then they "snapped."

In response to the problem of school shootings, various government-funded agencies conducted research on school shooters. The US Department of Education, along with numerous other national organizations (Dwyer et al. 1998), released a report that suggested school shooters often display warning signs before reaching the breaking point, and offered suggestions for recognizing these warning signs. One that was highlighted in this report is bullying; some students victimized by bullies may resort to violence in an effort to solve the problem. Two years later, a study conducted by the FBI was released (O'Toole 2000) in which school shooters were interviewed. This study, rather than focusing on warning signs, argued that in many cases, the school shooters issued some form of threat prior to the rampage. Consequently, O'Toole detailed a threat assessment approach to school safety. Pertaining to the present essay, one finding was that school shooters frequently reported that they had been the victim of repeated bullying. Finally, a study conducted by the US Secret Service and the US Department of Education also highlighted the role that bullying played in school shootings (Vossekuil et al. 2004). Some school shooters were victims of bullying, while others were themselves the bullies. Incidentally, there is no evidence that rampage school shooters "just snap." Instead, their behavior is the end result of a long process that begins with fantasy and ends with action (Vossekuil et al.).

Since the late 1990s, bullying has clearly emerged as the focal point of school violence prevention. A quick search of PsychInfo, for example, entering the search string Bully*.*, yielded 2,995 hits. The same search on Google resulted in 248,000,000 hits. Given the extent to which this phenomenon has been studied, it is important that bullying be clearly defined. Although numerous authors have defined bullying in various ways, the definition offered by Merrell et al. (2008) captures the essence. They suggest that bullying behavior is a subset of antisocial-aggressive behavior, and is "defined as repeated acts of aggression, intimidation, or coercion against a victim who is weaker than the perpetrator in terms of physical size, psychological/social power, or other factors that result in a notable power differential" (p. 26). The key points to this definition are that there is a power differential between the bully and the victim, the aggression is intentionally harmful, and the behaviors are recurring.

There are presently three primary forms of bullying that are recognized. These include overt bullying, which represents the commonly held notion of verbal and physical intimidation, harassment, and aggression. This type of bullying is most common among boys. In addition, covert bullying includes less obvious forms, such as name-calling or making gestures. Covert bullying also includes social or relational aggression, which entails spreading rumors and excluding an individual (Crick 1996); this is most common among girls. Most recently is cyberbullying, which takes place via social networking sites, text messaging, and photos posted to the World Wide Web or sent to others' cell phones (Hinduja and Patchin 2007; Raskauskas 2010). All forms of bullying result in negative consequences to the victims, including anxiety, depression, lowered self-esteem, impaired social relations, and school avoidance.

In addition to this taxonomy, students involved with bullying have been classified as bullies, victims, and bully-victims. Bullies are further defined as pro-active or reactive. Pro-active bullies seem to act aggressively without provocation, and appear to have social

and behavioral problems in multiple areas of their life. On the other hand, reactive bullies lash out in response to real or perceived provocation. Victims, as already mentioned, tend to be individuals with a real or perceived weakness, either in stature or in social standing. The awareness of a third type, bully-victims, has only recently been highlighted. As the title suggests, these students are the victims of bullying, yet also victimize other, weaker, individuals.

In the remainder of this essay, I will provide a brief overview of two of the more popular bullying prevention programs. Following this overview, I will present research evidence as to their effectiveness, and end with results of two meta-analyses on bullying prevention research.

Overview of Bullying Prevention Programs

Partially because bullying has been implicated as a cause of lethal school violence, and partially because bullying creates a whole host of problems for victims and the school environment, numerous anti-bullying programs have been developed. The first and perhaps most recognized worldwide was developed by Dan Olweus in Norway in the 1970s (Olweus 1978). Like others, the *Olweus Bullying Prevention Program* takes a developmental approach to bullying prevention, with different strategies aimed at elementary, middle, and high school students. There are school-wide, classroom, and individual components. The program begins with a school-wide questionnaire to assess the prevalence of bullying at the school. In addition, a daylong faculty meeting focuses on the problem, solutions, and the formation of a coordinating committee to work on bullying prevention. At the classroom level, teachers enforce rules against bullying and regularly discuss bullying with their students. Individually, students identified as bullies or victims and their parents receive interventions. Teachers, counselors, psychologists, social workers, or others may be involved in these interventions. The Olweus Bullying Prevention Program has been used throughout the world. Studies of this program have been conducted in Australia, Canada, Cyprus, Finland, Japan, the Netherlands, Norway, Spain, and the United States (Kyrikides et al. 2006).

Another program that has been used to address bullying in school is Promoting Alternative Thinking Strategies (PATHS). This program was developed to promote pro-social skills, foster positive emotional development, and develop conflict-resolution skills (Greenberg et al. 1998). Although it was not developed specifically to address bullying, the program curriculum offers students skills and strategies to resolve conflicts in an appropriate way, thereby limiting bullying behaviors. Specifically, the program is aimed at elementary students, beginning in Kindergarten and lasting through the fifth grade. All students in a school receive the instruction, which focuses on "emotional literacy, self-control, social competence, positive peer relations, and interpersonal problem-solving skills" (Blueprints Model Programs Fact Sheet, p. 3). The majority of the program is delivered by teachers in the classroom, although there are some materials for parents to use in the home.

There are many additional programs available that purport to decrease the incidence of bullying. This is not by any means an exhaustive list of anti-bullying programs that are currently available. Indeed, such a list would include hundreds of different programs, many of which have not been scientifically tested. Two of the more popular programs are *Responding in Peaceful and Positive Ways* (Farrell et al. 2001), which targets social skills and responding appropriately to conflict, and *Expect Respect*, which is a program designed to address bullying, sexual harassment, and teenage dating violence (Rosenbluth 2002).

Effectiveness Research

Research that seeks to ascertain the extent to which an intervention works can take one of two primary forms. *Efficacy* research typically occurs in a very controlled environment, so many or all potential confounding variables are controlled. The emphasis in efficacy studies is on internal validity, and most commonly, the intervention is compared to a no-treatment control. The implementation of the intervention generally adheres to a treatment manual. Significant results indicate that a given intervention, under controlled conditions, leads to better outcomes than the no-treatment control. The problem with efficacy research is that the tightly controlled conditions do not adequately represent what occurs in the real world. Thus, *effectiveness* research attempts to assess the extent to which an intervention works when delivered to people in a real-world setting. The central concern with this research is

on external validity. Significant results indicate that the intervention appears to have resulted in changes in the outcome variable(s). The cost of this emphasis is that significant results may be due to a host of confounding variables, most of which cannot be controlled. The preponderance of research on bullying prevention programs is of the effectiveness type.

The Center for the Study and Prevention of Violence at the University of Colorado reviews research on various violence prevention programs: (http://www.colorado.edu/cspv/index.html). The Center has developed a set of Blueprints for Violence Prevention, which are interventions that are empirically supported. The research is evaluated for "evidence of deterrent effect with a strong research design, sustained effects," multi-site replication, and other factors, such as cost-benefit ratio. Based on these criteria, programs are rated as either *model* or *promising*. If the research fails to support a given program, it is considered ineffective. One program has been included as a model program specifically for bullying prevention (the Olweus Bullying Prevention Program). An additional model program for violence prevention is the PATHS program, although this does not target bullying per se.

The *Olweus Bullying Prevention Program* has received considerable international research support over the years. Many of these studies have been field-based, starting with the original nation-wide sample in Norway. Students in the original study reported a 50% reduction of bullying and being victimized by bullies. In a follow-up study in Norway, results were not so large, with 21–38% reductions in student reports of bullying. Studies have also been conducted in the USA and Great Britain, with percentage reductions in bullying that are similar to the latter findings.

One limitation of the *Olweus Bullying Prevention Program* is that data are comprised of self-reports from students. There are many factors that may impact the accuracy of self-reports of any phenomenon, including social desirability/undesirability, demand characteristics, or increased knowledge or awareness of the topic. Social desirability entails painting oneself in a positive light in order to please others. After having spent considerable time talking about bullying in the classroom, some students may underreport their involvement in these behaviors in order to appease their teachers. Social undesirability occurs when respondents deliberately overreport their engagement in deviant behaviors. Cornell (2006) provides some interesting data to support this overreporting phenomenon, especially among early adolescents. Demand characteristics are one type of participant bias, and are cues that participants identify that influence them to respond to survey items in a particular way (Heppner et al. 2008). Students completing a bullying survey can discern what the researchers are assessing, and can thus respond in ways that they believe the researchers desire. Finally, some behaviors included in the program may not have been thought of as bullying, such as name-calling. As students' knowledge of bullying increases, their responses to the survey may change from pre- to post-test.

A second limitation is that the definition of bullying that is provided to students on the questionnaire is very long and complicated (Cornell 2006). According to Cornell (2006, p. 84), the definition of bullying given to students is:

A student is considered being bullied when another student or several other students

- Say mean and hurtful things or make fun of him or her or call him or her mean and hurtful names
- Completely ignore or exclude him or her from their group of friends or leave him or her out of things on purpose
- Hit, kick, push, shove around, or threaten him or her
- Tell lies or spread false rumors about him or her or send mean notes and try to make other students dislike him or her
- And do other hurtful things like that

These things may take place frequently, and it is difficult for the student being bullied to defend himself or herself. It is also bullying when a student is teased repeatedly in a mean and hurtful way. It is not called bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two students of about the same strength or power argue or fight.

As Cornell clearly articulated, "[t]his is a long and complex definition to expect students to comprehend and apply with precision" (p. 84). Such a definition may be confusing, and may lead to increased error variance in children's responses.

In summary, there has been much research to support the effectiveness of the *Olweus Bullying Prevention Program*. Nevertheless, there are some methodological

shortcomings to much of this research. As researchers continue to investigate the effectiveness of anti-bullying programs, it is expected that the methodological sophistication will improve, thereby enhancing our confidence in the empirical outcomes of such programs.

Promoting Alternative Thinking Strategies (PATHS) is a program aimed specifically at reducing aggression by strengthening socio-emotional capacities. The PATHS program was not developed to specifically address bullying, but the intended outcomes are to decrease the sorts of behaviors seen among bullies. For example, as previously stated, target competencies include increasing students' emotional literacy. There is some evidence that students who engage in reactive bullying misinterpret others' emotional cues; neutral emotions or behaviors may be seen as negative or aggressive (Bradley 2007). Self-control also has been implicated as lacking among some bullies, and the PATHS program aims to enhance this among students. Other targets, such as building positive peer relations and strengthening interpersonal problem-solving, also may be deficiencies among some students who bully.

The Center for the Study and Prevention of Violence from the University of Colorado has classified the PATHS as a Blueprint program. In their review of the literature, they found that compared to children in a control condition, students who received the curriculum were significantly higher in self-control, understanding and recognition of emotions, tolerance for frustration, ability to use appropriate conflict-resolution skills, and skills related to thinking and planning. In addition, students in the treatment condition showed significant decreases over control students in symptoms of anxiety, sadness, and depression; and conduct problems (these latter findings were reported both by teachers and students).

Thus, from this essay, both the *Olweus Bullying Prevention Program* and *Promoting Alternative Thinking Strategies* meet the criteria for Blueprints programs. Research has shown that students receiving either program are significantly less likely to engage in bullying and related behaviors than those not receiving either program. These results have been replicated across settings and with different researchers. In the following section, I will review results of two meta-analytic studies that have examined the research on bullying prevention programs.

Meta-Analyses

Meta-analysis is a method of statistically analyzing a body of previously conducted research by calculating an average effect size across these studies. Mertens (2010) stated that meta-analysis synthesizes "the existing research [and] uses effect sizes as a way to standardize outcomes and facilitate comparison across studies" (p. 422). Essentially, an effect size is the difference between the treatment group and the control group, represented as a standard deviation. "Thus, an effect size of 0.5 means that the two means are separated by half a standard deviation" (Mertens 2010, p. 422). Statisticians indicate that average effect sizes may be small ($\leq$0.20), medium ($\sim$0.50), or large ($\geq$0.80) (Mertens 2010).

There have been two recent meta-analyses of bullying interventions (Ferguson et al. 2007; Merrell et al. 2008). Each will be described in some detail here, with attention given to the inclusion/exclusion criteria and major findings. In addition, strengths and limitations of each will be addressed. The order in which the articles are discussed was determined by the date of publication.

Ferguson et al. (2007). The purpose of the Ferguson et al. study was to assess the effectiveness of anti-bullying programs. *Inclusion criteria* were:

- Studies that had been published between 1995 and 2006.
- Outcome variables included bullying or aggressive behavior in the school setting.
- Studies needed to include a control or contrast group (post-test only designs were excluded).
- Interventions needed to be in the schools.
- Studies were published in peer-reviewed journals.

The final analysis contained 42 published articles, representing over 34,000 participants. Several potential moderator variables were coded from the dataset, including grade level of the intervention; whether the sample consisted of at-risk students, or were aimed at the general school population; and whether the dependent variables assessed violent behavior or other bullying behaviors, such as teasing.

Across all studies, the average effect size was.12; recall that an effect size of 0.2 or less is small. The authors conclude that this small of an effect is likely to be "too small to be practically significant or noticeable" (Ferguson et al. 2007, p. 408). The lowest effect

size (0.08) occurred for studies that took place in middle schools; the largest effect size (0.15) occurred for studies that took place in elementary schools. When assessing the impact of the moderator variables, it was found that only at-risk status significantly predicted effect size (p. 409). Thus, based on these findings, Ferguson et al. conclude that anti-bullying programs may best be directed at children who are at-risk for engaging in bullying behaviors. Ultimately, results of this meta-analysis indicate the anti-bullying programs in schools are not practically effective in reducing aggressive and bullying behaviors.

There are two primary limitations of this research (Ferguson et al. 2007). The most glaring is that the articles used for the meta-analysis are not indicated in the article. Comparison with other meta-analyses is therefore not possible. Second, only articles from peer-review journals were included, and although this may strengthen the results, it is not exhaustive. Additional research may have been reported in non-peer-review journals, in book chapters, and in doctoral dissertations.

Merrell et al. (2008). Adding to the literature, Merrell and colleagues sought to examine studies that focused on smaller segments of the school as well as the entire school. Moreover, they included studies published over a 25-year period rather than the 10-year period of Ferguson et al. (2007). *Inclusion criteria* were:

- Studies were published between 1980 and 2005.
- The studies needed to make use of either an experimental or quasi-experimental design.
- Interventions targeted bullying behaviors (broadly defined to include roles of bully, victim, bystander, defender, or enforcer).
- The intervention needed to be primarily oriented toward bullying (rather than another target with bullying included as a secondary aim).
- Statistical results needed to be reported in a way that allows for meta-analysis (i.e., means, standard deviations, etc.).
- Studies were reported in peer-review journals, book chapters, or doctoral dissertations.

The final analysis included 40 studies, representing over 15,000 participants. Studies had been conducted in several different countries, including Belgium, Canada, UK, Italy, Norway, and USA. Outcome measures included student self-report, teacher self-report, teacher report of the child's behavior, peer report, and school discipline records (p. 30).

The authors reported average effect sizes for multiple classification variables, with as many as 10 of the 40 studies and as few as one study comprising the data for each. Across these 28 classification variables, the average effect size was not reported. However, they ranged from –0.03 (for peer report of identified victims) to –3.81 (teacher report of student behavior/emotional problems). Note that a negative effect indicates that the program resulted in a negative outcome.

Merrell et al. (2008) concluded that many of the effect sizes were too small to be meaningful (17 of the 28 reported). However, meaningful effects were found for strengthening social competence, peer acceptance, increasing teachers' knowledge of effective practice, teacher's efficacy expectations about their intervention skills, and teachers' behavior in responding to bullying. There were also some interventions that were linked to negative effects, such as teachers' reports of students' behavior or emotional problems. While some results appear promising or even significant, the number of analyses that were based solely on one or two studies renders the picture rather dubious. Perhaps this study would have provided a clearer understanding of the effectiveness of bullying intervention programs had the authors conducted fewer analyses with larger numbers of studies in each.

This research (Merrell et al. 2008) addresses two of the limitations of the Ferguson et al. (2007) study, namely, the articles used for the analyses were included in the manuscript, and sources other than from peer-reviewed journals were included. However, two additional limitations are apparent in this research. First, although the time-frame was expanded from 10 to 25 years, and the potential database was enlarged by including sources other than those from peer-reviewed journals, the final sample is actually smaller than the sample in the Ferguson et al. (2007) study ($n = 40$ vs. $n = 42$). While this discrepancy may be due to restricted inclusion criteria, the smaller number of articles is surprising. Second, the authors conducted multiple analyses of effect sizes, with half (14/28) being represented by only one study. Rather than being a meta-analysis, these results are merely reporting the effects of single studies, thereby calling into question the validity of the findings.

Conclusions

While numerous interventions have been developed to curb bullying in school, the research results on these programs are complicated at best and less than promising at worst. Many studies have shown that specific and even conglomerated interventions/programs effectively decrease incidents of reported bullying in schools. Moreover, these programs also appear to be effective when looking at students' knowledge and awareness of bullying behaviors. However, other research has shown that either the effects are too small to be meaningful (Ferguson et al. 2007), and may even be harmful to students when implemented (Merrell et al. 2008). At this time, it is safe to conclude that schools need to address the problem of bullying, but that implementation of a packaged program without integrating the specific needs and culture of their school may not yield the desired results.

Bullying continues to be the most closely studied aspect of school violence. However, it has been shown to be only one of many factors that contribute to school violence. Some initial research has examined some of these other factors. For example, Daniels et al. (2010) studied averted school shootings and found that breaking the code of silence through forming meaningful connections with all students is a promising avenue for further investigation. As new ways are searched to decrease school violence, one must look beyond the simple explanations and include all identified contributing factors and their interactions

Cross-References

▶ Bullying Risks and Consequences

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Bullying Risks and Consequences

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Considerable societal and research interest has centered on the nature and consequences of bullying during

the period of adolescence. Bullying is a well-known phenomenon that involves youths' repeated aggressive behavior meant to hurt another, physically or mentally, and to assert power over them. Bullying is recognized as pervasive in peer groups and has been identified as occurring across a wide range of societies (for a review of bullying in 66 countries and regions, see Due and Holstein 2008). It also is known as having potentially drastic consequences for youth (e.g., posttraumatic stress disorder, see Mynard et al. 2000), and can have dramatic effects even later in life (e.g., suicide, see Klomek et al. 2010). The recognition of its significance has contributed to important efforts to reduce its prevalence and address its consequence (Vernberg and Biggs 2010). These efforts, such as zero-tolerance policies (Espelage and Swearer 2003), have become increasingly popular and, importantly, also problematic as researchers begin to have a better understanding of the nature of bullying and its consequences. This essay focuses on those understandings.

Despite an increase in the social recognition that bullying is an important phenomenon that needs to be addressed, bullying actually may take diverse forms that complicate efforts to define and even recognize the full range of its manifestations. When bullying was first recognized as an important area of research, researchers did identify several of its score components. Most notably, a leading researcher in this area, Olweus (1993), defined bullying as a behavior that, over time, exposes a child to intentional inflictions of injury or discomfort by one or more children. These intentional inflictions could be verbal or physical and vary by degree of intensity. Olweus also made the distinction between direct and indirect bullying, with direct bullying considered as direct attacks on an individual, while the latter (sometimes referred to as relational aggression) uses social techniques to isolate and exclude individuals from others. At its core, bullying was deemed as involving aggression that is felt as aggression.

Researchers may agree on the above aspects of bullying, but there is considerable disagreement on what would constitute a bullying relationship. According to Olweus (1993) and others (Pellegrini 2002), three factors must be present to constitute a relationship as a bullying relationship: intent to harm, a power differential, and repetition of negative actions. Other researchers point out, however, that some bullies may not intend to harm but, instead, simply view their actions as fun or funny (see Scaglione and Scaglione 2006). Likewise, bullying can involve hazing, which involves the coercion of peers into performing a dangerous or humiliating act as a rite of passage, with that rite accepted by most who are hazed as a necessary step toward their belonging to a particular group (Thomas 2006). For example, in a study of adolescent athletes, over 17% had been hazed, and 86% said that the acceptance was worth the bullying; and while only 3% perceived their hazing experience as dangerous, 22% actually had engaged in potentially dangerous behaviors (Thomas 2006). Yet another form of bullying, cyberbullying, does not fit neatly into traditional views of bullying, but it can be equally important to consider. Cyberbullying victims often do not know the identity of their attacker (Kowalski and Limber 2007), and one single instance of bullying can have unintended consequences leading to repeated victimization as information can spread quickly and with great consequences (Scaglione and Scaglione 2006). Equally at variance with traditional definitions is the finding that the dichotomous categorization of bully and victim leads to inappropriate assumptions; bullying appears to be much more of a continuum in which adolescents might be a bully, victim, bully/victim, and/or bystander (Espelage and Swearer 2003). Bullying, then, increasingly is recognized as a complex phenomenon that can occur at various levels of intensity, with a varying severity of consequences, and within a wide variety of relationships.

Researchers have identified important characteristics of bullies. Bullying, at least the traditional view of it, has been viewed as an issue relating to early adolescents. Bullying typically peaks in early adolescence and decreases in frequency as children mature through adolescence; but this is not to say that bullying cannot take other forms when youth transition out of adolescence and take on different roles with different groups. Several studies also show that girls make greater use of indirect aggression, likely due to their socialization, while boys tend to use direct aggression; but some studies have failed to show gender difference in the use of relational aggression (see Rys and Bear 1997; Espelage et al. 2003). Researchers also find anger to be a significant correlate to bullying (Espelage and Swearer 2003), as is hyperactivity (Gianluca 2008), poor academic performance (Cook et al. 2010), gang

involvement, bringing a weapon to school, fighting in school, skipping or being suspended from class (Fitzpatrick et al. 2007), low self-esteem, and family teasing about appearance (Jankauskiene et al. 2008). Other researchers have found that bullies typically are influenced by negative community factors, perceive school as having a negative environment, and have a negative attitude about others (Cook et al. 2010). These studies highlight a wide variety of factors that focus on the negative environments in which bullies find themselves as much as on the individual bully's own problematic characteristics and the difficult situations that they create.

As expected, research about bullies' characteristics does reveal conflicting findings, perhaps because studies may be examining different types of bullying. Rather than finding low self-esteem and poor social skills as key factors, for example, Olweus (1993) found that bullies tend to have average to high self-esteem and be more popular than their victims, but they also tend to have positive perceptions of violence, be impulsive and dominating, and be more physically strong. But, that is not to say that some bullies do not have low self-esteem or otherwise problem relationships. Passive bullies, those who participate in bullying but do not initiate it, may include anxious and insecure children who follow bullies who have healthy self-esteems (Olweus 1993). Other researchers also have noted that bullies have problematic social skills, such as the tendency to use more destructive strategies to resolve their problems (Stevens et al. 2002). Yet other studies report links between bullying and extraversion, psychoticism, and neuroticism (Connolly and O'Moore 2003). Findings also reveal that depression may cause higher levels of aggression in adolescents (Austin and Joseph 1996), but mixed results emerge regarding the role of anxiety (Espelage and Swearer 2003). The wide range of findings has led recent research efforts to emphasize the heterogeneous nature of bullies and the complex nature of bullying in peer groups (see Peeters et al. 2010). Even though these new lines of research can shed light on various findings, they also are remarkable for their diversity of findings as well as for their general highlighting of problems in bullies' mental health and personal relationships.

Research regarding bully/victims does reveal important consistencies. Although those consistencies may be due to the general lack of research on this group of offenders/victims, existing results are quite clear. Bully/victims often have difficulty controlling their excess energy, causing irritation and tension with their annoying behaviors (Olweus 1993). As a result, they are often the targets of their peers. Bully/victims bully as a means to alleviate their anger and desire for revenge, instead of as a means to gain respect or power. Adolescent bully/victims have been found to be more likely than pure bullies to internalize problems, have peer relational problems, and legitimize antisocial behavior (Marini et al. 2006). Bully/victims also tend to have more aggression than pure bullies, while also having more negative affect than pure victims.

Research also reveals quite common characteristics of victims of bullying. Passive victims are usually more anxious, insecure, cautious, and quiet than their peers. Research has shown a threefold increase in the likelihood of victimization if a child has low self-esteem and appears unhappy (Jankauskiene et al. 2008). Obesity also has been noted as an important risk factor, as well as, for boys, "body anxiety" that leads youth to be afraid to get hurt. Importantly, weight also influences the type of victimization; e.g., underweight boys and girls are, respectively, more likely to be physical and relational victims, while overweight boys and obese girls are more likely to be victims of verbal bullying (see Wang et al. 2010). Self-perceptions of physical attractiveness also influence victimization, with males who perceive themselves as less physically attractive than their peers reporting that they had been victimized more, but with those who view themselves as more physically attractive reporting that they had experienced more sexual bullying as well as more bullying of others (Cunningham et al. 2010). Indicators of being bullied may include loss of interest in school, a drop in grades, excuses to avoid school, withdrawal, increased emotionality, change in appetite or sleep patterns, torn clothing or bruises, and the development of social and behavioral problems (Scaglione and Scaglione 2006). Despite these important findings, it is important to note that research has focused more on those who bully than on victims.

The focus on bullying, rather than those bullied, is highlighted by research and theories that seek to explain bullying. The bulk of theories focuses on

those who bully. Notably, several theories in this area focus on the importance of peers' influencing bullying. This research draws from a long line of research highlighting how adolescents' social behavior, particularly aggression, is highly influenced by peers. The homophily hypothesis, for example, posits that bullies tend to befriend peers who engage in the same level of bullying, and this peer group then reinforces bullying behavior; and this pattern has been found in the case of adolescent bullying (Espelage et al. 2003). In addition to peers, research has focused on family issues, and that research indicates links between bullying and parenting style and family life. For example, lack of family cohesion, inadequate parental supervision, family violence, hostile discipline techniques, poor modeling of problem-solving skills, and high levels of family conflict and drug use all correlate with aggression (Espelage and Swearer 2003). Other studies have found sibling bullying as quite common in bullies, while victimization by siblings common in bullied victims, with an important study finding that slightly over half of bullies victimized their siblings, while 77% of school bullied victims victimized their siblings (Duncan 1999). Studies also have focused on school characteristics. The social climate of schools has been shown to influence bullying behavior (Baker 1998). Schools with more parental involvement, high academic standards, and positive disciplinary actions have been shown to have less bullying (Ma 2002), and these positive environments do deter the development of internalizing or externalizing behaviors among some youth at risk (Kuperminc et al. 2001). While there is limited research relating to teachers' contributions to bullying, some studies have found that teachers more likely report lower rates of bullying than their students (Stockdale et al. 2002), are not always able to identify bullies (Leff et al. 1999), and do not feel confident in their ability to deal with bullies (Boulton 1997). As these findings show, individual characteristics, families, and school environments all play important roles in the creation and maintenance of bullying (see also Cook et al. 2010).

The effects of bullying are increasingly well documented, and, like bullying itself, they can vary considerably. In the short term, bullying may cause shame, depression, embarrassment, insecurity, low self-esteem, and school phobia (Scaglione and Scaglione 2006). Bullying also can cause psychosomatic symptoms, such as headaches and stomachaches resulting from prolonged stress and anxiety. In the long term, effects may include future violence, depression, and anxiety (Scaglione and Scaglione 2006), as well as negative self-evaluation (Roth et al. 2002). For girls, experiencing bullying links to a decrease in self-esteem, life satisfaction as well as mental and physical health; it also links to an increase in drug use (Gruber and Fineran 2007). Importantly, research also points to important consequences for those who bully. For bullies, poor school performance, use of drugs and alcohol, and gang involvement may be short-term consequences. While bullies may be popular and well liked (Olweus 1993), they often lack close, long-term peer relationships (Scaglione and Scaglione 2006). Habitual bullying also may lead to participation in criminal activity. All around, then, bullying is problematic for both offenders and victims (see Nansel et al. 2001).

Existing research on bullying reveals important findings, and those findings confirm the complexity of adolescents' relationships and individual development. While there is considerable exploration into the relationship between the bully and the victim, a broader examination may be required as the complexity of bullying and victimization becomes evident. The identification of multiple factors that influence the creation, maintenance, and consequence of bullying for both victims and offenders has important implications. Those factors clearly have implications for streamlining intervention and prevention programs. Those programs are likely to reach effectiveness only with a clearer understanding of the multiple dimensions of bullying.

Cross-References

▶ Bullying and School Violence Interventions

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Burdens of Proof in Juvenile Courts

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When a state intervenes in offenders' lives and seeks to place them under the state's control, the state must be

able to prove that its actions are warranted and not arbitrary. For example, different stages of criminal procedure require those who act on the state's behalf (e.g., police and judges) to be reasonably certain of the facts supporting their actions. This is important from the beginning to the end of state intervention, with the needed level of certainly varying based on the nature of that intervention. The required level of certainty, framed as the requisite burden of proof, the state must meet in order for it to intervene is one of the most basic protections individuals have against erroneous state decisions affecting them. Despite its importance, one of the key issues relating to adolescents is that it was not always clear what protections they would have against the state, including the burden of proof the state would need to be held to before it could find them responsible for delinquent actions. In the United States, it was only relatively recently, in *In re Winship* (1970), that the Supreme Court explicitly addressed the issue.

Theoretically, there are three levels of doubt that a legal system can require before it could be convinced of the appropriateness of its decision regarding the probability that propositions are true: preponderance of the evidence, clear and convincing evidence, and beyond a reasonable doubt (see Levesque 2006). Preponderance of the evidence simply means more probable than not, which some interpret as more than a 50% chance of something being true. The clear and convincing standard is the one typically used in civil cases, and it is one that requires more certainty than the preponderance but less than beyond a reasonable doubt. Beyond a reasonable doubt is the highest standard, which is that a person of a reasonable mind would not have "reasonable doubt" that a purported case is true. For reasonable doubt, there could be doubt but not so much as to convince a reasonable person that a fact/situation is not as it is purported to be. The rationale for the different standards is that the more intrusive a state action would be, then the more the state must bear the risk of error. Thus, if the risk of error is minimal, there is no need to worry as much about the infringement and a lower burden of proof would suffice. If the risk of error is great (e.g., wrongful incarceration), then the state would bear the costs and take the risk that offenders who are factually guilty not be found legally guilty if it cannot be proven to a high level of certainty. Legal systems, then, seek to calibrate the appropriate burden of proof that would be needed, and then seek to find ways to ensure that the burdens are actually applied in given situations.

Given that juvenile justice systems are meant to be civil systems, and that they are meant to provide courts with flexibility needed to rehabilitate youth, the issue arose whether there would be a need to find delinquents responsible under a low, middle or high burden of proof. In addressing the issue directly in *In re Winship* (1970), the Court reached a quite reasonable conclusion. It held that the beyond a reasonable doubt standard applies during the adjudicatory stage when a juvenile is charged with an act that would constitute a crime if committed as an adult. Thus, the case assumes that close cases should be decided in favor of the individual rather than the government.

In *In re Winship* (1970), a 12-year-old boy had stolen $112 from a woman's pocketbook left in a locker room. The petition charged the juvenile with the alleged act that, if done by an adult, would constitute the crime or crimes of Larceny. At the adjudicatory hearing, the judge acknowledged that the proof might not establish guilt beyond a reasonable doubt, but rejected appellant's contention that such proof was required. Instead, the judge, following relevant state law, found guilt based on the preponderance of the evidence standard. During a subsequent dispositional hearing, the juvenile was ordered to be placed in a training school for an initial period of 18 months, subject to annual extensions of his commitment until his 18th birthday – 6 years in this case. The juvenile lost on appeal, until his case reached the Supreme Court. The Court reversed. It did so by ruling explicitly that due process protects the accused against conviction except upon proof beyond a reasonable doubt of every fact necessary to constitute the crimes charged.

The Court provided many rationales supporting the need to require proof beyond a reasonable doubt in criminal cases. The accused have immensely important interests at stake, namely the possibility that they may lose their liberty upon conviction and the certainty that they would be stigmatized by the conviction. The high standard also was deemed necessary to command the community's respect and confidence in applications of the criminal law. There should not be doubt that innocent individuals are condemned and confidence that the government will find guilt only with properly finding guilt with utmost certainty. It found that the same considerations that demand extreme

caution in fact-finding to protect innocent adults apply as well to innocent children. The Court rejected the claim that a lower standard would be permissible because the juvenile court is essentially a civil court. It also rejected the standard on the grounds that it was needed to help children, not punish them. The Court ruled that, even with good intentions, children can be found delinquent and be subjected to the loss of liberty for years is comparable in seriousness to a felony prosecution. It also noted that the higher standard would not affect the informality, flexibility, or speed of the hearing at which fact-findings take place. The Court reasoned that juveniles may well be engaging in a general course of conduct inimical to their welfare that calls for judicial intervention, but that intervention must not subject children to the stigma of a finding that they violated a criminal law and to the possibility of institutional confinement on proof insufficient to convict them were they adults. The Court flatly rejected claims that would protect youth less than adults.

Winship is credited with raising the bar limiting the ability of the state to infringe on adolescents' rights and, in doing so, enhancing the due process rights of juveniles. There clearly is no dispute about that, as the Court clearly finds that youth should not be treated differently from adults when it comes to deciding their sentences. *Winship*, however, did much more than that. One of the important points about *Winship* is that it established a broad constitutional principle that eventually had import for adults' rights claims. *Winship* announced the fundamental due process principle that proof beyond a reasonable doubt is mandated both in the adjudicatory stage of a delinquency proceeding as well as in criminal cases. In fact, much of the Court's opinion had focused on criminal cases and the need for a higher standard in those cases even before reaching issues relating to delinquency proceedings. The Court would confirm that stance 5 years later, in *Mullaney v. Wilbur* (1975), which required states to prove the element of criminal intent beyond a reasonable doubt. Given these developments, it would be difficult to argue that *Winship* is not strong precedent that stakes a strong claim for the due process rights of juveniles as it puts them firmly on par with those of adults.

Cross-References

► Juvenile Court Rationales and Models

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