A

Abandonment

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Although children who are abandoned tend to be infants or young children (who are called foundlings), abandonment still is important to consider when studying the period of adolescence. Abandonment potentially relates to adolescents in two major ways. First, abandonment is relevant to adolescents in that they can be abandoned or in that the feeling of being abandoned leads youth to leave their parents by, for example, running away from their homes (Thompson et al. 2008). Second, abandonment is relevant to adolescents because they may be at risk for abandoning their own children. These propositions may be true but, regrettably, research on abandonment is considerably inadequate and does not support them conclusively. For example, researchers and policy makers lack reliable statistics regarding how many children are abandoned, their basic characteristics and situations, as well as the characteristics of those who abandon them. Even the most comprehensive federal statistics reporting on the incidence and common features of child maltreatment do not report abandonment rates or characteristics (U.S. Department of Health and Human Services 2009). Thus, studies do not have a firm grip on the number of cases involving abandonment, but they do provide a sense that it is an important issue that may affect adolescents.

Abandonment turns out to be a much more complicated legal and social concept than might be initially imagined. Legally, children are abandoned when their parents leave them without the supervision of an appropriate person for what is deemed to be an inappropriate amount of time. Typically, the parents do not intend to return and relinquish their control over the child's care; and the child is abandoned outside of legal adoption. As with other types of child maltreatment, abandonment is regulated by both civil and criminal law. Child abandonment is a criminal offense in every state; but what constitutes abandonment varies from one state to another. Variations focus on what the parents do, the child's characteristics, and the penalties. Much variation exists in the civil context as well. Variation in this context also focuses not only on what parents do as well as on the child's characteristics and situations but also on the rights of parents involved and the types of resources that might be provided to the parents and families. In the civil context, abandonment also arises when a court decides to terminate the natural rights of parents on the grounds of abandonment in order to permit adoption or other state interventions on behalf of the child. Importantly, pursuing abandonment in criminal or civil contexts has consequences, especially in terms of protections individuals would have and what would be appropriate outcomes for the parents as well as the children: criminal justice systems would aim to prosecute and punish parents in ways that might remove them from their homes while civil, child welfare systems would aim to consider, in appropriate cases, the potential rehabilitation of parents as well as reunification with their families.

The law remains equally complicated when dealing with abandonment from the perspective of adolescents who might be the ones to abandon their own children. Adolescents who have children may be at higher risk of abandoning their infants, and this supposition has led to important legal developments relating directly to the legal regulation of abandonment. Although adolescents may be deemed at higher risk, research has yet to provide supporting evidence to that effect. It has been adolescent (and other young) mothers, however, who have tended to attract attention from society and policy makers. That attention recently contributed to the development of "Safe Haven Laws." Every state now

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has laws permitting parents to abandon their children at a safe place, such as with fire station departments, emergency medical personnel, hospitals, police departments, and in some cases, churches (Pollock and Hittle 2003). Although these laws have been described as permitting parents to abandon their children anonymously and without fear of prosecution, that description actually may not be the case depending on state laws. Again and as with all other areas of child welfare and criminal law, laws can be quite complicated and can vary from state to state.

State laws vary considerably in their approaches to regulating safe havens for children who would be abandoned. They vary in the manner that they restrict the age of babies who can be legally relinquished, vary in terms of who they allow to relinquish the children, and vary to the extent that they assure anonymity. Equally importantly, they vary in the specific protection granted to those who seek to relinquish, for example, if a child has been abused; the case is likely to be treated as an abandonment rather than relinquishment, and the relinquisher can be prosecuted for their abusive actions. States also vary in terms of who can accept the baby and the protections that they would get from liability. In addition, states vary in terms of the rights of the relinquishing parent (e.g., whether they can change their minds) as well as the rights of the children (e.g., whether their medical history can be taken by the relinquisher). The rights of fathers also vary, with some states requiring a search for the natural father. Although it may be a general rule that safe haven laws permit abandonment without fear or prosecution, then, what is permitted certainly varies and that variation highlights well some of the important considerations that can arise in cases of abandonment.

In addition to their remarkable variation, safe haven laws are notable for the extent to which they have attracted considerable controversy as well as their relative ineffectiveness (Sanger 2006). Although they have helped assuage fears of children being killed or otherwise harmed by parents who no longer wanted them, available evidence has yet to support their effectiveness (see Pollock and Hittle 2003). The legal responses also have been seen as problematic in that they do not seek to identify and serve the young women who feel isolated and lack access to resources and support in times of crisis leading to abandonment. This lack of a broader perspective makes this area important to the study of adolescence as it necessarily involves the need to address broader issues relating to adolescent sexuality and pregnancy, enhance communication among youth, families, and communities, and develop supportive networks for adolescents in need. These broader issues go to the core of the study of adolescence as well as the core of efforts that can eventually address abandonment and its consequences.

Cross-References

► Runaway Youth

References

Pollock, K., & Hittle, L. (2003). *Baby abandonment: The role of child welfare systems*. Washington, DC: Child Welfare League of America.

Sanger, C. (2006). Infant safe haven laws: Legislating the culture of life. *Columbia Law Review, 106*, 753–829.

Thompson, S. J., Bender, K. A., Lewis, C. M., & Watkins, R. (2008). Runaway and pregnant: Risk factors associated with pregnancy in a national sample of runaway/homeless female adolescents. *The Journal of Adolescent Health, 43*(2), 125–132.

U.S. Department of Health and Human Services. (2009). *Child Maltreatment, 2007*. Washington, DC: U.S. Department of Health and Human Services.

Abnormality

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Conceptions of abnormality are at the center of the study of mental health and healthy development, both generally and as applied to the adolescent period. Yet, what constitutes abnormality continues to be the subject of considerable debate and controversy. A close examination of the study of abnormality and disorder reveals that there are many ways to approach the notion of abnormality, all of which have their limitations and strengths.

Controversies surrounding conceptions of disorder and abnormality emerged quite forcefully a few decades ago, especially in popular culture, as they were sparked by the writings of Thomas Szaz (1971, 1974) who argued that mental disorders could be conceived as a function of subjective societal values and were, in essence, myths. Although his model was unable to

explain why some socially disapproved beliefs were not deemed pathological (such as rudeness or some forms of racism), his conceptualization did focus on a key point of abnormality, which is that abnormality at least partly constitutes conditions deemed undesirable and that societal conditions figure prominently in determining what should be deemed undesirable in the first instance. This approach was championed by many who questioned whether the concept of mental disorder actually existed, and viewed it as a myth that justified the use of medical power to intervene in socially disapproved behavior (see Foucault 1964/1965; Sarbind 1969). This skeptical view, having made important points, still left much to be examined, as highlighted by other efforts to define and understand abnormality.

One of the most expected ways to conceptualize abnormality relies on the statistical conception of normal. Cohen (1981) provided the most authoritative statement on a statistical approach to disorder in which he viewed disease as a quantitative deviation from the statistical norm. The approach has considerable merit, as statistical deviations are critical to several definitions of disorders, such as intelligence. Yet, statistical deviation above the norm may be viewed as healthy, and even arguing that deviation must be in the negative direction to be deemed abnormal in the sense of being a disorder remains problematic since some behaviors can be statistically deviant but still not disorders (such as immoral or criminal behaviors). Still, disorders often are statistically deviant, and determining what would constitute a disorder would require imposing either subjective or objective judgments on that statistical deviance.

Another approach to determining what constitutes abnormality relies on the notion that it simply is what health professionals treat (see Taylor 1976). This approach has some appeal in that it takes a pragmatic approach focusing on conditions that elicit interventions from mental health professionals, centers on patients and professionals, and may circumvent issues relating to broader societal value judgments. Still, the approach has its limitations in that many conditions treated by professionals (e.g., pregnancy or parent–child conflicts) may not be pathological yet still evoke a need for professional assistance. Perhaps even more problematic, this approach runs the risk of having both patients and professionals being wrong about what constitutes a disorder and, equally problematically, it can lead to not viewing disorders as disorders until those in treatment view them as such. Thus, this approach may have considerable merit but it still lacks a general concern for broader societal or group judgments.

Other models focus less on enlisting social criteria and personal value judgments and more on invoking biological criteria. Some, for example, have argued that abnormality should be defined by relying strictly on such biological criteria derived from evolutionary theory (see Kendell 1975). These would include identifying as abnormal conditions that reduced one's life span or reduced reproductive fitness. Although this approach has the advantage of trying to be objective, it still necessarily relies on value judgments in determinations of what would be considered disadvantageous. The approach also encounters important limitations in that many disadvantages may be due to environments, and many disadvantages are tied to intrinsic conditions (males die younger than females) and not to disorders.

Yet another approach conceives of abnormality as harmful dysfunction. This approach (see Wakefield 1992) champions a view that takes into account social values in the concept of harm and more objective approaches through focusing on dysfunction. The approach seeks to distinguish conceptions of abnormality that are socially constructed from those that are arguably more scientific. Although the approach has considerable merit, it too is subject to limitations in that there are no clear cut definitions of dysfunction and adaptive functions, and there may not be clear dividing lines between normal and abnormal functioning.

Arguably, the most widely accepted view of abnormality and disorder comes from the *Diagnostic and Statistical Manual* (DSM), now in its 4th edition and published by the American Psychiatric Association (2000). The DSM's definition has been relatively unchanged since its third edition. Its criteria for disorder focus on notions of distress, disability, expectability, and dysfunction. The concept of disability is meant to capture behavioral and observable components while the notion of distress seeks to capture the more subjective and experiential aspects of mental disorder. The focus on expectability highlights a focus on statistical norms and what is likely within a normal range. The focus on dysfunction denotes a breakdown or disruption indicating a failure to perform functions,

which was meant to provide a more objective view of abnormality that resisted a focus on social value judgments. Although the DSM's approach brings together many others, it too has been widely criticized, as illustrated by studies highlighting different manifestations of mental disorders worldwide (see, e.g., Kleinman and Cohen 1997) as well as by commentaries highlighting the inherent problems with the use of terms like "dysfunction" to define disorder (see, e.g., Wakefield 1992) and arguing that the approach to diagnoses lacks sufficient clinical utility (see Andersson and Ghaderi 2006).

Controversies revolving around definitions of abnormality are likely to continue. They likely are to do so given the challenges of identifying clear criteria for abnormality and changing societal views of what can be deemed valued. Still, despite these controversies, researchers and theorists do tend to rely on overlapping criteria for what constitutes abnormality, a tendency that helps to account for the remarkable consensus that does exist regarding whether specific conditions could be deemed abnormal.

Cross-References

► Disease
► Normality

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders DSM-IV-TR.* Washington, DC: Author.

Andersson, G., & Ghaderi, A. (2006). Overview and analysis of the behaviourist critism of the diagnostic and statistical manual of mental disorders. *Clinical Psychologist, 10*, 67–77.

Cohen, H. (1981). The evolution of the concept of disease. In A. L. Caplan, H. T. Engelhardt Jr., & J. J. McCartney (Eds.), *Concepts of health and disease: Interdisciplinary perspectives* (pp. 209–220). Reading: Addison Wesley.

Foucault, M. (1965). *Madness and civilization: A history of insanity in the age of reason.* (trans: Howard, R.) New York: Pantheon (Original work published 1964).

Kendell, R. E. (1975). The concept of disease and its implications for psychiatry. *The British Journal of Psychiatry, 127*, 305–315.

Kleinman, A., & Cohen, A. (1997). Psychiatry's global challenge. *Scientific American, 276*, 74–77.

Sarbin, T. (1969). The scientific status of the mental illness metaphor. In S. C. Pond & R. B. Edgerton (Eds.), *Changing perspectives in mental illness* (pp. 1–16). New York: Holt, Rinehart & Winston.

Szasz, T. S. (1971). The sane slave. *American Journal of Psychotherapy, 25*, 228–239.

Szasz, T. S. (1974). *The myth of mental illness: Foundations of a theory of personal conduct* (Rev. ed.). New York: Harper & Row.

Taylor, F. K. (1976). The medical model of the disease concept. *The British Journal of Psychiatry, 128*, 588–594.

Wakefield, J. C. (1992). The concept of mental disorder: On the boundary between biological facts and social values. *The American Psychologist, 47*, 373–388.

Abortion Counseling

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Unwanted pregnancies leading to abortions are common life events, and they relate directly to youth. Approximately 22% of the 205 million annual pregnancies end in abortion (Sedgh et al. 2007), and in 2004 individuals less than 19 comprised approximately 17.4% of completed abortions while 32.8% were ages 20–24. Despite its prevalence, abortions raise a host of social and legal issues that challenge basic values and foster intense controversy. Indeed, researchers often charge that the scientific enterprise in this area of study is being manipulated and that research findings are being misrepresented to justify particular social agendas, especially efforts involving access to contraception and abortion (see Russo and Denious 2005). Those controversies likely will continue, especially as they relate to mothers' mental health outcomes relating to abortions, and particularly as they relate to adolescents and their status (with research noting varied outcomes and mostly focusing on adult women; see Major et al. 2009). Although controversies tend to focus on elective abortions, this essay examines all three main types of abortion – therapeutic, elective, and spontaneous abortions, and some of the important legal and clinical issues they might raise for adolescents.

Therapeutic and elective abortions typically are considered together, although they can be deemed considerably different. Therapeutic abortion is the deliberate termination of a pregnancy aimed at preserving the mental or physical health of the mother, preventing the birth of a lethally defective fetus, or reducing the number of fetuses in multiple conceptions to reduce health risks. Thus, an elective abortion is one done for any other reason. Over 90% of abortions occur during the first trimester, either utilizing surgical

or nonsurgical procedures. Vacuum aspiration may be used during weeks 6–12, and medicinal abortion between weeks 0–9. Surgical options available after the first trimester are dilation and curettage used during 12–15 weeks, and dilation and evacuation is used 15–12 weeks. Dilation and extraction, performed after 21 weeks, is largely illegal in the USA since the passing of the Partial-birth Abortion Ban of 2003, which the Supreme Court upheld in *Gonzales v. Carhart* (2007). The legal foundation of that case is important to consider given that it directly concerns many of the legal and policy issues relating to elective and therapeutic abortions, and those issues directly relate to counseling contexts.

In *Carhart*, the Court held that the partial-birth abortion ban did not impose an undue burden on the due process right of women to obtain an abortion. The Court did so by noting that the burden was not impermissible as framed under precedents assumed to be controlling, such as the Court's prior decisions in *Roe v. Wade* (1973) and *Planned Parenthood of Southeastern Pennsylvania v. Casey* (1992). *Roe v. Wade* had recognized that a right to privacy under the due process clause in the Fourteenth Amendment to the United States Constitution extends to a woman's decision to have an abortion, but it had noted that the right needed to be balanced against the government's legitimate interests for regulating abortions (protecting prenatal life and protecting the mother's health). Finding that the state's interests grew over the course of the pregnancy, the Court ruled in favor of permitting greater state regulation depending on the trimester of the pregnancy. That approach would be modified later to permit a right to abortion up to the point of viability, which is usually placed at 7 months (28 weeks) but may occur earlier. The Court adopted the viability approach in *Planned Parenthood of Southeastern Pennsylvania v. Casey* (1992).

In *Planned Parenthood of Southeastern Pennsylvania v. Casey* (1992), a deeply divided Court rendered a plurality opinion that recognized viability as the point at which the state interest in the life of the fetus outweighs the rights of the woman and abortion may be banned entirely except where it is necessary, in appropriate medical judgment, for the preservation of the life or health of the mother. The plurality opinion in *Casey* also crafted the rule that a restriction would be impermissible if it posed an undue burden on women's rights to seek an abortion, with the undue burden defined as a restriction that had the purpose or effect of placing a substantial obstacle in the path of a woman seeking an abortion of a nonviable fetus. Specifically in this case, the Court used the standard to find impermissible the need for spousal notifications but upheld the use of 24-hour waiting periods, informed consent, and parental consent requirements on the grounds that they did not pose undue burdens. The focus on informed consent was to ensure that women had fuller knowledge of what abortions were and parental consent requirements were efforts to ensure (with some exceptions) that parents were involved in the minor's decision-making. These provisions highlight the tension between a focus on individual rights and a focus on seeking to ensure that individuals make deliberate decisions.

The tension between individual rights and those of others who might have a stake in the abortion decision is worth highlighting in that it is particularly important for adolescents. As noted, the Court in *Planned Parenthood of Southeastern Pennsylvania v. Casey* (1992) had considered, among other provisions, the parental consent measure of an abortion statute. The statute provided that, except in a medical emergency, the informed consent of at least one parent (or guardian) was required before an unemancipated minor could obtain an abortion. The statute also provided a judicial bypass procedure, if neither parent gave consent, upon a finding that the young woman was sufficiently mature or that an abortion would be in her best interests. The Court ruled that a state may require a minor seeking an abortion to obtain the consent of a parent or guardian, provided that there is an adequate judicial bypass procedure. That approach confirmed what the Court had previously noted, in passing, in prior cases, most notably *Bellotti v. Baird* (1979). It was in *Bellotti* that the Court had noted criteria that could make for a constitutional bypass provision. The provision must allow the minor to bypass the consent requirement if she establishes that she is mature enough and well enough informed to make the abortion decision independently, must allow the minor to bypass the consent requirement if she establishes that the abortion would be in her best interests, must ensure the minor's anonymity, and must provide for expeditious bypass procedures. The Court strictly foreclosed parents' absolute right to be consulted about, much less veto, their child's

decision to abort. This recognition has led the Court to require states to provide access to an alternative decision-maker, such as a judge, when the state imposes parental notice and consent conditions on the minor's abortion decision. This balance serves as a compromise position between according minors the right to make their own decisions concerning the continuation of a pregnancy and according parents or guardians' unchallenged authority to determine whether the pregnancy must be continued to term. But it does recognize that parents can serve important functions in that minors typically lack valuable attributes and resources (such as financial stability, education, and maturity) that an adult would be more likely to bring to a situation of unwanted motherhood. Clearly, whether parents are notified or give consent raises important tensions, and these same tensions emerge in counseling.

Important issues arise in counseling contexts, and they can vary throughout the decision-making process. In therapeutic abortion, individuals must first decide whether to continue with the pregnancy despite the risks. If indeed the pregnancy is wanted and possibly difficult to achieve, efforts are made to address potential feelings of uncertainty, grief, or despair. In these contexts, ethical and religious questions likely arise. In procedures involving elective abortion, pre-abortion counseling seeks to aid in the decision-making process and consideration of reasons and options. Counseling involves considering not only obstacles from their academic, career, and life plans but also responses from families or communities. Adolescent girls likely are in different positions than adults in that they also likely must consider their readiness for parenthood, stunted development, and family discord. In elective abortion contexts, postabortion counseling may not be necessary, as a range of emotions may be present including sadness, anxiety, guilt, regret, but also positive emotions. Counseling most likely is needed in contexts where the adolescent lacks social support, feels coerced in the decision-making, has high ambivalence, or has other preexisting circumstances that can contribute to negative postabortion reactions. For postabortion counseling, no standards have been published; however, women generally are helped to identify emotions and life circumstances impacted by their decision. Psychoeducation may be given regarding new coping skills, and religious aspects may be considered to facilitate personal resolution. Importantly and depending on resolutions, counseling may be provided during the process itself, and it also may be needed later.

Spontaneous abortions, or miscarriages, occur before 27 weeks of pregnancy and result in infant death. While 12–15% of clinically known pregnancies end in miscarriage, many more occur before anyone recognizes the pregnancy, thus increasing the miscarriage rate to an estimated 45–50% of all pregnancies. Risk appears to increase with age, with women ages 20–24 having a 9% chance. Sometimes miscarriages may be physically painful processes, with the negative experiences sometimes compounded by the very private nature of the event. Miscarriage puts individuals at risk for depressive symptoms, major depression, anxiety, obsessive-compulsive disorder, and posttraumatic-stress disorder (Klier et al. 2002; Geller et al. 2004). Some women may be concerned about immediate medical issues and underlying factors for the miscarriage. Here, post-loss counseling aims to validate death and normalize feelings of grief. Symptom reduction, grief management, utilization of coping resources, and psychosocial factors also may be addressed. Research in this area has not centered on the needs of adolescents, although adolescents' status and developmental needs may raise distinct issues.

Whether intentional or unintentional, abortion remains prevalent. It necessarily involves numerous complex and difficult issues. Those issues are likely even more complex when dealing with adolescents. In addition to dealing with psychological, moral, and social considerations, this area of adolescents' experiences also involves complex laws that raise important issues and try to balance many rights and responsibilities. Despite those complexities and perhaps because of intense controversies, research relevant to adolescents has been sporadic and much of the research in this area, including writings that focus on clinical issues, tends not to focus on adolescents' particular needs (see Coleman 2006; Levesque 2000).

Cross-References

► Abortion Rights

References

Bellotti v. Baird. (1979). 443 U.S. 622.

Coleman, P. K. (2006). Resolution of unwanted pregnancy during adolescence through abortion versus childbirth: Individual and family predictors and psychological consequences. *Journal of Youth and Adolescence, 35*, 903–911.

Geller, P. A., Kerns, D., & Klier, C. M. (2004). Anxiety following miscarriage and the subsequent pregnancy: A review of the literature and future directions. *Journal of Psychosomatic Research, 56*, 35–45.

Gonzales v. Carhart. (2007). 550 U.S. 124.

Klier, C. M., Geller, P. A., & Ritsher, J. B. (2002). Affective disorders in the aftermath of miscarriage: A comprehensive review. *Archives of Women's Mental Health, 5*, 129–149.

Levesque, R. J. R. (2000). *Adolescents, sex, and the law: Preparing adolescents for responsible citizenship*. Washington, DC: American Psychological Association.

Major, B., Appelbaum, M., Beckman, L., Dutton, M. A., Felipe Russo, N., & West, C. (2009). Abortion and mental health: Evaluating the evidence. *The American Psychologist, 64*(9), 863–890.

Planned Parenthood of Southeastern Pennsylvania v. Casey. (1992) 505 U.S. 833.

Roe v. Wade. (1973) 410 U.S. 113.

Russo, N. F., & Denious, J. E. (2005). Controlling birth: Science, politics and public policy. *Journal of Social Issues, 61*, 181–191.

Sedgh, G., Henshaw, S., Singh, S., Ahman, E., & Shah, I. H. (2007). Induced abortion: Rates and trends worldwide. *Lancet, 307*, 1338–1345.

Abortion Rights

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One of the most important issues facing adolescents involves the extent to which their right to privacy will be respected, and that right is implicated in a broad variety of potential contexts and circumstances. In the United States, a key area where this issue has been litigated has been in the context of abortion. This context is of significance in and of itself as well as for demonstrating how the legal system approaches the rights of adolescents. As a result, *Bellotti v. Baird* (1979), the leading Supreme Court case dealing with adolescents' rights to access abortions without the involvement of their parents, is one of the most important United States Supreme Court decisions dealing with the adolescent period. The case and this area of law address the fundamental issue of the extent to which adolescents can have rights of their own and, equally importantly, the extent to which they can control the exercise of those rights.

Bellotti involved a Massachusetts law requiring parents to consent for minors who were seeking abortions. The law had provided that if one or both parents of the minor refuse consent, the minor could obtain a judicial order permitting the abortion if they were able to show good cause. On appeal to the United States Supreme Court, the Justices were unable to agree on a single opinion that would announce the rule and reasoning for its decision, but eight members of the Court agreed that the Massachusetts statute violated the United States Constitution. The law, according to the Supreme Court, violated the independent rights of minors to seek and obtain abortions. Among other findings, the Court required states to respect mature minors' rights to exercise their right to access abortions and, by doing so, recognized minors' own rights without requiring parental involvement. That general rule is worth exploring in greater detail as it has important consequences for protecting the rights of adolescents, especially those rights that would be deemed fundamental and highly protected if they were adults.

The case had multiple opinions that focused on different aspects of adolescents' rights. One of the opinions (by four members of the Court) provided the key ruling in the case. The opinion reasoned that states need not require parental involvement in adolescents' decisions regarding abortions. However, if they do seek to require a pregnant minor to obtain one or both parents' consent to an abortion, they also must provide an alternative procedure for obtaining authorization for the abortion. Alternative procedures must allow a pregnant minor the opportunity to show either (1) that she is mature enough and well enough informed to make her abortion decision, in consultation with her physician, independently of her parents' wishes, or (2) that even if she is not able to make the decision independently, the abortion desired would be in her best interests. The state also must ensure that such proceedings assure that a resolution of the issue, and any appeals that might follow, will be completed with anonymity and with sufficient expedition to provide an effective opportunity for an abortion to be performed. Following that reasoning, the Court held that the Massachusetts statute unduly burdened the constitutional right to seek an abortion because it permitted the withholding of judicial authorization for an abortion for a minor found to be mature and fully competent to decide to have an abortion; it was also unconstitutional because it required parental

consultation or notification in every instance, without affording a pregnant minor an opportunity to receive an independent judicial determination that she is mature enough to consent to an abortion or that an abortion would be in her best interests.

The case also had an important concurring opinion and a strong dissent. A concurring opinion (also by four members of the Court) expressed the view that a pregnant minor's right to make the abortion decision may not be conditioned on the consent of one parent, especially given the Court's earlier decisions holding that a woman's right to decide whether to terminate a pregnancy is entitled to constitutional protection. Given that reasoning, the statute was unconstitutional because under it no minor, no matter how mature and capable of informed decisionmaking, might receive an abortion without the consent of either both of her parents or a judge, there thus being, in every instance, an absolute third-party veto to which a minor's decision to have an abortion was subject. A dissenting opinion expressed the view that the statute was not unconstitutional in requiring parental consent when an unmarried woman under 18 years of age seeks an abortion.

In addition to being important for this area of jurisprudence, as noted above, the case was important for what it highlighted about the rights of minors. The Court emphasized that minors are not beyond the protection of the Constitution. The Court noted that the legal system typically favors the rights of parents to raise their children as they see fit, it did so by highlighting three fundamental rationales for justifying the conclusion that the constitutional rights of children cannot be equated with those of adults: the peculiar vulnerability of children; their inability to make critical decisions in an informed, mature manner; and the importance of the parental role in child rearing. By supporting the power of parents to control the rights of adolescents under those conditions, the Court also laid the groundwork for the opposite. That is, when dealing with fundamental rights, adolescents are increasingly given control over those rights if they can show that they are not peculiarly vulnerable, can make informed and mature decisions, and the parents' role is attenuated in the matter. If these conditions are met, then adolescents are more likely to be able to control their own rights or states are more likely to provide mechanisms for them to demonstrate that they should be able to exercise their rights. The legitimacy of this approach was confirmed in this case's approval of the "judicial bypass" provision – the stipulation that states must provide minors with an opportunity to demonstrate that they are mature enough to not engage their parents and can make their own decisions or, in the alternative, another decision maker can decide what course of action should be taken if the minor is not mature enough.

The case is of significance for recognizing the rights of minors to control some very important decisions, as it arguably includes the right to privacy on which abortion decisions are made. But the case actually is considerably limiting (see Levesque 2000). For example, in practice, the judicial bypasses have tended to be unnecessary since adolescents tend to be quite mature if they can figure out that they can seek a judicial bypass and, as it turns out, most are found mature by judges. Also in practice, especially as it relates to abortions, the need for appearances in court results in delays and other obstacles which, in theory, should be avoided due to the urgencies involved and, as many have argued, since the use of the judicial bypass brings little of value to the minors or their families. Despite these and other criticisms, the bypass requirements are likely to continue given that they do provide a balance between the rights of parents and those of their children and they do, in many ways, help reinforce parental rights, which remains the dominant standard. In fact, the focus on judicial bypasses was what allowed the Supreme Court to permit laws requiring parental notification that minors were seeking abortions (see *Hodgson v. Minnesota* 1990). The provision of alternatives means that the major rule, the rights of parents, remains, which is something of considerable significance given that it is not clear whether and how adolescents will know of alternatives and thus avail themselves of them.

Cross-References

► Abortion Counseling

References

Bellotti v. Baird, 443 U.S. 622 (1979).

Hodgson v. Minnesota, 497 U.S. 417 (1990).

Levesque, R. J. R. (2000). *Adolescents, sex, and the law: Preparing adolescents for responsible citizenship*. Washington, DC: American Psychological Association.

Abstention

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Abstention refers to a deliberate act of self-denial. The period of adolescence involves considerable abstention, especially in the form of social and legal efforts to encourage adolescents to abstain from engaging in numerous types of behaviors. Included among the most frequent behaviors that adolescents abstain from are smoking (Jacobsen et al. 2005), consuming alcohol and illicit drugs (Rosenberg et al. 2008), engaging in sexual activity (Loewenson et al. 2004), as well as general delinquency (Boutwell and Beaver 2008). Our society has developed and continues to support numerous institutions that help adolescents abstain and that even can use the force of law to have adolescents abstain from activities deemed problematic. Illustrative of these efforts are the juvenile and criminal justice systems, schools, health-care institutions, as well as families. These institutions also embrace efforts to help adolescents abstain from more socially acceptable and legally permissible activities, such as using potentially harmful products like caffeine (Oberstar et al. 2002), sugared products (French et al. 2003), and even the media (Levesque 2007). Given the recognition of the need to prevent negative health and its associated outcomes, the period of adolescence always has been a period that has attracted considerable efforts to foster habits that would result in having adolescents abstain from an ever-increasing amount of activities deemed potentially problematic. These efforts always have attracted considerable controversy, as evidenced most strikingly in abstinence-based sexuality education (Levesque 2000), since they go to the heart of what it means to be an adolescent: someone who is considered to be in transition and who needs special supports to transition through a period that likely will have an important impact on their later development.

Cross-References

► Abstinence
► Desistance from Crime and Delinquency

References

Boutwell, B. B., & Beaver, K. M. (2008). A biosocial explanation of delinquency abstention. *Criminal Behavior and Mental Health, 18*, 59–74.

French, S. A., Story, M., Fulkerson, J. A., & Gerlach, A. F. (2003). Food Environment in Secondary Schools: À La Carte, Vending Machines, and Food Policies and Practices. *American Journal of Public Health, 93*, 1161–1168.

Jacobsen, L. K., Krystal, J. H., Mencl, W. E., Westerveld, M., Frost, S. J., & Pugh, K. R. (2005). Effects of smoking and smoking abstinence on cognition in adolescent tobacco users. *Biological Psychiatry, 57*, 56–66.

Levesque, R. J. R. (2000). *Adolescents, sex, and the law: preparing adolescents for responsible citizenship*. Washington: American Psychological Association.

Levesque, R. J. R. (2007). *Adolescents, media, and the law: what developmental science reveals and free speech requires*. New York: Oxford University Press.

Loewenson, P. R., Ireland, M., & Resnick, M. D. (2004). Primary and secondary sexual abstinence in high school students. *Journal of Adolescent Health, 34*, 209–215.

Oberstar, J. V., Bernstein, G. A., & Thuras, P. D. (2002). Caffeine use and dependence in adolescents: one-year follow-up. *Journal of Child and Adolescent Psychopharmacology, 12*, 127–35.

Rosenberg, H., Baylen, C., Murray, A., Phillips, K., Tisak, M. S., Versland, A., et al. (2008). Attributions for abstinence from illicit drugs by university students. *Drugs: Education, Prevention and Policy, 15*, 365–377.

Abstinence

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Overview

The majority of teenagers in the USA begin their adolescence in a state of sexual abstinence and end it sexually active. These before and after points are known, but there is much about adolescents' abstinence behavior and meaning-making that is not. This essay summarizes the state of scientific and scholarly knowledge about abstinence in the lives of teenagers. It places abstinence in its social and political context, discusses various definitions of abstinence, examines research on the goals of abstinence and whether it achieves them, and considers potential benefits and harms of abstinence to adolescents, while highlighting gaps in knowledge and areas of controversy.

The majority of teenagers in the USA begin their adolescence in a state of sexual abstinence and end it sexually active. While fewer than one in eight 15 year olds have ever had sex, 70% of 19 year olds have had vaginal sexual intercourse (Abma et al. 2004). Though these before and after points are known, there is much about adolescents' abstinence behavior and meaning-making that is not. This essay will summarize what is known about abstinence in the lives of teenagers while highlighting gaps in knowledge and areas of controversy.

The Social and Political Context of Abstinence

Any consideration of abstinence among US adolescents must be situated within the socio-political context of abstinence-only education. Unlike other wealthy, industrialized democracies, for the past few decades, the USA has emphasized sexuality education programs for teenagers that instruct adolescents to abstain from sex until they are married or to become "secondary virgins" by ceasing sexual activity until marriage. This federal policy, only very recently ended, has brought the concept of abstinence to prominence among those who study and provide care for adolescents, but has left it ill-defined and not well understood.

Abstinence is most often studied in the context of research into sexual behavior, cognitions, and emotions. This context has had several effects upon the populations generally studied. It can be difficult to obtain parental consent, institutional approval, and funding for the study of sexuality-related phenomena among young adolescents, unless these adolescents are members of a group seen as particularly vulnerable to negative sexual outcomes such as teen pregnancy or sexually transmitted infections (STIs). Thus, the majority of studies that investigate abstinence either work with older, easier to reach adolescents such as college students, or they focus on these "at-risk" groups, especially African-American teenagers and girls. Two important exceptions are data on abstinence and sexual behavior from the National Longitudinal Study of Adolescent Health, a nationally representative study of seventh- to twelfth-graders that began in 1995, and data from a nationally representative sample of adults reporting on their adolescent experiences in the National Sexual Health Survey, carried out in 1995–1996.

What is Abstinence?

Clinicians, educators, and parents often assume that adolescents regard "having sex" and "being abstinent" as opposites. In fact, research suggests that youths' understanding of these constructs is more complex. There is a solid consensus across studies of how adolescents define abstinence that vaginal intercourse "counts" as having sex, and that avoiding all erotic contact, even kissing, constitutes abstinence. However, much less agreement is found about behaviors such as mutual masturbation, oral sex, and anal sex. Some adolescents define these acts as sex, while others, possibly working from an "anything but vaginal intercourse" point of view, define them as abstinence (Byers et al. 2009).

The appropriate role of abstinence in youths' lives is another topic on which adolescents' perspectives may diverge from those of some adults. Many adolescents report thinking of abstinence as a way of protecting themselves against the potentially negative social and physical consequences of sex. Others report viewing the practice of abstinence as a moral or religious choice. However, most youth also see abstinence as a developmental stage rather than a steady state, and perceive it as part of the trajectory that eventually leads to partnered sexual activity (Ott et al. 2006). In this conceptualization, adolescents who have stepped onto the "sexual escalator" start at abstinence and move toward sex (Masters et al. 2008).

Abstinence may be consciously chosen by some teenagers as a values-driven practice, as a sexual risk reduction method, or as a combination of both. This notion of abstinence applies to youth who have opportunities to engage in partnered sexual behavior but chose not to do so. However, research suggests that many teenagers, both those who have already experienced first intercourse and those who have not, simply lack frequent sexual opportunities. They may not have a sexual partner, or having a willing partner, may not have the privacy, space, or time for sex. These youths' behavior – not having sex – may appear from the outside to be identical to that of youth who are abstinent on purpose, but the behavior's meaning to them, and its role in their sexual and relational development, is likely to be very different.

These definitional issues are of both practical and conceptual interest to those who work with youth. Practically, adolescents who view their behavior (e.g., oral sex) as abstinent rather than as sexual may be less

likely to practice sexual risk reduction, thus increasing their risk of STIs. Attempts to be abstinent according to the "anything but vaginal intercourse" definition apparently held by some teenagers may paradoxically lead to even higher risk sexual behavior, such as the anecdotal reports of young women substituting anal sex, with its attendant higher risk of HIV transmission, for vaginal sex as a method of "virginity preservation." Conceptually, researchers and clinicians attempting to assess adolescents' abstinence practices may need to be more behaviorally explicit about how they ask their questions, rather than assuming a shared definition of abstinence. Attention to why adolescents are abstinent also seems warranted: There are likely to be important differences between the abstinence of an 18-year-old Catholic girl who is saving intercourse for marriage and that of a 15-year-old boy from a secular family who also has never had partnered sex, but who aspires to do so at the earliest opportunity.

Does Abstinence "Work"?

Abstinence is sometimes described as being 100% effective in preventing pregnancy and STIs. However, if abstinence is considered as a contraceptive or STI prevention method rather than as a values-governed practice, it has, like all such methods, a failure rate. This failure rate is the difference between perfect use (abstaining from sex at every sexual opportunity) and typical use (intending to be abstinent, but not having 100% success doing so). Prevention methods such as condoms are susceptible to both user failure and method failure; all abstinence failure, clearly, is user failure.

Very little research investigating the failure rate of abstinence as a contraceptive or STI preventative has been done. Mathematical modeling based on the assumption that typical abstinence use is less than 100% demonstrates that partial abstinence (infrequent sex) provides some protection against infections with a low per-act probability of transmission, such as HIV. However, for those infections with a high per-act probability of transmission, such as syphilis and Chlamydia, and for pregnancy, abstinence needs to be nearly perfect to reduce risk effectively (Pinkerton 2001). A study using nationally representative data examined the effectiveness of virginity pledges (public statements of commitment to abstinence until marriage) in reducing STI rates among young adults. Rates of STI, as measured with biomarkers, did not differ between young adults who had taken abstinence pledges as adolescents and those who had not (Bruckner and Bearman 2005). Both of these findings suggest the relative ineffectiveness of abstinence, as practiced in real life, at preventing most STIs and pregnancy.

Is Abstinence Good for Adolescents?

Abstinence until marriage, the average age of which – now 27 for men and 25 for women – is older with each generation, seems increasingly unlikely for most adolescents (Finer 2007). Nonetheless, some abstinence advocates assert that premarital sex is inherently dangerous to teenagers, likely to result in physical and psychological harm. Any given sex act may indeed result in a negative physical, social, or emotional outcome such as contracting an STI, becoming unintentionally pregnant, being teased or stigmatized by peers, or wounded feelings. However, research suggests that whether people's initial sexual experiences occur before marriage does not affect their long-term physical or emotional health. Rather, the context in which an adolescent begins to have partnered sex is the more critical factor: If the experience is pre-pubertal, incestuous, forced, or coerced, then this is likely to affect later functioning; otherwise, premarital sex is not associated with negative health outcomes in adulthood (Else-Quest et al. 2005). Another study using nationally representative data classified ages at first intercourse as early (lowest quartile, mean age 14), normative (middle two quartiles, mean age 17), or late (highest quartile, mean age 22) based on adults' reports of their adolescent experiences. Both early and late sexual initiations were associated with problems in sexual functioning, especially among men. Initiation before marriage, but within normative age ranges, was not associated with sexual difficulties or general ill-health (Sandfort et al. 2008).

Other research suggests that not only may abstinence, in some situations, offer little benefit to youth, it may also have its own potentially harmful effects. Teenagers' identification of themselves as people committed to abstinence may keep them from considering situations in which they might someday choose to engage in sexual behavior and from learning how they might then protect themselves against unwanted pregnancy and STIs. Uncritical endorsement of abstinence as the only appropriate choice for adolescents is often linked with a view of sexual behavior that minimizes the role

of personal choice and agency in making sexual decisions, particularly for young women (Tolman 2002). "Virginity pledging" is associated with a reduced likelihood of contraceptive or condom use at first intercourse (Bearman and Bruckner 2001).

Abstinence advocacy by educators, policy makers, and health care providers can also cause social harm to the adolescents it excludes. Such discussions rarely acknowledge the experience of sexual minority adolescents. This lack can be attributed to the influence of teen pregnancy and out-of-wedlock birth prevention goals on contemporary thinking about abstinence; conceptualizations of abstinence that frame it as a way to avoid "illegitimate" births will naturally tend to be hetero-centric. One of the tenets of the pro-abstinence movement in the USA is that a monogamous married relationship is the standard of human sexual activity. Since gay men and lesbians cannot legally marry in the majority of states, sexual minority teens are left with no guidance on how to make an informed, values-driven decision about whether or when to begin partnered sexual activity. This exclusion can contribute to the marginalization of an already vulnerable group of adolescents.

For some adolescents, in some situations, abstinence can be a very positive choice. Most youth will experience an abstinent period during which they are riding the "sexual escalator" but do not yet feel ready for intercourse. They may experiment with physical intimacy and participate in relationships that include noncoital sexual behavior during this period. Some youth will be members of communities with a moral or religious framework that values abstinence until marriage, and choosing to enact this value consistently in their own lives may be a practice of empowerment, safety, and integrity for them. However, youth with different ethical frameworks may initiate partnered sex outside of marriage, and it is equally possible for them to take this action with empowerment, safety, and integrity.

Adolescents have many choices for safe, healthy, ethical expression of their sexuality, including the choice of abstinence. Teenagers who are informed of these options by adults, and taught skills both for refusing unwanted sex and for negotiating wanted sex, sexual safety, and pregnancy prevention, will be more likely to traverse their adolescence successfully and establish fulfilling adult relationships.

Cross-References

► Sexuality Education

References

Abma, J. C., Martinez, G. M., Mosher, W. D., & Dawson, B. S. (2004). Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. National Center for Health Statistics. *Vital Health Statistics, 23*(24).

Bearman, P. S., & Bruckner, H. (2001). Promising the future: Virginity pledges and first intercourse. *The American Journal of Sociology, 106*(4), 859–912.

Bruckner, H., & Bearman, P. S. (2005). After the promise: the STD consequences of adolescent virginity pledges. *The Journal of Adolescent Health, 36*, 271–278.

Byers, E. S., Henderson, J., & Hobsman, K. M. (2009). University students' definitions of sexual abstinence and having sex. *Archives of Sexual Behavior, 38*, 665–674.

Else-Quest, N. M., Hyde, J. S., & DeLamater, J. D. (2005). Context counts: Long-term sequelae of premarital intercourse or abstinence. *Journal of Sex Research, 42*(2), 102–112.

Finer, L. B. (2007). Trends in premarital sex in the United States, 1954–2003. *Public Health Reports, 122*(1), 3–78.

Masters, N. T., Beadnell, B., Morrison, D. M., Hoppe, M. J., & Gillmore, M. R. (2008). The opposite of sex? Examining adolescents' thoughts about abstinence and sex, and their sexual behavior. *Perspectives on Sexual and Reproductive Health, 40*, 87–93.

Ott, M. A., Pfeiffer, E. J., & Fortenberry, J. (2006). Perceptions of sexual abstinence among high-risk early and middle adolescents. *The Journal of Adolescent Health, 39*(2), 192–198.

Pinkerton, S. D. (2001). A relative risk-based, disease-specific definition of sexual abstinence failure rates. *Health Education & Behavior, 28*(1), 10–20.

Sandfort, T. G. M., Orr, M., Hirsch, J. S., & Santelli, J. (2008). Long-term health correlates of timing of sexual debut: Results from a national US study. *American Journal of Public Health, 98*(1), 155–161.

Tolman, D. L. (2002). *Dilemmas of desire: Teenage girls talk about sexuality*. Cambridge: Harvard University.

Abstinence Education

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Overview

"Abstinence education" (also known as *abstinence-only*, *abstinence-plus*, or *abstinence-only-until-marriage*

education) has, in recent years, become a specialized label, a technical term employed by educators, politicians, youth advocates, and public health workers in the USA. The label identifies a particular moral and educational agenda shaping what has been taught about human sexuality within USA public schools, since the 1980s. Approaches to teaching sexuality that lack the characteristics of this particular agenda (described in more detail, below) are titled, in turn, "comprehensive sexuality education." Labeling or branding these educational efforts has facilitated their polarization, their validation as entrepreneurial efforts, and their entanglement in an ongoing, bitter dispute over the best strategies to teach children and adolescents about sexual health.

This brief essay – far from an exhaustive account of the issue – reviews the polemics surrounding abstinence education, summarizes abstinence education's history in the USA, and reflects on the role sexual abstinence plays in adolescent development. In each of these segments, readers will find the views of abstinence education proponents presented alongside the perspectives of its critics. As abstinence education and comprehensive sexuality education have coexisted within US public schools, the juxtaposition presented here is intentional because it highlights the complex dynamics and "subtle dance" between two distinct sexuality education paradigms.

It is important to bear in mind that abstinence education is not unique to the USA, however. Uganda, for instance, has promoted a public health campaign to prevent the spread of HIV/AIDS based on the "ABC" approach ("abstain, be faithful, condomise"; see http://www.avert.org/abc-hiv.htm for details on the variations on the ABC definition). Nevertheless, many of the abstinence education initiatives being implemented in various countries have their philosophical and methodological origins in the USA movement. Due to space constraints, this essay will focus exclusively on abstinence education efforts in the USA.

Abstinence Education or Comprehensive Sexuality Education?

Participants on both sides of the issue tend to agree on a basic, bare-bones definition of abstinence education: Abstinence education directs children and adolescents to deliberately and voluntarily avoid "having sex" (specifically, to avoid penile–vaginal intercourse) until they are married, in order to prevent an unintended pregnancy or various sexually transmitted infections (or STIs). Such restraint is viewed as the healthiest way of circumventing the undesirable consequences associated with certain sexual behaviors, and maintaining the sexual health of children and adolescents. While proponents and critics of abstinence education tend to agree on this basic definition, however, they differ significantly regarding the scope and methods for teaching abstinence in a developmentally appropriate manner. Some of the questions fiercely debated by friends and foes include, for example, "Abstinence from *which* behaviors, specifically, should be taught?" And, "Should information about sexual anatomy and physiology also be presented?"

When evaluating a particular type of abstinence education – programs funded by Title V in Texas between the years 2000 and 2005 (see description of Title V funding, below) – the authors of this essay and their evaluation team quickly learned that programs' definitions of abstinence (and, by extension, of abstinence education) were surprisingly more nuanced and complex than the bare-bones definition presented above. The team learned that abstinence consisted of not only *avoiding* sexual activity (however sexual activity was defined), but also *adopting* or *assimilating* a series of behaviors, intentions, and attitudes, pertinent to an "abstinent-life-style." In other words, to be considered truly "abstinent" by abstinence education proponents, adolescents should also adopt a positive view of sexless relationships, of their own academic/professional future, and of themselves as worthy human beings (i.e., possess high levels of ▶ self-esteem). Alongside this repertoire of attitudes, "truly abstinent teens" should also avoid many noncoital sexual behaviors (in some instances, even hand-holding) and other practices such as becoming friends with peers who are sexually active, using/abusing alcohol and drugs, and consuming media with sexual content (pornography, erotic movies, rap lyrics). For a detailed study of the nuances associated with various definitions of abstinence, see Goodson et al. 2003. For a discussion of what constitutes abstinence, from the perspective of one abstinence education program funded by Title V, see Mann et al. 2000.

Motivated by such an idiosyncratic and multifactorial definition of abstinence, programs anchor their pedagogy in the teaching of virtues such as honesty,

integrity, and loyalty. Abstinence education curricula also place a strong emphasis on influencing/shaping individual-level psychological factors such as perceptions of social norms and, ultimately, self-esteem. Little (and sometimes no) emphasis is placed on teaching about healthy sexuality in its various dimensions (relationships, sexual communication, sexual identity, sexual anatomy, physiology, reproduction, contraception, infection prevention).

In contrast, comprehensive sexuality education is less directive and places stronger emphasis on teaching about all the dimensions of sexual health, including abstinence, using developmentally appropriate strategies. Those who support comprehensive sexuality education do so grounded in the assumption that knowledge is power, and withholding information from youth (information that could, potentially, save their lives and protect their health) is nothing short of unethical and tantamount to educational misconduct. Comprehensive sexuality education, therefore, proposes that youth should have access to *all* available knowledge about human sexuality, in ways that are appropriate for their age. While such knowledge includes information about sexual anatomy, physiology, and protection from diseases or unwanted pregnancies, abstinence from risky sexual behavior is equally an essential element of this knowledge-base.

This assumption – that information imparted in developmentally appropriate ways is empowering and ethical – has led one of the major organizations involved in promoting comprehensive sexuality education in the USA – the Sexuality Information and Education Council of the United States (SIECUS) – to propose a set of guidelines for educators teaching sexual health to various age groups. These recommendations can be found in the publication *Guidelines for Comprehensive Sexuality Education: Kindergarten – 12th Grade* (National Guidelines Task Force 2004). The document, now in its third edition, was heralded as a significant "breakthrough in sexuality education" at the time it was released and to this day remains an important resource for comprehensive sexuality educators.

Despite the emphasis on teaching all dimensions of sexual health, comprehensive sexuality education has consistently highlighted the message that abstinence from intercourse is the healthiest form of "sexually being in the world" for all children and most adolescents. As in the case of abstinence education, comprehensive sexuality education views the teaching of sexual abstinence as healthy and desirable. Comprehensive sexuality education's dispute with abstinence education centers, however, in abstinence education's *approaches* (not providing information about the various aspects of sexual health), its *assumptions* (that teaching abstinence from sex *and* teaching ways to protect oneself provide youth with mixed, ambiguous messages), and the socially conservative and pro-marriage *agendas* being championed through these programs (for instance, the promotion of marriage as the only acceptable venue for sexual relationships).

To better understand comprehensive sexuality education's various concerns, it is important to learn about the legislative efforts put in place to support both comprehensive sexuality and abstinence education programs in the USA, in recent decades. The section below provides a brief outline of these laws.

Brief History of Legislation Efforts Supporting Comprehensive Sexuality and Abstinence Education in the USA

Attempts to educate USA children and adolescents in the public school system about health and sexuality enjoy a lengthy, yet conflicted, history. Prior to the 1980s, schools focused on providing students basic information about puberty and personal hygiene, obedient to the charge of forming healthy and productive citizens.

In the early 1980s, conservative groups (led by political and religious leaders) initiated focused and systematic efforts to influence the teaching of sexuality education in public schools. These efforts hinged on, and were nourished by, the argument that the then-available approach to sexuality education (comprehensive) had been ineffective in halting the epidemics of unplanned teenage pregnancies and STIs in the USA. Comprehensive sexuality education had achieved little, if anything, in terms of prevention, and was deemed a "miserable failure" by these conservative groups. According to abstinence advocates, what was needed was a different *modus operandi*, a different worldview for teaching adolescents about healthy sexuality: an approach that went beyond merely *minimizing* risk behaviors and emphasized *eliminating* sexual risks, altogether. Abstinence education was proposed, therefore, as a "much-needed" *variant* of school-based

sexuality education or as an *alternative* approach to comprehensive sexuality education. Many proponents viewed it as the *only alternative*, however, and claimed abstinence education should replace *all* comprehensive sexuality education (Mann et al. 2000).

This latter point-of-view hinged on the belief that comprehensive sexuality education, besides having proven ineffective for prevention, bore the potential, in fact, to *harm* adolescents. Defenders of abstinence education claimed (then and now) that comprehensive approaches send teenagers an ambiguous message: the message that youth can (and should) choose to abstain from all forms of risky sexual behaviors yet, in circumstances where they cannot, they should protect themselves from unintended consequences. This "ambiguous message" communicates the notion that abstinence is, indeed, too difficult a choice, and there are other ways to negotiate sexual relationships (Mann et al. 2000). According to abstinence education proponents, this apparent contradiction generates too much uncertainty for children and adolescents regarding their sexual decision-making and should not be taught as a healthy option. In an effort to purge this ambiguity from the school-based sexuality education available then, religious and politically conservative groups began (in the 1980s) to effectively advocate for federal funding of abstinence-*only* education, in which the message regarding abstinence from coital activity would be strengthened, and the information about protection from pregnancy and STIs would be weakened.

Below is a brief outline of the main legislative efforts put forth in the last 4 decades to support comprehensive sexuality and abstinence education. It is important to bear in mind that, while attempts to promote abstinence were in place as early as the 1980s, it was the 1996 legislation that represented a major shift in the history of school-based sexuality education. The 1996 legislation has had, thus far, the most significant impact on the teaching of sexuality education in US public schools. It stands out as a unique innovation in the realm of morality politics and government oversight of the content taught in health and sexuality education classes. (To better understand *why* the 1996 legislation represents an innovation in public policy and sexuality education, see Doan and Williams 2008.)

1970 – Family Planning Services and Population Research Act (PL 91–572). The Act established the Office of Population Affairs in the Department of Health, Education, and Welfare. Title X funds were allocated for "family planning services, training, information, and education programs" (Doan and Williams 2008, p. 26).

1978 – Adolescent Health Services and Pregnancy Prevention Care Act. Spearheaded by Senator Edward Kennedy (D-MA), "this act intended to reduce teen pregnancy by increasing access to federally funded contraception and abortion services" (Doan and Williams 2008, p. 26).

1981 – Adolescent Family Life Act (AFLA; PL 97–35). This represented the first "federally funded, and sanctioned, sex education legislation" (Doan and Williams 2008, p. 28). Generated in response to pressure from conservative Christians, it was included in the Omnibus Budget Reconciliation Act of 1981 – "signed into law as Title XX of the Public Health Service Act" (Doan and Williams 2008, p. 28). Title XX funded many initiatives emphasizing "abstinence and adoption as an alternative to abortion" and, therefore, opened wide the doors for funding focused exclusively on abstinence-only-until-marriage education in 1996 (Doan and Williams 2008, p. 28).

1996 – Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). This was a welfare reform omnibus bill. According to Doan and Williams (2008), "omnibus legislation refers to the practice of packaging numerous, disparate policy issues into one massive bill" (p. 15) whose details often get approved without discussion. Thus, absent any public or Congressional debate (similar to the creation of Title XX in 1981), $50 million of federal funding were allocated, annually, for abstinence-only-until-marriage programs. Title V funding, then, became available for "educational or motivational" programs willing to comply with eight well-defined parameters for the teaching of abstinence (known as the "A-through-H Definition" – see Glossary for definition).

2000/2001 – Special Projects of Regional and National Significance – Community-Based Abstinence Education (SPRANS-CBAE). This was an abstinence program advocated by the George W. Bush administration that "bypasse[d] state intervention by providing [federal government] money directly to community organizations, including faith-based organizations" (Doan and Williams 2008, p. 41). Recipients of these funds had to comply with the requirements

spelled out in Title V (described above), including abiding by the "A-through-H Definition." SPRANS-CBAE programs were required to shift from a focus on *reducing risky behavior* to one *promoting preparation for marriage* (Doan and Williams 2008, p. 32). Between 2001 and 2006, funding for CBAE increased over 450% (SIECUS 2008). According to Advocates for Youth, "from 1998 to 2003, almost *a half a billion dollars* in state and federal funds were appropriated to support the Title V initiative" (Hauser 2008).

2007 – Legislation passed by Congress requiring abstinence education programs funded by Title V comply with all of the eight characteristics of the "A-through-H Definition." In addition to the compliance mandate, states were now required to provide assurances that funded curricula and materials "meaningfully represent[ed] each element of the definition" (SIECUS 2008).

2009 – End to Reauthorization of Title V funding. Funding for the Family Life Act remained stable, but significant cuts were made to CBAE's budget for fiscal year 2009.

2009 – Baucus Amendment (The Personal Responsibility Education for Adulthood Training) and Hatch Amendment (Abstinence-Only-Until-Marriage Education). Both amendments were approved by the Senate Finance Committee on September 29, 2009. The Baucus Amendment proposed to fund comprehensive sexuality education, with $75 million allotted to evidence-based programs and $25 million, to "innovative programs as well as research and evaluation" (SIECUS 2009). The Hatch Amendment proposed to *reinstate Title V funding* for abstinence education. Both amendments are part of the Patient Affordable Care Act (also known as the "Healthcare Reform Bill" – H.R. 3590) that will be voted by the US House and Senate, in the near future. At the time of this writing, the US House of Representatives had voted in favor of the Act, and the Senate had approved a motion to move forward with discussion (consideration) of the Act.

Although extensive, the list above does not tell a complete story: it fails to reflect many other streams of funding (from both federal and state monies) that have supported abstinence education. Specifically, the list does not include support being provided through earmarked grants awarded to certain states and to specific organizations (SIECUS 2008). Moreover, according to a recent SIECUS report: "Abstinence-only-until-marriage providers are also receiving funds through traditional HIV/AIDS and STD [sexually transmitted diseases] prevention accounts such as those administered by HHS and the Centers for Disease Control and Prevention (CDC)" (SIECUS 2008).

Finally, it is important to note that, in addition to all government-generated support, abstinence education initiatives have spawned a multimillion-dollar business in the USA, centered on nonprofit organizations and curriculum developers. Examples include organizations such as "Aim for Success" (www.aimforsuccess.org) and curricula such as "Worth the Wait," sponsored by a healthcare agency (www.worththewait.org). Therefore, even if Title V and other major abstinence education initiatives become defunded through legislative acts during President Obama's administration (2009 onward), the impact this might have on the abstinence education agenda in the USA remains unknown.

Evaluations of Abstinence Education Initiatives

In July 2009, the CDC reported data from the National Vital Statistics System in the USA focusing on the sexual and reproductive health of persons aged 10–24 years. The data were collected over a 5-year period, 2002–2007 (Centers for Disease Control and Prevention 2009). The report concluded that after a significant decline between 1991 and 2005, birth rates as well as syphilis infection among teenagers 15–19 years old *increased* between the years 2005 and 2007 (Centers for Disease Control and Prevention 2009, p. 02). When the initial declines were documented, abstinence education advocates were quick to claim the credit for these statistical improvements. As the rates began to increase, however, critics readily pointed to the ineffectiveness of abstinence education programming as the main culprit.

While documentation of abstinence education programs' successes or failures was scarce prior to the Title V authorization in 1996, evaluations of these programs and concomitant publication of evaluation reports have grown exponentially, since then. A few states that received Title V funding, for instance, opted to carry out an independent evaluation of their initiatives (perhaps instigated by the requirement that states provide a substantial amount of matching funds of their own, to support these programs). Texas was

one of the states putting in place a multiyear, multiphase evaluation (carried out by an evaluation team that included the authors of this essay). Other states conducting their own evaluations during the first 5 years of Title V funding included Maryland, Missouri, Nebraska, Arizona, Florida, Oregon, Washington, Iowa, Pennsylvania, and California (who ceased to receive Title V funding after its evaluation revealed the programs were not effective) (Hauser 2008). The only attempt to evaluate Title V, *nationwide*, was implemented by the research/evaluation firm, Mathematica Inc. (Trenholm et al. 2007).

Findings from all of these evaluations have been mixed and non-convincing: state-level evaluations as well as Mathematica national data suggest abstinence education programs fail to foster, among participants, both the intention and the practice of waiting to have sex until marriage. Findings do suggest, however, that in terms of changing youth's attitudes toward abstinence ("It's 'cool' to be abstinent!"), improving their perceptions of the social norms regarding sexual activity among teens ("People around me think abstinence is best for me . . ."), and increasing their awareness of the benefits of postponing sexual relationships, the programs have experienced some measure of success. The programs have failed, however, in helping teens "translate" this awareness, these attitudes and these beliefs into actual intentions, motivations, and behaviors (Guide to Community Preventive Services 2009).

Evaluations of abstinence education have failed to demonstrate strong and long-term, sustainable indicators of program effectiveness, but the reasons for such failure are multiple and complex. Most of the evaluations, themselves, have failed to employ rigorous experimental or quasi-experimental designs (for various, often valid reasons), limiting confidence in the findings (United States Government Accountability Office 2006). According to a report evaluating abstinence education interventions to prevent HIV/AIDS, other STIs, and pregnancy, released by the Task Force on Community Preventive Services at the CDC, "there is insufficient evidence to determine the effectiveness of group-based abstinence education . . . evidence was considered insufficient due to inconsistent results across studies" (Guide to Community Preventive Services 2009). Unquestionably, reasons for lack of effectiveness also lie within the programs. For example, most evaluated programs revealed a conspicuous absence of sound theoretical grounding. Only 2 of the 32 programs evaluated in Texas proposed to develop their curricula based on well-tested health behavior or youth development theories (Goodson et al. 2006b).

According to the Texas and the Mathematica evaluations, programs had, instead, an implicit, unstated theory-of-action (or causal explanations for why certain activities in the program might promote abstinent behavior among participants). Remarkably, these theories-of-action, more often than not, mirrored the wisdom available in the scientific literature, and targeted variables correlated with teens' sexual behavior. Nonetheless, when it came to delivering the programs, lesson plans frequently placed too much emphasis on factors only *minimally* associated with behaviors and intentions.

A telling example of this misplaced focus has been the forceful messages targeting adolescents' *self-esteem*. The logic behind the messages: higher self-esteem will lead to more confident and healthier choices, thus fostering avoidance from risky behaviors. While self-esteem has been found, at times, to be correlated with sexual attitudes, intentions, and behaviors among youth, the quality of the evidence is questionable, the strength of the association is modest, at best, and at times the relationship between self-esteem and sexual behavior has been inverse (i.e., higher levels of self-esteem are associated with lower levels of preventive/protective behaviors; for a systematic review of this issue, see Goodson et al. 2006a). Empirical evidence does not support the disproportionate importance abstinence education programs have placed on the self-esteem factor; therefore, despite an internal logic that echoes scientific findings, abstinence education programs tend to – in practice – "overdo" certain factors and ignore others, thus transforming their efforts into a-theoretical interventions with diminished probabilities of success (Goodson 2010).

Continued evaluations of abstinence education programs will remain an important area of study, even if these programs find themselves stripped of federal funding in the future: the question of how to teach human sexuality with emphasis on abstinence from risky sexual activity, in developmentally appropriate manners, remains a valid and pedagogically important question. Only since the advent of federally funded abstinence education initiatives have sexuality educators begun to pay any serious attention to the question.

Abstinence Education: Its Role in Adolescent Development

Despite the political and pedagogical controversies surrounding the teaching of abstinence, as they have played themselves out in the history of sexuality education in the USA, does abstinence education have a role to play in the healthy development of children and adolescents? The answer to this question is quite simple: While abstinence education as an ideological agenda may have proven less than helpful to American teenagers given these programs' inability to affect youth sexual behavior, the notion of abstaining from practices that may pose health and social risks for adolescents is, undoubtedly, valid, and valuable.

Abstinence from sexual/coital behavior during childhood and adolescence is the healthiest and ideal practice for youth and – as an ideal construct – finds support at many levels of arguments: for children and adolescents it makes sense to avoid sexual intercourse, based on biological, psychological, social, economic, legal, and spiritual arguments. Because children's and adolescents' bodies, sexual organs, sexual physiology, and emotional make-up lack maturity, they are considerably more vulnerable to diseases, infections, and emotional traumas with lasting consequences (sometimes life-long effects, such as in the case of infertility caused by Chlamydia infection, or infection with the cancer-causing strain of the ► Human Papillomavirus (HPV) and HPV Vaccines). From a psychological perspective, adolescents do not have the cognitive and emotional maturity to make wise decisions regarding personal relationships that might impact their futures. From a social interaction perspective, choices to couple with certain partners have important implications for teens' existing social networks, either exposing them to risk-prone environments (where they may engage in other risky behaviors such as alcohol consumption or drug use), or destroying extant supportive networks. Economically, because adolescents are, mainly, consumers and not producers in a capitalist economy, they are not equipped to face the financial challenges posed by an unplanned pregnancy, and the consequences associated with raising an unexpected child. Legally, sexual relationships with minors are against the law in the USA, a notion that often seems neglected, only to be resurrected when a "case" happens, a couple is "caught," and the justice system is invoked. Lastly, the spiritual lives of adolescents can become seriously affected by premature sexual relationships, leading to existential angst, doubt, and uncertainty. Because sexual relationships do not occur in a vacuum but are, instead, embedded in people's set of values, beliefs, and commitments, the potential ramifications for youth's spiritual lives, of engaging early in a sexual relationship (or more than one) can lead to cognitive dissonance, lack of healthy attachments, and personal distress.

While the notion of abstinence from risky sexual activity can be defended on many grounds as the ideal for children and adolescents, it is important to remember that youth (worldwide) inhabit an imperfect world and live nonideal lives. Granted, many teenagers engage in sexual activity without experiencing any of the difficulties outlined above. Nevertheless, most of the available scientific and social science evidence supports the notion that, the younger the child or adolescent, the higher his/her vulnerability to experiencing these ills. The odds are not in teenagers' favor, compared to their adult counterparts, when it comes to their sexual health and well-being. While teaching the ideal, sexuality educators must also ground themselves in their social realities and provide teens with the resources (information and social support) to minimize potential risks.

The intrinsic value of sexual abstinence for children and adolescents, therefore, is easily supported by empirical data and logical arguments, from multiple perspectives. It is, indeed, a healthy practice and it plays a major role in adolescents' psychosocial, physical, and spiritual development. Unfortunately, abstinence education debates in the USA have been mired in controversies about political agendas, pedagogical approaches, and content coverage; it is here that expert opinions conflict and clash, often to the neglect of the adolescents themselves.

Cross-References

► Birth Control
► Condom Use
► Sexuality Education

References

Centers for Disease Control and Prevention. (2009). Sexual and reproductive health of persons aged 10-24 years - United States, 2002–2007. Surveillance summaries. *Morbidity and Mortality Weekly Report (MMWR), 58*(SS-6), 1–62.

Doan, A. E., & Williams, J. C. (2008). *The politics of virginity: Abstinence in sex education.* Westport: Praeger.

Goodson, P. (2010). *Theory in health promotion research and practice: Thinking outside the box*. Boston: Jones & Bartlett.

Goodson, P., Suther, S., Pruitt, B. E., & Wilson, K. (2003). Defining abstinence: Views of directors, instructors, and participants in abstinence-only-until-marriage programs in Texas. *Journal of School Health, 73*(3), 91–96.

Goodson, P., Buhi, E. R., & Dunsmore, S. C. (2006a). Self-esteem and adolescent sexual behaviors, attitudes, and intentions: A systematic review. *Journal of Adolescent Health, 38*(3), 310–319.

Goodson, P., Pruitt, B. E., Suther, S., Wilson, K., & Buhi, E. (2006b). Is abstinence education theory based? The underlying logic of abstinence education programs in Texas. *Health Education & Behavior, 33*(2), 252–271.

Guide to Community Preventive Services. (2009). *Prevention of HIV/AIDS, other STIs and pregnancy: Abstinence education interventions*, from http://www.thecommunityguide.org/hiv/RRabstinence_ed.html

Hauser, D. (2008). *Five years of abstinence-only-until-marriage education: Assessing the impact*. Retrieved November 2009, from http://www.advocatesforyouth.org/index.php?option=com_content&task=view&id=623&Itemid=177

Mann, J., McIlhaney, J. S., & Stine, C. C. (2000). *Building healthy futures: Tools for helping adolescents avoid or delay the onset of sexual activity*. Austin: The Medical Institute for Sexual Health.

National Guidelines Task Force. (2004). *Guidelines for comprehensive sexuality education: Kindergarten - 12th grade* (3rd ed., 1st ed. 1991). New York: SIECUS.

SIECUS. (2008). *The Federal Government & abstinence-only-until-marriage programs*. Retrieved September 2, 2009, from http://www.communityactionkit.org/index.cfm?pageId=892

SIECUS. (2009). *Dueling amendments on sex education pass senate finance committee*, from http://www.siecus.org/index.cfm?fuseaction=Feature.showFeature&FeatureID=1802

Trenholm, C., Devaney, B., Fortson, K., Quay, L., Wheeler, J., & Clark, M. (2007). *Impacts of Four Title V, Section 510 Abstinence Education Programs*. Princeton: Mathematica Policy Research.

United States Government Accountability Office. (2006). *Abstinence education: Efforts to assess the accuracy and effectiveness of federally funded programs*. Report to Congressional Requesters, Washington: GAO-07-87.

Academic Achievement: Contextual Influences

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Academic achievement subsumes a number of indicators to measure cognitive gains and progression through the US educational system. Regardless of the operationalization, the link between academic achievement and later life prospects is well established in the extant literature. Adolescents who earn poorer grades in school are more likely to be retained in grade, to fall behind in credit accrual, and to earn lower achievement test scores, all of which are associated with lower high school completion rates and higher dropout rates (Battin-Pearson et al. 2000; Stearns et al. 2007). High school dropouts, in turn, have lower household incomes, lower occupational status, difficulty finding and maintaining employment, higher incarceration rates, and greater health issues, all of which cost society in terms of lost tax revenue and increased reliance on governmental social services (Rumberger 2001). Although academic achievement is strongly associated with cognitive ability and motivation (Eccles et al. 2003), a comprehensive understanding of adolescents' academic achievement must take into account how the ecological contexts in which adolescents are embedded promote or inhibit their academic achievement.

Academic Achievement in Context

There is a growing recognition among developmentalists that environmental contexts, such as families, schools, and peers, affect numerous developmental domains, including academic achievement (Chung and Steinberg 2006; Cook et al. 2002). Ecological theory provides one lens for exploring the interactions between the individual and both distal and more proximal ecological contexts, interactions that ultimately drive adolescent development, including academic achievement (Bronfenbrenner 1979). During adolescence, the most common proximal contexts in individuals' lives are families, schools, and peers (Steinberg and Morris 2001). The structures of these environments as well as the interactions that occur therein can either promote or inhibit adolescents' academic achievement.

An exploration of adolescents' academic achievement must also be situated in an understanding of the larger stratification systems in the US, stratification reflected in the achievement gap between low-income and more affluent youth as well as the gap between African-American and Latino youth as compared to their White and Asian-American peers (Farkas 2003). Although a more distal factor, the sociohistorical context in which adolescents develop, including existing stratification systems in the US generally and in the

American educational system more specifically, shapes educational opportunities and academic prospects. As such, a comprehensive understanding of adolescents' academic achievement must entail understanding the larger stratification systems as well as the more proximal contexts of adolescents' development.

Stratification and Academic Achievement

The achievement gap between African-American and Latino students and their White and Asian-American peers is well established, as is the achievement gap between poor and non-poor youth in the US. National statistics show that African-American youth are most likely to have been retained in grade before ninth grade (16%), followed by Latino (11%) and White (8%) students. Poor students' retention rates (23%) are almost five times that of non-poor students (5%). Moreover, the achievement divide between these demographic groups only widens across time. Dropout rates for Asian-American (3%) and White (6%) students are relatively low compared to those of African-American (12%) and Latino students (20%), and the dropout rates of low-income youth are approximately five times that of high-income youth (NCES 2009).

Research further metes out the gaps reflected in overall national trends. In comparing standardized achievement test scores for the various race/ethnic groups, research consistently documents the achievement divide (Anderson and Keith 1997; Caldas and Bankston 1997; Lee 2007). These differences are observed across content areas (i.e., English/language arts, writing, mathematics, science, history) and widen from early to late adolescence (Gregory and Weinstein 2004). The race/ethnic achievement gap is also observed for adolescents' grades in school (Fuligni 1997; Lohman et al. 2007) and their dropout status (Lee and Burkam 2003). Consistent with research on the achievement gap across race/ethnic groups, an achievement gap between low-income and high-income youth is also observed for achievement test scores (Blair et al. 1999; Caldas and Bankston 1997), and the proportion of life spent in poverty is associated with lower reading comprehension achievement test scores during adolescence (Eamon 2005). A more detailed discussion of the effects of household socioeconomic status (including not only income but also family structure and educational and occupational status) as a structural characteristic of families is discussed in greater detail below.

Academic Achievement and the Family Context

Numerous studies have explored the link between the structural characteristics of families and adolescents' academic achievement, with the vast majority focusing on various facets of family socioeconomic status (SES). Higher family SES, as measured by parental educational and occupational status and income, is associated with higher achievement test scores (Felner et al. 1995; Gregory and Weinstein 2004; Lee 2007). Moreover, higher-SES adolescents earn higher grades in school (Fuligni 1997; Lohman et al. 2007; Stewart 2008) and are less likely to drop out of school (Lee and Burkam 2003). More extensive reviews of the poverty literature (see Bradley and Corwyn 2002; McLoyd 1998) detail the pernicious effects of being poor or low-SES for adolescents' academic achievement measured in a number of ways (i.e., achievement test scores, class failure, retention in grade, graduation rates, dropout rates). In addition to SES, family structure is also associated with adolescents' academic achievement – adolescents reared in single-parent headed households earn lower achievement test scores (Caldas and Bankston 1997; Lee 2007) and lower grades in school (Lohman et al. 2007; Stewart 2008), are less likely to complete high school, and are more likely to drop out of school (Rumberger 1987) than those reared in intact, two-parent families.

In addition to the influence of familial structural characteristics, the processes that occur within families also influence adolescents' academic achievement. Parents' support for academics, discussions around academics, and provision of educational enrichment in the home are associated with better academic performance, in terms of adolescents' achievement test scores and grades in school (Eamon 2005; Steinberg et al. 1992; Woolley and Grogan-Kaylor 2006). Parents' direct involvement in their adolescents' schools, via activities such as open house attendance, parent–teacher association participation, and classroom volunteering, are positively associated with higher test scores and grades (Gutman and Eccles 1999; Park and Bauer 2002; Shumow and Miller 2001). In their meta-analysis of middle-school-aged adolescents' parental

involvement, Hill and Tyson (2009) found that academic socialization practices (e.g., discussions around academics, fostering educational aspirations) were more effective in promoting academic achievement than home-based supports or school-based involvement, findings consistent with an earlier meta-analysis of secondary students residing in urban areas (Jeynes 2007).

In addition to direct involvement in their children's education, other processes within the home also play a role in adolescents' academic success. For example, adolescents who believe their parents are warm and supportive tend to earn higher grades in school (Bean et al. 2003; Benner and Kim 2010; LeCroy and Krysik 2008), have higher achievement test scores (Portes 1999), and show greater growth in achievement test scores across adolescence (Gregory and Weinstein 2004). In contrast, adolescents who report greater emotional distance between themselves and their parents as well as those who report higher levels of conflict and harsh discipline often earn lower grades and score more poorly on standardized achievement tests (Benner and Kim 2010; Crosnoe 2004; Dotterer et al. 2008; Gutman and Eccles 1999). Parents' behavioral control of their adolescents, in terms of monitoring adolescents' activities, is positively associated with higher achievement test scores (Blair et al. 1999; Gregory and Weinstein 2004) and grades (Bean et al. 2003), although the influence of parental monitoring has been found to vary across race/ethnic groups.

In addition to these individual indicators of family processes and interactions, scholars have also examined multiple aspects of parenting simultaneously to identify parenting profiles or typologies, generally focusing on parental warmth and control (see Baumrind 1971; Maccoby and Martin 1983). Studies examining the link between parenting profiles and adolescents' academic achievement find that youth whose parents employ authoritative parenting (high warmth combined with high levels of control) earn higher grades and better achievement test scores than those whose parents employ other parenting styles, although again, some differences emerge across race/ethnic groups (Fletcher et al. 1999; Jeynes 2007; Steinberg et al. 1992). For example, it appears that White and Latino adolescents benefit more academically from authoritative parents than African-American and Asian-American adolescents.

Overall, this body of research suggests that family characteristics, particularly those directly related to economic well-being, influence the academic achievement of adolescents. However, the processes that occur within families can promote stronger achievement – adolescents benefit academically when they have families who are involved in the educational process and who provide warmth and support but also appropriate monitoring of adolescents' day-to-day lives.

Academic Achievement and the School Context

The school is another primary context of socialization during adolescence, and the relationship between school structural characteristics and adolescents' performance is well established. Adolescents in high-poverty schools (generally measured by the percentage of students qualifying for the federal school lunch program) and schools with high percentages of race/ethnic minority students generally experience more academic difficulties than their peers attending more affluent schools and schools with fewer race/ethnic minority students (Benner and Graham 2009; Caldas and Bankston 1997; Lee and Croninger 1994; Leventhal and Brooks-Gunn 2004). Although not as consistent, in general greater school diversity is associated with higher grades in school and stronger educational attainment (Borman et al. 2004; Goza and Ryabov 2009). Additionally, adolescents enrolled in large schools tend to perform more poorly on standardized tests and exhibit less growth in achievement across time (Lee et al. 1997), earn lower grades in school (Benner and Graham 2009), and have higher dropout rates (Baker et al. 2001; Lee and Burkam 2003) than students attending smaller schools. Similar academic difficulties emerge for adolescents in schools with higher student-to-teacher ratios (Baker et al. 2001; McNeal 1997).

Tracking systems are another structural characteristics of many American middle and high schools. Tracking, whether it emerges de facto or as a more systemic practice, "places students who appear to have similar educational needs and abilities into separate classes and programs of instruction" (Oakes 1987, p. 131). Higher socioeconomic diversity and race/ethnic diversity are associated with more pronounced de facto tracking in mathematics and English courses in American schools (Lucas and Berends 2002), and in general, research suggests that track placement serves to

only promote and reinforce existing academic inequalities, with African-American and Latino adolescents and low-income adolescents being placed in the "lower" tracks at substantially higher rates than their White, Asian-American, and more affluent peers (Oakes 2005). Not surprisingly, adolescents' track placement has a significant influence on changes in their academic achievement across time, such that placement in higher tracks (i.e., honors, advanced) promotes greater achievement than placement in lower tracks (i.e., very basic, basic; Hallinan 1994; Oakes 2005). The structure of tracking systems also influences adolescents' achievement – when there is immobility within tracking systems (i.e., little movement of students changing academic tracks across time), a greater achievement gap in achievement test scores exists between tracks, whereas high levels of inclusiveness in a tracking system (i.e., proportion of students in a college-preparatory curriculum) are associated with a smaller gap in achievement across tracks (Gamoran 1992).

School transitions, normative experiences that occur when adolescents enter middle or junior high school and high school, involve a shift in both the structural characteristics of the schools adolescents attend and the relationships and interactions that occur within and across the school contexts. As such, it is not surprising that school transitions are influential for adolescents' academic achievement. Initial research posited that the academic challenges experienced in early adolescence were due to the developmental transition into adolescence, but Simmons and Blyth's (1987) groundbreaking work illustrated that the transition to middle school was a driving force in explaining early adolescents' academic declines. Subsequent research has corroborated these initial findings, documenting substantial declines in both grades and teacher-rated academic performance from elementary to middle school (Gutman and Midgley 2000; Rudolph et al. 2001). Although less is known about the transition to high school, scholars identify similar achievement disruptions across the high school transition (Barber and Olsen 2004; Reyes et al. 1994). Research suggests that the declines observed across the high school transition persist across the first 2 years of high school and are particularly disruptive for incongruent African-American and Latino adolescents who transition to high school with few same-ethnicity peers (Benner and Graham 2009).

Interactions that occur within schools, beyond the changes in those interactions observed across school transitions, also influence adolescents' academic achievement. Interactions specifically around academics, beyond the obvious instructional activities, promote academic achievement during adolescence. For example, when adolescents believe their teachers have high regard for them as students, they earn higher grades in school (Roeser and Eccles 1998), consistent with the extensive teacher expectancies literature that highlights a strong link between teachers' educational expectations for students and students' academic achievement (Gill and Reynolds 1999; Muller et al. 1999; Smith et al. 1998). Although teacher opinions about particular students can influence academic achievement, teachers' overall views of the academic caliber of students in their schools are also linked to adolescents' academic success. For example, teachers' general ratings of the achievement orientation of the student body are associated with adolescents' reading and math achievement test scores as well as their grades in school (Brand et al. 2008).

In addition to interactions and processes directly tied to academics, the emotional connections within schools are also important for adolescents' academic achievement. When adolescents feel closer to their teachers and express more positive perceptions about student–teacher relationships, adolescents exhibit stronger academic achievement, in terms of achievement test score growth, grades in school, and dropout status (Crosnoe 2004; Gregory and Weinstein 2004; Lee and Burkam 2003; Woolley and Grogan-Kaylor 2006), although interestingly, *teacher* perceptions of the student–teacher relationship are not predictive of adolescents' achievement (Brand et al. 2008). Similar trends are observed for more general ratings of school climate – adolescents who view their schools more favorably and feel more connected to their schools receive higher grades (LeCroy and Krysik 2008; Stewart 2008; Zand and Thomson 2005) and earn higher scores on achievement tests (Eamon 2005) than those who view their schools more negatively. Perceptions of specific aspects of the school climate are also important for adolescents' academic success. For example, adolescents who report more positive evaluations of their schools' interracial climates have better academic achievement (Mattison and Aber 2007). Similarly, perceptions of school safety also promote academic

performance – when adolescents are in schools that they perceive as more safe or that their teachers rate as more safe, they perform better on achievement tests (Brand et al. 2008; Leventhal and Brooks-Gunn 2004) and are less likely to drop out of school (Rumberger 1995). Adolescents also perform better academically when in schools where teachers rate the student body as less disruptive (Brand et al. 2008).

Overall, the patterns of influence observed in the school context closely mirror those observed at the family level. The structural characteristics of schools, particularly the SES and racial/ethnic make-up of schools, are directly related to adolescents' academic achievement. Yet this body of research suggests that the processes and interactions that occur within schools can promote the academic achievement of all students, with adolescents benefitting from close bonds with their teachers specifically and their schools more generally.

Academic Achievement and the Peer Context

Although research linking the structural characteristics of peer/friendship groups to academic achievement is more rare, evidence suggests that these characteristics do in fact play a role in adolescents' achievement. For example, adolescents with higher-SES peers generally earn higher grades and are more likely to complete high school than those with lower SES peers, although these effects are often race/ethnic dependent (Goza and Ryabov 2009). The academic achievement of an adolescents' peer group is also linked to their own academic achievement. Whether examining reciprocated friendships or larger peer networks, the grades of those with whom adolescents are closest are positively associated with adolescents' own grades in school (Altermatt and Pomerantz 2005; Mounts and Steinberg 1995; Ryan 2001). Similarly, when adolescents are embedded in highly dense networks of high achieving peers, they have the highest achievement levels, whereas adolescents embedded in highly dense networks of low-achieving peers have the worst achievement (Maroulis and Gomez 2008). Related to this, adolescents who have more friends who have dropped out of school have a greater likelihood of later dropping out themselves (Ream and Rumberger 2008).

In addition to the structural characteristics of peer groups and friendship groups, the quality and support adolescents receive from these significant others also influences their academic achievement. Not surprisingly, when adolescents' peers are achievement oriented and provide academic support, adolescents typically earn higher grades in school (Herman 2009; LeCroy and Krysik 2008; Steinberg et al. 1992; Stewart 2008; Wentzel et al. 2004) and have a lower likelihood of later school dropout (Ream and Rumberger 2008). More generally, associating with prosocial peers is linked to higher grades in school (Wentzel et al. 2004), whereas having more deviant and disruptive peers is associated with poorer school performance during adolescence (Berndt and Keefe 1995; Fuligni et al. 2001). Feeling accepted by peers, whether measured as a reciprocated friendship or by more general ratings of support and acceptance, is positively associated with adolescents' academic achievement (Hartup 1996; Wentzel et al. 2004; Wentzel and Caldwell 1997). Victimization by peers, in contrast, is associated with poorer school performance (Graham et al. 2006; Juvonen et al. 2000).

The link between peer processes and achievement has received particular attention from scholars examining oppositional identity and the "burden of acting white" for African-American adolescents (Fordham and Ogbu 1986). Fordham and Ogbu argued that the underachievement of African-American adolescents is linked, in part, to a peer culture that devalues academic effort and achievement, labeling it "acting white." A number of studies have challenged the theses of Fordham and Ogbu, acknowledging that although adolescents of color may experience peers' accusations of acting White, these accusations do not influence adolescents' subsequent academic achievement (Ainsworth-Darnell and Downey 1998; Bergin and Cooks 2002). Moreover, Tyson and colleagues (2005) identify not only racialized peer pressure with African-American adolescents, but also class-based peer pressure with White adolescents, where lower-income White adolescents equate academic achievement with acting "high and mighty" (p. 598).

Overall, although the research linking adolescents' peer groups to their academic achievement is more scarce, a clear pattern emerges. When adolescents have friends who perform better in school, are more oriented to school, and provide more academic support, adolescents benefit academically. In addition to the academic characteristics of peers and academically based interactions, more general emotional support

and friendship quality also seemingly promote academic success during adolescence, whereas rejection and victimization by peers is detrimental to adolescents' academic well-being.

Future Directions of the Adolescent Academic Achievement Literature

Across the primary contexts of adolescents' development – families, schools, and peer groups – a consistent pattern of findings links both the structural characteristics of each context and the processes and interactions that occur therein with adolescents' academic achievement. When contexts are characterized by more resources and less social marginalization, adolescents perform better academically. Moreover, warm, academics-oriented relationships within each context promote academic achievement and educational growth. Although these patterns are clear, much is left to explore in relation to adolescents' academic achievement, and ecological theory serves as an important guide for future inquiry.

First, ecological theory suggests a fundamental interplay between the structural characteristics of a given ecological context and the processes that occur within that context, yet researchers sometimes conflate structure and process and create models that do not differentiate between the two. Future research on adolescents' academic achievement should examine how the structural characteristics of families, schools, and peer groups influence the processes and interactions that occur within these contexts (see Benner et al. 2008 for an example). Investigation of the differential effects of structure and process will provide insights into what aspects of contexts are more amenable and malleable to change in order to better promote adolescents' academic success.

A second area ripe for future inquiry relates to the interplay across the ecological contexts of adolescence. The contexts of adolescents' development do not exist within a vacuum – parents attend activities at their children's schools, teachers' promote academic involvement and support in homes, peers interact both within and outside the confines of school. These cross-context interactions, as well as the consistency in relations across contexts, influence adolescent development, yet researchers have, with few exceptions, ignored these mesosystemic influences. Those scholars who have explored cross-system interactions have highlighted the importance of these for adolescents' academic achievement. For example, Crosnoe (2004) found that close relations to parents were associated with higher grades in school when adolescents also attended schools with more positive student–teacher bonds. Similarly, Gregory and Weinstein (2004) found that monitoring and regulation by parents and teachers exerted an additive effect for adolescents' mathematics achievement. Future research should further explore the additive (and possibly compensatory) nature of relationships across ecological contexts as well as the extent to which the structural characteristics of a given context might influence cross-context interactions. It is through understanding these more nuanced processes and interactions that we will be able to more effectively promote the academic achievement of all adolescents.

Cross-References

► Educational Aspirations
► Vocational Education

References

Ainsworth-Darnell, J. W., & Downey, D. B. (1998). Assessing the oppositional culture explanation for racial/ethnic differences in school performance. *American Sociological Review, 63*, 536–553.

Altermatt, E. R., & Pomerantz, E. M. (2005). The implications of having high-achieving versus low-achieving friends: A longitudinal analysis. *Social Development, 14*, 61–81.

Anderson, E. S., & Keith, T. Z. (1997). A longitudinal test of a model of academic success for at-risk high school students. *Journal of Educational Research, 90*, 259–268.

Baker, J. A., Derrer, R. D., Davis, S. M., Dinklage-Travis, H. E., Linder, D. S., & Nicholson, M. D. (2001). The flip side of the coin: Understanding the school's contribution to dropout and completion. *School Psychology Quarterly, 16*, 406–426.

Barber, B. K., & Olsen, J. A. (2004). Assessing the transitions to middle and high school. *Journal of Adolescent Research, 19*, 3–30.

Battin-Pearson, S., Newcomb, M. D., Abbott, R. D., Hill, K. G., Catalano, R. F., & Hawkins, J. D. (2000). Predictors of early dropout: A test of five theories. *Journal of Educational Psychology, 92*, 568–582.

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology Monographs, 4*, 1–103.

Bean, R. A., Bush, K. R., McKenry, P. C., & Wilson, S. M. (2003). The impact of parental support, behavioral control, and psychological control on the academic achievement of African American and European American adolescents. *Journal of Adolescent Research, 18*, 523–541.

Benner, A. D., & Graham, S. (2009). The transition to high school as a developmental process among multiethnic urban youth. *Child Development, 80*, 356–376.

Benner, A. D., Graham, S., & Mistry, R. S. (2008). Discerning individual and conjoint effects of ecological structures and processes on adolescents' educational outcomes. *Developmental Psychology, 44*, 840–854.

Benner, A. D., & Kim, S. Y. (2010). Understanding Asian American adolescents' developmental outcomes: Insights from the family stress model. *Journal of Research on Adolescence, 20*, 1–12.

Bergin, D. A., & Cooks, H. C. (2002). High school students of color talk about accusations of "acting White". *The Urban Review, 34*, 113–134.

Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child Development, 66*, 1312–1329.

Blair, S. L., Blair, M. C. L., & Madamba, A. B. (1999). Racial/ethnic differences in high school students academic performance: Understanding the interweave of social class and ethnicity in the family context. *Journal of Comparative Family Studies, 30*, 539–555.

Borman, K. M., Eitle, T. M., Michael, D., Eitle, D. J., Lee, R., Johnson, L., et al. (2004). Accountability in a postdesegregation era: The continuing significance of racial segregation in Florida's schools. *American Educational Research Journal, 41*, 605–631.

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology, 53*, 371–399.

Brand, S., Felner, R. D., Seitsinger, A., Burns, A., & Bolton, N. (2008). A large scale study of the assessment of the social environment of middle and secondary schools: The validity and utility of teachers' ratings of school climate, cultural pluralism, and safety problems for understanding school effects and school improvement. *Journal of School Psychology, 46*, 507–535.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Caldas, S. J., & Bankston, C. (1997). Effect of school population socioeconomic status on individual academic achievement. *Journal of Educational Research, 90*, 269–277.

Chung, H. L., & Steinberg, L. (2006). Relations between neighborhood factors, parenting behaviors, peer deviance, and delinquency among serious juvenile offenders. *Developmental Psychology, 42*, 319–331.

Cook, T. D., Herman, M. R., Phillips, M., & Settersen, R. A., Jr. (2002). Some ways in which neighborhoods, nuclear families, friendship groups, and schools jointly affect changes in early adolescent development. *Child Development, 73*, 1283–1309.

Crosnoe, R. (2004). Social capital and the interplay of families and schools. *Journal of Marriage and Family, 66*, 267–280.

Dotterer, A. M., Hoffman, L., Crouter, A. C., & McHale, S. M. (2008). A longitudinal examination of the bidirectional links between academic achievement and parent adolescent conflict. *Journal of Family Issues, 29*, 762–779.

Eamon, M. K. (2005). Social-demographic, school, neighborhood, and parenting influences on the academic achievement of Latino young adolescents. *Journal of Youth and Adolescence, 34*, 163–174.

Eccles, J. S., Wigfield, A., & Byrnes, J. (2003). Cognitive development in adolescence. In R. M. Lerner, M. A. Easterbrooks, & J. Mistry (Eds.), *Handbook of psychology: Developmental psychology* (Vol. 6, pp. 325–350). Hoboken: Wiley.

Farkas, G. (2003). Racial disparities and discrimination in education: What do we know, how do we know it, and what do we need to know? *Teachers College Record, 105*, 1119–1146.

Felner, R. D., Brand, S., DuBois, D. L., Adan, A. M., Mulhall, P. F., & Evans, E. G. (1995). Socioeconomic disadvantage, proximal environmental experiences, and socioemotional and academic adjustment in early adolescence: Investigation of a mediated effects model. *Child Development, 66*, 774–792.

Fletcher, A. C., Steinberg, L., & Sellers, E. B. (1999). Adolescents well-being as a function of perceived interparental consistency. *Journal of Marriage and Family, 61*, 599–610.

Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the "burden of 'acting White'". *The Urban Review, 18*, 176–206.

Fuligni, A. J. (1997). The academic achievement of adolescents from immigrant families: The roles of family background, attitudes, and behavior. *Child Development, 68*, 351–363.

Fuligni, A. J., Eccles, J. S., Barber, B. L., & Clements, P. (2001). Early adolescent peer orientation and adjustment during high school. *Developmental Psychology, 37*, 28–36.

Gamoran, A. (1992). The variable effects of high school tracking. *American Sociological Review, 57*, 812–828.

Gill, S., & Reynolds, A. J. (1999). Educational expectations and school achievement of urban African American children. *Journal of School Psychology, 37*, 403–424.

Goza, F., & Ryabov, I. (2009). Adolescents' educational outcomes: Racial and ethnic variations in peer network importance. *Journal of Youth and Adolescence, 38*, 1264–1279.

Graham, S., Bellmore, A. D., & Mize, J. (2006). Peer victimization, aggression, and their co-occurence in middle school: Pathways to adjustment problems. *Journal of Abnormal Child Psychology, 34*, 363–378.

Gregory, A., & Weinstein, R. S. (2004). Connection and regulation at home and in school: Predicting growth in achievement for adolescents. *Journal of Adolescent Research, 19*, 405–427.

Gutman, L. M., & Eccles, J. S. (1999). Financial strain, parenting behaviors, and adolescents' achievement: Testing model equivalence between African American and European American single- and two-parent families. *Child Development, 70*, 1464–1476.

Gutman, L. M., & Midgley, C. (2000). The role of protective factors in supporting the academic achievement of poor African American students during the middle school transition. *Journal of Youth and Adolescence, 29*, 223–248.

Hallinan, M. T. (1994). School differences in tracking effects on achievement. *Social Forces, 72*, 799–820.

Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development, 67*, 1–13.

Herman, M. R. (2009). The Black-White-other achievement gap: Testing theories of academic performance among multiracial and monoracial adolescents. *Sociology of Education, 82*, 20–46.

Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of teh strategies that promote achievement. *Developmental Psychology, 45*, 740–763.

Jeynes, W. H. (2007). The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Education, 42*, 82–110.

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology, 92*, 349–359.

LeCroy, C. W., & Krysik, J. (2008). Predictors of academic achievement and school attachment among Hispanic adolescents. *Children and Schools, 30*, 197–209.

Lee, H. (2007). The effects of school racial and ethnic composition on academic schievement during adolescence. *The Journal of Negro Education, 76*, 154–172.

Lee, V. E., & Burkam, D. T. (2003). Dropping out of high school: The role of school organization and structure. *American Educational Research Journal, 40*, 353–393.

Lee, V. E., & Croninger, R. G. (1994). The relative importance of home and school in the development of literacy skills for middle-grade students. *American Journal of Education, 102*, 286–329.

Lee, V. E., Smith, J. B., & Croninger, R. G. (1997). How high school organization influences te equitable distribution of learning in mathematics and science. *Sociology of Education, 70*(2), 128–150.

Leventhal, T., & Brooks-Gunn, J. (2004). A randomized study of neighborhood effects on low-income children's educational outcomes. *Developmental Psychology, 40*, 488–507.

Lohman, B. J., Kaura, S. A., & Newman, B. M. (2007). Matched or mismatched environments? The relationship of family and school differentiation to adolescents' psychosocial adjustment. *Youth and Society, 39*, 3–32.

Lucas, S. R., & Berends, M. (2002). Sociodemographic diversity, correlated achievement, and de facto tracking. *Sociology of Education, 75*, 328–348.

Maccoby, E., & Martin, J. (1983). Socialization in the context of teh family: Parent-child interaction. In E. M. Hetherington (Ed.), *Handbook of child psychology: Socialization, personality, and social development* (Vol. 4, pp. 1–101). New York: Wiley.

Maroulis, S., & Gomez, L. M. (2008). Does "connectedness" matter? Evidence from a social network analysis within a small-school reform. *Teachers College Record, 110*, 1901–1929.

Mattison, E., & Aber, M. S. (2007). Closing the achievement gap: The associations of racial climate with achievement and behavioral outcomes. *American Journal of Community Psychology, 40*, 1–12.

McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53*, 185–204.

McNeal, R. B., Jr. (1997). High school dropouts: A closer examination of school effects. *Social Science Quarterly, 78*, 209–222.

Mounts, N. S., & Steinberg, L. (1995). An ecological analysis of peer influence on adolescent grade point average and drug use. *Developmental Psychology, 31*, 915–922.

Muller, C., Katz, S. R., & Dance, L. J. (1999). Investing in teaching and learning: Dynamics of the teacher-student relationship from each actor's perspective. *Urban Education, 34*, 292–337.

National Center for Education Statistics. (2009). *Condition of education 2009*. Washington: U.S. Department of Education.

Oakes, J. (1987). Tracking in secondary schools: A contextual perspective. *Educational Psychologist, 22*, 129–153.

Oakes, J. (2005). *Keeping track: How schools structure inequality*. New Haven: Yale University Press.

Park, H.-S., & Bauer, S. (2002). Parenting practices, ethnicity, socioeconomic status, and academic achievement in adolescents. *School Psychology International, 23*, 386–396.

Portes, P. R. (1999). Social and psychological factors in teh academic achievement of children of immigrants: A cultural history puzzle. *American Educational Research Journal, 36*, 489–507.

Ream, R. K., & Rumberger, R. W. (2008). Student engagement, peer social capital, and school dropout among Mexican American and non-Latino White students. *Sociology of Education, 81*, 109–139.

Reyes, O., Gillock, K. L., & Kobus, K. (1994). A longitudinal study of school adjustment in urban, minority adolescents: Effects of a high school transition program. *American Journal of Community Psychology, 22*, 341–369.

Roeser, R. W., & Eccles, J. (1998). Adolescents' perceptions of middle school: Relation to longitudinal changes in academic and psychological adjustment. *Journal of Research on Adolescence, 8*, 123–158.

Rudolph, K. D., Lambert, S. F., Clark, A. G., & Kurlakowsky, K. D. (2001). Negotiating the transition to middle school: The role of self-regulatory processes. *Child Development, 72*, 929–946.

Rumberger, R. W. (1987). High school dropouts: A review of issues and evidence. *Review of Educational Research, 57*, 101–121.

Rumberger, R. W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal, 32*, 583–625.

Rumberger, R. W. (2001). *Why students drop out and what can be done*. Cambridge, MA: Harvard Civil Rights Project.

Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development, 72*, 1135–1150.

Shumow, L., & Miller, J. D. (2001). Parents' at-home and at-school academic involvement with young adolescents. *Journal of Early Adolescence, 21*, 68–91.

Simmons, R. G., & Blyth, D. A. (1987). *Moving into adolescence: The impact of pubertal change and school context*. Hawthorn: Aldine.

Smith, A. E., Jussim, L., & Eccles, J. (1998). Self-fulfilling prophecies, perceptual biases, and accuracy at the individual and group levels. *Journal of Experimental Social Psychology, 34*, 530–561.

Stearns, E., Moller, S., Blau, J., & Potochnick, S. (2007). Staying back and dropping out: The relationship between grade retention and school dropout. *Sociology of Education, 80*, 210–240.

Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology, 52*, 83–110.

Steinberg, L., Dornbusch, S. M., & Brown, B. B. (1992). Ethnic differences in adolescent achievement. *American Psychologist, 47*, 723–729.

Stewart, E. (2008). School structural characteristics, student effort, peer associations, and parental involvement. *Education and Urban Society, 40*, 179–204.

Tyson, K., Darity, W., Jr., & Castellino, D. R. (2005). It's not "a Black thing": Understanding the burden of acting White and other dilemmas of high achievement. *American Sociological Review, 70*, 582–605.

Wentzel, K. R., & Caldwell, K. (1997). Friendships, peer acceptance, and group membership: Relations to academic achievement in middle school. *Child Development, 68*, 1198–1209.

Wentzel, K. R., Barry, C. M., & Caldwell, K. A. (2004). Friendships in middle school: Influences on motivation and school adjustment. *Journal of Educational Psychology, 96*, 195–203.

Woolley, M. E., & Grogan-Kaylor, A. (2006). Protective family factors in the context of neighborhood: Promoting positive school outcomes. *Family Relations, 55*, 93–104.

Zand, D. H., & Thomson, N. R. (2005). Academic achievement among African American adolescents: Direct and indirect effects of demographic, individual, and contextual variables. *Journal of Black Psychology, 31*, 352–368.

Academic Self-efficacy

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Overview

Time spent in learning accounts for a large portion of an adolescent's life. Enjoyment in learning activities, adjustment in the school setting, and academic achievement represent desired attainments for both students and their families. A vast literature additionally shows that these attainments influence children's course of life, by affecting their scholastic choices and professional aspirations, as well as their psychosocial development and well-being. Among the factors contributing to these attainments are academic self-efficacy beliefs and optimal experience in learning. The first part of this essay will illustrate the two constructs and related assessment methodologies. The short- and long-term developmental outcomes of the constructs will also be outlined, as well as the contextual and individual factors contributing to optimal learning environment and experience. The second part will present a model combining academic self-efficacy beliefs and optimal experience, and will bring forward future directions for research and practice.

Introduction

Learning at school is one of the major means through which culturally relevant information is transmitted, with the view to provide individuals with the knowledge required to identify and fulfill their role in society. On the one hand, a great number of studies attest to the natural human tendency to learn and the thirst for knowledge in young children (Shernoff and Csikszentmihalyi 2009). On the other hand, findings in western countries highlight that once children enter the formal school system, they start to report lack of interest, disengagement, and apathy toward learning, which can lead to poor concepts assimilation and eventually to school dropout. Obstacles to learning usually include disruptive thoughts, dysfunctional emotional reactions, negative interpersonal relationships, and poor organizational skills. This is much more true of adolescents who tend to be even less engaged in school activities. In order to shed light on the reasons for such learning disaffection and to identify intervention strategies promoting engagement in school activities, scholars in the 1960s and 1970s have advocated the agentic role of students in regulating academic learning. In particular, two theories have proved successful in providing sound empirical evidence and models of academic learning: Bandura's social-cognitive theory (1997) and Csikszentmihalyi's flow theory (1975/2000). The first part of this essay will illustrate the two theoretical frameworks, related methodology, and major findings connected to the learning domain. The second part will present a model building a bridge between the two theories, and will bring forward future directions for research and practice.

Self-efficacy Beliefs in Bandura's Social-Cognitive Theory

Bandura's social-cognitive theory stresses the active and proactive role individuals play in shaping the course of their life (Bandura 1986, 2001). People are viewed as self-regulating agents whose development takes place in complex transactions within a network of socio-structural and psychosocial influences, where individuals are both producers and products of their social systems. During these transactions, individuals play a decisive role in setting goals, in choosing which paths to follow, and in selecting the activities and social relationships that are most appropriate to their choices.

Among the mechanisms of human agency, a pervasive influence is played by self-efficacy beliefs, namely, the beliefs that individuals hold about their capacity to exert control over the events that affect

their lives, and to organize and execute courses of action to attain designed goals. Any other factor that may operate as motivator in people's efforts to reach their goals is rooted in the core belief that one has the power to produce effects by one's own actions (Bandura 1997, 2001). Self-efficacy beliefs directly contribute to decisions, actions, and experiences, as people reflect upon their capacities when deciding whether to undertake challenging activities or to persist in pursuing difficult tasks. Findings have documented the influential role of self-efficacy beliefs in various domains of functioning such as learning, work, sports, health, social adjustment, and well-being, in different conditions and phases of life (for a review, see Bandura 1997, 2001). Moreover, the functional role of perceived self-efficacy and the processes through which it operates have been confirmed across cultures (Bandura 2002).

Compared to other psychological constructs, perceived self-efficacy has a variety of distinctive characteristics. First, it concerns perceived capacities to perform an activity or to manage a task, and not personality traits (i.e., extraversion) or other general psychological characteristics (i.e., self-esteem). Second, self-efficacy beliefs are not only domain-specific, but may also be context- and task-specific. Moreover, they vary across several dimensions, such as level, generality, and strength. The level of perceived self-efficacy refers to its dependence on the difficulty level of a particular task (i.e., a math addition problem); generality refers to the transferability of one's efficacy judgements across different tasks, contexts, or domains; finally, strength pertains to the confidence with which one can perform a specific task or activity.

Self-efficacy Beliefs' Assessment

The distinctive features of self-efficacy described above have implications for the construct measurement. As the efficacy beliefs system is not a global trait but a differentiated set of self-beliefs linked to distinct realms of functioning, only multi-domain measures can adequately reveal the pattern and degree of generality of people's sense of personal efficacy. The "one measure fits all" approach has a limited explanatory and predictive value because most of the items in such a measure may have little or no relevance to the specific domain of functioning or task one is interested to evaluate. Self-efficacy beliefs covary across distinct domains only when different spheres of activity are governed by similar subskills, or when skills in diverse domains are developed together.

All over the world, scales were developed to measure people's self-efficacy beliefs in different life domains. In the academic settings, there are scales assessing students' perceived capabilities to learn specific subjects (e.g., the "Self-efficacy to Learn Statistics" scale; Finney and Schraw 2003); scales measuring the perceived capabilities to apply successful learning strategies (e.g., the "Self-Efficacy for Learning Form"; Zimmerman et al. 2005); and multi-domain scales, assessing students' capacity to enlist social resources, to learn specific subjects, and to self-regulate their learning activities (e.g., the measure developed by Bandura 2006).

New scales can be designed by scholars and educators interested in measuring self-efficacy beliefs in specific contexts and in relation to particular domains or tasks. The guidelines developed by Bandura (2006) enlist the main rules that have to be respected in order to build a proper self-efficacy scale. First, the construction of a scale primarily relies on a good conceptual analysis of the domain of interest, as the knowledge of the activity domain specifies which aspects of personal efficacy should be measured. In particular, a comprehensive efficacy assessment should be linked to the behavioral factors that mostly determine the quality of functioning in the domain and over which people can exercise some control. Second, efficacy items should accurately reflect the construct of self-efficacy. They should be phrased in terms of "can do", as the "can" phrase reflects a judgment of capability ("Can you finish your homework assignments by deadline?"). Perceived self-efficacy should be measured against levels of task demands that represent challenges or difficulties to successful performance. Self-efficacy judgements reflect the level of difficulty individuals believe they can surmount. If there are no obstacles to overcome, the activity is easily performable, and everyone is highly efficacious. For instance, every student can state he or she feels able to "get him or herself to study" when there is no challenge or impediment, but only the most efficacious will judge themselves very capable to "get themselves to study when there are other interesting things to do". The nature and level of the challenges against which personal efficacy is judged will vary depending on the sphere of activity and may be graded in terms of level of exertion, accuracy,

productivity, threat, or self-regulation required. Constructing scales to assess self-efficacy thus requires preliminary work to identify specific challenges and impediments. In preliminary phases, people are usually asked to describe the things that make it hard for them to perform the required activities on a regular basis. The identified challenges or impediments are then inserted into the efficacy items, and respondents are asked to judge their ability to meet the challenges or to overcome the various impediments. At last, item format should present sufficient gradations to guarantee a variety of answers in the population and to avoid ceiling effects.

Self-efficacy Beliefs in Educational Settings

Research on adolescents' academic perceived self-efficacy, namely, their self-beliefs in managing activities connected to learning processes and success at school, is extremely wide and has been conducted in different cultures (see for major reviews: Bandura 1997; Pajares 1996, 1997; Schunk and Pajares 2004). Studies used various assessment scales and adopted different research designs. In experimental studies, self-efficacy beliefs were usually manipulated in order to assess their effect on students' performance. In nonexperimental studies, the relationship of efficacy beliefs with indicators of students' performance or well-adjustment was evaluated cross-sectionally or longitudinally. Other studies specifically evaluated the effectiveness of long-term interventions aimed to strengthen students' perceived self-efficacy through trainings based on the sources of self-efficacy identified by Bandura. Overall, research demonstrated that self-efficacy beliefs influence students' academic and career choices, as well as motivational factors and learning strategies that promote success at school.

Academic Choices and Career

Self-efficacy beliefs influence academic choices as students are prone to engage in tasks in which they feel confident and avoid those in which they do not. Especially in high school and college, where students have greater control over activity selection, their efficacy beliefs strongly influence course choices and academic career (Britner and Pajares 2006). For example, several studies conducted in the areas of science and mathematics showed that perceived self-efficacy is more predictive of interest in and choice of these learning domains than prior achievement and outcome expectations (e.g., Lent et al. 1993; Pajares and Miller 1995). In addition, adolescents' academic self-efficacy has been demonstrated to affect career trajectories through occupational self-efficacy (Bandura et al. 2001).

Motivation and Learning Strategies

Once an activity is chosen, self-efficacy beliefs contribute to its accomplishment through a number of motivational factors (see Schunk and Miller 2002, for a review). Perceived self-efficacy determines the effort students will expend on activities and their perseverance in front of obstacles and difficulties (e.g., Bouffard-Bouchard et al. 1991; Gore 2006). Confident students approach difficult tasks as challenges to be mastered rather than as threats to be avoided. They have greater intrinsic motivation, set themselves challenging goals, and maintain strong commitment to them. Moreover, they more quickly regain their confidence after failures or setbacks, and they attribute failure to insufficient effort or lack of acquirable knowledge and skills (Schunk 1998; Zimmerman et al. 1992). Conversely, students with low self-efficacy tend to believe that things are more difficult than they really are, and they are likely to attribute their failure to inborn and permanent lack of ability. Both sets of thoughts foster negative emotions and determine low confidence in personal capabilities. Students with higher self-efficacy beliefs also use more effective cognitive and meta-cognitive learning strategies and show greater flexibility in their use, as shown by Zimmerman and his colleagues in their extensive line of inquiry on the relationships between self-efficacy beliefs, academic self-regulatory strategies, and academic achievement. They demonstrated that self-efficacy beliefs influence self-regulatory processes such as goal setting, self-monitoring, self-evaluation, and strategy use (Zimmerman and Cleary 2006).

Academic Achievement

There is ample empirical evidence that self-efficacy beliefs are related to and exert an influence on academic achievement, either directly or through the influence of other personal achievement predictors, such as previous achievement, skills, and mental abilities (see Pajares and Schunk 2001, for a review). Early adolescents' perceived academic self-efficacy has also been

demonstrated to mediate the influence of external factors such as parents' own efficacy beliefs and aspirations, and the family's socioeconomic status (Bandura et al. 1996).

Longitudinal studies attested to the long-lasting effect of efficacy beliefs on academic achievement and likelihood of dropping out of school (Caprara et al. 2008). A general decline in efficacy beliefs has also been observed from junior high to high school, as a consequence of the increasing demands and pressures on children's academic performance. However, that decline is weaker for children with higher self-efficacy beliefs. The effects of efficacy beliefs on achievement are usually stronger for high school and college students than for elementary students. In particular, recent empirical studies and meta-analyses demonstrated the strong predictive value of efficacy beliefs on late adolescents' performance in college (Gore 2006; Robbins et al. 2004). The strongest effects were obtained when achievement was assessed through basic skills measures or classroom-based indices such as grades. Moreover, although a reciprocal influence between self-efficacy beliefs and school attainments can be hypothesized, Schunk and his colleagues showed the causal influence of perceived self-efficacy on students' achievement-related behaviors. In particular, they detected that the increase of self-efficacy through instructional strategies resulted in improved academic performances (e.g., Schunk and Swartz 1993).

Factors Promoting Students' Self-efficacy Beliefs

Bandura (1986, 1997) identified four main sources of self-efficacy: personal mastery, physiological reactions, vicarious experiences, and forms of persuasion. (1) Personal mastery experiences are the strongest source for enhancing perceptions of self-efficacy. In general, frequent successes boost self-efficacy, whereas consistent failure experiences usually undermine it. However, this process is not completely automatic, as personal accomplishments are interpreted in light of one's self-regulatory processes, such as self-evaluations, attributions, and goal setting. For instance, perceived self-efficacy depends on the individual evaluation of circumstances and external factors; if a student does well on a math test but judges it easier than typical math tests, it is unlikely that his or her efficacy beliefs will change. (2) Physiological reactions can also influence a student's efficacy judgement. If a student gets extremely anxious during a classwork, he or she may interpret the rapid heart rate as an indicator of personal ineffectiveness. (3) Adolescents also judge their level of self-efficacy through vicarious experiences, such as modeling, defined as the behavioral, cognitive, and affective changes resulting from observing other individuals. Models may be different types of individuals (peers or adults) and can take various forms (live or symbolic). Their effectiveness will be strongest when observers believe they are similar to the model in terms of age, gender, and ability. (4) Finally, also social persuasion can shape students' efficacy perceptions. In the learning settings, teachers and parents may promote students' positive efficacy beliefs using various form of verbal persuasion aimed at encouraging (e.g., "I'm sure you can do it") and reassuring them (e.g., "You will do better on the next exam"), as well as providing specific feedback that clearly link performance and its progress, with strategy use (e.g., "You failed because you used a wrong way to study. I'll suggest..."). This form of social persuasion has a strong long-lasting effect as it encourages students to view academic success and failure in terms of controllable personal strategies that can be learned and progressively improved.

Optimal Experience and Psychological Selection

Another line of research that has brought about valuable contributions in the educational setting focuses on the phenomenology of learning experience. Csikszentmihalyi's flow theory (1975/2000) belongs to the well-established humanistic tradition in psychology, stressing the crucial role of subjective experience in individuals' interaction with their daily context. Subjective experience comprises cognitive, emotional, and motivational components, and represents the conscious processing of information coming from the individual's outer and inner worlds. As attentional processes regulating the stream of conscious experience are a limited psychic resource, only a selected amount of this information will be processed (Csikszentmihalyi 1978). Csikszentmihalyi has identified the quality of experience as the selection criterion of the content in consciousness. In their daily lives, individuals associate activities and situations with different experiential states, based on the challenges or opportunities for

action perceived in such activities and situations, and on the skills they perceive to possess in facing such challenges. In particular, empirical findings showed that people report a globally positive and complex experience in activities or situations in which they perceive high challenges matched with adequate high skills (Massimini et al. 1987). Such condition has been defined as optimal experience or flow. It is characterized by deep concentration, absorption, enjoyment, control of the situation, clear-cut feedback on the course of the activity, clear goals, and intrinsic reward. The term "flow" expresses the feeling of fluidity and continuity in concentration and action described by most participants (Csikszentmihalyi and Csikszentmihalyi 1988).

Several cross-cultural studies, conducted on samples widely differing in age, educational level, and occupation, have shown that optimal experience can occur during the most various activities of daily life, such as work, study, parenting, sports, arts and crafts, social interactions, and religious practice (Delle Fave and Bassi 2009; Delle Fave and Massimini 2004; Hektner et al. 2007; Massimini and Delle Fave 2000). However, regardless of the activity, the onset of optimal experience is associated with a specific condition: The ongoing task has to be challenging enough to require concentration and engagement, and to promote satisfaction in the use of personal skills.

These studies also shed light on the psychological structure of optimal experience (Delle Fave and Massimini 2005). It comprises a cognitive and stable core, represented by components such as high concentration and control of the situation. These components do not show remarkable variations across samples and activities. On the contrary, affective and motivational variables widely vary across activities. Therefore, optimal experience represents a multifaceted construct with stable cognitive features, around which motivational and emotional components fluctuate in intensity according to the associated activities. More specifically, regarding motivational variables, wide cross-domain variations were detected in the values of perceived goals and short-term activity desirability. In particular, in productive activities – such as study and work – the perception of goals is prominent, but the short-term desirability is perceived as significantly lower than in other domains. Social interactions and leisure activities are characterized by both short-term desirability and high values of long-term goals; passive entertainment activities, such as watching TV, are characterized by short-term desirability, but by the lowest perception of goals.

Research has shown that, by virtue of its positive and complex characteristics, optimal experience represents an important indicator of individuals' optimal psychological functioning. From the wider perspective of the theory of psychological selection (Massimini and Delle Fave 2000), flow experience plays a key role in promoting individuals' long-term development. The positive features of this complex state of consciousness foster the active investment of time and effort in the practice and cultivation of the associated activities. This progressively leads to an increase in related skills and competencies, and to the search for higher challenges in order to support the engagement, concentration, and involvement that characterize optimal experience (Delle Fave et al. 2009). This process therefore gives rise to a virtuous cycle promoting individual development, through both the selective acquisition of increasingly complex information and the refinement of related personal competencies (Massimini and Delle Fave 2000). It also supports the creation of an individual life theme, that is, the interests and goals a person preferentially cultivates during his or her life (Csikszentmihalyi and Beattie 1979).

The Investigation of Optimal Experience: Instruments and Models

Several research procedures have been developed to investigate the daily fluctuations of subjective experience and the occurrence of flow. Among them, the most widely used are Experience Sampling Method (ESM) (Csikszentmihalyi et al. 1977; Hektner et al. 2007), Flow Questionnaire (Csikszentmihalyi 1975/2000; Delle Fave and Massimini 1991), and the Flow State Scale-2 (Jackson and Eklund 2002). The first two instruments were widely used in the educational setting and are thus described below.

Experience Sampling Method (ESM) provides information on contextual and experiential aspects of daily life through online repeated self-reports that participants fill out during the real unfolding of daily events and situations. In a standard ESM study, participants carry for 1 week an electronic device sending random signals six to eight times a day during waking hours. They are asked to fill out a form at each signal

reception. ESM forms comprise open-ended questions investigating the ongoing activities, location and social context, the content of thought, the desired activities, places and interactions, if any. Likert-type scales assess the level of affective, cognitive, motivational variables, as well as the level of perceived challenges and skills, personal satisfaction, short- and long-term importance of the activity. In order to explore the relationship between challenge and skill perception on the one side and the quality of experience on the other side, a model of analysis has been developed, the Experience Fluctuation Model (EFM; Massimini et al. 1987). The analysis of ESM data through the EFM showed a recurrent association between specific challenge/skill ratios and specific experiences. In particular, the perception of challenge and skill values as balanced above average is associated with optimal experience. On the opposite, the balance between perceived below-average values of challenges and skills is associated with a state of disengagement and disorder defined as apathy.

Optimal experience can also be assessed by means of single administration questionnaires, among which Flow Questionnaire is the most commonly used in the educational setting. Participants are asked to read three quotations that describe optimal experience, to report whether they have ever had similar experiences in their life and, if so, to list the associated activities or situations (also defined optimal activities). Subsequently, participants are asked to describe such an experience through 0–8 point scales investigating cognitive, affective, and motivational variables. The individual and environmental conditions which contribute to the onset and maintenance of optimal experience are also investigated.

Optimal Experience and Learning

Research on optimal experience and learning has mainly been conducted with ESM, thus allowing for the online investigation of learning activities as well as the quality of associated experience. Studies on adolescents were performed in different countries and cultures, shedding light on the quality of experience in learning, the contextual and individual factors contributing to flow onset in learning activities, as well as the impact of optimal experience in learning activities on students' short-term well-being and long-term development.

Quality of Experience in Learning

Based on ESM assessments, adolescents devote between 40% and 78% of their daily time budget to learning activities, be they academic tasks performed at school or studying at home (Hektner et al. 2007). Across cultures, learning activities represent potentially challenging opportunities for self-expression and creativity (Delle Fave and Massimini 2005; Hektner et al. 2007; Shernoff and Csikszentmihalyi 2009). In particular, students associate them with high cognitive investment, the perception of long-term goals, and short-term stakes. However, they also describe low levels of happiness, intrinsic motivation, and short-term desirability. When students report a match between high challenges and high skills, as in optimal experience, the quality of the learning experience improves in its cognitive, emotional, and motivational dimensions, even though short-term desirability still hits negative values.

In addition, a difference emerged between schoolwork activities – such as listening to lectures and taking notes – and homework tasks (Bassi and Delle Fave 2004; Hektner et al. 2007). The former are more frequently associated with apathy and disengagement, whereas the latter with optimal experience. Such difference can be related to the degree of perceived autonomy and self-regulation students describe in the two contexts. At school, learning activities are primarily directed by the teachers, both in terms of lesson contents and of amount of time devoted to a given task. In this condition, adolescents mostly report passively listening to lessons, finding in it low meaningful challenges and no room for skill investment. While at home, on the other hand, they are in control of learning activities, are free to decide how much time to devote to learning, and are thus more likely to experience flow and active engagement in the task at hand.

Contextual and Individual Variables Favoring Flow in Learning

Contextual factors play a relevant role in the occurrence and cultivation of optimal experience. The process of psychological selection is partially regulated by the set of norms and rules that characterizes the cultural system individuals live in (Csikszentmihalyi and Massimini 1985). Cultural constraints also contribute to define the range and variety of activities available to the individuals as potential opportunities for optimal experiences (Delle Fave and Massimini 2004).

In particular, formal education is crucial both for individuals' adjustment to society and for the transmission and perpetuation of cultural information. Cultures differ in the importance attached to academic learning and the strategies adopted to transmit it. For example, studies have shown that Asian and Asian-American students tend to report a more positive learning experience, and to retrieve more opportunities for optimal experience in school activities than their Western Caucasian counterparts (Asakawa and Csikszentmihalyi 1998; Shernoff and Schmidt 2008).

Family and school represent the proximal environment in the first stages of development that strongly influences individual's discovery and cultivation of optimal activities. The interaction patterns within the family can facilitate or hamper the natural tendency of children to selectively reproduce rewarding activities. Studies on the role of family in sustaining adolescents' active engagement in learning have shown that parents can represent models of commitment to self-determined goals (Hektner 2001). In particular, children whose parents place high relevance on academic activities and provide both support and challenge in the learning process are more likely to enjoy learning and to associate it with optimal experience (Rathunde 2001).

At the school level, various factors have been shown to impact on students' retrieval of optimal experiences. A notion-centered school environment can lead students to the development of a passive and compulsory learning strategy; on the opposite, a learning environment that enables students to find meaningful relations between study contents and personal experience and goals can help them discover the rewarding features of knowledge and the potential of learning tasks as opportunities for optimal experience (Shernoff and Csikszentmihalyi 2009). As shown above, teachers play a major role in promoting students' optimal experience at school through the degree of autonomy they give to learners. Teachers frequently report that students' engagement in academic activities supports their optimal experiences in teaching; in their turn, students indicate that their flow in learning is related to the teachers' enthusiasm (Hektner et al. 2007). However, the simultaneous ESM assessment of students' and teachers' experience at school has shown an alarming discrepancy: While teachers mostly report flow while teaching, students mostly report apathy while listening to classes and taking notes. Again, this may be related to the difference in perceived control. While teaching, teachers are in control of instruction, but students are not. This tentative explanation can also apply to the different quality of experience students associate with various learning activities. Comparing five most common in-class activities (TV/video, lecture, group work, individual work, and test/quiz), studies have shown that adolescents are more engaged in group and individual work than while listening to a lecture or watching TV or a video; while taking a test or quiz, students report very high levels of concentration but low enjoyment (Shernoff and Csikszentmihalyi 2009).

Also individual factors play a relevant role in the occurrence and cultivation of optimal experience in learning (Delle Fave et al. 2009). Evidence has shown that biological predispositions and specific talents influence the orientations of psychological selection and the perceived opportunities for optimal experience. Studies with talented teenagers (Csikszentmihalyi et al. 1993) have highlighted the relationship between talents in specific domains, such as music or mathematics, and the selective long-term engagement in these domains as opportunities for optimal experiences and skill cultivation. Also, personality characteristics are associated with the occurrence of optimal experience in learning; these include optimism, self-esteem, and extraversion (Schmidt et al. 2007). Moreover, female high school students tend to report flow in classrooms more frequently than males (Shernoff and Schmidt 2008). However, this may be related to the higher frequency of optimal experience reported by girls across all contexts. Finally, studies with US participants also identified differences in optimal experience based on age, with older students (12th graders) reporting more occasions for flow than younger students (10th graders) (Hektner et al. 2007; Shernoff and Schmidt 2008).

Short-Term and Long-Term Impact of Flow on Adolescent's Development

A great number of studies have shown that the association of learning activities with optimal experience has both short- and long-term consequences (Hektner et al. 2007, and Shernoff and Csikszentmihalyi 2009, for a review). In the short term, students derive enjoyment, intrinsic reward, and sense of mastery from learning tasks (Delle Fave and Bassi 2000). They additionally report high levels of engagement which, in its turn, is reflected in high academic achievement

and grades (Shernoff and Schmidt 2008). In the long term, research has highlighted the role of optimal experience in sustaining commitment in learning and in shaping individual life themes (Asakawa and Csikszentmihalyi 1998; Delle Fave and Massimini 2005). Students report longitudinal coherence in the amount of time devoted to study over a 3-year period in secondary school (Hektner 2001). The association of flow with learning activities further contributes to predicting the level of academic career students are willing to pursue, and to shaping adolescents' long-term goals and future work interests (Csikszentmihalyi and Schneider 2000; Hektner 2001; Wong and Csikszentmihalyi 1991).

Merging Perspectives: Self-efficacy Beliefs and Optimal Experience in Learning

In the learning domain, recent attempts have been made to fruitfully join the social-cognitive perspective underlying academic self-efficacy research with the humanistic-phenomenological perspective underlying flow studies (Bassi et al. 2007). Both approaches share the view that individuals are active agents in the interaction with their environment, and stress the role of self-regulation processes in programming future actions on the basis of expectations and beliefs, on the one hand, and of perceived quality of experience, on the other. In addition, both underline the role of perceived abilities and sense of mastery in facing environmental challenges. However, the two approaches also show some differences: Social-cognitive theory places special emphasis on expectancy about success or failure, and on beliefs about one's ability and performance, while the theory of psychological selection focuses on the intrinsic value of engaging in learning activities and its impact on achievement and future plans.

With the aim to better understand adolescents' learning behavior in the short and long term, the cognitive and experiential constructs were combined into a broader framework. It was suggested that self-efficacy beliefs may influence behavior through the mediating effect of associated quality of experience. To put this framework to the test, two groups of Italian secondary school students were selected on the basis of their high and low perceived academic self-efficacy. Through ESM, for 1 week online information was collected on the daily activities and associated quality of experience of the two groups. In line with expectations, high self-efficacy students devoted more time to learning, especially at home, than low self-efficacy students. They also reported a more positive quality of experience during learning, primarily associating schoolwork (listening to lectures, taking notes), classwork (oral and written tests), and homework with optimal experience. On the contrary, low self-efficacy students did not perceive a great amount of opportunities for optimal experience in learning tasks, and they reported different experiential profiles according to the type of learning activities. More specifically, they primarily associated schoolwork and homework with low challenging experiences, such as apathy and relaxation, and tests and exams with anxiety, reporting a perceived lack of skills in facing the task.

Conclusions and Future Directions

Findings reported in this essay highlight the importance of adolescents' academic self-efficacy beliefs and optimal experience in learning activities as key factors in the promotion of well-adjustment at school, quality learning, and long-term development. The centrality of these constructs is going to increase in contemporary society, where information technologies are introducing extensive changes in educational settings and increasing importance is assigned to students' personal control over learning. Suggestions for intervention as well as future directions in research can be derived from these studies.

At the intervention level (see Pajares and Schunk 2001, and Shernoff and Csikszentmihalyi 2009), results bring forward the need to provide students with learning activities which are challenging enough in the face of personal skills. Lack of challenges can lead to experiences of apathy or disengagement that do not sustain enjoyment in learning and long-term academic commitment (Bassi et al. 2007; Delle Fave and Bassi 2000). At the same time, sense of competence and confidence in one's skills can primarily be raised through successful experiences with the task at hand, namely, through mastery experiences. For example, a series of studies (Pajares and Schunk 2001) showed that students' self-efficacy beliefs increased through the use of instructional strategies such as modeling, goal setting, strategy training, as well as provision of proximal rather than distal goals, rewards, and attributional or progress feedback. Emphasis should also be placed on the development of students' self-regulatory habits, providing

students with optimal learning environments in which both autonomy and initiative are supported.

Concerning future research directions, further studies are needed to devise and test a formal model including academic self-efficacy beliefs and quality of experience in learning. Self-efficacy beliefs are expected to direct behavior through the mediation of perceived quality of experience, and of optimal experience in particular. However, optimal experience in learning activities could have both synchronic and diachronic, cumulative consequences. By providing intrinsic reward, optimal experience can sustain long-term perseverance and effort in cultivating associated activities. It could also represent a feedback to perceived self-efficacy. Direct experience of competence in high challenge/high skill situations could be cognitively elaborated into rather stable self-efficacy beliefs. In their turn, these beliefs could direct time and energy investment into activities in which individuals perceive themselves as highly competent in the face of current challenges. This process would facilitate the retrieval of optimal experiences and the development of lasting high self-efficacy beliefs. In the long run, this process could go on in a virtuous circle, promoting individual development, with respect to skill cultivation, satisfaction, and goal setting. Shedding light on the mutual influences between self-efficacy and flow can advance understanding of adolescents' motivational processes and offer guidelines for promoting enjoyment and engagement in the school setting.

References

Asakawa, K., & Csikszentmihalyi, M. (1998). The quality of experience of Asian American adolescents in academic activities: An exploration of educational achievement. *Journal of Research on Adolescence, 8*, 241–262.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26.

Bandura, A. (2002). Social cognitive theory in cultural context. *Journal of Applied Psychology: An International Review, 51*, 269–290.

Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (Vol. 5, pp. 307–337). Greenwich: Information Age Publishing.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67*, 1206–1222.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child Development, 72*, 187–206.

Bassi, M., & Delle Fave, A. (2004). Adolescence and the changing context of optimal experience in time: Italy 1986–2000. *Journal of Happiness Studies, 5*, 155–179.

Bassi, M., Steca, P., Delle Fave, A., & Caprara, G. V. (2007). Academic self-efficacy beliefs and quality of experience in learning. *Journal of Youth and Adolescence, 36*, 301–312.

Britner, S. L., & Pajares, F. (2006). Sources of science self-efficacy beliefs of middle school students. *Journal of Research in Science Teaching, 43*, 485–499.

Bouffard-Bouchard, T., Parent, S., & Larivèe, S. (1991). Influence of self-efficacy on self-regulation and performance among junior and senior high-school aged students. *International Journal of Behavioral Development, 14*, 153–164.

Caprara, G. V., Fida, R., Vecchione, M., Del Bove, G., Vecchio, G. M., Barbaranelli, C., et al. (2008). Longitudinal analysis of the role of perceived self-efficacy for self-regulated learning in academic continuance and achievement. *Journal of Educational Psychology, 100*(3), 525–534.

Csikszentmihalyi, M. (1975–2000). *Beyond boredom and anxiety.* San Francisco: Jossey-Bass.

Csikszentmihalyi, M. (1978). Attention and the holistic approach to behavior. In K. S. Pope & J. L. Singer (Eds.), *The stream of consciousness* (pp. 335–358). New York: Plenum.

Csikszentmihalyi, M., & Beattie, O. (1979). Life themes: A theoretical and empirical exploration of their origins and effects. *Journal of Humanistic Psychology, 19*, 45–63.

Csikszentmihalyi, M., & Csikszentmihalyi, I. (Eds.). (1988). *Optimal experience – Psychological studies of flow in consciousness.* Cambridge: Cambridge University Press.

Csikszentmihalyi, M., Larson, R., & Prescott, S. (1977). The ecology of adolescent activity and experience. *Journal of Youth and Adolescence, 6*, 281–294.

Csikszentmihalyi, M., & Massimini, F. (1985). On the psychological selection of bio-cultural information. *New Ideas in Psychology, 3*, 115–138.

Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). *Talented teenagers: The roots of success and failure.* New York: Cambridge University Press.

Csikszentmihalyi, M., & Schneider, B. (2000). *Becoming adult: How teenagers prepare for the world of work.* New York: Basic Books.

Delle Fave, A., & Bassi, M. (2000). The quality of experience in adolescents' daily life: Developmental perspectives. *Genetic, Social & General Psychology Monographs, 126*, 347–367.

Delle Fave, A., & Bassi, M. (2009). Sharing optimal experiences and promoting good community life in a multicultural society. *Journal of Positive Psychology, 4*, 280–289.

Delle Fave, A., Bassi, M., Massimini, F. (2009). Experiencia óptima y evolución humana [Optimal experience and psychological selection]. In C. Vasquez & G. Hervas (Eds.), *La ciencia del bienestar. Fundamentos de una psicología positiva* (pp. 209–230). Madrid: Alianza Editorial.

Delle Fave, A., & Massimini, F. (1991). Modernization and the quality of daily experience in a Southern Italy village. In N. Bleichrodt &

P. J. D. Drenth (Eds.), *Contemporary Issues in Cross-Cultural Psychology* (pp. 110–119). Amsterdam: Swets & Zeitlinger B.V.

Delle Fave, A., & Massimini, F. (2004). The cross-cultural investigation of optimal experience. *Ricerche di Psicologia, 27*, 79–102.

Delle Fave, A., & Massimini, F. (2005). The investigation of optimal experience and apathy: Developmental and psychosocial implications. *European Psychologist, 10*, 264–274.

Finney, S. J., & Schraw, G. (2003). Self-efficacy beliefs in college statistics courses. *Contemporary Educational Psychology, 28*, 161–186.

Gore, P. A. (2006). Academic self-efficacy as a predictor of college outcomes: Two incremental validity studies. *Journal of Career Assessment, 14*, 92–115.

Hektner, J. M. (2001). Family, school, and community predictors of adolescent growth conducive experiences: Global and specific approaches. *Applied Developmental Science, 5*, 172–183.

Hektner, J. M., Schmidt, J., & Csikszentmihalyi, M. (2007). *Experience sampling method. Measuring the quality of everyday life*. Thousand Oaks: Sage.

Jackson, S. A., & Eklund, R. C. (2002). Assessing flow in physical activity: The flow state scale-2 and dispositional flow scale-2. *Journal of Sport & Exercise Psychology, 24*, 133–150.

Lent, R. W., Lopez, F. G., & Bieschke, K. J. (1993). Predicting mathematics-related choice and success behaviors: Test of an expanded social cognitive model. *Journal of Vocational Behavior, 42*, 223–236.

Massimini, F., Csikszentmihalyi, M., & Carli, M. (1987). ESM and the monitoring of optimal experience: A tool for psychiatric rehabilitation. *Journal of Nervous and Mental Disease, 175*, 545–549.

Massimini, F., & Delle Fave, A. (2000). Individual development in a bio-cultural perspective. *American Psychologist, 55*, 24–33.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*, 543–578.

Pajares, F. (1997). Current directions in self-efficacy research. In M. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement* (Vol. 10, pp. 1–49). Greenwich: JAI Press.

Pajares, F., & Miller, M. D. (1995). Mathematics self-efficacy and mathematics outcomes: The need for specificity of assessment. *Journal of Counseling Psychology, 42*, 190–198.

Pajares, F., & Schunk, D. H. (2001). Self-beliefs and school success: Self-efficacy, self-concept, and school achievement. In R. J. Riding & S. G. Rayner (Eds.), *International perspectives on individual differences (vol. 2)*: *Self-perception* (pp. 239–265). Westport: Ablex.

Rathunde, K. (2001). Family context and the development of undivided interest: A longitudinal study of family support and challenge and adolescents' quality of experience. *Applied Developmental Science, 5*, 158–171.

Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin, 130*, 261–288.

Schmidt, J., Shernoff, D., & Csikszentmihalyi, M. (2007). Individual and situational factors related to the experience of flow in adolescence: A multilevel approach. In A. D. Ong & M. van Dulmen (Eds.), *The handbook of methods in positive psychology* (pp. 542–558). Oxford: Oxford University Press.

Schunk, D. H. (1998). Teaching elementary students to self-regulate practice of mathematical skills with modeling. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulated learning: From teaching to self-reflective practice* (pp. 137–159). New York, NY: Guilford Press.

Schunk, D. H., & Miller, S. D. (2002). Self-efficacy and adolescents' motivation. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents* (pp. 29–52). Greenwich: Information Age.

Schunk, D. H., & Swartz, C. W. (1993). Goals and progress feedback: Effects on self-efficacy and writing achievement. *Contemporary Educational Psychology, 18*, 337–354.

Schunk, D. H., & Pajares, F. (2004). Self-efficacy in education revisited: Empirical and applied evidence. In D. M. Mcinerney & S. Van Etten (Eds.), *Big theories revisited* (pp. 115–138). Greenwich: Information Age Publishing.

Shernoff, D., & Csikszentmihalyi, M. (2009). Flow in schools. Cultivating engaged learners and optimal learning environments. In R. Gilman, E. Huebner, & M. Furlong (Eds.), *Handbook of positive psychology in schools* (pp. 131–145). New York: Taylor & Francis.

Shernoff, D., & Schmidt, J. (2008). Further evidence of an engagement-achievement paradox among U.S. high school students. *Journal of Youth and Adolescence, 37*, 564–580.

Wong, M. M., & Csikszentmihalyi, M. (1991). Motivation and academic achievement: The effects of personality traits and the quality of experience. *Journal of Personality, 59*, 539–574.

Zimmerman, B., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal, 29*, 663–676.

Zimmerman, B. J., & Cleary, T. J. (2006). Adolescents' development of personal agency: The role of self-efficacy beliefs and self-regulatory skill. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (Vol. 5, pp. 45–69). Greenwich: Information Age Publishing.

Zimmerman, B. J., Kitsantas, A., & Campillo, M. (2005). Evaluación de la Autoeficacia Regulatoria: Una Perspectiva Social Cognitiva [Assessment of regulatory self-efficacy: A social-cognitive perspective]. *Evaluar, 5*, 1–21.

Acculturation

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Overview

Acculturation was first defined as "phenomena which result when groups of individuals having different

cultures come into continuous first hand contact with subsequent changes in the original culture patterns of either or both groups" (Redfield et al. 1936, p. 149). This original definition stressed continuous, long-term change and allowed for the process to be bidirectional, wherein both of the interacting cultures could make accommodations. The course of the acculturation process has been described as flowing from *contact* between dominant and nondominant cultural groups to *conflict* or crises between those groups that eventually results in *adaptations* by one or both of the conflicting groups. Based on the relationships to the immigrant's culture of origin and the host culture, researchers have emphasized four cultural adaptation styles: separation, assimilation, biculturalism, and cultural marginality. Separation or enculturation has been linked to higher self-esteem. Assimilation appears to be a risk factor for poor health and mental health. Biculturalism has been reported to be the healthiest cultural adaptation style.

Background and Definitions

Acculturation

Acculturation was first defined as "phenomena which result when groups of individuals having different cultures come into continuous first hand contact with subsequent changes in the original culture patterns of either or both groups" (Redfield et al. 1936, p. 149). This original definition stressed continuous, long-term change and allowed for the process to be bidirectional, wherein both of the interacting cultures could make accommodations. During the Cold War era, the definition of acculturation was gradually modified to denote linear, unidirectional change (Trimble 2003) as a result of interactions between dominant and nondominant groups, with nondominant groups taking on the language, laws, religions, norms, and behaviors of the dominant group (Berry 1998; Castro et al. 1996. For example, Smith and Guerra (2006) referred to acculturation as "the differences and changes in values and behaviors that individuals make as they gradually adopt the cultural values of the dominant society" (p. 283). Many factors, such as differences in attitudes between generations and sociopolitical trends, have influenced the conceptualization of acculturation, leaving no universally accepted definition of the term.

Adding further complexity, many other constructs in cultural research, such as assimilation, enculturation, acculturation stress, segmented assimilation, and biculturalism, have been invoked under the umbrella of acculturation research. The term acculturation, which denotes the bidirectional process of cultural contact and adaptation, is often erroneously used interchangeably with the term *assimilation*, which captures unidirectional adaptations made by minority individuals to fit into the host society. Consequently, the original Redfield (Redfield et al. 1936) definition captures the bidirectional notion of acculturation, whereas the description offered by Smith and Guerra (2006) denotes the unidirectional assimilation approach. These competing unidirectional and bidirectional approaches dominate acculturation research, influencing conceptualization, measurement, analytic strategies, and results of empirical studies in this area (Cabassa 2003).

Berry (1980) characterized the course of the acculturation process as flowing from *contact* between dominant and nondominant cultural groups to *conflict* or crises between those groups that eventually results in *adaptations* by one or both of the conflicting groups. These acculturation phases not only characterize large-scale sociological group dynamics over long periods, but also cultural interactions between social groups during different eras as well as individual psychological and social processes that affect a person's adjustment to a new cultural situation. Cultural conflict may develop gradually and extend continuously over generations, as it did for Native American people, or it may be quite abrupt and intense, such as the unsettling immersion experienced by a newly immigrated Latino or Asian child who speaks no English when he or she enters a US school for the first time. Although acculturation stages describe a sociological phenomenon that occurs between groups, a parallel interpersonal process is thought to occur among immigrant individuals and families.

Within this overarching sociological process of acculturation, several theoretical frameworks have been developed to describe what happens to individuals and families during acculturation (Lafromboise et al. 1993). These various approaches can be divided into two competing frameworks: assimilation theory and alternation theory. While proponents of these two theories agree that there are two criteria for acculturation – whether or not the acculturating individual or group retains cultural identity and whether or not

a positive relationship to the dominant society is established (Berry 1998) – they posit different views on how the acculturation process should end.

Acculturation Theories of Adaptation

Assimilation theorists say that individuals lose cultural identity in order to identify with the dominant cultural group. The assimilation model assumes that an individual sheds her or his culture of origin in an attempt to take on the values, beliefs, ways, and perceptions of the target culture (Berry 1998; Trimble 2003). The dominant culture is seen as more desirable, while the culture of origin is seen as inferior. In this model, change is directional, unilinear, nonreversible, and continuous. Assimilation theory is so pervasive that many acculturation theorists incorrectly use the terms acculturation and assimilation interchangeably (Lafromboise et al. 1993). This assimilation concept is captured by the notion of America as a "melting pot" where immigrants become "American," losing their prior culture and language in order to adapt to the host culture.

Alternation theorists, or proponents of the bicultural model, believe that individuals can both retain cultural identity and establish a positive relationship with the dominant culture. Researchers are now reconsidering linear conceptualizations of acculturation and are revisiting the original definition that allowed for dynamic bidirectional change (Trimble 2003). Alternation theorists believe that there is great value in the individual maintaining her or his culture of origin while acquiring the second culture. Thus, biculturalism, or having the ability to competently navigate within two different cultures, is the optimal end point for the process of cultural acquisition (LaFromboise et al. 1993).

In contrast to the unidirectional assimilation approach, the bidirectional approach from alternation theory considers enculturation (i.e., adoption and maintenance of behaviors, norms, values, and customs from a person's culture of origin), ethnic identity (i.e., a person's self-definition based on membership in a distinct group derived from a perceived shared heritage), and biculturalism (i.e., ability to integrate attributes of two cultures and competently navigate between cultural systems (Gonzales et al. 2002; LaFromboise et al. 1993) as important aspects of the acculturation process.

To summarize, acculturation is the overall process of contact, involvement, conflict, and change that occurs when two independent cultural systems meet. Within this large acculturation process, there are two critical dimensions to consider; the individual or families' relationship to the culture of origin and the relationship to the host culture. Bringing these two dimensions together, acculturation researchers discuss four different cultural adaptation styles (Berry 1998) that are shown in Table 1. The common notion of assimilation entails persons losing their culture-of-origin identity to identify with the dominant (host) cultural group. Integration, or *biculturalism*, would ensue from both retaining ethnic cultural identity and establishing a positive relationship with the dominant culture. Retaining culture-of-origin identity without establishing a positive relationship to the dominant culture would indicate rejection of the dominant culture, separation, and unwillingness to assimilate. Finally, losing cultural identity without establishing a positive relationship to the dominant culture would be the hallmark of *deculturation* or cultural marginality (Berry 1980; LaFromboise et al. 1993). Acculturation is the overall process of cultural involvement. Assimilation is generally associated with high levels of host culture involvement. A moderate-to-high level of involvement in both cultures marks integration or biculturalism. Separation or maintaining ethnic identity alone (enculturation) is associated with high levels of involvement in the culture of origin.

These cultural adaptation styles are important when considering the research on adolescent acculturation and health behavior. Several decades of empirical research findings lead researchers to conclude that assimilation is an important risk factor for increases in negative health behaviors and mental health problems (Amaro et al. 1990; Marks et al. 1990; Miranda et al. 2000; Vega et al. 1998). Conversely, biculturalism appears to be emerging as a protective factor that buffers acculturation stress, enhances sociocognitive

Acculturation. Table 1 Acculturation and adaptation styles

		Host culture involvement	
Culture-of-origin involvement		Low	High
	Low	Cultural marginality	Assimilation
	High	Enculturation	Biculturalism

functioning, and increases academic achievement (Feliciano 2001; Gil et al. 1994; Gomez and Fassinger 1994; Haritatos and Benet-Martinez 2002; Lang et al. 1982; Miranda and Umhoefer 1998). Each of these acculturation adaptation styles will be examined in the sections below.

Enculturation

There are several important underlying concepts within the overarching acculturation process. In contrast to acculturation, which occurs between cultural groups, *enculturation* is the adoption and maintenance of behaviors, norms, values, and customs from a person's culture of origin. Every culture indoctrinates children by exposing them to, or socializing them with, specific ideas, beliefs, routines, rituals, religious practices, languages, and ways of being in the world. The resulting cluster of beliefs and behaviors culminates in a person's ethnic identity. This sense of ethnic identity is a person's self-definition based on membership in a distinct group derived from a perceived shared heritage (Phinney and Ong 2007). The broad concept of enculturation encompasses the individual's level of involvement in his or her culture of origin, which is nurtured through early childhood exposure to cultural symbols and messages transmitted primarily through family interactions. By early adulthood, consistent exposure to these cultural beliefs and behaviors leads to an individual's working sense of ethnic identity (e.g., an affiliation with a cultural group and an understanding of how that cultural group expects its members to be in the world). The enculturation process both defines the characteristics of the group and secures its future by indoctrinating new members.

Retaining enculturation or culture-of-origin identity alone without establishing a positive relationship to the dominant culture would indicate *separation* and unwillingness to assimilate. The enculturation quadrant in Table 1 represents strong enculturation and low assimilation into the dominant or host society. Separation is the adaptation style that characterizes most immigrant parents who cling strongly to their culture-of-origin identity and who find the acculturation process particularly stressful.

Enculturation is an important factor in the three phases of acculturation given above. During intercultural contact, differences in enculturation between the two groups become apparent. For instance, Native Americans believed that land was a gift from the Creator, and no individual owned this gift. In contrast, the pilgrims, indoctrinated in the European currency economy and believing that they were God's chosen people, saw no difficulty in buying, trading for, or taking land for personal ownership. Differences between worldviews make groups wary of outsiders, triggering an urge to close ranks, and defend the way of life the group understands. It is easy to see how conflict may arise. With the future at stake, enculturation prompts individuals to choose *us* versus *them* – our beliefs and ways of doing things or theirs.

Assimilation

The central issue after different cultures make contact becomes who has power and control, and how will the dominant group use that power. Usually, the nondominant group is strongly influenced to take on norms, values, and behaviors espoused by the dominant group. The intensity and negativity associated with this process is largely contingent upon the receptivity of the dominant group in welcoming, respecting, or stigmatizing the nondominant group (Berry 1998). Further, the attitudes held by the dominant group influence the adoption of policies for relating to the nondominant group. For example, dominant group attitudes toward immigrants that influence policy are reflected in the debate in the USA regarding whether English should be declared the country's official language, whether school districts support English immersion or bilingual education programs, and restrictions requiring certain forms of identification that are difficult for immigrants to obtain in order to receive a driver's license.

During the conflict and adaptation phases of acculturation, antagonistic attitudes from the dominant group toward immigrants often prompt calls for assimilation or elimination. The term *acculturation*, which denotes the bidirectional process of cultural contact and change, is often erroneously used interchangeably with the term *assimilation*, which captures unidirectional adaptations made by minority individuals to conform to the dominant group.

The common notion of assimilation entails persons losing their culture-of-origin identity to identify with the dominant cultural group. That is, a movement in Table 1 from separation to assimilation, which a person completes by swapping the positive relationship with

his or her culture of origin for a positive affiliation with the dominant culture. The assimilation model assumes that an individual sheds her or his culture of origin in an attempt to take on the values, beliefs, behaviors, and perceptions of the target culture (Chun et al. 2003). The individual perceives the dominant culture as more desirable, whereas the culture of origin is seen as inferior. In this model, change is "directional, unilinear, nonreversible, and continuous" (Suarez-Orozco and Suarez-Orozco 2001, p. 8).

Assimilation theory has been applied in a range of policies and practice situations. For example, English as a Second Language (ESL) programs in which instructors speak only English and policy proposals that declare English to be the state's or country's "official" language have deep roots in assimilationist ideology. In 1998, California voters passed Proposition 227, which requires that all public school instruction be conducted in English by a wide margin (61% vs. 39%; now EC 300–340 of the California Education Code). Similarly, Arizona's voters passed Proposition 203 in 2000, which mandates school instruction must be in English and severely limits opportunity for bilingual instruction. Both propositions are examples of the assimilationist Structured English Immersion approach to educating immigrants who are not proficient in English.

In general, higher levels of assimilation are associated with negative health behaviors and mental health difficulties for both adolescents and adults (Rogler et al. 1991; Miranda et al. 2000; Smokowski et al. 2009). In comparison to their less-acculturated peers, Latinos who have become more assimilated to the host culture display higher levels of alcohol and drug use, less consumption of nutritionally balanced meals, and more psychiatric problems (Amaro et al. 1990; Marks et al. 1990; Vega et al. 1998; Alegría et al. 2008).

Most research on acculturation and adolescent health behavior has focused on youth violence and aggressive behavior. Recently, Paul Smokowski et al. (2009) conducted a comprehensive review of studies examining the relationship of Latino adolescent acculturation and youth violence. Among the studies reviewed, the association between acculturation and youth violence outcomes was examined in 16 studies; 13 of these investigations examined the perpetration of violence as the outcome, and these studies examined fear of being a victim of violence as the outcome. The results favored a significant positive association between assimilation and youth violence. Nine of the thirteen studies reported that higher adolescent assimilation (defined in different ways by time in the USA, generational status, language use, or with multidimensional measures) was associated with increased youth violence (Buriel et al. 1982; Sommers et al. 1993; Vega et al. 1993, 1995; Brook et al. 1998; Samaniego and Gonzales 1999; Dinh et al. 2002; Bui and Thongniramol 2005; Smokowski and Bacallao 2006; Schwartz et al. 2007).

Integration

While assimilation theory continues to be popular, a growing body of research has begun to question whether it is indeed adaptive for a person to give up his or her cultural identity to fit into the dominant culture (de Anda 1984; Feliciano 2001; Suarez-Orozco and Suarez-Orozco 2001). Critics of the assimilation model usually support the further development of alternation theory, a framework that rejects linear conceptualizations of acculturation and revisits the Redfield definition of acculturation that allowed for dynamic bidirectional change (Trimble 2003). Following Table 1, integration, or biculturalism, would ensue from both retaining ethnic cultural identity and establishing a positive relationship with the dominant culture. In contrast to the unidirectional approach of assimilation, the bidirectional approach considers enculturation (i.e., adoption and maintenance of behaviors, norms, values, and customs from a person's culture of origin), ethnic identity (i.e., a person's self-definition based on membership in a distinct group derived from a perceived shared heritage), and biculturalism (i.e., ability to integrate attributes of two cultures and competently navigate between cultural systems (Gonzales et al. 2002; LaFromboise et al. 1993) as important aspects of the acculturation process.

Alternation theorists believe that individuals can both retain cultural identity and establish a positive relationship with the dominant culture. Proponents of the alternation theory of cultural acquisition assert that there is great value in the individual maintaining her or his culture of origin while acquiring the second culture (Feliciano 2001). These theorists believe that the unidirectional change approach espoused by assimilationists may have fit prior groups of white European immigrants but does not adequately characterize

adaptations made by subsequent waves of immigrants from Latin America or Asia (de Anda 1984). In this perspective, biculturalism, or having the ability to competently navigate within and between two different cultures, is the optimal end point for the process of cultural acquisition (Coleman and Gerton 1993). For the immigrant individual and her or his family, alternation theory supports the *integration* of cognition, attitudes, and behaviors from both the culture of origin and the culture of acquisition. This integration may result in bilingualism, cognitive code-switching, and the development of multiple identities (e.g., immigrant adolescents behaving "American" at school and "Latino" at home) to meet disparate environmental demands (Dolby 2000; Suarez-Orozco and Suarez-Orozco 2001; Trueba 2002).

Of course, the influence of the dominant or host culture plays an important role in the acculturation process. Just as assimilation ideology pushes immigrants to accept host culture norms and behaviors, environmental contexts that actively support and value multiculturalism can also prompt individuals and families toward integration or biculturalism (Berry 2001; de Anda 1984). Beginning in the 1960s, multiculturalism gained traction, prompting melting-pot metaphors to be replaced with references to a cultural salad bowl or cultural mosaic. In this newer multicultural approach, each "ingredient" retains its integrity and flavor while contributing to a successful final product. However, considering the backdrop of stress and tension, these ethnic relations are better characterized as a simmering stew than a salad bowl. In recent years, this multicultural approach has been officially promoted in traditional melting-pot societies such as Australia, Canada, and Britain, with the intent of becoming more tolerant of immigrant diversity. Meanwhile, the USA continues to vacillate between assimilation and alternation (or multicultural) approaches to immigration and ethnic relations.

Alternation theory has been used in practice, but few macro policies have been based on this framework. English as a Second Language (ESL) and Two-Way Immersion programs that teach content in both English and Spanish are underpinned by alternation theory. Bicultural skills training programs are another reflection of how alternation theory has been applied to practice (e.g., see Szapocznik et al. 1984; Bacallao and Smokowski 2005).

Research findings have linked biculturalism with more adaptive, positive mental health outcomes than either low- or high-assimilation levels. Alternation theorists believe that biculturalism is an important, positive cultural adaptation style within the acculturation process. There is research evidence for this as a hypothesis. In a study comparing low- and high-assimilated Latinos, researchers found that bicultural Latinos obtained higher levels of quality of life, affect balance, and psychological adjustment (Lang et al. 1982). Miranda and Umhoefer (1998) reported bicultural individuals displayed high levels of social interest and low levels of depression. In a sample of 252 Latina undergraduate students, Gomez and Fassinger (1994) found bicultural women had wider repertoires of behavioral styles than either their low- or high-acculturated peers. Other studies found that bicultural individuals have increased creativity (Carringer 1974), and greater attention control (Bialystok 1999; Bialystok et al. 2004). Benet-Martinez et al. (2006) argue that the more complex mainstream and ethnic cultural representations developed by bicultural individuals relate to their higher levels of both cultural empathy (i.e., the ability to detect and understand other's cultural habits or pressures) and cultural flexibility (i.e., the ability to quickly switch from one cultural strategy or framework to another).

Rivera-Sinclair (1997) investigated biculturalism in a sample of 254 Cuban adults. She measured biculturalism using the Bicultural Involvement Questionnaire (BIQ), and found biculturalism was related to a variety of factors, including length of time a person had lived in the USA, age, family income, education level, and general anxiety level. Her findings showed that the study participants who were more likely to report high levels of biculturalism were those individuals who had been in the USA longer, had higher incomes, and had more education. In addition, she found that younger individuals were more inclined to be bicultural than were older persons. Most important, this analysis showed that anxiety levels decreased as biculturalism levels increased.

Gil et al. (1994) found bicultural adolescents had the lowest levels of acculturation stress and were less likely to report low family pride as compared with low- and high-assimilated Latino adolescents. For these bicultural adolescents, the acculturation process did not erode levels of family pride – a dynamic that

usually takes place as adolescents become highly assimilated.

In a study with 323 Latino adolescents living in North Carolina and Arizona (Smokowski and Bacallao 2007), biculturalism was a cultural asset associated with fewer internalizing problems and higher self-esteem. Interestingly, instead of ethnic identity, it was individuals' high level of involvement in non-Latino culture (i.e., US culture) that fueled the protective effect of biculturalism. However, ethnic identity or involvement in the culture of origin is strongly related to self-esteem and familism (e.g., family cohesion). Similarly, Coatsworth et al. (2005) compared the acculturation patterns of 315 Latino youth, and found that bicultural youth reported significantly higher levels of academic competence, peer competence, and parental monitoring.

Berry et al. (2006) conducted the largest and most elaborate investigation of acculturation and adaptation in immigrant youth in a study that encompassed youth from 26 different cultural backgrounds in 13 countries. In all, 7,997 adolescents participated, including 5,366 immigrant youth and 2,631 national youth (ages 13–18 years; mean age of 15 years). These researchers were able to confirm empirically the four cultural adaptation styles discussed in this essay. Integration or biculturalism was the predominant adaptation style with 36.4% of immigrant youth fitting this profile (22.5% displayed an ethnic profile [separation], 18.7% a national or assimilation profile, and 22.4% a diffuse or marginalized profile). This bicultural way of living included reporting diverse acculturation attitudes, having both ethnic and national cultural identities, being proficient in both ethnic and national language knowledge and use, having social engagements with both ethnic and national peers, and endorsing the acceptance of both obligations to family and parents, as well as believing in adolescents' rights. This high level of biculturalism (i.e., integrative cultural adaptation style) in youth supports earlier findings with adult immigrants (Berry and Sam 1997).

In this study, Berry and colleagues (2006) found that the longer youth had lived in the new culture, the more likely they were to have a bicultural adaptation style. Further, these researchers found the integrative cultural adaptation style was associated with both positive psychological adaptation (measured by indicators of life satisfaction, self-esteem, and psychological problems) and positive sociological adaptation (measured by school adjustment and behavioral problems). In comparison, the ethnic cultural adaptation style was linked to better psychological adaptation but worse sociological adaptation, whereas both the national and diffuse styles were associated with poor psychological and sociological adaptation. Although boys had slightly better psychological adaptation than girls, they had poorer sociocultural adaptation. These studies provide mounting evidence that psychological and social benefits are associated with being bicultural.

Deculturation

Finally, losing cultural identity without establishing a positive relationship to the dominant culture would be the hallmark of *deculturation* or cultural marginality (Berry 1980; LaFromboise et al. 1993). Less common than the other three adaptation styles, deculturation may be a stressful stage experienced by many immigrants as they construct a new or integrated cultural identity. Some authors refer to deculturation as "cultural homelessness," a state in which individuals do not feel an affiliation with any cultural group (Vivero and Jenkins 1999).

Conclusions

To summarize, acculturation is the overall process of cultural involvement. Assimilation is generally associated with high levels of host culture involvement. A moderate-to-high level of involvement in both cultures marks integration or biculturalism. Separation or maintaining ethnic identity alone (enculturation) is associated with high levels of involvement in the culture of origin, whereas having no affiliation with either culture is the hallmark of deculturation or marginalization. These four cultural adaptation styles and two major theories of cultural change (assimilation and alternation theories) capture much of the dynamic complexity within the overall acculturation process. Revisiting Berry's (1998) criteria, assimilation theory posits that a positive relationship to the dominant society is established without retention of ethnic identity, whereas in alternation theory, a moderate-to-strong positive relationship to the dominant society is established and a moderate-to-strong positive relationship to ethnic identity or culture of origin is retained. Neither theory has much to say about cultural

marginality, which occurs when a positive relationship is not formed with either the new culture or the culture of origin. Cultural marginality can result in apathy, lack of interest in culture, or the formation of a negative relationship with both cultures.

Flannery et al. (2001) conducted the earliest direct comparison of the assimilation and alternation models. In a sample of 291 Asian-Americans, they reported that both models had adequate predictive validity for use in acculturation research. They recommended using the unidirectional assimilationist model as an economical proxy measure of acculturation, and using the bidirectional alternation model for "full theoretical investigations of acculturation" (Flannery et al. 2001, p. 1035).

Turning our attention back to the conceptualizations of acculturation, alternation theory is aligned with the original Redfield definition that allows for dynamic bidirectional adaptations to occur in either or both cultures. Assimilation theory is aligned with the modified definition of acculturation that assumes unidirectional change from the dominant to the nondominant group. Assimilation and alternation theories, and the various cultural adaptation styles introduced above, are fascinating sociological constructs; however, these ideas become ever more critical when linked to health and mental health. Assimilation and alternation theories have both inspired several decades of research and knowledge development. Neither theory has been able to marshal enough empirical support to dominate the other. Rogler et al. (1991) reviewed 30 investigations to determine if consensus existed on the link between acculturation and mental health. Their review found evidence supporting each of the proposed relationships – positive, negative, and curvilinear – between acculturation and mental health. The relationship depends upon the specific mental health issue (e.g., drug use, aggressive behavior, depression, anxiety) that is under scrutiny. Research conducted after this review suggests that assimilation is an important risk factor, especially for youth violence, and biculturalism is a salient cultural asset, promoting psychological and social well-being.

Cross-References

- ► Assimilation
- ► Bicultural Stress
- ► Immigration

References

Alegría, M., Canino, G., Shrout, P. E., Woo, M., Duan, N., Vila, D., et al. (2008). Prevalence of mental illness in immigrant and non-immigrant U.S. Latino groups. *American Journal of Psychiatry, 165*(3), 359–369.

Amaro, H., Whitaker, R., Coffman, G., & Heeren, T. (1990). Acculturation and marijuana and cocaine use: Findings from HHANES 1982–1984. *American Journal of Public Health, 80* (Suppl), 54–60. doi:10.2105/AJPH.80.Suppl.54.

Bacallao, M. L., & Smokowski, P. R. (2005). Entre dos mundos (between two worlds) bicultural skills training and Latino immigrant families. *Journal of Primary Prevention, 26*(6), 485–509.

Benet-Martínez, V., Lee, F., & Leu, J. (2006). Biculturalism and cognitive complexity: Expertise in cultural representations. *Journal of Cross-Cultural Psychology, 37*(4), 386–407. doi:10.1177/0022022106288476.

Berry, J. W. (1980). Acculturation as varieties of adaptation. In A. M. Padilla (Ed.), *Acculturation: Theory, models, and some new findings* (pp. 9–25). Boulder: Westview Press.

Berry, J. W. (1998). Acculturation stress. In P. B. Organista, K. M. Chun, & G. Marin (Eds.), *Readings in ethnic psychology* (pp. 117–122). New York: Routledge.

Berry, J. W. (2001). A psychology of immigration. *Journal of Social Issues, 57*(3), 615–631.

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity and adaptation. *Applied Psychology, 55*(3), 303–332. doi:10.1111/j.1464-0597.2006.00256.x.

Berry, J. W., & Sam, D. L. (1997). Acculturation and adaptation. In J. W. Berry, M. H. Segall, C. Kagitcibasi (Eds.), *Handbook of Cross-Cultural Psychology: Social Behavior and Applications* (Vol. 3, pp. 291–326) (2nd ed.). Boston: Allyn and Bacon.

Bialystok, E. (1999). Cognitive complexity and attentional control in the bilingualmind. *Child Development, 70*(3), 636–644. doi:10.1111/1467-8624.00046.

Bialystok, E., Fergus, I. M., Craik, R. K., & Viswanathan, M. (2004). Bilingualism, aging, and cognitive control: Evidence from the Simon Task. *Psychology and Aging, 19*(2), 290–303. doi:10.1037/0882-7974.19.2.290.

Brook, J. S., Whiteman, M., Balka, E. B., Win, P. T., & Gursen, M. D. (1998). African American and Puerto Rican drug use: A longitudinal study. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*(9), 1260–1268. http://journals.lww.com/jaacap/Abstract/1997/09000/African_American_&_Puerto_Rican_Drug_Use__A.19.aspx.

Bui, H. N., & Thongniramol, O. (2005). Immigration and self-reported delinquency: The interplay of immigration, generations, gender, race, and ethnicity. *Journal of Crime and Justice, 28*(2), 71–80. http://www.ncjrs.gov/App/Publications/abstract.aspx?ID=234264.

Buriel, R., Calzada, S., & Vasquez, R. (1982). The relationship of traditional Mexican American culture to adjustment and delinquency among three generations of Mexican American male adolescents. *Hispanic Journal of Behavioral Sciences, 4*(1), 41–55. doi:10.1177/07399863820041003.

Cabassa, L. J. (2003). Measuring acculturation: Where we are and where we need to go. *Hispanic Journal of Behavioral Studies, 25*(2), 127–146. doi:10.1177/0739986303025002001.

Carringer, D. C. (1974). Creative thinking abilities of a Mexican youth: The relationship of bilingualism. *Journal of Cross-Cultural Psychology, 5*(4), 492–504. doi:10.1177/002202217400500409.

Castro, F. G., Coe, K., Gutierres, S., & Saenz, D. (1996). Designing health promotion programs for Latinos. In P. M. Kato & T. Mann (Eds.), *Handbook of diversity issues in health psychology* (pp. 319–346). New York: Plenum.

Chun, K. M., Organista, P. B., & Marín, G. (Eds.). (2003). *Acculturation: advances in theory, measurement, and applied research.* Washington: American Psychological Association.

Coatsworth, J. D., Maldonido-Molina, M., Pantin, H., & Szapocznik, J. (2005). A person-centered and ecological investigation of acculturation strategies in Hispanic immigrant youth. *Journal of Community Psychology, 33*(2), 157–174. doi:10.1002/jcop. 20046.

de Anda, D. (1984). Bicultural socialization: Factors affecting the minority experience. *Social Work, 29*(2), 101–107.

Dinh, K. T., Roosa, M. W., Tein, J.-Y., & Lopez, V. A. (2002). The relationship between acculturation and problem behavior proneness in a Hispanic youth sample: A longitudinal mediation model. *Journal of Abnormal Child Psychology, 30*(3), 295–309. doi:10.1023/A:1015111014775.

Dolby, N. (2000). Changing selves: Multicultural education and the challenge of new identities. *Teachers College Record, 102*(5), 898–912.

Feliciano, C. (2001). The benefits of biculturalism: Exposure to immigrant culture and dropping out of school among Asian and Latino youths. *Social Science Quarterly, 82*(4), 865–879.

Flannery, W. P., Reise, S. P., & Jiajuan, Yu. (2001). An empirical comparison of acculturation models. *Personality and Social Psychology Bulletin, 27*(8), 1035–1045.

Gil, A. G., Vega, W. A., & Dimas, J. M. (1994). Acculturative stress and personal adjustment among Hispanic adolescent boys. *Journal of Community Psychology, 22*(1), 43–54. doi:10.1002/1520-6629(199401)22:1<43::AID-JCOP2290220106>3.0.CO;2-T.

Gomez, M. J., & Fassinger, R. E. (1994). An initial model of Latina achievement: Acculturation, biculturalism, and achieving styles. *Journal of Counseling Psychology, 41*(2), 205–215. doi:10.1037/0022-0167.41.2.205.

Gonzales, N. A., Knight, G. P., Morgan-Lopez, A. A., Saenz, D., & Sirolli, A. (2002). Acculturation and the mental health of Latino youths: An integration and critique of the literature. In J. M. Contreras, K. A. Kerns, & A. M. Neal-Barnett (Eds.), *Latino children and families in the United States* (pp. 45–76). Westport: Greenwood.

Haritatos, J., & Benet-Martinez, V. (2002). Bicultural identities: The interface of cultural, personality, and socio-cognitive processes. *Journal of Research in Personality, 36*(6), 598–606. doi:10.1016/S0092-6566(02)00510-X.

LaFromboise, T., Coleman, H. L., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin, 114*(3), 395–412.

Lang, J. G., Munoz, R. F., Bernal, G., & Sorensen, J. L. (1982). Quality of life and psychological well-being in a bicultural Latino community. *Hispanic Journal of Behavioral Sciences, 4*(4), 433–450. doi:10.1177/07399863820044002.

Marks, G., Garcia, M., & Solis, J. M. (1990). Health risk behaviors of Hispanics in the United States: Findings from the HHANES 1982–1984. *American Journal of Public Health, 80*(Suppl), 20–26. doi:10.2105/AJPH.80.Suppl.20.

Miranda, A. O., & Umhoefer, D. L. (1998). Depression and social interest differences between Latinos in dissimilar acculturation stages. *Journal of Mental Health Counseling, 20*(2), 159–171.

Miranda, A. O., Estrada, D., & Firpo-Jimenez, M. (2000). Differences in family cohesion, adaptability, and environment among Latino families in dissimilar stages of acculturation. *Family Journal, 8*(4), 341–350. doi:10.1177/1066480700084003.

Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology, 54*(3), 271–281.

Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum for the study of acculturation. *American Anthropologist, 38*, 149–152.

Rivera-Sinclair, E. A. (1997). Acculturation/biculturalism and its relationship to adjustment in Cuban-Americans. *International Journal of Intercultural Relations, 21*(3), 379–391. doi:10.1016/S0147-1767(96)00040-5.

Rogler, L. H., Cortes, D. E., & Malgady, R. G. (1991). Acculturation and mental health status among Hispanics: Convergence and new directions for research. *American Psychologist, 46*(6), 585–597. doi:10.1037/0003-066X.46.6.585.

Samaniego, R. Y., & Gonzales, N. A. (1999). Multiple mediators of the effects of acculturation status on delinquency for Mexican American adolescents. *American Journal of Community Psychology, 27*(2), 189–210.

Schwartz, S. J., Zamboanga, B. L., & Jarvis, L. H. (2007). Ethnic identity and acculturation in Hispanic early adolescents: Mediated relationships to academic grades, prosocial behaviors, and externalizing symptoms. *Cultural Diversity and Ethnic Minority Psychology* 13 (4): 364–373. doi:10.1037/1099-9809.13.4.364.

Smith, E. P., & Guerra, N. G. (2006). Introduction. In N. G. Guerra & E. P. Smith (Eds.), *Preventing youth violence in a multicultural society* (pp. 3–14). Washington: American Psychological Association.

Smokowski, P. R., & Bacallao, M. (2006). Acculturation and aggression in Latino adolescents: A structural model focusing on cultural risk factors and assets. *Journal of Abnormal Child Psychology, 34*(5), 657–671. doi:10.1007/s10802-006-9049-4.

Smokowski, P. R., & Bacallao, M. L. (2007). Acculturation, internalizing mental health symptoms, and self-esteem: Cultural experiences of Latino adolescents in North Carolina. *Child Psychiatry & and Human Development, 37*(3), 273–292. doi:10.1007/s10578-006-0035-4. http://springerlink.metapress.com/content/1573-3327/?k=merican. Accessed September 29, 2009.

Smokowski, P. R., David-Ferdon, C., & Stroupe, N. (2009). Acculturation, youth violence, and suicidal behavior in minority adolescents: A review of the empirical literature. *Journal of Primary Prevention, 30*(3/4), 215–264. doi:10.1007/s10935-009-0173-0.

Sommers, I., Fagan, J., & Baskin, D. (1993). Sociocultural influences on the explanation of delinquency for Puerto Rican youths.

Hispanic Journal of Behavioral Sciences, 15(1), 36–62. doi:10.1177/07399863930151002.

Suarez-Orozco, C., & Suarez-Orozco, M. M. (2001). *Children of immigrants.* Cambridge, MA: Harvard University Press.

Szapocznik, J., Santisteban, D., Kurtines, W., Perez-Vidal, A., & Hervis, O. (1984). Bicultural effectiveness training: A treatment intervention for enhancing intercultural adjustment in Cuban American families. *Hispanic Journal of Behavioral Sciences, 6*(4), 317–344. doi:10.1177/07399863840064001.

Trimble, J. E. (2003). Introduction: Social change and acculturation. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: advances in theory, measurement, and applied research.* Washington: American Psychological Association.

Trueba, H. T. (2002). Multiple ethnic, racial, and cultural identities in action: From marginality to a new cultural capital in modern society. *Journal of Latinos and Education, 1*(1), 7–28.

Vega, W. A., Gil, A. G., Warheit, G. J., Zimmerman, R. S., & Apospori, E. (1993). Acculturation and delinquent behavior among Cuban American adolescents: Toward an empirical model. *American Journal of Community Psychology, 21*(1), 113–125. doi:10.1007/BF00938210.

Vega, W. A., Zimmerman, R. S., Khoury, E. L., Gil, A. G., & Warheit, G. J. (1995). Cultural conflicts & problem behaviors of Latino adolescents in home and school environments. *Journal of Community Psychology, 23*(2), 167–179. doi:10.1002/1520-6629(199504)23:2<167::AID-JCOP2290230207>3.0.CO;2-O.

Vega, W. A., Kolody, B., Aguilar-Gaxiola, S., Alderete, E., Catalano, R., & Caraveo-Anduaga, J. (1998). Lifetime prevalence of *DSM-III-R* psychiatric disorders among urban and rural Mexican Americans in California. *Archives of General Psychiatry, 55*(9), 771–778. doi:10.1001/archpsyc.55.9.771.

Vivero, V. N., & Jenkins, S. R. (1999). Existential hazards of the multicultural individual: Defining and understanding cultural homelessness. *Cultural Diversity and Ethnic Minority Psychology, 5*(1), 6–26.

Achievement Motivation

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Achievement motivation may be understood as an individual's concern for becoming successful, doing well, meeting obligations, overcoming obstacles, and attaining a sense of excellence. In the field of psychology, the concept first emerged as one of the basic needs identified in Henry Murray's (1938) groundbreaking theory of human motivation. Murray proposed that internal states of disequilibrium drive individuals' behaviors, and that disequilibrium emerges when individuals have a sense that they lack something and a need to address it. Murray classified needs as being primary (such as those that are biologically based like the need for food, air, water) or as secondary (such as those either driven by biological needs or an individual's psychological makeup, like need for affiliation, power, recognition, autonomy). Murray conceptualized the need for achievement as a secondary need. That need has been one of the most studied, along with the need for power and affiliation, and has mushroomed into several areas of research that relate to the period of adolescence.

The study of achievement motivation initially was popularized by the Thematic Apperception Test (TAT; McClelland et al. 1953) and efforts to link the need for achievement with other characteristics and their outcomes. The TAT gives high scores to those who work well under moderate risk, seek new information, advice, and feedback. Individuals who delay gratification, who get along well with others, and also attribute their success to internal factors and failure to external factors receive high TAT scores. Although the tendency has been to view the need to achieve as a good disposition, this is not always the case, as those with a high need to achieve also have been found more likely to use illegal or deceitful means to achieve their goals (McClelland 1985). Still, studies using the TAT have been among the most fruitful as they have led to important research and theoretical developments.

Defined as an operationalization of Max Weber's protestant ethic, TAT achievement scores have been found to be less reliable for predicting achievement in certain situations (McClelland 1961). These differences essentially have revolutionized the field. For example, TAT scores are less reliable when measuring academic achievement motivation for school and more reliable for predicting frustration in political figures. In addition, TAT measures and direct measures of achievement motivation do not appear to correlate; they are associated with different actions and life outcomes. These important findings contributed to a considerable amount of research seeking to explain them. The result of that research has led researchers to conclude that the TAT measures intrinsic motivation, while direct measures look more at social rewards for achievement (see Spangler 1992) and that two distinct but related motivational systems exist: explicit and implicit achievement motivation (see McClelland et al. 1989;

Thrash et al. 2007). These developments have been shown to have important implications. Notably, they reveal that different types of achievement motivations affect cognitive activities, self-regulatory strategies, and expectations for success. These differences have practical implications given how intrinsically or extrinsically motivated individuals can respond differently to different performance contexts (Story et al. 2009).

Researchers have provided other important ways to measure and understand achievement motivation. For example, Atkinson and Feather (1966) created a multivariate model that includes achievement motivation and the probability of success. This approach helped researchers to understand not only longitudinal pathways and outcomes but also the development of the theory of motivational behavior, such as separate components for approach and avoidance of achievement. Another group of researchers conceptualized achievement needs in a way that has become known as expectancy value theory, a theory developed to understand the mental calculations that take place in attitude development (Fishbein and Ajzen 1975). For example, their model views beliefs about achievement beliefs (e.g., self-perceptions of competence) and behaviors (e.g., persistence) as determined both by the expectancy youth have for success and the subjective value they place on succeeding (Wigfield and Eccles 2000).

Much research has focused on sex and cultural differences as well as developmental aspects of motivations for achievement. Historically, researchers viewed arousal and expression as differing by gender; however, comprehensive reviews have found no such pattern (Stewart and Chester 1982; Smith 1992). International studies generally have confirmed results from the USA; however, ideas of achievement differ depending on their cultural context (McClelland 1961), with achievement motivation associating with cultural differences in the perception and selection of domains, goals, and behaviors (Hofer et al. 2010). Developmentally, evidence has shown that parenting styles that train children for healthy independence – those with warmth, encouragement, and low control – cultivate high motivational achievement (McClelland 1985; Turner et al. 2009). As expected, these results do not always carry through from one study to the next, but general themes continue to gain support.

The study of achievement motivation has grown considerably given that several researchers have now offered different ways to understand it, sometimes using a variety of terms, and an increasing focus on the factors that contribute to what would be deemed achievement motivation. For example, Maehr (1984), who focused on educational contexts, hypothesized that motivation for achievement depends on the meaning that the learner creates for it, and this in turn influences how much time and energy the learner invests. For Maehr, meaning was comprised of three facets: an individual's current personal goals, that individual's sense of self, and that individual's perceptions of what could be achieved in the classroom. These three facets were proposed to be influenced by four antecedents: available information, characteristics of the learning situation, personal experience, and broader sociocultural contexts. Achievement motivation, under this approach, depends on all of these factors and, not surprisingly, all of these factors have been the subject of increasing research. Most notably, the sense of self that is now known as "self-efficacy" has received considerable interest. Self-efficacy, an individual's belief that they can perform a task, is part of understanding the self; it has been shown to be positively related to academic behaviors such as persistence, effort, cognitive strategy use, and achievement (Bandura 1997). Similarly, peer environments have been viewed as particularly important for adolescents. Belonging, peer interest in learning, and peer resistance to school norms might all be related to classroom environments. Positive associations have been shown between perceived peer investment in class activities and grades and their achievement. Acceptance and value also enhance a sense of belonging, as well as the sense that classrooms support mastery and improvement. And adolescents' social groups may promote or discourage certain behaviors, such as an achievement orientation, which could include a lack of it (Nelson and DeBacker 2008). These important lines of research confirm the complexity of this area of study and the need for research to focus on multiple factors.

The study of achievement motivation has grown considerably since it was conceptualized in the early 1900s. Although several researchers continued to use the term and have devised important measures to understand it, more recent research appears to focus more on its related components and on specific contexts of the need to achieve, such as in academic settings (see Steinmayr and Spinath 2009) and work-

based contexts (Kenny et al. 2010). These studies highlight key points, such as the importance of families, peers, and other social environments in fostering and shaping individuals' sense of self related to the need to achieve. The fragmentation may leave an impression of a reduced interest in understanding achievement motivation, but the reality appears to be that researchers have increased their interest in it, especially in understanding its developmental roots and potential outcomes.

References

Atkinson, J. W., & Feather, N. T. (1966). *A theory of achievement motivation*. New York: Wiley.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: WH Freeman.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading: Addison-Wesley.

Hofer, J., Busch, H., Bender, M., Ming, L., & Hagemeyer, B. (2010). Arousal of achievement motivation among student samples in three different cultural contexts: Self and social standards of evaluation. *Journal of Cross-Cultural Psychology, 41*, 758–775.

Kenny, M. E., Walsh-Blair, L. Y., Blustein, D. L., Bempechat, J., & Seltzer, J. (2010). Achievement motivation among urban adolescents: Work hope, autonomy support, and achievement-related beliefs. *Journal of Vocational Behavior, 77*, 205–212.

Maehr, M. L. (1984). Meaning and Motivation: Toward A Theory of Personal Investment. In C. Ames & R. Ames (Eds.), *Research on motivation in education: Student motivation* (Vol. 1, pp. 115–144). New York: Academic.

McClelland, D. C. (1961). *The achieving society*. Princeton: Van Nostrand.

McClelland, D. C. (1985). *Human motivation*. Glenview: Scott Foresman.

McClelland, D. C., Atkinson, J. W., Clark, R. A., & Lowell, E. L. (1953). *The achievement motive*. New York: Appleton.

McClelland, D. C., Koestner, R., & Weinberger, J. (1989). How do self-attributed and implicit motives differ? *Psychological Review, 96*, 690–702.

Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.

Nelson, R. M., & DeBacker, T. K. (2008). Achievement motivation in adolescents: The role of peer climate and best friends. *Journal of Experimental Education, 76*, 170–189.

Smith, C. P. (Ed.). (1992). *Motivation and personality: Handbook of thematic content analysis*. New York: Cambridge University Press.

Spangler, W. D. (1992). Validity of questionnaire and TAT measures of need for achievement: Two meta-analyses. *Psychological Bulletin, 112*, 140–154.

Steinmayr, R., & Spinath, B. (2009). The importance of motivation as a predictor of school achievement. *Learning and Individual Differences, 19*, 80–90.

Stewart, A. J., & Chester, N. L. (1982). Sex Differences in Human Social Motives: Achievement, Affiliation, and Power. In A. J. Stewart (Ed.), *Motivation and society* (pp. 172–218). San Francisco: Jossey-Bass.

Story, P. A., Hart, J. W., Stasson, M. F., & Mahoney, J. M. (2009). Using a two-factor theory of achievement motivation to examine performance-based outcomes and self-regulatory processes. *Personality and Individual Differences, 46*, 391–395.

Thrash, T. M., Elliot, A. J., & Schultheiss, O. C. (2007). Methodological and dispositional predictors of congruence between implicit and explicit need for achievement. *Personality and Social Psychology Bulletin, 33*, 961–974.

Turner, E. A., Chandler, M., & Heffer, R. W. (2009). The influence of parenting styles, achievement motivation, and self-efficacy on academic performance in college students. *Journal of College Student Development, 50*, 337–346.

Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology, 25*, 68–81.

Achievement Tests

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Achievement tests are evaluations that seek to measure knowledge or skills gained after training, instruction, or other experiences (Gibson and Mitchell 2008; McMillan and Schumacher 2010). These types of tests are taken by adolescents throughout their educational careers, even though they sometimes may not even realize that they are taking them. Although a wide variety of achievement tests exists, they can be grouped into categories according to their primary purpose and the scope of comparison (Whiston 2009). For example, norm-referenced achievement tests compare an individual's test score in a specific area to those of other test-takers. Criterion reference tests compare an individual's scores to a preset of knowledge or abilities. Some tests can be a mixture of both, such as some diagnostic achievement tests that are given to individuals to determine academic progress or identify strengths and weaknesses.

Efforts to measure achievement have grown, and their increase has resulted in considerable controversy. In educational environments, most notably, these tests often have become known as "high-stakes tests." These types of tests are those that can have important consequences for individuals, such as their moving to the

next grade, graduating, being allowed to take certain classes, or earning admittance into a school. Perhaps the most familiar use of achievement tests are group entrance exams taken by college-bound adolescents, such as the Scholastic Aptitude Tests (SATs) that play a critical role in the admissions criteria used by colleges and universities. It is these tests that have attracted the most controversy since they potentially have a powerful effect on an individual's life. The increasing controversies that these tests attract include, for example, concern that they use arbitrarily set standards, that they do not test important skills, that they shift the learning environment away from more creative learning, that they disadvantage particular groups in society, and that they are being used inappropriately (like for closing schools deemed problematic) (see, e.g., Whiston 2009). Despite these controversies, the tests can remain useful tools that reveal the extent of an individual's knowledge and how they might perform in certain environments. It seems clear that, despite criticisms, these types of tests are likely to continue to play an important role in adolescence, a role that seems to increase in significance even when controversies and resistance abound.

References

Gibson, R., & Mitchell, M. (2008). *Introduction to counseling and guidance*. Upper Saddle River: Pearson Education.

McMillan, J., & Schumacher, S. (2010). *Research in education: Evidence-based inquiry*. Upper Saddle River: Pearson Education.

Whiston, S. (2009). *Principles and applications of assessment in counseling*. Belmont: Brooks/Cole, Cengage Learning.

Acting Out

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The term "acting out" can have a variety of meanings as well as be executed at different levels of intensity. Acting out typically describes situations involving an individual's failure to exercise proper control over their actions, which is why acting out also tends to be used as a pejorative term. It indicates that the individual has failed to censor their taboo primitive impulses and signals a lack of assimilation into basic social norms (e.g., a faulty upbringing). Because acting out is considered destructive, self-destructive, and socially undesirable, it usually is reserved for an observation of others' behaviors. Acting out can be understood from the perspective of several disciplines, but it figures most prominently in therapeutic settings and those concerned with delinquent or other risky behavior (see Alexander and Sexton 2002; Overbeek et al. 2005). Almost invariably, acting out has been associated with the adolescent period, with acting out even seen as acting adolescent.

Therapeutic and criminological views of acting out show well its manifestations. From the perspective of psychotherapy and clinical science, acting out is considered the emergence of inner conflict without intention or insight (see Richarz and Romisch 2002). Some therapists see acting out as a means for personal growth and self-expression, while others see it as detrimental because it causes catharsis without insight. Acting out can involve demonstrating inner thoughts against a person's better judgment, divulging emotions that they do not want to acknowledge, or enacting experiences that they do not want to process. Criminological views tend to view acting out as an expression of deviance, violence (to the self or others), and risk taking (see, e.g., Overbeek et al. 2005). Acting out behavior may not be a usual characteristic of an individual; however, some individuals act out as a normal part of their lives. The therapeutic and criminological views, then, complement one another well in the manner they give a broader view of acting out, with one viewing it in constructive ways while the other viewing it as essentially problematic and in need of control.

The criminological view that focuses on risk taking likely is the most generally recognized form of "acting out" as it reflects popular perceptions of some adolescents. Indeed, some view adolescents as quintessentially linked to acting out; they regard the adolescent period as one marked by actions destructive to themselves or others in the manner they hamper the effective development of feelings and social skills. Although leading commentators may lament this negative view of adolescents, considerable research does support the claim that much of "acting out" revealed in antisocial behavior occurs during adolescence, that much of antisocial behavior is adolescence-limited

(see Moffitt 2003). Becoming mature and thus able not to act out typically means developing the ability to express conflicts safely and constructively, and being able to exercise appropriate impulse control, personal development, self-care, and relationship skills (see, e.g., Barker and Galambos 2005; Schultz et al. 2003).

Although popular images of acting out associate it with the adolescent period, researchers tend to find acting out as part of everyday life and find it in many contexts. The most notable contexts include acting out desires and fears through dreaming (see Richarz and Romisch 2002) or acting out fantasies or socially inappropriate thoughts by watching or otherwise interacting with media that can mimic real-life situations (see Bösche 2009). Despite those contributions, acting out likely will continue to be a term pejoratively associated with youth. Seen more comprehensively, however, the concept of acting out clearly has been quite useful as it has made important contributions to our understanding of adolescents' impulses and behaviors, their relative levels of maturity and deviance, as well as their developmental challenges and outcomes.

Cross-References

► Delinquency
► Risk-Taking

References

Alexander, J. F., & Sexton, T. L. (2002). Functional family therapy: A model for treating high-risk, acting-out youth. In F. W. Kaslow (Ed.), *Comprehensive handbook of psychotherapy: Integrative/eclectic* (pp. 111–132). New York: Wiley.

Barker, E. T., & Galambos, N. L. (2005). Adolescents' implicit theories of maturity: Ages of adulthood, freedom, and fun. *Journal of Adolescent Research, 20*, 557–576.

Bösche, W. (2009). Violent content enhances video game performance. *Journal of Media Psychology, 21*, 145–150.

Moffitt, T. E. (2003). Adolescence- limited and life-course persistent antisocial behaviour: A developmental taxonomy. *Psychological Review, 100*, 674–701.

Overbeek, G., Vollebergh, W., Engels, R., & Meeus, W. (2005). Juvenile delinquency as acting out: Emotional disturbance mediating the effects of parental attachment and life events. *European Journal of Developmental Psychology, 2*, 39–46.

Richarz, B., & Romisch, S. (2002). Acting-out: its functions within analytic group psychotherapy and its transformation into dreams. *International Journal of Group Psychotherapy, 52*, 337–354.

Schultz, L. H., Selman, R. L., & LaRusso, M. D. (2003). The assessment of psychological maturity in children and adolescents: Implications for the evaluation of school-based character education programs. *Journal of Research in Character Education, 1*, 67–87.

Activism

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Overview

Youth activism is a form of political engagement in which young people identify common interests, mobilize their peers, and work collectively to make their voices heard in the public square. Research on youth activism is interdisciplinary, emerging out of scholarship on youth development, civic engagement, cultural studies, and social movements. Youth activism is an important domain of research for two broad reasons. First, youth activists defy societal stereotypes about teenagers, such as that they are self-involved, impulsive, or unprepared for participation in mature community activities. Understanding youth's accomplishments in activism can challenge and expand conventional notions about adolescence as a developmental stage. Second, understanding youth activism as a developmental *context* is important, particularly for youth who feel marginalized from their schools or communities. Settings that support youth activism exemplify principles of learning that are relevant to other kinds of learning environments, such as schools and afterschool programs.

Introduction

Young people seek to make their voices heard and improve their communities or schools in a lasting way by engaging in activism and organizing. Youth may not have opportunities to vote or hold formal seats on decision-making bodies, but many contribute to social action campaigns that give voice to their hopes and concerns (Checkoway and Richards-Schuster 2006). For example, activist groups have worked to strengthen failing schools, performed action research to expose environmental polluters, and developed partnerships between gay and straight youth to promote safety and inclusion (Sadowski 2007; Warren et al. 2008). Here the term "activism" is used synonymously with "organizing" in order to capture the broad range of groups that engage young people in social change. Typically, such groups are based in community organizations,

churches, or after-school youth programs, but in some cases they may arise from school classes or clubs. In contrast to community service programs where youth clean parks, tutor children, or serve food to the homeless, youth activism groups seek to influence public policy or change institutional practices, often with a social justice focus (Kahne and Westheimer 1996). In this sense such groups exemplify a critical form of civic engagement, in which youth are encouraged to challenge the status quo and envision better alternatives for themselves and their peers (Watts and Flanagan 2007).

The developmental literature on youth activism discussed in this essay focuses on middle-school-aged and high-school-aged youth, as distinct from research about activism among college students. Much of the research on activism among youth between the ages of 12 and 18 has focused on young people from communities that have been systematically left out of decision making or who are deprived of adequate opportunities to learn in their schools and neighborhoods. For example, in the USA, research on activism has described efforts by African-American, Latino, and Asian-American youth from low-income neighborhoods to become collectively organized and participate in the public square. The term "marginalized" is broader than just ethnicity, however. Gay–straight alliances, for example, represent efforts by gay, lesbian, bisexual, and transgender (GLBT) youth and their heterosexual allies to create safe spaces in schools for GLBT students (Sadowski 2007). Research on youth activism tends to focus on marginalized youth because, historically, it is through organizing that oppressed groups gain power and accomplish social change.

Youth activism has proven to be an interdisciplinary field that attracts developmentalists, sociologists, anthropologists, and political scientists, among others. Adolescent development scholars have conducted studies that demonstrate the kinds of developmental competencies associated with activism (e.g., Larson & Hanson, 2005). Sociologists have examined activism in terms of broader questions about age segregation, inequality, and resistance (Ginwright et al. 2006; Gordon 2010). Education researchers focus on the political impact of youth organizing, such as in the arena of school reform (Oakes and Rogers 2006; Warren et al. 2008).

For the most part, research has relied on case studies of youth groups that draw upon ethnographic observation and interviews (e.g., Ginwright 2007; Kirshner 2009; Larson and Hansen 2005). Several reasons account for this pattern. First, youth activism is an emerging domain of research. In early stages of research, open-ended, exploratory inquiry is called for in order to understand the domain. This was particularly the case with youth organizing, because scholars argued that conventional measures of civic engagement, such as those that measure volunteering or future intention to vote, did not capture the kinds of grassroots community engagement activities of low-income youth (Cohen 2006). Second, because activism is signaled by authentic behavior and action, it is best studied in real-world, naturalistic contexts, rather than through laboratory simulations. In this sense the research has been driven by practice. Third, youth activist groups tend to be self-selecting. Unlike schools, they attract participants who elect to be there, which means that it would not make sense to impose random assignment on such groups and expect results to have ecological validity.

Scholars have begun to develop measures that can be used in surveys with larger populations of youth that tap into personal behavior or attitudes associated with organizing and activism. Measures focus on constructs that include political voice, competencies for civic action, participation in boycotts or demonstrations, political efficacy, and perceptions of inequality and injustice. A comprehensive list of these survey measures can be found in Flanagan et al. (2007).

Youth Activism as a Context for Development

This section idenfities common features of settings that engage youth in efforts to improve their schools and communities.

Authentic Interests

Youth activism campaigns emerge from struggles that youth experience in their everyday lives, such as pollution, lack of safety, and substandard schools (Ginwright and James 2002; Delgado and Staples 2007). Effective organizers invite youth to reflect on what they want to see improved about their environment – in short, to articulate their interests (Boyte 2004). Organizing a project around people's self-interests means the stakes are high – it has real consequences for the participants.

Collective Problem Solving

Researchers have noted that the *collective* focus of youth activism is one of its defining features (Youniss and Hart 2005). Participation involves a shift in focus from individual to group – from "what *I* can do" to "what *we* can do together." Members learn how to work effectively with others because their projects would otherwise not succeed. Watkins et al. (2007) showed that through working together on a social action campaign, youth participants learned how to "bridge differences" related to race, ethnicity, gender, and sexual orientation. Such experiences may contribute to feelings of collective efficacy. In a case study of a youth organizing group, young people commonly invoked the slogan "power in numbers" or "strength in numbers" to recruit others to their cause, suggesting the formation of a sense of collective efficacy (Kirshner 2009).

From the perspective of cognitive science, the emphasis on collective problem solving in youth activism embodies a distinct form of distributed cognition, which refers to the ways in which problem solving is distributed across people and tools (Hutchins 2000). According to this view, cognition is not just inside a person's head, but is instead distributed across a range of people and technological tools. Similarly, tasks in youth activism groups are often distributed among participants (Kirshner 2008). For example, a group designing a press release might include a computer-savvy writer, a talented artist, and someone who is good at keeping people on task. In such a scenario, each person may not master all of the same skills, but together they made an effective team.

The collaborative, distributed nature of work in activism groups enables participants to accomplish goals they would be hard-pressed to accomplish on their own. Consider some of the complex cognitive and social tasks required in effective political action campaigns. For example, participants must develop long-term strategies and respond to unexpected contingencies. They need to construct arguments that are sensitive to audience, such as when speaking before a city council. And along the way they need to build support among their peers and community members. Young people's accomplishments in campaigns defy predictions about what adolescents are capable of doing according to standard developmental theory (Youniss and Hart 2005).

When effective, youth organizing groups comprise highly interdependent systems that provide the necessary scaffolding and resources for youth to accomplish challenging goals. In this sense, activism groups engage young people's "zone of proximal development" (ZPD), which refers to the distance between what a person can do alone and what she can do in collaboration with peers or an experienced adult (Vygotsky 1978). Activities targeted toward the upper end of the zone of proximal development are said to stimulate development – they comprise "leading activities" for development, helping to support and stimulate young people's maturing psychological functions (Griffin and Cole 1999). When organized optimally, social action campaigns may serve as leading activities for the development of strategic thinking and sociopolitical awareness.

Youth–Adult Partnerships

Much of the literature about youth activism foregrounds the actions and accomplishments of youth themselves. But this emphasis on "youth" obscures the fact that activism groups typically embody cross-age collaborations in which young adults (usually in their twenties) play critical roles as organizers and advisors.

The quality of relationships between youth and young adults has become a topic of interest for researchers (Larson et al. 2005). Adults who work with high-school-aged or middle-school-aged youth often experience dilemmas about their roles. For example, some adults may seek to empower youth by letting them formulate campaign strategy; they step aside so that youth can assume leadership. But these same adults may have greater expertise in campaign strategy or how to facilitate group decision making. Tensions between youth empowerment goals and adult expertise, therefore can pose challenges for adult leaders (Kirshner 2008).

Forms of youth–adult interaction vary considerably across groups. Some groups aspire to be "youth-led," in which case adults act simply as facilitators who help youth formulate their own goals and plans (Larson et al. 2005). Other groups seek to develop partnerships characterized by shared roles and egalitarian decision making (Camino 2005). Still others embrace an apprenticeship approach, in which veteran activists model what it means to engage in social action or community organizing (Kirshner 2006). As in craft

apprenticeships, experienced adults gradually "fade" so that youth can take over the activities of the group. And, of course, there are additional ways of parsing gradations of youth–adult interaction, as suggested by Hart's (1992) "ladder of participation," which is used widely by youth organizations (see also Hart 2006 for an updated commentary on this framework).

Regardless of the specific type of collaboration, the very fact that youth interact with adults as they carry out activism campaigns is significant, given a broader societal context in which age segregation is common (Hart 2006; Heath 1999; Zeldin et al. 2003). As Rogoff et al. (2003) write, "Instead of routinely helping adults, children are often involved in specialized child-focused exercises to assemble skills for later entry in mature activities" (p. 181). Urban high schools, in particular, are often too large, anonymous, and lacking in opportunities for meaningful connections between teachers and students (National Research Council 2003. Youth groups, therefore, provide an important venue for young people to develop relationships with adults in the context of task-oriented activities.

Alternative Frames for Identity

Youth activists forge identities that challenge stereotypes about low-income youth of color. One way they do this is through the actions they take in the public realm. By participating in civic venues, such as school board or city council meetings, youth position themselves – and are positioned by others – as competent political actors (Nasir and Kirshner 2003). Youth activism groups also provide alternative frames for identity through the kinds of sociopolitical ideologies that they espouse. As Youniss and Yates (1997) have written, in order to develop a civic identity, adolescents must come to identify with transcendent values and ideologies that link the self to a past and present. Here the term ideology is not limited to specific political systems, but instead connotes the need to find meaning – to identify with beliefs that link one to a broader social and cultural context (Furrow and Wagener 2003). Experiences that expose teenagers to political viewpoints support civic identity development because they enable young people to reflect on sociopolitical issues and to see themselves as active producers of society (Kirshner 2009).

Social justice-oriented youth activism groups, in particular, seek to foster awareness of the influence of social forces on individual behavior as well as a belief in the power of ordinary people to accomplish social change (Freire 1970; Watts and Flanagan 2007). Such conversations may be especially relevant to low-income youth of color who have experienced a disjuncture between American ideals and their lived experiences of poverty or racism (Rubin 2007). Activism projects enable youth to see how issues that are typically treated as a private responsibility can be reframed as a collective responsibility. This way of framing social problems can be significant in identity development because it contributes to feelings of empowerment and collective self-determination (Flores-Gonzales et al. 2006). For example, Ginwright (2007) described the case of a young mother seeking her high-school diploma who encountered barriers to finding child care during school hours. Rather than interpret the situation as her own isolated problem, she organized other teenage mothers to make their case to the district superintendent, who decided to keep the child-care center open. Although longitudinal research is called for to understand precisely how social action experiences like this influence identity development, Ginwright's study suggests that taking action may contribute to a sense of collective identity that is related to positive youth development outcomes.

Engagement in Academic and Civic Institutions

Social action can be a vehicle for making academic skills relevant to youth's everyday lives (Tate 1995). For example, Rogers et al. (2007) write about the history, language arts, and statistics skills that youth employed to accomplish projects documenting inequities in the Los Angeles school system. Youth participants described these academic practices as "tools" to accomplish goals they cared about – rather than view school subjects as foreign or alienating, they sought to become more proficient so that they could find and document evidence for their projects. Similarly, Mitra (2004) has written about the powerful competencies that students develop when they pursue strategies to gain greater "student voice" in their schools. Proponents of student voice aim to create opportunities for a broad range of students to be heard in decision making and planning, by creating new structures that convene youth and adults to work together, such as assessment and strategic planning, student-guided

neighborhood tours for teachers, or leading professional development workshops for teachers (Mitra 2007; Yonezawa and Jones 2007).

Activism groups also connect youth to mainstream civic institutions. Campaigns typically culminate in presentations to civic decision makers, outreach to community residents, or closed-door meetings with policymakers where youth present policy proposals or grievances (Kirshner and Geil (in press)). Political encounters such as these represent concrete access points for youth. Such access points offer some of the few public channels through which young people can transgress age segregation and contribute their voice to political decision making.

Debates and Knowledge Gaps

Measures of Civic Action

Efforts to quantify civic engagement through surveys struggle with what counts as civic action. Some argue that existing measures of civic engagement, such as intention to vote or volunteer, are too narrow and discount other important forms of engagement, such as helping out a neighbor in need, providing informal mentoring to neighborhood children, or performing a socially conscious hip-hop song. Ethnographic research has sought to uncover and report a more expanded set of behaviors and practices that scholars include when talking about youth civic engagement. At the same time, some scholars argue that research should demarcate behaviors that are explicitly political in nature, such as efforts to change policies or institutional structures that contribute to inequality.

Insider and Outsider Approaches to Youth Voice and Activism

Insider strategies tend to work from within the system by building partnerships between students and adult personnel that contribute to site-based decision making and changes to classroom instruction (Mitra 2006). Such opportunities go beyond student councils by creating new structures that convene youth and adults to work together to improve their school. One especially promising strategy is student action research (Jones and Yonezawa 2008; Rubin and Jones 2007). Administrators, parents, and students share a common interest in high-quality data that captures features of school quality and climate that are absent from NCLB-mandated measures, but which are relevant to school improvement. In a project described by Jones and Yonezawa (2008), for example, students collected data showing a wide discrepancy between students and teachers' views of the level of challenge in their classes, which provoked conversations among teachers about how to respond. In another example, students in Oakland created a youth-authored School Accountability Report (SAR) that included variables such as student achievement, teacher quality, health and nutrition, and facilities (Duncan-Andrade n.d.). These fledgling efforts to create broader measures of school quality leverage students' expertise about their worlds and school leaders' desire for useful data to complement measures of test performance. One potential limitation of insider strategies is if they become focused solely on technical questions, such as how to improve grading procedures or create stronger teacher–student relationships, without also addressing broader issues of equity in a school or district (Renee et al. 2009). Another limitation is if student roles are just window dressing or tokenistic (Zeldin et al. 2003).

Youth and community organizing groups based outside of schools, on the other hand, have sometimes shown their ability to hold political decision makers accountable to constituents and thereby promote equitable reforms (Oakes and Rogers 2006; Warren et al. 2008). Kwon (2006), for example, described how a pan-ethnic coalition of youth groups successfully defeated a plan to build a "super jail" for juvenile offenders in California. Youth organizing groups may be more likely to appeal to students who feel marginalized in school or are not academically successful. Further research is needed, however, that compares the effectiveness of insider and outsider approaches for accomplishing equity-based school reform.

Effects of Activism on Development

Qualitative case study research suggests that extended social action or youth voice campaigns provide opportunities to develop and practice powerful competencies, such as decision making, social trust, strategic thinking, civic efficacy, and intergroup understanding (Larson and Hansen 2005; Watkins et al. 2007; Mitra 2004; Ginwright 2007). Because of the self-selected populations and lack of comparison studies, however, some scholars have questioned the causal inferences that people make about these studies. It could be that

the key drivers of development in these settings have more to do with their small size, the personalities of adult leaders, or the fact that they are self-selected in their composition.

These unresolved debates have important implications for civic education. For example, if youth were required or randomly assigned to join a social action group as part of the school curricula, would such experiences show the same effects? Forced participation such as this would likely undermine the basic principles of empowerment settings. Nevertheless, efforts to apply youth organizing principles in a more general way to schools represent an important future direction for research and practice. It is an open question whether the guiding principles of community-based activism groups would show similar successes engaging youth if they were formalized as part of a school-based civic education curricula.

A related area for research pertains to the impact of activism on youth development and resiliency. Although there have been longitudinal studies of participants in the Civil Rights movement (discussed in Youniss and Yates 1997), few studies of contemporary youth activism have examined participants' trajectories of development over several years. It is not known how short-term experiences contribute to youth's long-term sociopolitical identities or other developmental outcomes. This kind of research is particularly challenging because young people tend to self-select into such groups, making causal inferences difficult. Nevertheless, careful longitudinal studies need not be randomized experiments to help us understand how participants change over time and how social action experiences become meaningful in their lives.

Understudied Populations

In 2006, there were widespread rallies for immigration reform in the USA. Many of the participants were undocumented youth. But with some exceptions (e.g., Perez 2009), few scholars have studied the precursors or outcomes of activism for undocumented immigrant youth. This is partly because undocumented youth need to conceal their status for fear of deportation or other consequences for them and their families (Gonzalez 2007). Despite barriers to participation, many undocumented youth are taking active roles trying to lobby legislators to pass immigration reform and the Dream Act.

Another understudied population is socially conservative youth, such as those who organize to restrict abortion or promote prayer in schools. Activism is often viewed as the province of politically progressive groups, but scholarship on activism will be limited if it does not also explore its conservative varieties.

Conclusion

In the context of developmental psychology, adolescence has historically been portrayed as a stage between childhood and adulthood. For some, the stage-based approach implies a view of teenagers as "unfinished" or "undeveloped," which has contributed to social policies that restrict them from the public sphere (Vadeboncoeur 2005). Although neurological and biological research has shown that adolescence is a time of heightened physiological change, the implications for adolescent roles are under-determined. For example, some interpret evidence of the immaturity of the prefrontal cortex as a rationale for limiting youths' roles or treating them as a separate class from adults. Others point to such evidence to show how important it is that youth gain complex experiences interacting with adult systems and learning how to participate in them as agents of change. The research on youth activism discussed in this essay provides support for the argument that the most effective response to youth's transitional status is to provide authentic opportunities to participate, rather than maintain their segregation from adult institutions.

References

Boyte, H. C. (2004). *Everyday politics: Reconnecting citizens and public life*. Philadelphia: University of Pennsylvania Press.

Camino, L. (2005). Pitfalls and promising practices of youth-adult partnerships: An evaluator's reflections. *Journal of Community Psychology, 33*(1), 75–85.

Checkoway, B. N., & Richards-Schuster, K. (2006). Youth participation for educational reform in low-income communities of color. In S. Ginwright, P. Noguera, & J. Cammarota (Eds.), *Beyond resistance: Youth activism and community change* (pp. 319–332). New York: Routledge.

CIRCLE. (2008). *Civic and political engagement of youth with no college experience: Summary of focus groups in Baltimore, MD*. Medford: Center for Information and Research on Civic Learning and Engagement.

Cohen, C. (2006). African American youth: Broadening our understanding of politics, civic engagement, and activism. *Youth activism SSRC web forum*. Retrieved from http://ya.ssrc.org/african/Cohen/pf.

Delgado, M., & Staples, L. (2007). *Youth-led community organizing: Theory and action*. New York: Oxford University Press.

Duncan-Andrade, J. M. R. (n.d.). *A pedagogy of indignation: Reading and reclaiming the world through critical research literacies.* San Francisco: César Chávez Institute, San Francisco State University.

Flanagan, C. A., Syvertsen, A. K., & Stout, M. D. (2007, May). *Civic measurement models: Tapping adolescents' civic engagement* (Working paper 55). College Park: The Center for Information & Research on Civic Learning & Engagement.

Flores-Gonzales, N., Rodríguez, M., & Rodríguez-Muñiz, M. (2006). From hip-hop to humanization: Batey Urbano as a space for Latino youth culture and community action. In S. Ginwright, P. Noguera, & J. Cammarota (Eds.), *Beyond resistance: Youth activism and community change: New democratic possibilities for policy and practice for America's youth* (pp. 175–196). London: Routledge.

Freire, P. (1970/2002). *Pedagogy of the oppressed.* New York: Continuum.

Furrow, J. L., & Wagener, L. M. (2003). Transcendence and adolescent identity: A view of the issues. In J. Furrow & L. Wagener (Eds.), Beyond the self: identity and transcendence. Special Issue. *Applied Developmental Science, 7*(3), 116–118.

Ginwright, S. (2007). Black youth activism and the role of critical social capital in Black community organizations. *American Behavioral Scientist, 51*(3), 403–418.

Ginwright, S., & James, T. (2002). From assets to agents of change: Social justice, organizing, and youth development. *New Directions for Youth Development, 96*(winter), 27–46.

Ginwright, S., Noguera, P., & Cammarota, J. (Eds.). (2006). *Beyond resistance! Youth activism and community change: New democratic possibilities for policy and practice for America's youth.* Oxford: Routledge.

Gonzalez, R. G. (2007). Wasted talent and broken dreams: The lost potential of undocumented students. *Immigration Policy in Focus, 5*(13), 1–12.

Gordon, H. R. (2010). *We fight to win: Inequality and the politics of youth activism.* New Brunswick: Rutgers University Press.

Griffin, P., & Cole, M. (1999). Current activity for the future: the Zo-ped. In P. Lloyd & C. Fernyhough (Eds.), *Lev Vygotsky: Critical assessments. Volume III, The zone of proximal development* (pp. 276–295). London: Routledge. (Reprinted from *Children's learning in the zone of proximal development*, by B. Rogoff & J. V. Wertsch, Eds., 1984, San Francisco: Jossey-Bass).

Hart, R. A. (1992). *Children's participation: From tokenism to citizenship.* Florence: UNICEF International Child Development Center.

Hart, R. A. (2006). *Stepping back from "the ladder:" Reflections on a model of child/adult relations in group decision-making.* Unpublished manuscript.

Heath, S. B. (1999). Dimensions of language development: Lessons from older children. In A. S. Masten (Ed.), *Cultural processes in child development* (Vol. 29, pp. 59–75). Mahwah: Erlbaum.

Hutchins, E. (2000). *Distributed cognition.* San Diego: University of California.

Jones, M., & Yonezawa, S. (2008). Student-driven research. *Educational Leadership, 66*(4). Retrieved January 19, 2009, from http://www.ascd.org/publications/educational_leadership

Kahne, J., & Westheimer, J. (1996). In the service of what? The politics of service learning. *Phi Delta Kappan, 77*(9), 593–599.

Kirshner, B., & Geil, K. (in press). "I'am about to bring it!" Access points between youth activists and adult policymakers. Children, Youth Environments.

Kirshner, B. (2006). Apprenticeship learning in youth activism. In P. Noguera, S. Ginwright, & J. Cammarrota (Eds.), *Beyond resistance: Youth activism and community change: New democratic possibilities for policy and practice for America's youth* (pp. 37–57). Oxford, UK: Routledge.

Kirshner, B. (2008). Guided participation in youth activism: Facilitation, apprenticeship, and joint work. *Journal of the Learning Sciences, 17*(1), 60–101.

Kirshner, B. (2009). "Power in numbers": Youth organizing as a context for exploring civic identity. *Journal of Research on Adolescence, 19*(3), 414–440.

Kwon, S. A. (2006). Youth of color organizing for juvenile justice. In S. Ginwright, P. Noguera, & J. Cammarota (Eds.), *Beyond resistance: Youth activism and community change: New democratic possibilities for policy and practice for America's youth* (pp. 215–228). Oxford: Routledge.

Larson, R. W., & Hansen, D. (2005). The development of strategic thinking: Learning to impact human systems in a youth activism program. *Human Development, 48*(6), 327–349.

Larson, R., Walker, K., & Pearce, N. (2005). A comparison of high quality youth-led and adult-led youth programs: Balancing inputs from youth and adults. *Journal of Community Psychology, 33*(1), 57–74.

Mitra, D. L. (2004). The significance of students: Can increasing student voice in schools lead to gains in youth development? *Teachers College Record, 106*(4), 651–688.

Mitra, D. L. (2006). Educational change on the inside and outside: The positioning of challengers. *International Journal of Leadership Education, 9*(4), 315–328.

Mitra, D. (2007). Student voice in school reform: From listening to leadership. In D. Thiessen & A. Cook-Sather (Eds.), *The international handbook of student experience in elementary and secondary school* (pp. 727–744). Dordrecht: Springer.

Nasir, N., & Kirshner, B. (2003). The cultural construction of moral and civic identities. *Applied Developmental Science, 7*, 138–147.

National Research Council. (2003). *Engaging schools: Fostering high school students' motivation to learn.* Washington: The National Academies Press.

Oakes, J., & Rogers, J. (2006). *Learning power: organizing for education and justice.* New York: Teachers College Press.

Perez, W. (2009). *We ARE Americans: Undocumented students pursuing the American Dream.* Sterling: Stylus Publishing.

Renee, M., Welner, K., & Oakes, J. (2009). Social movement organizing and equity-focused educational change: Shifting the zone of mediation. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *International handbook of educational change, 23*(1), 153–168.

Rogers, J., Morrell, E., & Enyedy, N. (2007). Studying the struggle: Contexts for learning and identity development for urban youth. *American Behavioral Scientist, 51*(3), 419–443.

Rogoff, B., Paradise, R., Arauz, R. M., Correa-Chavez, M., & Angelillo, C. (2003). Firsthand learning through intent participation. *Annual Review of Psychology, 54*, 175–203.

Rubin, B. C. (2007). "There's still not justice": Youth civic identity development amid distinct school and community contexts. *Teachers College Record, 109*(2), 449–481.

Rubin, B., & Jones, M. (2007). Student action research: Reaping the benefits for students and school leaders. *National Association of Secondary School Principals Bulletin, 91*(4), 363–378.

Sadowski, M. (2007). Growing up in the shadows: School and the identity development of sexual minority youth. In M. Sadowski (Ed.), *Adolescents at school: Perspectives on youth, identity, and education.* Cambridge, MA: Harvard Education Press.

Schutz, A. (2006). Home is a prison in the global city: The tragic failure of school-based community engagement strategies. *Review of Educational Research, 76*(4), 691–744.

Tate, W. (1995). Returning to the root: A culturally relevant approach to mathematics pedagogy. *Theory into Practice, 34*(3), 166–173.

Vadeboncoeur, J. (2005). Naturalised, restricted, packaged, and sold: Reifying the fictions of "Adolescent" and "Adolescence". In J. Vadeboncoeur & L. P. Stevens (Eds.), *Re/Constructing "the Adolescent": Sign, symbol, and body* (pp. 1–24). New York: Peter Lang.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Warren, M. R., Mira, M., & Nikundiwe, T. (2008). Youth organizing: From youth development to school reform. *New Directions for Youth Development, 2008*(117), 27–42.

Watkins, N. D., Larson, R. W., & Sullivan, P. J. (2007). Bridging intergroup difference in a community youth program. *American Behavioral Scientist, 51*(3), 380–402.

Watts, R., & Flanagan, C. (2007). Pushing the envelope on civic engagement: A developmental and liberation psychology perspective. *The Journal of Community Psychology, 35*, 779–792.

Yonezawa, S., & Jones, M. (2007). Using students' voices to inform and evaluate secondary school reform. In D. Thiessen & A. Cook-Sather (Eds.), *The international handbook of student experience in elementary and secondary school* (pp. 681–710). Dordrecht: Springer.

Youniss, J., & Yates, M. (1997). *Community service and social responsibility in youth.* Chicago: University of Chicago Press.

Youniss, J., & Hart, D. (2005). Intersection of social institutions with civic development. *New Directions for Child Development, 109*, 73–81.

Zeldin, S., Camino, L., & Calvert, M. (2003). *Toward an understanding of youth in community governance: Policy priorities and research directions* (Social Policy Report series). Ann Arbor, MI: Society for Research in Child Development.

Acute Brain Disorders

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Acute brain disorders, sometimes referred to as acute brain syndromes, are various psychiatric syndromes that are temporary, reversible, and diffuse in their impairment. Acute refers to the process' reversibility. The impairment is typically caused by head injury, use of drugs, or an infection. More recently, delirium has become the preferred term to use to label the temporary in the ability to focus, sustain, or shift attention as well as a change in thinking (e.g., in memory and disorientation) or perceptual disturbances that fluctuate in severity (see Brown and Boyle 2002).

References

Brown, T. M., & Boyle, M. F. (2002). The ABC of psychological medicine: Delirium. *British Medical Journal, 325*, 644–647.

Adaptation

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Adaptation involves fitting or confirming to an environment. Adaptation generally implicates the assumption that it is advantageous; thus, "maladjustment" results from unsuccessful adaptation and "adjustment" results from successful adaption. Importantly, adaptation typically is viewed as involving a combination of changing the self as well as altering the external environment.

The term gained renewed popularity with the rise of modern sociobiology. Sociobiology examined both species level and individual explanations for behaviors (see Wilson 1975). Species level types of explanations ("ultimate explanation") involve the function (or adaptation) that a specific behavior serves and the evolutionary process (or phylogeny) that resulted in the behavior or trait's functionality. Individual level types of explanations focus on the development of the individual (ontogeny) and the proximate mechanisms involved in the behavior or trait (such as specific hormones). Sociobiologists deem phenotypic traits adaptive if they provide organisms with a reproductive advantage.

How adolescents adapt to their environments figures prominently in the study of adolescence. Illustrative is how adolescents develop career goals, which involves an adaptation of their expectations to

the opportunities provided by their environments. Adolescents have been shown to simultaneously adapt their career goals to their interests, scholastic achievement, and environmental opportunities (see Hirschi and Vondracek 2009). How adolescents adapt to their environments also, for example, has been important to studies addressing adolescents' immigration and cultural adaptation (see, e.g., Chuang and Gielen 2009) as well those examining adolescent mental health (see, e.g., Williamson et al. 2009). It is difficult to find an area of study relating to adolescents that does not eventually relate to adolescents' adaptation.

References

Chuang, S. S., & Gielen, U. P. (2009). Understanding immigrant families from around the world: Introduction to the special issue. *Journal of Family Psychology, 23*, 275–278.

Hirschi, A., & Vondracek, F. W. (2009). Adaptation of career goals to self and opportunities in early adolescence. *Journal of Vocational Behavior, 75*, 120–128.

Williamson, P., Koro-Ljungberg, M. E., & Bussing, R. (2009). Analysis of critical incidents and shifting perspectives: Transitions in illness careers among adolescents with ADHD. *Qualitative Health Research, 19*, 352–365.

Wilson, E. O. (1975). *Sociobiology: The new synthesis*. Cambridge: Harvard University Press.

Addiction

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Addiction is a behavioral disorder marked by a physical or psychological dependency that results in significant negative disruptions in an individual's quality of life. Formally, addictions relate to drug (including alcohol) use, although the term often is used colloquially to include apparent compulsive behavior and dedication to activities. The important sign of addiction is the continued engagement in self-destructive behavior despite negative consequences. Addiction's self-destructive behaviors involve a loss of control, compulsive seeking, and vulnerability to relapse. Importantly, dependency and addiction are often used interchangeably, but dependency actually relates to physiological effects while addiction relates to behaviors; and both often coexist although they need not do so. Ceasing to use depended on drugs typically (but not always) leads to withdrawal and produces an abstinence syndrome.

Although traditionally limited to drug use, the term has been the subject of considerable scientific debate that has considered whether to include other addictive behaviors under the classification of addiction. The commonly proposed behavioral addictions include pathological gambling, compulsive buying, compulsive exercise, workaholism, computer addiction, Internet addiction, and sexual addiction (see Albrecht et al. 2007). Efforts to include other behavioral addictions continue, such as the recent recognition that mobile phone use by adolescents may result in addiction (Chóliz 2010). Research on mobile phone use reveals some of the most characteristic symptoms of dependence – those symptoms include excessive use; problems with parents due to excessive use; interference with usual activities; an increase in use to reach same levels of satisfaction, including efforts to obtain new models and devices; and the need to frequently use phones. Although it may be tempting to not view behavioral problems as addictive, there are increasing efforts to expand the use of the term addiction to non-substance-use related conditions (see Potenza 2006; Albrecht et al. 2007).

Epidemiological evidence has long shown that individuals who begin experimenting with drugs of abuse during early adolescence are more likely to develop substance use disorders. Despite that relationship, research has yet to confirm a causal link (see Schramm-Sapyta et al. 2009). Although the adolescent brain may be vulnerable to certain drugs, the level of maturity, for example, may not permit it to be vulnerable to certain aspects of drugs. As an example, cocaine-sensitive neuronal circuits continue to mature during adolescence, which may account for the well-established finding in indicating a decreased behavioral response to cocaine in adolescents as compared to adults (Cao et al. 2007).

References

Albrecht, U., Kirschner, N. E., & Grüsser, S. M. (2007). Diagnostic instruments for behavioral addiction: An overview. *GMS Psycho-Social Medicine, 4*, 1–11.

Cao, J., Lotfipour, S., Loughlin, S. E., & Leslie, F. M. (2007). Adolescent maturation of cocaine-sensitive neural mechanisms. *Neuropsychopharmacology, 32*, 2279–2289.

Chóliz, M. (2010). Mobile phone addiction: A point of issue. *Addiction, 105*, 373–374.
Potenza, M. N. (2006). Should addictive disorders include non-substance-related conditions? *Addiction, 101*, 142–151.
Schramm-Sapyta, N. L., Walker, Q. D., Caster, J. M., Levin, E. D., & Kuhn, C. M. (2009). Are adolescents more vulnerable to drug addiction than adults? Evidence from animal models. *Psychopharmacology, 206*, 1–21.

Adjudicative Competence

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Overview

Juvenile adjudicative competence is a complex topic that involves neurobiology, ethics, and legal considerations. To understand adjudicative competence's layers, one must first understand its legal definitions, constitutional bases, and components. Such understanding requires familiarity with the evolution and implementation of the concept of adjudicative competence in the juvenile justice system. Additionally, recent psychological and neurobiological research has underscored the potential impact of mental illness and developmental immaturity on juveniles' adjudicative competence. Recognizing the biology of the adolescent mind helps inform what has proven to be a long-standing, ethically controversial subject.

Introduction

Adjudicative competence refers to a defendant's competence to proceed with and participate in the adjudicative process, either in juvenile court or adult criminal court. At least three fundamental competencies are integrated into adjudicative competence: competence to waive counsel, competence to enter a guilty plea (and thereby relinquish a variety of trial-related rights), and competence to stand trial. In addition to establishing these competencies, a defendant must also demonstrate "pre-adjudicative competence." Pre-adjudicative competence includes competence to confess or to waive one's *Miranda* rights (i.e., one's right to remain silent, to know that anything said may be used against one in court, and to consult with an attorney, among other things).

Constitutional Basis

Competence to stand trial is an established principle of jurisprudence that extends back to at least the seventeenth century. Adjudicating incompetent defendants violates several Amendments of the U.S. Constitution (in addition to English Common Law), including a defendant's 6th Amendment trial-related rights (e.g., the right to effective assistance of counsel, the right to confront one's accusers, and the right to present evidence) and the Due Process clause of the 14th Amendment ("Nor shall any State deprive any person of life, liberty, or property, without due process of law"). Ensuring that defendants are competent to proceed in the adjudicative process safeguards the accuracy of any criminal adjudication, helps guarantee a fair trial, and helps to make certain the defendant, if found guilty, knows why he/she is being punished. In short, it preserves the dignity and integrity of the legal process.

Select Case Law Regarding Adjudicative Competence

In the 1960 case of *Dusky v. U.S.*, the U.S. Supreme Court established the substantive standard for competence to stand trial, one aspect of adjudicative competence. The *Dusky* standard for competence to stand trial is "whether the accused has sufficient *present* ability to consult with his lawyer with a reasonable degree of rational understanding and whether he has a rational as well as factual understanding of the proceedings against him" (*Dusky v. U.S.* 1960). This standard is employed in some form or other in every state and in federal court. The ruling in *Dusky v. U.S.* requires that a defendant currently possess two capabilities: (1) the ability to understand the charges and proceedings against him and (2) the ability to work with his attorney in preparation of his defense. *Dusky* does not require that a mental disorder be the cause of incompetence.

A judge, defense attorney, or prosecutor can raise the issue of adjudicative competence. However, competence is presumed unless the defendant proves

otherwise by a preponderance of the evidence (i.e., "more likely than not"). In order for a defendant to be found incompetent to stand trial (IST), most states require that either a developmental disability (e.g., mental retardation) or a mental disease, defect, or disorder be the cause of the deficits that render the defendant incompetent. Mere ignorance or simple unwillingness to participate in the adjudicative process does not render a defendant IST. If a defendant is educable, he will likely be considered competent. Until recently, courts and legislatures had essentially remained silent on the topic of whether developmental immaturity may be viewed as a potential cause of incompetence in either juvenile or adult criminal court (see later for more recent development in this domain). For example, the California Standard for Adjudicative Competence (California Penal Code, 2011, § 1170.17) dictates, "A defendant is mentally incompetent for purposes of this essay if, *as a result of mental disorder or developmental disability*, the defendant is unable to understand the nature of the criminal proceedings or to assist counsel in the conduct of a defense in a rational manner." The federal standard, modified by the Insanity Defense Reform Act of 1984, defines incompetence to stand trial as "a *present mental disease or defect* [that] renders the defendant unable to understand the nature and consequences of the proceedings against him or to assist in his defense."

Since *Dusky*, the U.S. Supreme Court has ruled that a defendant's right to be competent is "so fundamental to an adversary system of justice" that conviction of an incompetent defendant or failure to adhere to procedures designed to assess a defendant's competence (when doubt has been raised regarding it) violates the Due Process Clause of the 14th Amendment (*Drope v. Missouri* 1975). Additional cases have also discussed complex aspects of competence to stand trial. In *Jackson v. Indiana* (1972), the Court addressed what should happen to defendants who will never be competent to stand trial. In *Jackson*, the U.S. Supreme Court opined, "A defendant cannot be held more than the reasonable period of time necessary to determine whether there is a substantial probability that he will regain competence in the foreseeable future." The Court also noted that, "Due process requires that the nature and duration of confinement bear some reasonable relation to the purpose for which the individual is committed." Therefore, operationally once it is apparent that restoration of a defendant's competence is unlikely, he/she must be released or civilly committed.

Components of Competence

In 1973, the McGarry Criteria operationalized the "competence to stand trial" concept. Four main areas comprise the McGarry Criteria for competence: (1) understanding of the charges and potential consequences, (2) understanding of the trial process, (3) capacity to participate with an attorney in defense, and (4) potential for courtroom participation. "Understanding of the charges and their potential consequences" includes the abilities to appreciate the charges and their relative seriousness, to understand possible dispositional consequences of guilty, not guilty, and not guilty by reason of insanity (NGRI) verdicts or pleas, to appreciate the range and nature of possible penalties, and to realistically appraise the likely outcomes of the trial. "Understanding the trial process" requires the ability to understand the roles of participants in the trial process (e.g., judge, defense attorney, prosecutor, witnesses, and jury), to understand the trial process and potential consequences of pleading and plea bargaining, and to grasp the general sequence of pretrial/trial events (Laboratory of Community Psychiatry, Harvard Medical School 1973).

According to the McGarry Criteria, a defendant is capable of "participating with an attorney in one's defense" if he can: display the abilities to adequately trust or work collaboratively with an attorney, disclose a reasonable, coherent description of the facts pertaining to the charge to the attorney, reason about available options by weighing their consequences, and realistically challenge prosecution witnesses and monitor trial events. "Potential for courtroom participation" is measured by the defendant's ability to testify coherently and relevantly, if testimony is needed, control one's behavior during trial proceedings, manage the stress of trial, and display self-serving motivation (Laboratory of Community Psychiatry and Harvard Medical School 1973).

Assessment of Competence

Competence Assessment Instruments

Although the cornerstone of assessing competence is a thorough forensic psychiatric/psychological

examination by a skilled examiner, Competence Assessment Instruments (CAIs) can serve as adjunctive tools that can help guide and assist the examiner.

The Georgia Court Competency Test (GCCT), which was initially developed in 1978 and revised in 1988 (Georgia Court Competency Test – Mississippi State Hospital Version (GCCT-MSH)), is a standardized, 21-item instrument (Nicholson et al. 1988). Its questions address six domains: (1) physical layout of the court, (2) functions of court participants in a trial, (3) the defendant's charges, (4) helping one's attorney, (5) the alleged crime, and (6) potential consequences. The administration of the exam takes 10–15 min, and it is scored from 0 to 100, with a score <70 indicating that further examination of competence-related abilities is likely warranted. The GCCT-MSH has shown good inter-rater reliability; however, it has been criticized for being too focused on the defendant's knowledge of the trial process and not focused enough on the defendant's ability to assist in his/her defense. The GCCT-Juvenile Revision (GCCT-JR) was an additional variation developed in 1997.

In 1997, Richard Bonnie and his colleagues (Hoge et al. 1997) developed the MacArthur Competence Assessment Tool – Criminal Adjudication (MacCAT-CA) (see Bonnie and Grisso 2000). This standardized, 22-question instrument requires approximately 30 min to administer. Competence is scored along three axes: understanding, reasoning, and appreciation. For each measured domain, defendants can score within three levels of impairment: none or minimal (<1.0 standard deviations (SD) below the mean of the "presumed competent" sample), mild (1.0–1.5 SD below the mean), or clinically significant (>1.5 SD below mean). While some examiners find working with its hypothetical case difficult, the exam has good internal reliability.

For defendants with mental retardation, the Competence Assessment for Standing Trial for Defendants with Mental Retardation (CAST-MR) commonly is used. It includes 40 multiple-choice items and ten items related to the defendant's particular case. Defendants evaluated by this instrument must have a 4th-grade reading level, but the questions, which require narrative answers, can be read to the defendant. The CAST-MR was initially tested on subjects with mental retardation in the community, not criminal defendants; therefore, the subjects were less likely to be familiar with the court process. This may have negatively impacted the test's validity for use in mentally retarded pretrial detainees.

Structured Interview

In 2005, Grisso et al. developed the Juvenile Adjudicative Competence Interview (JACI). This structured interview was designed to guide clinicians in assessing youths' reasoning, understanding, and appreciation of the adjudicative process. The JACI is specifically designed to allow examiners to obtain information about errors or distortions that arise because of adolescents' developmental characteristics. Through its provisions for retesting of defendants to evaluate retention of material, examiners may determine whether or not defendants are educable. While the JACI is slowly becoming the "standard of care and practice," research and experience with its use is still somewhat limited.

Limitations

Available competence assessment instruments have some limitations, some of which are particularly evident when attempting to utilize them with juveniles. With the exception of the JACI, the instruments were all developed on adults. Many of them are weighed more toward "understanding" than the other assessed domains. If global scores are used, specific deficits that may prevent defendants from being competent (e.g., delusions) potentially can be masked by proficiency in other areas. Additionally, only cognitive (rather than both cognitive and psychosocial) factors are typically assessed. The difference between these factors and the implications of assessing only cognitive factors will be discussed later.

Adjudicative Competence and the Juvenile Justice System

The juvenile justice system – *juvenile* referring to a person who has not yet reached the age at which one is treated as an adult by the criminal justice system – has its origins in 1899 with the Illinois legislature, which founded the first juvenile court in Chicago. This court invoked as the operating principle a *parens patriae* doctrine ("parent of the state") rather than a *police power* doctrine. The court focused on helping/rehabilitating the delinquent rather than punishing the crime and protecting the public. Due process protections, such as assuring adjudicative

competence, generally were not considered because the court fashioned itself as strictly rehabilitative and because the proceedings were considered civil, not criminal, in nature (Scott 2000).

Until the 1960s, juvenile courts operated unfettered by the constitutional mandates that applied to adult criminal court proceedings. Judges had a great deal of discretion in almost every aspect of delinquency proceedings, including the ultimate disposition of youths adjudicated delinquent. Not surprisingly, there were some abuses of power.

Relevant Case Law

In the 1960s, the lack of due process in juvenile court proceedings was challenged in a number of cases. *Kent v. United States* (1966) was the first U.S. Supreme Court case involving juvenile court proceedings. Its ruling established that prior to waiver/transfer to adult court, juveniles are entitled to a hearing, access by counsel to the records involving the waiver, and a written statement by the judge outlining the reasons for the waiver.

To date, *In re Gault* (1967) has proven to be the most significant U.S. Supreme Court case involving juvenile court proceedings. The ruling established that in hearings that could result in commitment to an institution (considered a serious deprivation of liberty), juveniles have the right to notice of charges, counsel, confrontation and cross-examination of witnesses, and privilege against self-incrimination (i.e., Fifth Amendment rights). Presiding Justice Abe Fortas stated, "Neither the 14th Amendment nor the Bill of Rights is for adults only" and referred to the Gault court as a "kangaroo court." Of note, no right to appeal was granted.

Additional cases addressed juvenile justice matters throughout the 1970s. The U.S. Supreme Court ruled during *In re Winship* (1970) that the proper standard of proof in delinquency adjudications was "beyond a reasonable doubt" not "preponderance of the evidence." The U.S. Supreme Court's opinion in *McKeiver v. Pennsylvania* (1971) held that the due process clause of the 14th Amendment does not require jury trials in juvenile court.

Ultimately, through the "criminalization of the juvenile court system," the U.S. Supreme Court has determined that due process protections apply to juvenile court proceedings. As a result of the *Gault* hearing, the accountability of youths has been acknowledged, but the special character of the juvenile justice system has been maintained. Many viewed such changes as fairly sweeping; nevertheless, adjudicative competence still was not viewed as an important issue because the jeopardy adolescents faced in juvenile court was not perceived as particularly great and many understood *parens patriae* as the operative doctrine. Although infrequently explicitly stated, the presumption in adult criminal court is that juveniles tried there are subject to the "adult competence" standard, which is typically codified. In juvenile court, the situation is less clear. According to Johnson's 2006 review, approximately 35 states and the District of Columbia explicitly recognize a juvenile's right to adjudicative competence (in juvenile court) through case law or statutory provisions (only Oklahoma explicitly does not recognize this right). In some cases, the adult adjudicative competence standard is employed, though rarely has this been elucidated clearly by courts or state legislatures.

With regard to IST, some states require that mental illness or mental disease (rather than developmental immaturity) be the cause of such incompetence, while other state provisions for juvenile adjudicative competence do not explicitly require predicate mental disorders (Johnson 2006). At present, few state statutes officially recognize developmental immaturity as a cause for incompetence. Florida and Arkansas recognize that, in certain cases, chronological age and developmental immaturity may prevent a juvenile offender from being competent to stand trial. In fact, Arkansas *presumes* that youth under 13 years of age are incompetent.

Remediation of Competence

Another area that demands more research is the restoration of juvenile adjudicative competence, or what Viljoen and Grisso (2007) refer to as "remediation of competence" in minors deemed IST. In general, when compared with adults, youth have cognitive and developmental limitations (which can be compounded by psychopathology or mental illness) which may adversely impact their understanding of legal proceedings, their ability to assist counsel, and their appreciation of the "situation at hand." Because of the dearth of empirically based remediation efforts, Viljoen and Grisso suggest drawing from research in the fields of education and developmental and clinical psychology.

They describe four areas to target in the remediation of competence: (1) factual understanding, (2) rational understanding, (3) communication with counsel, and (4) reasoning. However, they also acknowledge the inherent challenges in such remediation attempts.

Purposes of the Criminal Justice System

Once a defendant is deemed competent to stand trial, he/she enters the criminal justice system. The purposes of the criminal justice system are best understood as fourfold. *Deterrence* aims to dissuade the future commission of crimes by the individual and/or others. *Incapacitation*, manifested as incarceration or execution, attempts to protect the public. *Rehabilitation* is attempted through the participation in treatment and/or correctional programs to correct underlying problems and prevent recidivism. Finally, *retribution* is reflected in the idea that individuals are incarcerated or executed because they "deserve it."

Historical Perspectives

During the late 1980s and 1990s, youth violence increased while juvenile homicide precipitously increased. With public pressure on state and federal policymakers to use juvenile court (and adult criminal court) as a mechanism for social control (i.e., police power and protecting the public, rather than for rehabilitation of juvenile offenders), this time period was an era of punitive reforms. This approach was manifest as a "get tough on juvenile crime" mentality. Commonly heard aphorisms included "juvenile offenders are criminals who happen to be young, not children who happen to be criminal" and "old enough to do the crime, old enough to do the time." While clever in their phrasing, these notions have been criticized for discounting the importance of youthful immaturity in the assessment of adjudicative competence and criminal responsibility.

Waivers to Adult Court

With the historical shift to a more punitive model, numerous pieces of legislation (e.g., Prop 21 in California in 2000) were passed with the intent to decrease juvenile crime. The most notable effect, however, was the increased ease with which juveniles were transferred ("waived") to adult criminal court from juvenile court. The number of juveniles waived to adult court in 1994 was 73% greater than the number waived in 1986 (Stahl 1999). Additionally, the age at which juveniles could be tried in adult criminal court was lowered. In 2009, juveniles under 12 years of age could be prosecuted in adult court in more than half of states, while 7-year-olds could be tried as adults in 22 states and in the District of Columbia (Deitch et al. 2009). Since 2006, the federally enacted Adam Walsh Child Protection and Safety Act requires states to place juveniles as young as 14-years-old on a sex offender registry if they are found guilty of certain sexual offenses. "This law – and many similar state statutes – applies not only to predatory offenses, but also to those involving consensual sex, public exposure, or inappropriate touching" (Annie E. Casey Foundation 2008).

In addition to specific laws demanding that juvenile offenders register as adult offenders in certain cases, there are several categories of waiver from juvenile to adult court. A *legislative* waiver (also referred to as a statutory exclusion) occurs when legislature determines that charges for certain crimes must be filed in adult criminal court if the juvenile defendant is of a minimum age (usually 14–16 years of age). A *prosecutorial* waiver (also called a direct file) can occur when the prosecutor has fairly broad discretion in deciding whether to file charges in juvenile or adult court. The extent to which prosecutorial waivers occur depends largely on prosecutors' philosophies and the political climate. Due to wide variation, this phenomenon has been referred to as "Justice by Geography."

In a *judicial* or *discretionary* waiver, the judge determines the waiver. Generally, the burden of proof is on the prosecutor to prove that the juvenile is "not fit." A *presumptive* waiver is a type of discretionary waiver in which a juvenile is presumed not to be a "fit and proper subject" to be dealt with in juvenile court if he/she is charged with a certain crime and is of a certain age. However, the juvenile is entitled to a pretrial hearing in juvenile court (a "fitness hearing") to rebut this presumption.

A *reverse* waiver can occur if charges are directly filed in an adult criminal court and the minor is subsequently convicted of a different charge that is not eligible for "direct-filing." After a post-conviction "fitness hearing" in either juvenile or criminal court, the judge can remand the case to juvenile court for disposition. The major determinant in these cases is whether a defendant is amenable to treatment, though

some states, such as California, have multiple determining factors (California Welfare and Institutions Code, 2011, § 707).

The more punitive historical trend in the juvenile justice system has shown paradoxical results. In a 2007 review of the impact of transfer laws on subsequent violence in the juvenile offender population, the U.S. Centers for Disease Control and Prevention (CDC 2007) reported that "transfer to the adult criminal justice system is associated with subsequent violence among juvenile participants when compared with violence among juveniles retained in the juvenile justice system." Also, the CDC noted ". . .little evidence supports the idea that transfer laws deter juveniles in the general population from violent crime." Fagan et al. (1989) wrote that juvenile offenders in adult criminal institutions were found more likely to be assaulted physically and sexually and more likely to commit suicide.

Other Punitive Reforms

There have been other consequences of juvenile crime initiatives as well. Some juvenile offenses have counted toward "strikes," while records of juvenile court proceedings may or may not be sealed or kept confidential. There has been an increased use of "blended sentencing," that is, the juvenile justice system has jurisdiction over an offender until age 18, at which point the offender is turned over to the adult correctional system. Additionally, juvenile offenders have seen longer periods of custody, for example, California Youth Authority (CYA) may keep "juveniles" in custody until age 25. Furthermore, courts have increasingly used "once waived, always waived" statutes, which establish that once a juvenile has been waived to and convicted in an adult criminal court, all subsequent charges must be filed in adult criminal court.

Factors Potentially Influencing Juvenile Adjudicative Competence

Mental Disorders

The prevalence of mental disorders in youth in the juvenile justice system is high. These are the same youth in whom adjudicative competence is likely to be at issue. Approximately 66% of juvenile pretrial detainees or delinquents meet the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV), criteria for a mental disorder (including Substance Disorders and Conduct Disorder). Excluding conduct disorder alone as a mental disorder only decreases the rates by approximately 5% (Grisso 2004).

In adult offenders, mental disorders that typically call adjudicative competence into question are psychotic disorders and mental retardation. Other disorders such as major depressive disorder or attention-deficit/hyperactivity disorder (ADHD) are not usually considered serious enough to impair significantly adjudicative competence. In contrast, "subthreshold" disorders may have significantly more repercussions on adjudicative competence in juveniles than in adults, due to the relatively immature cognitive processes of those individuals under 15 years of age. Additionally and obviously, juveniles generally show more psychosocial immaturity than their adult counterparts; mental retardation or borderline intellectual functioning further increases juveniles' risk for being incompetent to participate in the adjudicative process. This is important because the average IQ of youth in the juvenile justice system is approximately one to two standard deviations below normal. For example, Otto's meta-analysis (1992) showed that the rates of mental retardation (i.e., an IQ $\leq$ 70) in the juvenile justice population are approximately three to eight times higher than the rates in the general population, and the prevalence of learning disorders is 17–53%. Subsequent studies generally have replicated his findings.

Regardless, in juveniles, mental illness has generally been considered a less-important etiology of adjudicative incompetence than developmental immaturity. Many scholars have assumed this is due to the rarity of psychosis in childhood and early adolescence compared to the almost ubiquitous developmental immaturity in this age group.

Developmental (Im)maturity

Cognitive and psychosocial domains of developmental maturity both potentially influence juvenile adjudicative competence. The cognitive domain of developmental maturity encompasses a defendant's ability to understand, reason about, and appreciate the adjudicative process. More simply, this addresses the question: Does the defendant know what he should do? Some or all of these "cognitive" abilities may be either impaired or newly acquired in juveniles. The psychosocial domain integrates developmental factors or

traits that influence the dependability and uniformity with which juveniles deploy their cognitive abilities. This domain addresses the question: What does the defendant actually do and why? Many of these factors/traits are transient and change as the juvenile matures.

Cognitive Domain

In the past, research typically focused on cognitive differences between juveniles and adults that may impair adjudicative competence. Initially, legal standards for CST motivated this line of inquiry. Subsequently, it was discovered that age and intelligence are the most consistent predictors of adjudicative competence or the lack thereof. Juveniles younger than 14–15 years of age are generally more likely to show deficits in cognitive domains. They often view their rights as discretionary and externally controlled rather than automatic and inalienable. They also display poorer understanding and valuation of the trial process and participants than adults. However, studies querying adults and juveniles 15 years of age or older about hypothetical, nonlegal circumstances found little difference between these two groups. Unfortunately, many of these studies did not examine delinquent youth, who are more likely to have lower intelligence levels and higher rates of mental illness than the general juvenile population. Furthermore, many researchers have questioned whether these laboratory studies are relevant to stressful, emotionally charged, real-world settings where youth actually may make these decisions. Therefore, juvenile adjudicative competence must be considered in a broader developmental framework.

Psychosocial Domain

Because juveniles have historically been viewed by society as more impulsive, more vulnerable to peer pressure, and more likely to engage in risky and immediately gratifying (but ultimately damaging) behaviors than adults, they are generally precluded from certain activities (e.g., driving, serving in the military) until they reach certain ages. Recently, researchers have begun to examine more precisely particular domains of "immaturity," quantify the degree of these impairments by age, and examine how these impairments may affect adjudicative competence.

Many adolescents manifest deficits in the following domains: (1) risk appraisal, (2) time perspective, (3) peer influence, (4) abstract thinking, (5) perceived autonomy, and (6) "character" stability (Kambam and Thompson 2009; Steinberg 2009). Adolescents tend to discount and undervalue risk (risk appraisal), care more about short-term consequences than long-term consequences, and are less "future-oriented" than adults (time perspective). Adolescents are much more likely than adults to be subject and succumb to peer influence (peer influence). The perceptions and decisions of youth may be based on overly concrete ideas; they may view rights as discretionary or conditional as opposed to automatic and inalienable (abstract thinking). A child's or adolescent's lack of perceived autonomy can manifest itself as passivity, inattention, or compliance with authority or perceived autonomy (Galvan et al. 2007; Gardner and Steinberg 2005; Scott et al. 1995; Steinberg and Cauffman 1996). Furthermore, coherent integration of various elements of identity does not occur until early adulthood under the best of circumstances ("character stability"). Therefore, while adolescent antisocial behavior (much of which may be predicated on the above "deficits") is extremely common, only a small percentage of adolescents continue this behavior into adulthood (Moffitt 1993).

Case examples illustrate these psychosocial issues in adolescents. For example, because pleading "not guilty" would require him to remain in custody, a minor may agree to plead guilty to a charge despite limited evidence because he wants to be released to his parents quickly. Here, the minor does not appropriately weigh the longer-term consequences of pleading guilty. In another scenario, a minor who has stolen property and faces strong evidence against him may refuse to agree to a plea bargain in an attempt to appear "cool" to his peer group.

Neurobiological Research

Researchers have identified developmental, structural, and functional neurobiological changes and have correlated them with concurrent behavioral and cognitive data in order to draw conclusions about the causal mechanisms for (at least a portion of) these deficits. Reductions in gray matter density (i.e., pruning) in the frontal and parietal lobes appear to begin around puberty and proceed into adulthood (Sowell et al. 2001; Gogtay et al. 2004). White matter density and volume appear to increase with age. In fact, Bartzokis et al. (2001)

found that myelin volumes in the frontal and temporal lobes did not peak until age 45–50. Sowell et al. (2003) found that while limbic cortices complete myelination relatively early, frontal and parietal cortices show a less linear pattern of maturing and continue to myelinate into adulthood.

Psychological Research

Scholars have conducted competence studies to evaluate the extent to which adolescents may differ from adults in their abilities to participate as defendants in trials. Thomas Grisso coordinated the MacArthur Juvenile Adjudicative Competence Study (1998–2002), which found that youth under age 16 are significantly more likely than adults to have impaired adjudicative competence in the areas of understanding, reasoning, and appreciation of their legal issues; youth under age 14 and those of below-average intelligence were at greatest risk of impairment. Ficke et al. (2006) found that incarcerated juveniles generally have significantly lower IQ and achievement test scores than youth in the general population. In particular, 9–12-year-olds and those with IQs less than 60 demonstrated significant deficits in understanding, reasoning, or appreciation on the MacCAT-CA.

Limited Research

Multiple factors may explain the limited, though expanding, body of knowledge on assessment of juveniles' competence to stand trial. Juvenile competence is not explicitly recognized by statute in most states. Juvenile proceedings have historically been considered civil (rather than criminal), non-adversarial, and almost therapeutic. Therefore, adjudicative competence generally has not been perceived as a necessity for juveniles (at least those remaining in juvenile court). From a more pragmatic standpoint, few juvenile cases are appealed, thus depriving appeals courts of the opportunity to decide the juvenile competence issue.

Commentary

An accumulating body of evidence suggests that juveniles, particularly younger adolescents and children, frequently demonstrate deficits that impair their ability to participate effectively in the adjudicative process. These deficits are most frequently a result of developmental immaturity, rather than the result of a mental illness. Therefore, the traditional paradigm of restoration of adjudicative competence (i.e., commitment to a state hospital and treatment with medication) does not typically apply. Rather, juveniles must attain competence through normal maturation; however, keeping children in state custody until competence is attained likely challenges constitutional standards (see *Jackson v. Indiana* (1972)) and may have a deleterious impact on children's or adolescents' development. Dismissing potentially serious charges because of incompetence is, for many, an equally unsatisfactory solution.

The salient question remains: How does one minimize the risk that juveniles' 6th and 14th Amendment rights will be violated by having their cases adjudicated while incompetent, while still recognizing the government's and society's legitimate interest in adjudicating these cases? The answer may lie within modifying policy. Grisso et al. (2003) suggest implementing a "sliding scale" of competence for juvenile court. That is, if a juvenile defendant's potential jeopardy is limited, a basic understanding of the legal system and an ability to assist counsel to some degree should be sufficient. If the charges and potential penalties are more serious, the "bar" for competence should be set somewhat higher. Another potential improvement would be to afford juveniles a "non-waivable" right to counsel to allow "assisted competence." If a juvenile defendant develops trust in his/her attorney and understands that the attorney will zealously advocate for the defendant's best interests, the minor's ability to understand other, more subtle aspects of the adjudicative process become somewhat less crucial.

Other policy change may include ensuring that attorneys for juveniles have (at least) elementary training in the relevant principles of child and adolescent psychological development. This would not only help attorneys identify potentially incompetent clients, but would also improve competent juveniles' effectiveness of participation in the adjudicative process. Another option would involve instituting a rebuttable presumption of incompetence for all juveniles waived to adult criminal court. The prosecution would then be required to prove the defendant is competent by a preponderance of the evidence. If juveniles are subsequently found incompetent based on adult criminal court standards, they would be returned to juvenile court for adjudication and disposition. Finally, more frequent use of informal, pre-adjudicative dispositions

or plea agreements, such as placement, mandatory outpatient treatment, dependency court, etc., may also help preserve the rights of the juvenile offender. Although this does not address the problem of potential "incompetence to plead," this may reduce the number of cases that require formal adjudication.

Public policy related to the adjudication of minors in juvenile court or adult criminal court needs to evolve as evidence base on juvenile adjudicative competence increases. Such evolution will help preserve both juvenile defendants' trial-related rights and the integrity of the juvenile and adult criminal justice systems as a whole.

Cross-References

► Juvenile Risk Assessment

References

Annie E. Casey Foundation. (2008). *2008 Kids count data book: A road map for juvenile justice reform*. Baltimore: Annie E. Casey Foundation.

Bartzokis, G., Beckson, M., Lu, P., et al. (2001). Age-related changes in frontal and temporal lobe volumes in men: A magnetic resonance imaging study. *Archives of General Psychiatry, 58*(5), 561–565.

Bonnie, R., & Grisso, T. (2000). Adjudicative competence and youthful offenders. In T. Grisso & R. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp. 73–103). Chicago: University of Chicago Press.

California Penal Code §1170.17 (2011).

California Welfare and Institutions Code §707 (2011).

Centers for Disease Control and Prevention. (2007). Effects on violence of laws and policies facilitating the transfer of youth from the juvenile to the adult justice system: A report on recommendations of the task force on community preventive services. *Morbidity and Mortality Weekly Report*, 56(RR-9), available at www.cdc.gov/mmwR/pdf/rr/rr5609.pdf (accessed March 14, 10).

Deitch, M., Barstow, A., Lukens, L., & Reyna, R. (2009). *From time out to hard time: Young children in the adult criminal justice system*. Austin: The University of Texas at Austin, LBJ School of Public Affairs.

Drope v. Missouri, 420 U.S. 162 (1975).

Dusky v. U.S., 352 U.S. 402 (1960).

Fagan, J., Frost, M., & Vivona, T. S. (1989). Youth in prisons and training schools: Perceptions and consequences of the treatment – Custody dichotomy. 40 Juvenile and Family Court J.1.

Ficke, S. L., Hart, K. J., & Deardorff, P. A. (2006). The performance of incarcerated juveniles on the MacCAT-CA. *The Journal of the American Academy of Psychiatry and the Law, 34*, 360–373.

Galvan, A., Hare, T., Voss, H., Glover, G., & Casey, B. J. (2007). Risk-taking and the adolescent brain: Who is at risk? *Developmental Science, 10*, F8–F14.

Gardner, M., & Steinberg, L. (2005). Peer influence on risk-taking, risk preference, and risky decision-making in adolescence and adulthood: An experimental study. *Developmental Psychology, 41*, 625–635.

Gogtay, N., Giedd, J., Lusk, L., et al. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences of the United States of America, 101*(21), 8174–8179.

Grisso, T. (2004). *Double jeopardy: Adolescent offenders with mental disorders*. Chicago: University of Chicago Press.

Grisso, T., Steinberg, L., Woolard, J., et al. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior, 27*(4), 333–363.

Hoge, S. K., Bonnie, R. J., Poythress, N., Monahan, J., Eisenberg, M., & Feucht-Haviar, T. (1997). The MacArthur Adjudicative Competence Study: Development and validation of a research instrument. *Law and Human Behavior, 21*, 141–179.

In re Gault, 371 U.S. 1 (1967).

In re Winship, 397 U.S. 358 (1970).

Jackson v. Indiana, 406 U.S. 715 (1972).

Johnson, K. M. (2006). Juvenile competency statues: A model for state legislation. *Indiana Law Journal, 81*, 1067–1095.

Kambam, P., & Thompson, C. (2009). The development of decision-making capacities in children and adolescents: Psychological and neurological perspectives and their implications for juvenile defendants. *Behavioral Sciences & the Law, 27*(2), 173–190.

Kent v. United States, 383 U.S. 541 (1966).

Laboratory of Community Psychiatry, Harvard Medical School. (1973). *Competency to stand trial and mental illness*. Rockville: Department of Health, Education, and Welfare.

McKeiver v. Pennsylvania, 403 U.S. 528 (1971).

Moffitt, T. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674–701.

Nicholson, R., Robertson, H., Johnson, W., & Jensen, G. (1988). A companion of instruments for assessing competency to stand trial. *Law and Human Behavior, 2*, 313–321.

Otto, R., Greenstein, J., Johnson, M., & Friedman, R. (1992). Prevalence of mental disorders among youth in the juvenile justice system. In J. Cocozza (Ed.), *Responding to the mental health needs of youth in the juvenile system* (pp. 7–48). Seattle: National Coalition for the Mentally Ill in the Criminal Justice System.

Scott, E. (2000). Criminal responsibility in adolescence: Lessons from developmental psychology. In T. Grisso & R. Schwartz (Eds.), *Youth on trial: A developmental perspective on juvenile justice* (pp. 291–324). Chicago: University of Chicago Press.

Scott, E. S., Reppucci, N. D., & Woolard, J. L. (1995). Evaluation adolescent decision making in legal contexts. *Law and Human Behavior, 19*, 221–244.

Sowell, E., Mattson, S., Thompson, P., Jernigan, T., Riley, E., & Toga, A. (2001). Mapping continued brain growth and gray matter density reduction in dorsal frontal cortex: Inverse relationships during post-adolescent brain maturation. *The Journal of Neuroscience, 21*, 8819–8829.

Sowell, E., Peterson, B., Thompson, P., Welcome, S., Henkenius, A., & Toga, A. (2003). Mapping cortical change across the human life span. *Nature Neuroscience, 6*(3), 309–315.

Stahl, A. (1999). *Delinquency cases waived to criminal court, 1987–1996. Fact sheet.* Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

Steinberg, L. (2009). Adolescent development and juvenile justice. *Annual Review of Clinical Psychology, 5*, 47–73.

Steinberg, L., & Cauffman, E. (1996). Maturity of judgment in adolescence: Psychosocial factors in adolescent decision making. *Law and Human Behavior, 20*, 249–272.

Viljoen, J., & Grisso, T. (2007). Prospects for remediating juveniles' adjudicative incompetence. *Psychology, Public Policy, and Law, 13*(2), 87–114.

Adjustment

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In developmental science, adjustment is an often used term that refers to reactions to identifiable stressors, with adjustment involving adapting the self to the situation, changing the situation, or both. Studies examining adjustment range widely, such as adjustment to school, parental conflict, chronic illnesses, adoption, victimization, or even to adolescence itself. Adjustment can also refer to the relative presence or absence of diagnosed psychological disorders, symptoms, or negative mood. The broad scope of what constitutes adjustment is reflected in the wide range of ways that it is measured, ranging from a focus on depressive systems to how one generally copes with a situation. The most specific way that adjustment is used arguably is in the contexts of adjustment disorders, but even those have been criticized as being too vague, poorly defined, and constituting indefinite symptomatology (see Strain and Diefenbacher 2008).

As a construct, adjustment has not been the subject of much commentary in and of itself; it is simply assumed to cover a broad range of factors. The notable exception to lack of effort to conceptualize adjustment appeared in 1940 by Sarbin (1940), who viewed adjustment as focusing on conformity to cultural norms, mores, and traditions, or as focusing on a mastery of one's environment in ways that are adequate and satisfying to individuals, or as a compromise of one's beliefs or needs in ways that remain satisfying, such as changing one's standards. Although considerably dated, more current uses of the term adjustment do seem to fall in those three broad categories.

Two reasons may explain the lack of effort to better conceptualize the nature of adjustment. One reason is that, rather than focus on adjustment itself, research on adjustment has focused on what stress or factor adjustment specifically referred to. For example, one of the most fruitful areas of research involves adjustment to chronic illnesses and diseases. That area has led to multiple views of what constitutes adjustment. A leading example conceptualized adjustment to diseases as focusing on mastery of disease-related tasks, preserving functional status, having low negative affect and no psychological disorder, and addressing issues of quality of life in multiple domains (such as physical, functional, social, sexual, and emotional domains) (see Stanton et al. 2001). Other conceptualizations also have emerged to describe adjustment to illnesses, some of which add a focus on retaining a purpose in life, regulating distress, restoring relationships with others, and maintaining a positive mood and self-worth (for a review, see Stanton et al. 2007). Importantly and although this area of research has centered more on adults than on youth, it reveals how a multitude of factors influence adjustment, such as socioeconomic status, culture and ethnicity, gender, as well as personality attributes and coping mechanisms. This area of research also shows, however, that the study of adjustment has become much more specialized and focused.

Another reason for a lack of focus on a more general concept of adjustment is a continued focus on its extremes. Notably, there is considerable focus on maladjustment, in the sense of focusing on pathology and problem behavior. This broad focus is of significance even though research on the formal diagnosis of adjustment disorder in adolescence is a common diagnosis for nonpsychotic youth and research relating to it remains quite scarce (see Pelkonen et al. 2007). Equally importantly, research increasingly focuses on positive adjustment, as highlighted by the positive youth development movement. Both of these extremes of adjustment provide important understandings of the nature

of adolescence as well as factors that do contribute to effective adjustment, although more of a focus has been placed on the more negative side of adjustment as opposed to the optimal side. That research, much of which has been conducted in the United States, has shown that most adolescents appear "adjusted" in that they take pleasure in many aspects of their lives and are satisfied with most of their relationships most of the time (Offer and Schonert-Reichl 1992). Adolescents also appear adjusted in that large national samples report that the vast majority of youth in the United States do not show signs of psychopathology, with one leading study showing, for example, that 78% of youth in its national sample were deemed adjusted, with 44% being well or adequately adjusted, and the other 34% marginally adjusted (McDermott and Weiss 1995). These may appear to be impressive and positive findings, but the converse is also true: approximately 20% of youth suffer from psychopathology and are deemed in need of mental health care. This line of research, although focusing on the negative, highlights well the benefits that can come from research focusing on adjustment.

Cross-References

► Adjustment Disorder

References

McDermott, P. A., & Weiss, R. V. (1995). A normative typology of healthy, subclinical, and clinical behavior styles among American children and adolescents. *Psychological Assessment, 7*, 162–170.

Offer, D., & Schonert-Reichl, K. A. (1992). Debunking the myths of adolescence: Findings from recent research. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 1003–1014.

Pelkonen, M., Marttunen, M., Henriksson, M., & Lönnqvist, J. (2007). Adolescent adjustment disorder: Precipitant stressors and distress symptoms of 89 outpatients. *European Psychiatry, 22*(5), 288–295.

Sarbin, T. R. (1940). Adjustment in psychology. *Journal of Personality, 8*, 240–249.

Stanton, A. L., Collins, C. A., & Sworowski, L. A. (2001). Adjustment to chronic illness: Theory and research. In A. Baum, T. A. Revenson, & J. E. Singer (Eds.), *Handbook of health psychology* (pp. 387–403). Mahwah: Erlbaum.

Stanton, A. L., Revenson, T. A., & Tennen, H. (2007). Health psychology: Psychological adjustment to chronic disease. *Annual Review of Psychology, 58*, 565–592.

Strain, J. J., & Diefenbacher, A. (2008). The adjustment disorders: The conundrums of the diagnoses. *Comprehensive Psychiatry, 49*, 121–130.

Adjustment Disorder

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Adjustment Disorder is an imprecise term for a variety of symptoms that develop in response to an identifiable stressor, such as a school transition (American Psychiatric Association 2000). The focus tends to be on an individual's reaction to an overwhelming stress; indeed, the disorder used to be labeled "adjustment reaction." When the stressor is not a traumatic event, the diagnosis of adjustment disorder is used rather than that of posttraumatic stress disorder (PTSD). Psychiatric classificatory systems require that symptoms occur within 1–3 months of an identified stressor. Symptoms can include anxiety, depressed mood, disturbance of conduct, physical complaints, withdrawal, or academic inhibition. The disorder's duration is typically brief, less than 6 months. If it lasts longer than that, the diagnosis is reevaluated and the individual is perhaps designated into a different diagnostic category or the diagnosis is specified as chronic, acute, or persistent adjustment disorder.

Adjustment disorders are deemed common, and may be the most common single psychiatric diagnosis for adolescents and children. They occur in 2–8% in community samples of children and adolescents and 10–30% of those in mental health outpatient settings (see Rodgers and Tennison 2009). The disorders also have significant implications. Adolescents with adjustment disorder are deemed at risk to abusing toxic substances and for suicidal acts (Portzky et al. 2005). Despite the frequency and apparent significance of the diagnosis, reviews reveal a pervasive lack research on the nature and management of adjustment disorder (Laugharne et al. 2009). Debate also continues regarding the conceptual basis of the disorder and its usefulness as a diagnostic entity (Baumeister and Kufner 2009).

Cross-References

► Adjustment

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: American Psychiatric Association. text revision.

Baumeister, H., & Kufner, K. (2009). It is time to adjust the adjustment disorder category. *Current Opinion in Psychiatry, 22*, 409–412.
Laugharne, J., van der Watt, G., & Janca, A. (2009). It is too early for adjusting the adjustment disorder category. *Current Opinion in Psychiatry, 22*, 50–54.
Portzky, G., Audenaert, K., & van Heeringen, K. (2005). Adjustment disorder and the course of suicidal process in adolescents. *Journal of Affective Disorders, 87*, 265–270.
Rodgers, L. S., & Tennison, L. R. (2009). A preliminary assessment of adjustment disorder among first-year college students. *Archives of Psychiatric Nursing, 23*, 220–230.

Adolescent Crisis

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Adolescent crisis can be defined in many ways. Typically, it refers to the upheaval that happens during this period, such as the changes that can take place in multiple dimensions, including emotional components, psychological factors, and physical development. The adolescent period has been conceptualized as rife with often dramatic shifts leading to viewing psychological events during this period as crises in and of themselves due to their being important to address before reaching maturity. This view was one adopted by Erik Erikson who conceived of a psychological theory proposing that exploration was at the heart of the identity crisis that needed to be resolved before youth could address other psychosocial tasks (Erikson 1968). Importantly, however, his view of crisis was not the one typically associated with the term "crisis"; rather it was a much tamer one involving the need to come to terms with key developmental issues, and those "crises" continued throughout the life span as individuals sought to address different issues that come with different stages of life.

The developmental understanding of the adolescent crisis is one in which adolescents are engaged in the exploration of becoming adults, a process that may as easily involve an ongoing, energetic, impulsive approach at some points and the opposite, bored, withdrawn, seclusive response at other times. Several have shown how it is the challenge and responsibility that adolescents face in needing to establish their adult personas and role that results in the series of crises taking place during this period (see Boyes and Chandler 1992). Certainly, the task of undergoing biological changes, concerning both physiological and psychological dimensions of one's self, results in the adolescent sense of self being confronted with seeming insurmountable difficulties. Arguably, emotional changes happening in this period prove the most salient in affecting alterations in an individual's personality as they confront the problems inherent in growth and development. Some have viewed the adolescent crisis as helping to account for why some youth may tend toward poor social judgment, including rebellious and hostile attitudes toward parents and other authority figures, whom they tend to blame for their own problems (see Kidwell et al. 1995). That pattern may then persist into, or at least highly influence, later developmental periods.

References

Boyes, M. C., & Chandler, M. (1992). Cognitive development, epistemic doubt, and identity formation in adolescence. *Journal of Youth and Adolescence, 21*, 277–304
Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton
Kidwell, J. S., Dunham, R. M., Bacho, R. A., Pastorino, E., & Portes, P. R. (1995). Adolescent identity exploration: A test of Erikson's theory of transitional crisis. *Adolescence, 30*, 785–793

Adolescent Turmoil

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Adolescent turmoil is an imprecise label applied to adolescents during the 1970s, and which proposed that adolescence universally involved a time of emotional turmoil of ► storm and stress (Larson and Ham 1993). Behavioral patterns or characteristics typically associated with this view of turmoil include rebelliousness, concern about identity and role, unstable moods, and unpredictable and highly mercurial behavior. This belief has since been disconfirmed, as Offer asserts that only a minority of adolescents experience adolescent turmoil (perhaps approximately 20%) and adolescents typically sustain enjoyable relationships with their families and peers, and are comfortable with their

social and cultural values (see Offer and Schonert-Reichl 1992). However, even though most child counselors and psychologists remain aware that only a small percentage of adolescents are afflicted by this state, it appears that parents, teachers, and even mental health professionals tend to adhere to the belief that adolescence is still the "terrible teens" (Offer and Schonert-Reichl 1992). The lingering dimension of this inaccurate belief, coupled with the research findings that teenagers in the United States and other countries experience a higher rate of negative affect and increased rates of some behavioral and psychological problems (Larson and Ham 1993), prompted researchers to engage in efforts to uncover the sources of this negative affect and these adjustment problems. In the past few decades, the recognition that adolescents are not necessarily in turmoil has led to a renewed focus on the positive aspects of development and supportive environments (see Larson 2000).

Cross-References

► Storm and Stress

References

Larson, R. W. (2000). Toward a psychology of positive youth development. *American Psychologist, 55*, 170–183.

Larson, R., & Ham, M. (1993). Stress and "storm and stress" in early adolescence: The relationship of negative events with dysphoric affect. *Developmental Psychology, 29*, 130–140.

Offer, D., & Schonert-Reichl, K. A. (1992). Debunking the myths of adolescence: Findings from recent research. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 1003–1014.

Adoption

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Adoption refers to the end of a process through which an adult formally assumes the guardianship of a child and incurs the rights and responsibilities of a parent. Adoption is more than guardianship, with guardianship being designed for the care of the young and adoption effecting a permanent change in status that requires formal legal recognition (see, e.g., Hansen and Gupta-Kagan 2009). In the United States, that legal recognition generally involves state law. In regulating adoptions, states may permit them to be either open or closed. Closed adoptions involve the total relinquishment of the natural parents' rights, while open adoptions permit natural parents to select adoptive parents as well as, in some instances, negotiate visitation and other rights (see, e.g., Gaddie 2009). States also limit who can adopt as well who can be adopted. Thus, for example, states permit the adoption of minors and not necessarily adults, and they regulate who can adopt (e.g., some states restrict adoptions by some couples, such as same sex couples; see, e.g., Cooper 2004). Although various ways of adopting youth have been practiced throughout history, research examining adoption's relationship to adolescent development is quite recent. Indeed, researchers have tended not to focus on adolescents. This essay examines key themes emerging from research in this area of study, especially as they relate to adolescents.

Two theoretical models particularly offer insight into adoption's effect on children's development. The first model focuses on stress and coping, as it begins with the assumption that adopted youth are at a higher risk for psychological and educational difficulties (Brodzinsky 1990). This approach contends that factors such as genetics, family relationships, and social environments have an effect on children's levels of trust, self-confidence, sense of control, personal values, and personal awareness, which then impact their attitudes about adoption and that this attitude directly effects their adjustment. The model focuses on the grief that most adopted adolescents experience after realizing the meaning of their biological parents' decision to release them for adoptions. It generally shows that families who can navigate this phase with open communication about the adoption generally have more well-adjusted children. The second model is the well-known ecological model of development. That model focuses on children's unique relationships with their environment. Children's environments involve a number of systems like family, home, culture, and society, all of which interact with one another and change over time (Bronfenbrenner 1979). Each system influences the other and thus impacts child development. For example, the culture of a society influences the government institutions that create adoption policies. These policies then dictate the adoption process

and some of the family functioning post adoption. The way the family functions, which relates to several social forces as well as individuals within the family, directly impacts the adopted youth. Although focusing on different factors, these models highlight well how several factors likely impact adopted youths' development and how understanding and responding to adolescents' experiences requires considering multiple individual and social influences.

Although the models that often are used to understand the effects of adoption on youth have made important contributions, few studies actually focus on adolescents' experiences. The small body of research on adopted adolescent functioning has produced inconclusive and contradictory results. Earlier studies had reported the percentage of adopted adolescents residing in mental health settings as higher than their percentage in the general population, indicating that adopted youth are at a higher risk for disorders (Schechter 1961). More recent research, however, indicates this to no longer be the case or, if not, then a considerably more nuanced picture of adopted youth emerges. A more recent study used community-based data and found that adopted youth were only at slightly higher risk for maladjustment, with the risk measuring even less in families with two parents (Miller et al. 2000). Importantly, a study from a leading research group found adopted youth to be better adjusted than youth in single parent homes by a biological mother (Fergusson et al. 1995). These conflicting findings are mirrored by longitudinal studies from around the globe. Some studies have been unable to discern patterns in the adjustment of adopted youth, while others have found maladjustment to peak at age 11 and completely disappear by early adulthood (see, e.g., Maughan and Pickles 1990). Yet, other studies have found consistent differences. In the United States, for example, a large-scale study using a representative sampling of 90,000 US adolescents from 12 to 17 years of age examined differences in psychological and academic adjustment among adopted and nonadopted youth by using both adolescent self-report and parent-report data; the results showed group differences consistently favoring nonadopted over adopted adolescents in areas related to school performance, psychological well-being, and substance use (Miller et al. 2000). In addition, several studies that have taken advantage of Sweden's national registrar containing sociodemographic and health data of all citizens have found results that disfavor adopted youth; although countries of origin may mask important differences, the general findings have shown adopted youth to be at increased risk for psychiatric hospitalization, suicidal behavior, severe social problems, lower cognitive functioning, and poorer school performance (see Palacios and Brodzinsky 2010). Despite these differences, it is important to highlight that the magnitude of the differences is not large, and that the differences may be due to the extreme ends of functioning. Although adopted youth may reveal statistically greater psychological and academic problems than nonadopted youth, the vast majority of adopted youth tend to be within the normal range of adjustment (see Haaguard 1998).

Rather than simply comparing potential differences in the mental health and other outcomes of adopted youth with youth who remain with their biological families, other research focuses on the risk factors that can lead to adoptee's maladjustment. Some researchers identify prior treatment, including abuse and neglect, as potential causes for this maladjustment (Logan et al. 1998). Other studies indicate that having adopted siblings in the home lessens the risk for behavioral problems while parents' biological children in the home increases this risk (Howe 1997). It also has been theorized that open adoptions alleviate the psychological strain associated with the enigmatic nature of traditional adoption practices, and that it thus increases the chances of more positive outcomes (Baran and Pannor 1990). Finally, it has been proposed that transracial adoptions keep the adoptee from forming a cultural identity, thus creating a heightened risk for adjustment problems; but some research has not found such behavioral difficulties between transracial adoptees and youth raised by parents from their ethnic background (Cederblad et al. 1999). This area of research points to the important conclusion that adjustment problems cannot be generalized to the entire adoptive population. Disruptions have been associated with the age of the adoptee upon placement, length of time in care, number of moves, number of returns to the birth home, level of behavioral problems, overactivity, presence of preferential treatment, and the ability to show signs of attachment. Traumatic or abusive childhoods also cause children to adopt coping skills that reflect their environment, and which unfortunately do not

transfer well to more stable environments. These findings have emerged from classic studies examining the experiences of institutionalized children as well as more contemporary studies that lead reviewers of these studies to find both significant continuity as well as noteworthy recovery from most of children's experiences (see Palacios and Brodzinsky 2010).

The understanding of risks and challenges facing youth who have been adopted has led to suggestions for helping youth adjust positively and avoid negative outcomes. Though no robust research exists to support the following approaches, their basis in the preceding theoretical models and existing research indicates potential for success. The stress and coping model of adoption stresses the importance of trust and control for healthy adopted adolescents' adjustment (Brodzinsky 1990). Parents can promote this trust and sense of control by being forthcoming with their adopted children about the specifics of their adoption. If an open adoption is in place, for example, parents can involve their children in making decisions concerning contact with their birth parents. The ecological perspective also encompasses the areas beyond the adolescent and their family that affect adolescents' psychological health (see Bronfenbrenner 1979). Adopted youth can sometimes feel excluded from other adoptees or their native cultures. Parents can arrange for these children to attend support groups with other adopted youth, take classes in their native language, connect with the local community from their home country, or even visit their birth place. Parents also can take part in the process by making connections with other adoptive parents. Other areas affecting adoptive youths' lives like their school, church, and local and national policy can be addressed by enlightening teachers, church leaders, and local- and state-elected officials on ways they can help with issues affecting adopted children and their families. The emergence and recognition of these types of responses to address adopted youths' needs provide increasing confidence that youth can enjoy positive environments supportive of healthy developmental outcomes.

Although there may be an increased need for adoptive parents, especially for adolescents who are deemed less adoptable compared to younger children, controversies continue even despite research revealing how different family formations can provide the needed nurturing environments. Considerable controversy continues regarding the eligibility of some parents to become parents. For example, transracial adoption continues to be a topic of debate among the community and some minority groups, despite research demonstrating that there may not be a need for concern if adoptions are conducted with awareness and responsiveness to cultural issues and those relating to diversity (Campbell 2000). Similarly and although nontraditional families are increasingly becoming accepted as options for adoptees, they still experience difficulty when they choose to adopt. In some cases, for example, gay and lesbian families only are eligible to adopt older or special-needs children (see Cooper 2004). Despite an apparent favoring of traditional families as best suitable for adopting youth, nontraditional families increasingly are becoming accepted as options for adoptees. Single men or women are choosing to adopt children through traditional means, artificial reproductive technology, or using a surrogate parent. International adoptions continue to increase as societal changes limit the pool of children domestically; for example, effective contraception, legalized abortion, and a decrease in the stigma associated with unwed motherhood, has caused the number of children adopted from unwed mothers to drop from 80% in 1970 to 4% in 1983 (see Cole and Donley 1990); and shifts in child welfare laws now mean that children may not be reunited with their families or stay in foster care drift but, instead, be placed for adoption (most likely by their foster parents) (see Levesque 2008). With this marked reduction in domestic adoptions, international adoptions have skyrocketed. These different family formations, both in terms of the adoptees and the adopting families, still may face challenges, but it is notable that laws, policies, and society increasingly embrace different family formations.

The above changes are of particular significance to adolescents. The changes not only provide them with families but also provide them with different issues to address. For example, several of these changes, such as those across countries or those dealing with open adoptions, likely create different opportunities and challenges relating to birth parents. Arguably, a key issue that coincides with the development of adolescents for adopted youth is the normative focus on discerning a healthy sense of self and identity. For adoptees, this normative transition has been linked to an inner search involving reflections of their

adoption (see Irhammar and Cederblad 2000), which has been noted as a normative experience that begins in middle childhood in the context of the developmental changes in their understanding of adoption, eventually translates into an outer search, typical of adolescent and youth periods, which in turn translates into the desire to gain more information or contact with biological parents (see Wrobel and Dillon 2009). Reviews of research in this area reveal conflicting results, especially along dimensions of who searches (e.g., in terms of their gender, mental health) (see Palacios and Brodzinsky 2010). Given the challenge of conducting research in this area, and the new focus on this aspect of research, it is not surprising to find a need for more research to understand nuances in the experience of being adopted.

Adoption has become a common phenomenon, which has resulted in important research and policies. Research has focused more on young children. As a result, for example, while open adoption has worked for adopted infants and there is reason to believe that it also could work well for older youth, the benefits of this system still need to be assessed for older adoptees. Models that have been developed to understand adolescents' adjustments to adoption have provided important insights, but they also have shown how considerable research needs to be conducted. As a result, research shows a need to consider resources beyond the family, but systematic study of post-adoption resources must be established to make available a continuity of care for adopters and adoptees. Indeed, more research still is needed as more and more families choose adoption as a viable means to form their families and as the composition of adopted families continues to reflect considerable diversity in response to the pressing need for more families to adopt adolescents.

Cross-References

► Dependency Court Processes
► Foster Care

References

Baran, A., & Pannor, R. (1990). Open adoption. In D. M. Brodzinsky & M. D. Schechter (Eds.), *The psychology of adoption* (pp. 316–331). New York: Oxford Press.

Brodzinsky, D. M. (1990). A stress and coping model of adoption adjustment. In D. M. Brodzinsky & M. D. Schechter (Eds.), *The psychology of adoption* (pp. 3–24). New York: Oxford Press.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge: Harvard University Press.

Campbell, S. B. (2000). Taking race out of the equation: Transracial adoption in 2000. *Southern Methodist University Law Review, 53*, 1599–1626.

Cederblad, M., Hook, B., Irhammar, M., & Mercke, A. (1999). Mental health in international adoptees as teenagers and young adults: An epidemiological study. *Journal of Child Psychology and Psychiatry, 40*, 1239–1248.

Cole, E. S., & Donley, K. S. (1990). History, values, and placement policy issues in adoption. In D. M. Brodzinsky & M. D. Schechter (Eds.), *The psychology of adoption* (pp. 42–61). New York: Oxford Press.

Cooper, M. (2004). What makes a family?: Addressing the issue of gay and lesbian adoption. *Family Court Review, 42*, 178–188.

Fergusson, D. M., Lynskey, M., & Horwood, L. J. (1995). The adolescent outcomes of adoption: A 16-year longitudinal study. *Journal of Child Psychology and Psychiatry, 36*, 597–615.

Gaddie, L. (2009). Open adoption. *Journal of the American Academy of Matrimonial Lawyers, 22*, 499–516.

Haaguard, J. J. (1998). Is adoption a risk factor for the development of adjustment problems? *Clinical Psychology Review, 18*, 47–69.

Hansen, M. E., & Gupta-Kagan, J. (2009). Raising the cut-off: The empirical case for extending adoption and guardianship subsidies from age 18 to 21. *UC Davis Journal of Juvenile Law & Policy, 13*, 1–23.

Howe, D. (1997). Parent-reported problems in 211 adopted children: Some risk and some protective factors. *Journal of Child Psychology and Psychiatry, 38*, 401–411.

Irhammar, M., & Cederblad, M. (2000). Outcome of inter-country adoptions in Sweden. In P. Selman (Ed.), *Intercountry adoptions. Developments, trends and perspectives* (pp. 143–163). London: BAAF.

Levesque, R. J. R. (2008). *Rethinking child maltreatment law: Returning to first principles*. New York: Springer.

Logan, F. A., Morrall, P. M. E., & Chambers, H. (1998). Identification of risk factors for psychological disturbance in adopted children. *Child Abuse Review, 7*, 154–164.

Maughan, G., & Pickles, A. (1990). Adopted and illegitimate children growing up. In L. Robins & M. Rutter (Eds.), *Straight and devious pathways from childhood to adulthood* (pp. 36–61). Cambridge: Cambridge University Press.

Miller, B. D., Fan, X., Christensen, M., Grotevant, H. D., & van Dulmen, M. (2000). Comparisons of adopted and nonadopted adolescents in a large, nationally-representative sample. *Child Development, 71*, 1458–1473.

Palacios, J., & Brodzinsky, D. (2010). Adoption research: Trends, topics, outcomes. *International Journal of Behavioral Development, 34*, 270–284.

Schechter, M. (1961). Observations on adopted children. *Archives of General Psychiatry, 3*, 21–32.

Wrobel, G. M., & Dillon, K. (2009). Adopted adolescents: Who and what are they curious about. In G. M. Wrobel & E. Neil (Eds.), *International advances in adoption research for practice* (pp. 217–244). New York: Wiley.

Adoption and Safe Families Act

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When a state fears for the endangerment of a child's health or safety, it can intervene in an otherwise autonomous family to resolve the threat or remove the child. The state's efforts to resolve the threat before removing the child or to permit the child to return home after the threat is removed are parts of a "reasonable efforts" mandate. When the state retains custody of the child, the court often orders the state to provide certain services for the parents or orders the parents to obtain needed services. Such services may include psychological counseling, substance-abuse treatment, parenting classes, homemaker assistance, and other services to remedy deficiencies that led to the child's removal from the home. Such services serve to facilitate the reunification of the family. However, in certain situations, the court may relieve the state from making reasonable efforts to reunify a family. Once a child has been placed in foster care, the court holds periodic reviews with the parties. Various rationales support the need for reviews, but the major reason for their use rests on the manner the foster care system operates on the assumption that it provides temporary shelters meant either to expedite children's return to their homes or to successful adoptions. The length of time a particular child stays away from the family and the ultimate decision regarding the child's long-term care largely depend on the nature of the state's response, the manner it defines and implements its reasonable efforts mandates.

Although it may seem that children's needs would dictate a state's response, the nature of the state's response generally depends on self-imposed burdens. Individual states design and maintain prevention and foster care programs. Although the states play an important role, they are guided by the federal government. The federal government plays a key role since it uses the power of the purse (federal subsidies) to guide state policies toward its preferred ways of designing child welfare programs. Congress grants funds to states only when their laws comply with congressional mandates. The *Adoption and Safe Families Act* (ASFA) (Adoption and Safe Families Act 1997) currently serves as the major federal mandate guiding the structure and implementation of foster care systems and responses to families and children who may have need for them.

Although AFSA now primarily regulates the implementation of efforts that seek to prevent and, where necessary, provide alternative care, the statute is best understandable in light of the statute that it amended. ASFA amended the groundbreaking *Adoption Assistance and Child Welfare Act* ("*Child Welfare Act*") (Adoption Assistance and Child Welfare Act 1980). The *Child Welfare Act* was Congress's first major effort, through its spending powers, to help states provide services to keep children in their homes and secure adoptions for children who cannot return home after having entered the foster care system. Before 1980, the federal government had reimbursed states for foster care expenses but had not offered comparable financial support for adoption or prevention and reunification services. As passed in 1980, the *Child Welfare Act* continued to reimburse states for foster care maintenance payments but it also offered additional funding for child protection, family intervention, and adoption services for children with special needs. The federal government conditioned each state's funding, however, on their compliance with federal requirements. ASFA pushed federal mandates into somewhat different directions, most notably toward a more obvious focus on ensuring child safety and hastening stability. Together, these two statutes reveal the remarkable extent to which federal mandates can shape responses to children at risk.

A requirement that eventually became most relevant to discussions of ASFA was Part E of the *Child Welfare Act*. That part required states to have an approved plan for administering child protective services. Each state's plan must provide, among other things, that "in each case, reasonable efforts will be made (A) prior to placement of a child in foster care, to prevent or eliminate the need for removal of the child from his home, and (B) to make it possible for the child to return to his home." This mandate has become commonly known as the "reasonable efforts" provision. The *Child Welfare Act* had sought to provide adequate services early in order to diminish the need for more costly foster care placements. By requiring states to provide adequate services, the reasonable

efforts provision narrowed the criteria for entering foster care to those children who could not sufficiently benefit from family preservation services. Once children entered foster care, the reasonable effort provision narrowed the criteria for remaining in foster care to those children who could not sufficiently benefit from reunification services. The reasonable efforts mandate, then, encouraged states to reduce the use, especially the extended use, of the child welfare system. The mandate did so by reducing the need for the foster care system through family preservation efforts and promoting adoption incentives whose primary economic purpose consisted of expediting exits from the foster care system.

The general understanding of reasonable efforts as a service enforcement provision made theoretical sense, but it had and continues to face many practical challenges. The federal requirement to make reasonable efforts was not guided by standards to assess reasonable efforts. This eventually led to criticisms that the focus on reunification inhibited child safety and protection and that too many children were caught in "foster care drift" without a sense of permanency. These and similar criticisms led to a major overhaul of the *Child Welfare Act*. That overhaul took the form of the *Adoption and Safe Families Act*. As the title suggests, the focus of the new and still controlling legislative mandates sought to promote permanency and prioritize child safety. Congress sought to reach the goals of these mandates by modifying the reasonable efforts requirement and by setting strict deadlines for implementing placement plans (the case plans the state must have in place for every child under state supervision).

Among other changes, ASFA urged two important changes especially worth considering. The first change dealt with the act's new timelines regulating the amount of time children can remain in foster care before being placed for adoption. The *Child Welfare Act* had required that every child in foster care receive a dispositional hearing within the first 18 months in state custody. ASFA reduced that time frame as it, quite tellingly, relabeled "dispositional" hearings as "permanency" hearings. ASFA required states to hold permanency hearings within the child's first 12 months in foster care and at least once every 12 months as long as the child remained in state custody. ASFA also required every child in foster care to receive a permanent plan within 12 months. Significantly, ASFA directed states to petition a court for termination of parental rights once a child had resided in state custody for 15 of the most recent 22 months. Importantly, a state could be excused from this obligation if: (1) the state has placed the child in the care of a relative, (2) the state can provide a compelling reason for maintaining the parental relationship, or (3) the state has failed to provide reasonable efforts to reunite the family. By establishing a new and shortened timeline for termination of parental rights, this amendment would become ASFA's hallmark provision.

The second change brought by ASFA involved clarifying what was meant by reasonable efforts. The amended section 671(a)(15) has six subparts. Subpart (A) requires that, in making reasonable efforts and in determining whether reasonable efforts had been made, "the child's health and safety shall be the paramount concern." Subpart (A) explicitly requires reasonable efforts to not compromise children's safety. Unlike prior legislation, this mandate provides that "reasonable efforts shall be made to preserve and reunify families: (i) prior to the placement of a child in foster care, to prevent or eliminate the need for removing the child from the child's home; and (ii) to make it possible for a child to safely return to the child's home." This subpart essentially preserves the reasonable efforts language under the 1980 *Child Welfare Act*. However, subpart (C) extends the reasonable efforts mandate beyond family preservation and reunification to include permanency. Under this part, the state must make reasonable efforts "to place the child in a timely manner in accordance with the permanency plan, and to complete whatever steps are necessary to finalize the permanent placement of the child." Subpart (D) excuses states from making reasonable efforts based largely on a parent's current and previous conduct. This shift in focus away from preservation permits states to not make reasonable efforts where the parent has performed any of several specific acts: (1) subjected the child to aggravated circumstances (as defined by state law), (2) committed murder or voluntary manslaughter of another child of the parent, (3) aided or abetted, attempted, conspired, or solicited to commit such murder or manslaughter, or (4) committed a felony assault that results in serious bodily injury to the child or another child of the parent. Subpart (E) holds that a state that adopts subpart (D)'s approach

must provide a permanency hearing within 30 days rather than the usual 18 months under the *Child Welfare Act*. Finally, subpart (F) explicitly authorizes concurrent planning, a form of case management that permits states to make, simultaneously, reasonable efforts toward a permanent out-of-home placement and reasonable efforts toward reunification at the same time. The reasonable efforts amendments and the revised timelines significantly redefine and reduce the force of the reasonable efforts standard that had been meant to secure efforts to reunify children with their families. To a large extent, by focusing on child safety, federal legislative mandates tend to encourage out-of-home care.

Reviews of state legislative mandates reveal that nearly all states have enacted legislation requiring state agencies to make reasonable efforts to preserve or reunify families (for a comprehensive review, see Levesque 2008). The extent to which states incorporated ASFA's mandates in their legislation suggests a softening of the significance of reasonable efforts after ASFA. This weakening of the reasonable efforts clause can be seen in the strong emphasis states have placed on making health and safety the paramount concern and the relatively weak emphasis states have given to requiring reasonable efforts to finalize a permanent placement. The vast majority of states have enacted legislation emphasizing the "paramount" nature of the child's health and safety in dependency proceedings. Neither the "health and safety" provision nor the provision permitting states to waive their reasonable efforts obligation impose on states an affirmative duty to provide services. Indeed, both provisions arguably encourage the opposite. In addition, it is important to note that state courts have discretion to waive reasonable efforts to protect a child's health and safety, even if none of the conditions that waive reasonable efforts exists. State courts need such flexibility to respond appropriately to individual cases. Yet, granting such flexibility unintentionally weakens the requirements of the reasonable efforts clause, as further demonstrated by the relatively soft legislative emphasis states have placed on reasonable efforts toward permanency and the comparably heavy emphasis they have placed on the provisions that waive reasonable efforts. This suggests that states view ASFA's clarification of reasonable efforts primarily as legislation diluting the obligation to make reasonable efforts to reunify families. The legislatures thus appear to agree with the primacy ASFA accords to the health and safety of the child.

Cross-References

▶ Child Abuse Prevention and Treatment Act

References

Adoption Assistance and Child Welfare Act. (1980). Pub. L. No. 96-272, 94 Stat. 500.

Adoption and Safe Families Act. (1997). Pub. L. No. 105-89, 111 Stat. 2115.

Levesque, R. J. R. (2008). *Rethinking child maltreatment law: Returning to first principles*. New York: Springer.

Adrenarche

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Adrenarche refers to the increase in activity of the adrenal glands that occurs just before puberty. It typically begins approximately at 7 or 8 years of age, before the signs of puberty, and continues throughout puberty. In humans, for both boys and girls, increases in adrenal androgens during adrenarche are associated with the development of pubic and axillary hair, as well as with an acceleration in the rate of bone maturation and skeletal growth and an increase in body odor (Spear 2000). Androgens associated with adrenarche are thought to be important for brain maturation (Campbell 2006), and, as has been shown for puberty itself, environmental conditions (such as parenting) influence the onset of adrenarche (Ellis and Essex 2007). Levels of these androgens during the transition through puberty have been linked to adjustment and behavioral problems (Spear 2000).

Cross-References

▶ Gonadarche
▶ Menarche
▶ Puberty

References

Campbell, B. C. (2006). Adrenarche and the evolution of human life history. *American Journal of Human Biology, 18*, 569–589.

Ellis, B. J., & Essex, M. J. (2007). Family environments, adrenarche, and sexual maturation: A longitudinal test of a life history model. *Child Development, 78*, 1799–1817.

Spear, L. P. (2000). The adolescent brain and age-related behavioral manifestations. *Neuroscience and Biobehavioral Reviews, 24*, 417–463.

Advertising: Do Not Buy That

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Overview

The specific problem this essay addresses is "How do adolescents resist advertising?" A brief review of research about the effects of advertising on adolescents focuses on concerns of parents regarding the dangers to adolescents resulting from exposure to print, broadcast, and Internet advertising. Research on mechanisms that facilitate adolescents' ability to resist these effects is reviewed. Specific programs designed to facilitate critical thinking about advertising are explored, as are family talk about media and the emerging social media as aspects of advertising resistance. Suggestions for future research are offered.

Do Not Buy That: Reducing the Impact of Advertising on Adolescents

Adolescents are an incredibly attractive target for marketers of products and services. This targeting occurs because advertising is a $300 billion/year industry featuring 900,000 brands, and children and adolescents are attractive consumers: Teenagers spend over $150 billion/year on consumer products, and have a major influence on many of their parents' purchases (Shifrin 2006). In light of increasing media use by adolescents and the rise of social media and other advertising vehicles, concern about the behavioral and cognitive effects of advertising on viewers, readers, and users of mediated entertainment is now as severe for adolescents as it has been on young children in the social science literature. The focus of this essay is on populations of young men and women aged 12–17.

The specific problem this essay addresses is "How do adolescents resist advertising?" Much of the writing and research in advertising as media effect begins with an often unstated premise: Since adolescents are the target of numerous marketing campaigns, there must be evidence of their effectiveness. A good deal of research in the social science literature takes effectiveness for granted. Here, I explore those areas where adolescents resist advertising messages. Some questions include: When and under what conditions do adolescents reject advertising appeals? What is the role of parents, siblings, and peers in encouraging resistance? How effective are specific media and school campaigns in raising cognitive thresholds against persuasion designed to elicit consumer behavior?

There is scarcely a parent who does not have a complaint about marketing to children and adolescents in general as well as a host of anecdotes about particular advertising campaigns. Not surprisingly, the scientific literature regarding risks to these populations reflects these complaints and supports many of the suspicions of parents, teachers, and other adult figures about the role of advertising in the lives of young people. They include: concerns about advertising as a factor in alcohol and tobacco use, the relationships among drug advertising and the belief that there is a drug that can cure all pains and worries, and subsequent drug abuse by adolescents. Over a decade of research supports the significant association between adolescent advertising exposure and tobacco use (Biener and Siegel 2000). A number of investigations have reinforced the correlations among exposure to drug advertising and adolescent beliefs in the efficacy of drugs as problem solvers (Strasburger 2001).

Parents and caregivers also worry about the portrayal of unrealistically trim and attractive figures as contributing factors to low self-esteem and the rise of eating disorders among those who are exposed to these stereotypes in commercials and ads. Also of concern is the dramatic increase of adolescent obesity in the past 2 decades. Young people are exposed to thousands of ads for fast foods, sodas, and snacks containing high levels of salt and sugar and their weights have increased as a function of this exposure (Davies and Fitzgerald 2008).

Parents also express concern about recent research that supports a link between advertising and earlier onset of sexual intercourse in adolescents. Sex is used to sell almost every product in contemporary ads, and commercials for products to remedy erectile

dysfunction are common in prime time TV viewing. The multiplication of messages about these products, in the absence of advertising for birth control products, may send inappropriate messages to adolescents especially as they are not being taught well in school sex education programs.

Research on all of these problems has supported and extended our knowledge about all of these issues; exposure to advertising has been connected to adolescent self-image, eating disorders and obesity, drug, alcohol and tobacco use, and early onset of sexual experiences in the absence of information about birth control. See, for example (Strasburger, Wilson and Jordan 2002).

The Development of Skepticism and Cynicism About Advertising

The teen years are a time of suspicion and rejection of many aspects of society. Investigations of skepticism – the degree to which young people disbelieve the claims in advertising – have found that this disbelief is reliably associated with education. As teachers and other role models expose fallacies and exaggerations in arguments, advertising is a natural target for questioning the truth of advertising claims. While some members of the educational community have gone as far as to advocate *teaching* adolescents to be skeptical of advertising, their critics counter that this would be intellectually dishonest in that truthful advertising would be needlessly discounted. Apart from results regarding education, skepticism is also an outcome of simple maturation and the concomitant role of traditional socializing agents such as peers and the family. Skepticism has been shown to be negatively correlated with adolescents' receptivity to and liking for advertising as well as onset of early alcohol and tobacco use among youth aged 9–17 (Austin et al. 2006).

Market research on adolescent populations is regularly conducted by research firms and advertising agencies (HarrisInteractive 2004). Much of this qualitative research is based on focus group studies of approximately ten adolescent subjects, guided by professionals who record comments made by subjects. This research reveals that while teens say that advertising has little impact on them, they frequently discuss TV commercials with their friends and are especially fond of humorous ads and commercials that feature popular music that they like. Similarly, they deny that Internet banner ads influence them to purchase products, but they spend more time on the computer than they do on other electronic media. Word-of-mouth is a strong factor in marketing to this population; the majority of focus group participants admit that they learn about new Web sites primarily from their peers. They strongly deny that celebrity spokespersons in advertising are effective and assert that no ad can make an unattractive product seem to be worth buying.

From relatively recent investigations, we know that there are two variables that predict adolescent tobacco use beyond mere exposure to advertising: susceptibility to advertising and novelty-seeking. Novelty-seeking has been used as a personality trait construct in several studies and has been shown to be positively related to the onset of smoking in young adulthood. Several longitudinal studies have found the relationship is especially strong when combined with advertising susceptibility, the ability to vividly recall specific cigarette promotions and possession of tobacco-related promotional items (Audrain-McGovern et al. 2003).

The central effect of tobacco advertising may be in its relationship to adolescent perceptions of prevalence. If teens think that a large portion of the population smokes, that perception may override adolescent skepticism about advertising. One study found that eighth and ninth graders who saw a depicted convenience store loaded with tobacco ads and products were much higher in their estimates of how many people smoked than were their peers who saw stores without promotions or ads (Henricksen et al. 2002). Clearly, advertising has the potential to suggest that more people smoke than actual populations surveys would suggest.

Intervention Programs

While proponents of media education programs have focused on advertising issues surrounding susceptibility to persuasive appeals for at least 30 years, the specific use of these programs to reduce unhealthful behaviors is more recent. Many programs have been designed for young children, rather than adolescents. A typical investigation in this tradition is Austin's (Austin and Johnson 1997) investigation of third-graders' training in alcohol advertising. She trained teachers to facilitate analysis of alcohol ads and found that the treatment had both immediate and delayed effects (3 weeks). Immediate effects included the children's increased understanding of persuasive intent

of the ads, viewing of characters as less similar to people they knew in real life and less desirable as friends. More importantly, in the treatment group, there was decreased desire to be like the characters, decreased expectation of positive consequences from drinking alcohol, and decreased likelihood of choosing an alcohol-related product as a reward over a non-themed product. In another investigation of adolescents regarding the effects of an alcohol education, an intervention centered on television advertising found that adolescents' counter arguing of alcohol advertisements were present a year after the intervention (Metrik et al. 2003).

In terms of adolescent populations, four investigations have affirmed the efficacy of the Lions Club International's *Skills For Adolescents* (SFA) program in preventing or reducing drug and alcohol use, and smoking by middle school students (Crano and Burgoon 2002). The 40-session SFA program includes media education but also more global critical thinking instruction about a number of life decisions related to physical and mental health. Among the findings are that the curriculum can help deter the initiation of regular cigarette smoking and experimental use of marijuana through the end of the seventh grade and deter the initiation of regular alcohol use and binge drinking. The data also indicate that the program can delay the progression to regular cigarette smoking and to experimental marijuana use among students who had initiated regular alcohol use or binge drinking but not regular cigarette smoking by the end of the sixth grade. Although the program is available at no cost, many communities do not use it because of the prevalence of DARE programs in school, which have not been supported by systematic programs of research.

Family Communication and Advertising

In the past 25 years, a good deal of research has focused on patterns of parent–child and sibling-to-sibling communication about media content. This tradition is known as *mediation.* The majority of investigations in mediation have focused on parent–child communication about television programming, as television is the most-used medium used by children prior to adolescence, and parents are the dominant agents of socialization for young children. Mediation is the pattern of communication by which parents comment on television content either during or subsequent to the child's viewing, and communicate information about the meaning of televised behavior, the parent's approval or disapproval of content, and specific rule-making by parents about the amount and kind of television use that they permit.

Parental mediation efforts have been conceptualized as the extent of critical comments about behaviors witnessed on television or film (active mediation), setting rules about how much, when, and which types of television can be viewed (restrictive mediation), and the presence of parents during children's television viewing (co-viewing) (Nathanson 2001). Active mediation may take place while the child is viewing with a parent, or after the viewing occurs, e.g., "Do you think the toy is really as big as it looks on TV?" Restrictive mediation frequently occurs in non-viewing moments: "You are not allowed to watch that program, it's too violent."

Research exploring the impact of active and restrictive mediation has found that it can decrease aggressive behavior, improve children's comprehension of television, foster refined consumer behavior, and develop critical thinking about television's representation of the real world (Desmond et al. 1985).

Children and adolescents whose parents set rules about television viewing (restrictive mediation) exhibit higher reading scores than do unregulated viewers (Roberts et al. 1984), tend to be more skeptical about television reality (Desmond et al. 1985), are less likely to ask for products advertised on television, and are less physically aggressive (Nathanson 2001). Not all mediation is positive, however, in that if children perceive parents' mere co-viewing as parental endorsement of content, they may behave aggressively after watching an aggressive wrestling program or a violent cartoon (Desmond et al. 1990).

Both survey research and direct observation have been used to investigate how frequently parents actually mediate television content. While direct observations in the home suggest that active mediation occurs less than 5% of the time, surveys indicate greater frequency when parents self-report, or when children corroborate parents' estimates. Nathanson (2001) found that parental mediation is strongly related to parental attitudes about TV content, with parents who dislike violent content reporting more restrictive mediation. There is some evidence that use of the

network's parental advisory system and family mediation occurs most frequently in families with gifted or high-achieving children who watch small or moderate amounts of TV producing what one investigator has labeled the "preaching to the choir" effect (Abelman 1999).

Apart from mediation, family patterns of communication have received some research attention. One dimension of parent–adolescent interaction that is typically associated with conversations about alcohol and drugs is the demand/withdraw pattern, where one party utters a demand or a threat "I'd better not catch you drinking before you are 21" and the other interactant withdraws "Ok-Leave me alone." One study of parents talking to adolescents found that frequent demand/withdraw patterns in conversations were associated with low self-esteem and high alcohol and drug use – for both adolescents and parents (Cauglin and Malis 2004). These health outcomes were associated with demand/withdraw scenarios from either side's punctuation – that is, whether it was the parents who were demanding and the children who were withdrawing, or vice versa. They also found that *criticisms* and *avoidance* were related to adolescents' drug use. This pattern held even when the topic of conversation was about relatively bland topics, such as adolescents being too noisy or not cleaning their bedrooms. Clearly, this investigation suggests that parent mediation about media content should probably take the form of positive-active mediation, such as pointing out the teens depicted in a film as being happy, successful, and substance-free, rather than to initiate mediation that may result in withdrawal and avoidance: "Don't be like those kids who think drinking is o.k." Ongoing research on family communication is promising, in that it has the potential to provide information for parents on how to approach the topic of advertising in a manner that may produce critical thinking by adolescents.

The New Media Landscape

Social media is a global term meaning software that facilitates one-to-many (and many-to-one) message exchanges among users, and includes sites such as *Facebook*, *MySpace*, *Twitter*, and others now evolving in the early twenty-first century. Adolescents who use these media talk about their social lives including relationships, interactions with family and friends, and a variety of topics germane to their current concerns. Several recent investigations revealed that a large percentage (in one survey nearly 50%) of posts to these sites by adolescents mention drinking, risky sexual activity, and drug use. While adolescents have always enjoyed talking about sex, drugs, and rock n' roll with their peers, these new media provide opportunities for pre-adolescents to monitor what their older counterparts are saying about these topics.

Author of one of these investigations, Megan Moreno, an assistant professor of pediatrics at the University of Wisconsin-Madison, has found that, regardless of whether teen postings reveal true behavior, kids do think that what they see on social media sites is real, and the younger they are, the more they believe (Moreno et al. 2009). This is important, Moreno writes, "because teenagers are powerfully influenced by the behavior of their peers. Teenagers' behavior also is influenced by seeing behavior on television and hearing about it on the radio and in music. Social media combines those two influences" (p. 422). Therefore, attractive, popular kids who talk about drinking and drug use may be models for younger adolescent's behavior.

While social media may exacerbate problems resulting from exposure to advertising, they also have the potential to reach adolescents in ways that were not possible 20 years ago in prosocial ways. Marketers of products purchased by teens are ratcheting up campaigns to use *Facebook*, *Twitter*, and numerous other Internet-based media to promote beverages, complexion creams, and computer games. In recent years, health-based social marketing campaigns have applied these media to encourage adoption of healthy behaviors and avoidance of risk-taking among adolescents. One of the most investigated campaigns is the Truth, a campaign to prevent adolescent tobacco use. Based on the success of a Florida campaign in the 1990s, the TRUTH, funded by the tobacco industry's American Legacy Foundation campaign, became a national effort in 2000. While not strictly a "new media" campaign, the TRUTH employed broadcast and Internet counter-advertising to initiate adolescent conversations about tobacco and the industry that markets it. The primary objectives of the *truth* campaign were to (1) expose youth to *truth* messages and promote positive reactions to those messages, (2) change attitudes about tobacco use and the tobacco industry, and (3) reduce tobacco use among youth. These three objectives led to an

evaluation plan that aimed to develop measures of adolescent exposure to the campaign and to assess the relationship between campaign exposure and related knowledge, attitudes, and beliefs about tobacco.

The campaign was the first to take into account the pleasure taken by teenagers when they expose the hypocrisies of adults, and especially regarding their institutions. A large component of the TRUTH effort is to facilitate adolescents' perceptions of the tobacco industry as an institution that not only produces products that cause death and disease, but also lies about the dangers to the public. As an early social media campaign, the TRUTH fared well in evaluation research. One published study found that from 2000 to 2002 US adolescent smoking prevalence declined from 25.3% to 18% and that TRUTH accounted for approximately 22% of that decline (Wakefield et al. 2006). This study demonstrated that the campaign had a large and statistically significant impact on adolescent smoking, above and beyond a marked trend of declining smoking among this population. It also showed that while most social marketing campaigns have modest effect sizes by clinical standards, some campaigns can achieve relatively large effects. The campaign-attributable decline in smoking prevalence represents some 300,000 fewer adolescent smokers during the study period.

Conclusion

In many ways, parents have good reasons for their concerns about the risks of advertising outcomes on their children. A convincing body of research points to negative effects of advertising in areas of health, substance abuse, sexuality, and other areas of adolescent life. New media are being created every few years, each with the potential to add more advertising to the landscape with all of the concomitant risks.

Clearly, there are mechanisms that help adolescents to ignore or reject advertising messages. Some specific anti-advertising campaigns work to elevate adolescent resistance to advertising. How do they do this? The thread that unites the programs and parent efforts is critical thinking. While adolescents like and remember ads and commercials with humor and characters that they admire, the development of skepticism about the motives of advertisers in the early teen years helps them to reject unbelievable claims about advertised products.

Specific intervention programs help adolescents to apply critical thinking skills to evaluating the claims of advertising. Programs such as the Lion's Club "Skills For Adolescents" and the TRUTH elevate awareness of the motives and mechanisms of advertisers for teen audiences. Accompanied by programs of formative evaluation, these interventions are providing young readers and viewers with tools to evaluate advertising and to reduce risks. Further research should investigate how cost-effective programs can be developed for within-and-outside of school classroom use. The popularity of the Internet among this audience may provide a new way for the delivery of "teachable moments."

Family communication about advertising begun early in a child's life can help to provide more critical skills for adolescent audiences. A pattern of family talk, also known as mediation, about advertising helps a growing mind to appreciate how music, animation, pop culture heroes, and exaggeration combine to form powerful appeals in print, Internet, and television messages. More work on how to help parents become effective mediators is necessary, as is more research on negative family patterns that may interfere with the development of critical thinking about these topics.

In light of the popularity of social media, adolescents have vast new opportunities for exposure to advertising. As television drops lower in their media diet, time on media like Facebook occupies a good deal of adolescent leisure. Marketers are ratcheting up skills to deliver commercial messages. Opportunities for product placements are multiplied when media like YouTube brings a smorgasbord of visual entertainment at the click of a mouse; application of critical thinking becomes more difficult when all ads are nonverbal. Both researchers and adolescent advocates will need to develop new ways to counter-argue commercial messages.

Finally, there is a huge need for integration of variables and approaches in research on these problems. More messages and programs need to investigate, for example, novelty-seeking and its relationship to other aspects of advertising. Adolescents high in novelty-seeking are more likely to be attracted to advertising for alcohol, drugs, and tobacco. Can messages be designed to counter ads that appeal to high novelty seekers?

An example of research, which integrates several dimension of the problem is an investigation of 12th

graders media use and a construct termed "drive for thinness" (a self-reported need to feel thin) (Carson, Rodriguez, and Audrain-McGovern, 2005). Among the findings were that exposure to fashion, entertainment, and gossip magazines had indirect, positive effects on smoking through paths of drive for thinness and tobacco advertisement receptivity. There was a direct effect of health, fitness, and sports magazine reading on smoking. The authors of the study concluded that adolescents who read fashion, entertainment, and gossip magazines may be more likely to smoke, in part, because of a higher drive for thinness and greater receptivity to cigarette advertisements. Adolescents reading Health and Fitness magazines were less likely to report smoking. Integrative research such as this example will help to target the need to be thin and higher receptivity to advertising for future interventions. It is clear that advertising to adolescents will increase as will the media used to deliver it. Future research needs to keep up with the avalanche.

Cross-References

► Forbidden Fruit

References

Abelman, R. (1999). Preaching to the choir: TV Advisory usage among parents of gifted children. *Roeper Review, 22*, 22–39.

Audrain-McGovern, J., Tercyak, K., Shields, A., Bush, A., Espinel, C., & Lerman, C. (2003). Which adolescents are most receptive to tobacco industry marketing? Implications for counter-advertising campaigns. *Health Communication, 15*, 499–513.

Austin, E. W., & Johnson, K. K. (1997). Immediate and delayed effects of media literacy training on third graders' decision making for alcohol. *Health Communication, 9*, 323–349.

Austin, E. W., Chen, M. J., & Grube, J. W. (2006). How does alcohol advertising influence underage drinking? The role of desirability, identification and skepticisim. *Journal of Adolescent Health, 38*, 376–384.

Biener, L., & Siegel, M. (2000). Tobacco marketing and adolescent smoking: more support for a causal inference. *American Journal of Public Health, 90*, 407–411.

Carson, N., Rodriguez, D., & Audrain-McGovern, J. (2005). Investigation of factors linking media exposure to smoking in high school students. *Preventive Medicine: An International Journal Devoted to Practice and Theory, 41*(2), 511–520.

Caughlin, J. P., & Malis, R. S. (2004). Demand/withdraw communication between parents and adolescents: Connections with self-esteem and substance use. *Journal of Social and Personal Relationships, 21*, 125–148.

Crano, W. D., & Burgoon, M. (2002). *Mass media and drug prevention: Classic and contemporary theories and research.* Mahwah: Erlbaum.

Davies, H. D., & Fitzgerald, H. (2008). *Obesity in childhood and adolescence: Medical, biological, and social issues.* Westport: Praeger.

Desmond, R. J., Singer, J. L., Singer, D. G., Calam, R., & Colimore, K. (1985). Family mediation patterns and television viewing: young children's use and grasp of the medium. *Human Communication Research, 11*, 461–480.

Desmond, R. J., Singer, J. L., & Singer, D. G. (1990). Family mediation: Parental communication patterns and the influence of television on children. In J. Bryant (Ed.), *Television and the American family.* Mahwah NJ: Erlbaum.

HarrisInteractive (2004). *Teens talk about advertising: A report of findings from online focus groups with teens.* Retrieved November 23, 2009 from www.Harrisinteractive.com

Henriksen, L., Flora, J., Feighery, E., & Fortmann, S. (2002). Effects on youth of exposure to retail tobacco advertising. *Journal of Applied Social Psychology, 32*, 1771–1789.

Metrik, J., Frissell, K., & McCarthy, D. (2003). Strategies for reduction and cessation of alcohol use: Adolescent preferences. *Alcoholism: Clinical and Experimental Research, 27*, 74–80.

Moreno, M., Briner, L., Williams, A., Walker, L., & Christakis, D. (2009). Real use or "real cool": Adolescents speak out about displayed alcohol references on social networking websites. *Journal of Adolescent Health, 45*, 420–432.

Nathanson, A. (2001). Mediation of children's television viewing: Working toward conceptual clarity and common understanding. In W. B. Gudykunst (Ed.), *Communication yearbook 25.* Mahwah: Erlbaum.

Roberts, D., Bachen, C., Hornby, M., & Hernandez-Ramos, P. (1984). Reading and television: Predictors of reading achievement at different age levels. *Communication Research, 11*, 9–49.

Shifrin, D. L. (2006). Policy statement: American academy of pediatrics. *Pediatrics, 118*(6), 2563–2569.

Strasburger, V. (2001). Adolescents, drugs and the media. In D. Singer & J. Singer (Eds.), *Handbook of children and the media.* Thousand Oaks: Sage.

Strasburger, V., Wilson, B., & Jordan, A. (2002). *Children, Adolescents, The Media.* Thousand Oaks: Sage.

Wakefield, M., Terry-McElrath, Y., Emery, S., Saffer, H., Chaloupka, F., Szczypka, G., et al. (2006). Effect of televised, tobacco company-funded smoking prevention advertising on youth smoking-related beliefs, intentions, and behavior. *American Journal of Public Health, 96*, 2154–2160.

Affirmation

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Although the term "affirmation" may have multiple meanings, all converge on the assertion that something

exists, is true, and has value. In the context of human development, the term potentially relates to several issues. Most notably, affirmation relates to how individuals view themselves (as studied considerably in research on self-affirmation theory) and how others view them (as exemplified by research on the Michelangelo Phenomenon). Although research has yet to focus explicitly on how affirmation relates to adolescents, existing research does reveal its potential significance to understanding adolescent development, especially the significance of social interactions and the influence they may have on adolescents' sense of self and mental health.

Individuals generally have a strong stake in thinking and feeling positively about themselves. Indeed, they tend to characterize their futures as brighter than those of their peers; and they also engage in attributions that are self-serving, such as overestimating how they rate on most positive characteristics. When faced with information that threatens the positive views they have of themselves, they embark on types of thinking meant to preserve their positive views, such as ignoring, minimizing, or simply discrediting the significance of the threatening thoughts and information. People are motivated to maintain the perceived worth and integrity of their sense of self (Steele 1988). For example, when an event or information threatens a valued self-image, an individual likely will seek to maintain a global sense of self-integrity instead of focusing on the particular situation or domain that shows them to be lacking. When individuals affirm an unrelated aspect of their self-worth, their self-evaluation becomes less contingent on a particular problem area, which has the effect of rendering the problem less problematic. Thus, when faced with a psychological threat that challenges their sense of self, individuals can restore self-integrity by drawing on alternative sources unrelated to the threat, such as reflecting on another important value. This phenomenon has been understood through self-affirmation theory, which explains how individuals can affirm valued sources of self-worth (such as important personal qualities, values, or relationships), which then serves as a way to buffer threats to their sense of self and reduce the impact of the threats (see Sherman and Cohen 2006 for a review).

The manner affirmation works has important consequences for relationship development and individuals' sense of identity (see Drigotas et al. 1999; Kumashiro and Sedikides 2005). For example, relationships are part of an individual's identity and, as such, positive relationships likely play a key role in the maintenance of self-esteem. Affirmation from partners may reduce defensiveness and increase openness in light of challenging situations. They also may increase compassion, altruism, and positive emotionality. Affirmation from partners also can reduce stress and increase coping efficacy. In a real sense, social interactions, such as those had through close personal relationships, involve affirmation that helps individuals move closer to their ideal selves. That process has been described as the "Michelangelo Phenomenon," a process by which an individual helps their partner develop into the partner's ideal self. Partners' affirmations aid in the development of their ideal self because partners have a strong influence on situations where their partners' ideal self can flourish. Partners can increase self-esteem, life satisfaction, and emotional well-being, as well as relationship satisfaction. Importantly, the opposite also can be true. Partners can seek to cultivate their partners in a different direction than their ideal self, which results in negative emotional consequences when partners misinterpret, ignore, or undermine their partner's goals. Social relationships marked by affirmation, then, can facilitate healthy development; and those without appropriate affirmation can foster unhealthy outcomes or the relationships' dissolution.

The period of adolescence is known for adolescents' increased concern about their place in society and social relationships as well as their focus on exploring their sense of self (e.g., concerns about identity). These normative concerns highlight the importance of understanding affirmation's place in adolescent development, and they highlight how understanding the place of affirmation in the period of adolescence can contribute to a better understanding of affirmation, especially its roots and its role in identity development as well as relationship formation and dissolution. Still, existing research on affirmation already shows well how friends and partners facilitate movement toward an individual's sense of self and how they can influence their self-worth and personal development. A focus on adolescence can help the field move toward a greater understanding of affirmation's complexities and nuances as well as adolescence itself.

References

Drigotas, S., Rusbult, C., Wieselquist, J., & Whitton, S. (1999). Close partner as sculptor of the ideal self: Behavioral affirmation and the Michelangelo phenomenon. *Journal of Personality and Social Psychology, 77*, 293–323.

Kumashiro, M., & Sedikides, C. (2005). Taking on broad liability-focused information: Close positive relationships as a self-bolstering resource. *Psychological Science, 16*, 732–739.

Sherman, D. K., & Cohen, G. L. (2006). The psychology of self-defense: Self-affirmation theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 38, pp. 183–242). San Diego: Academic.

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 261–302). New York: Academic.

Affirmative Action

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"Affirmative action" refers to formal efforts, including a broad range of policies and practices, that consider an individual's membership in a protected group (such as one based on race, disability, and sex) to achieve diversity within an organization or for access to social goods and services (e.g., schools and occupations). These efforts seek to remedy and prevent discrimination as well as promote such societal goals as social stability, improved pedagogy, and a sense of equal justice. Because the actions involve positive steps, rather than simply not discriminating in a passive way, affirmative action seeks to promote equality in ways not required by antidiscrimination law. In the application of affirmative action, individuals from one of the select groups are preferred, when all things are equal, over individuals who do not have such characteristics. This approach tends to attract considerable controversy when framed in terms of being effected through quotas, but affirmative actions that give preferences need not necessarily use quotas. Given that the action is more than simply not discriminating, debates surrounding this practice center on two important concerns: how it remedies for past discrimination and how it actually discriminates against a group (typically called reverse discrimination) (see Schwartz 2000). This essay examines the illustrative Supreme Court cases in this area, which likely have a great effect on minority youth as it influences their access to such important resources as schools and occupations (as well as those of their family members) and influences the type of society in which all inhabit.

In the US, the modern history of affirmative action originated with the *Civil Rights Act of 1964* (1964) and Executive Orders that directed agencies of the federal government to employ a proportionate number of minorities whenever possible. These efforts eventually led to legal actions reaching the Supreme Court. Although many of these legal disputes involved government contractors, the most visible ones involved public universities' affirmative action practices. The most notable cases in this area were the *Regents of the University of California v. Bakke* (1978) case and two companion cases decided by the Supreme Court in 2003: Grutter v. Bollinger and Gratz v. Bollinger.

In deciding affirmative action cases involving racial preferences, the Court has used strict scrutiny analyses because race is used to categorize individuals. Typically, such categorizing violates the equal protection of laws standard, since individuals are not treated equally. However, differential treatment is permissible if the classification of the protected class is in furtherance of a compelling state interest and the governmental action relating to that class is narrowly tailored to achieve that interest. In these cases, diversity is the compelling state interest, and the concern is whether policies in place to achieve affirmative action impermissibly infringe on others' rights when they are, in effect, not preferred over members of another group.

The Supreme Court in *Bakke* addressed a case involving a white male's rejection from the University of California, Davis School of Medicine while other "special applicants" were admitted with significantly lower academic scores than he had. These special applicants were admitted under provisions that gave preference to minority groups. The trial court ruled that the special program operated as a racial quota (as it reserved a set number of places for minority applicants who were rated against one another, not the entire pool of applicants) and that the quotas were impermissible because they violated both Constitutional equal protection rights and also Title VI of the

Civil Rights Act of 1964. The California Supreme Court similarly found the practice unconstitutional as it noted that the special admissions program was not the least intrusive means of achieving the goals of the compelling state interests of integrating the medical school and increasing the number of doctors serving minority patients. The Supreme Court of the United States supported the lower courts as it found racial quotas unconstitutional. The Court, however, did so while also finding that educational institutions could use race as one of many factors to consider in their admissions process. The *Bakke* case, however, was not an entirely strong statement on the issue as it involved multiple opinions from several of the justices who only partly agreed with one another. Several years later, in *Grutter v. Bollinger* and *Gratz v. Bollinger*, the Supreme Court affirmed the view that "quotas" were not permissible but that race could be one factor of many factors that could be used to meet the compelling interest of diversity.

The Supreme Court may have settled the matter for now, but controversies still remain (see Sanders 2003). For example, those who argue for affirmative action adopt a group rights approach, where those who benefit from the actions need not be the ones who were actual victims of invidious discrimination; they get preference simply by being part of a protected class on the grounds that affirmative action programs are a way to ensure equality to all. Opponents prefer to have individual victims benefit from affirmative actions, and they do so on the grounds that using classifications otherwise perpetuates stereotypes and stigmas that affirmative actions are supposed to eradicate. Thus, rather than viewing affirmative actions as problematic for the dominant group, the actions are seen as problematic for some of the intended beneficiaries. They are deemed problematic to the extent that they run the risk of creating internal stigma (doubt about one's abilities) as well as external stigma (dealing with others' doubts of their qualifications). Controversies are likely to continue, especially since concerns about the effects of internal stigma are voiced by members of protected groups, including Justice Clarence Thomas, who belongs to a minority group often targeted as in need of affirmative action, who has described affirmative action programs as stamping minorities with a badge of inferiority (see Adarand Constructors, Inc. v. Peña 1995).

Broadly defined, affirmative action includes positive steps to increase access to resources and opportunities for individuals from historically excluded groups. These actions become quite controversial when they result in preferential selection, and they especially become controversial when they seek equality in result rather than equality in opportunity. These actions are problematic in that they do not, by definition, treat people equally. They create specially protected classes that society is much more ready to accept as protected if it can be shown that its members specifically suffered from invidious discrimination than society is ready to accept as deserving of special privileges without such a showing.

Cross-References

► Discrimination

References

Adarand Constructors, Inc. v. Peña. (1995). 515 U.S. 200.

Civil Rights Act of 1964. (1964). Pub.L. 88–352, 78 Stat. 241.

Gratz v. Bollinger. (2003). 539 U.S. 244.

Grutter v. Bollinger. (2003). 539 U.S. 306.

Regents of the University of California v. Bakke. (1978). 438 U.S. 265.

Sanders, S. R. (2003). Twenty-five years of a divided court and nation: "Conflicting" views of affirmative action and reverse discrimination. *University of Arkansas at Little Rock Law Review, 26*, 61–110.

Schwartz, D. S. (2000). The case of the vanishing protected class: Reflections on reverse discrimination, affirmative action, and racial balancing. *Wisconsin Law Review, 2000*, 657–689.

Affluent Youth

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Overview

Among developmental scientists there has been a growing awareness for the need to study the relationship between contextual factors and child adaptation. A substantial body of research exists documenting the association between child development and socioeconomic status. Within the academic literatures there is a general consensus that children growing up in poor

families tend to have worse physical and psychological health, greater frequency of behavioral problems, higher risk for drug and alcohol problems, and lower cognitive development and academic achievement than those who do not. Less, however, is known about youth at the opposite end of the socioeconomic spectrum: those who have grown up in affluent families. Whether, how and when wealth matters for child development has been largely an unexplored area of inquiry. Posited explanations for this research gap have included difficulties understanding and collecting data on wealth, as well as assumptions that affluent youth are a homogeneous group and at low risk for maladjustment. Over the last decade, a growing body of empirical research has begun to fill this gap, pointing to many similarities as well as important differences between the impoverished and their affluent counterparts.

Affluence: Definitional Issues

Affluence is a nebulous classification based upon a combination of socioeconomic factors and normative judgments, all of which can change over time and locale. Within both the theoretical and empirical literatures, operational definitions of wealth abound and have included both absolute standards (e.g., income, amount of property ownership/material goods, total assets, etc.), as well as relative comparisons. Affluence has been measured at the individual, household, community, and national levels, and several algorithms exist that combine variables. This range of definitions complicates cross-study comparisons and generalizations about affluent youth, with sample characteristics being indicative of affluence in one study and middle class status in another.

Affluence as a Context for Youth Development

Ecological Systems Theory has been a leading framework for understanding the lives of affluent youth. Developed by Urie Bronfenbrenner (1979), a pioneering developmental psychologist, the theory describes child development within the context of a complex and dynamic web of nested environmental systems. Across disciplines, discussions on affluence as a contextual variable have focused, to varying degrees, on aspects of Bronfenbrenner's five systems: the microsystem (family, peers, school, and neighborhood), the mesosystem (the interaction of microsystems), the exosystem (external environments), the macrosystem (broader culture, society's customs and values, including socioeconomic factors), and the chronosystem (socio-historical conditions). To date, the extent to which these systems impact youth outcomes, however, remains conflicting and difficult to disentangle. While some theoretical models have pointed to the positive effects of affluent parents and neighborhoods on youth development (Brooks-Gunn et al. 1993), others have argued that affluence is a contextual risk factor for maladaptation (Luthar 2003). Definitional and observational issues may explain these differing viewpoints, as well as the possibility that the relationship between affluence and positive youth outcomes may be nonlinear.

In 1946, renowned sociologist Max Weber introduced the concept of "life chances" as the degree to which a person has access to important societal resources. From a Weberian perspective, wealth affects a person's life chances. By impacting access to a host of valuable resources such as education, sociocultural opportunities, healthy food, housing, healthcare, and safe neighborhoods, wealth can create an environment that maximizes positive developmental outcomes. For example, affluence provides parents with opportunities to improve their children's lives, with dollars spent securing opportunities (e.g., private school education) that can pave the way to additional opportunities (e.g., acceptance into a prestigious university, access to high-powered social networks, etc.).

Others scholars have maintained that western society's overemphasis on wealth, possessions, appearances (social and physical), and fame compromises well-being. Laboring on a hedonic treadmill, theorists have argued that as a person amasses more wealth, expectations and desires rise in tandem. According to economist Staffan Linder, consumers in affluent countries can become single-minded in an attempt to increase the productivity of their non-work time to increase their wealth. The focus becomes one of relative deprivation, with the affluent perpetually assessing their value relative to others in their environment – colleagues at work, neighbors, and individuals in their social circle. In this scenario, the relatively affluent feel poor in comparison with the very wealthy. As financially successful parents focus their attention on career obligations and extrinsic goals, less time is then devoted to personal and familial relationships,

leisure time, spirituality, and community involvement. Expecting excessively high levels of achievement, both from themselves and their children, affluent parents may cultivate a family environment of perfectionism in which markers of their children's success include high grades, trophies, and admission to prestigious schools. According to this line of thinking, the dynamic interaction of family pressure, social comparisons, and emphasis on achievement places youth at risk for a host of psychological difficulties.

Merging both viewpoints, a curvilinear relationship may exist between wealth and positive youth outcomes. According to Csikszentmihalyi (1999), after a certain minimum threshold – which fluctuates with resource allocation in any given society – the benefits of affluence are irrelevant and possibly deleterious. Other variables may become potent in enhancing positive outcomes beyond this threshold such as establishing authentic relationships, achieving flow (a mental state in which a person is immersed in an activity and experiences a sense of energized focus, full involvement, and success in the process during which everyday concerns are typically ignored), etc. To date, empirical investigation of the effects of systems level variables on individual-level outcomes among affluent youth has been scant, and has mainly focused on Bronfenbrenner's microsystem. These data are reviewed below.

Adjustment Disturbances Among Affluent Youth: Empirical Findings

The work of Suniya S. Luthar, Professor of Psychology and Education at Columbia University, and her colleagues comprises the majority of the empirical studies available on affluent youth. Their work has resulted in studies spanning the past decade (1999–2009) with the majority of the data coming from three cohorts of secondary school students living in affluent communities (n = 880); (Luthar and Becker 2002; Luthar and D'Avanzo 1999; Luthar and Latendresse 2005), compared with two cohorts of inner-city students (n = 524); (Luthar and D'Avanzo; Luthar and Latendresse). These researchers have operationally defined "affluence" with community-level census income data; median family incomes for their affluent samples range from $74,898 to $125,381 and median family incomes for their inner-city comparison samples range from $27,388 to $34,658. Taken together, this body of literature has contributed to an improved understanding of externalizing behavior, internalizing behavior, and academic achievement among affluent youth, and the extent to which these outcomes may be related to both individual-level (e.g., youth gender) and parenting-related characteristics (e.g., closeness to parents). A brief description of findings within these domains is provided below.

Externalizing Behavior

Findings have generally been consistent indicating that rates of cigarette, alcohol, marijuana, and illicit drug use among high school samples of affluent youth are higher than rates reported nationally and by low-income youth in particular (e.g., Luthar and D'Avanzo 1999; Luthar and Goldstein 2008). In a longitudinal study of 289 affluent 10th graders tracked through 12th grade, McMahon and Luthar (2006) found that their substance use trends could be grouped into five typologies, very similar to those found in other investigations: (1) minimal to no use; (2) early onset of escalating use; (3) later onset of escalating use; (4) very early onset of persistently high use; (5) early onset then decreasing use. Incidence of delinquent behavior reported by affluent youth in Luthar and D'Avanzo's (1999) study were similar to rates of problem behaviors reported by low-income youth of the same age (Luthar and Ansary 2005). Urban youth tended to endorse behaviors such as physical fights and carrying weapons, while suburban youth endorsed higher levels of petty theft. Correlations between levels of delinquency and substance use have also been found (McMahon and Luthar 2006).

Internalizing Behavior

Anxiety and depression have been the most widely examined internalizing problems among affluent youth. Luthar and D'Avanzo (1999) documented levels of anxiety among 10th grade affluent youth that were significantly higher than their low-income counterparts and levels of depression that were marginally higher. McMahon and Luthar (2006) found links between both physiological anxiety (rather than social anxiety) and depression levels and substance use. Of the five substance use typologies derived by the investigators (see Externalizing Behavior), only the group of persistently high substance users approached clinical levels of depression. In contrast to these findings,

Luthar and Becker (2002) and Luthar and Latendresse (2005) found that clinical depression anxiety levels among affluent "preadolescents" (sixth graders) were similar to or lower than levels in normative samples, and also lower than their low-income counterparts. By seventh grade, however, internalizing problems were quite evident among the affluent, especially among girls (see Gender Differences).

Academic Achievement

Willie's (2001) study of the effect of socioeconomic context of the school community on standardized achievement test scores among elementary and middle school students found a gradual increase in achievement test scores corresponding to increases in the average income of their families, regardless of race. The author reports that students in affluent-concentrated schools scored an average of 27 (Black students) and 20 (White students) points higher than their low-income counterparts. Cross-sectional studies have found that grades are negatively correlated with substance use and positively correlated with academic motivation, within both low-income and affluent groups (e.g., Luthar and D'Avanzo 1999; Luthar and Ansary 2005). McMahon and Luthar's (2006) longitudinal study further specified that declines in academic performance occurred *prior* to escalation of substance use among affluent high school students specifically (they did not include a low-income comparison); moreover, marijuana users and "multi-problem" youth (those who engage in multiple problem behaviors such as substance use, delinquency, and school disengagement) exhibited the worst academic outcomes in Ansary and Luthar's (2009) 3-year investigation of affluent high school students.

Parenting

Researchers have more recently begun to explore the relationships between parenting-related factors and youth outcomes among the affluent. Parenting factors that have received empirical attention include parental containment (youths' belief that deviant behavior will elicit disciplinary consequences from parents), parental monitoring, parental commitment, closeness to parents, parental criticism, dinner with parents, parental expectations, and parental emphasis on personal character versus achievements.

Findings suggest that affluent youth perceive fewer repercussions for substance use compared to rudeness to others, delinquent behavior, or academic disengagement. Further, the perception of a more relaxed parental attitude toward substance use was strongly predictive of greater levels of actual use, particularly the use of alcohol (Luthar and Goldstein 2008).

Affluent and low-income youth appeared to be very similar in average levels of closeness to parents (mothers in particular) and regularity of eating dinner with at least one parent. Furthermore, lack of after-school supervision was linked with externalizing problems in both samples and dinner with parents was related to maladjustment and school performance (Luthar and Latendresse 2005). Although both affluent and low-income youth reported comparable levels of parent values that emphasize integrity, affluent youth interpreted this as implying valuation of "getting ahead" and achievement while low-income youths' interpretation focused on the closeness of the parent–child relationships.

Parental criticism and after-school supervision have emerged as important variables to consider in the adjustment of affluent youth. Although Luthar and Latendresse (2005) found that low-income youth reported more parental criticism than affluent youth and the result of parents' criticism may differ by income groups. Preliminary evidence suggests, for example, that increased rates of nonsuicidal self-injury in affluent youth compared with a community sample (a mix of lower-middle class and upper-middle class students) appeared to be predicted by parental criticism (Yates et al. 2008). Relationships between parental criticism and internalizing symptoms and grades have also been found among affluent youth (Luthar et al. 2006). Further, lack of after-school supervision appears to be related to indices of maladjustment for affluent youth (Luthar and Latendresse 2005; Luthar et al. 2006). Several gender differences have emerged with regard to parental factors; please refer to the Gender Differences section for additional information.

Peers

Another aspect of the youth's microsystem included in empirical studies relates to peer relationships. Becker and Luthar (2007) examined affluent and low-income youth's rebelliousness, problem behaviors (physical aggression, academic disengagement, delinquency and substance use), academic application (effort at school/good grades), and physical attributes (attractiveness/athletic ability) as predictors of peer regard and

social preference. All youth, regardless of income group, positively regarded classmates who showed pro-social positive traits, but also admired some physical aggression. Both groups also showed admiration for substance abusing boys (though not a social preference), strong admiration for academic application (more so than grades), and admiration and social preference for physical attractiveness (affluent girls in particular), and athletic ability (affluent boys in particular). In Luthar and Becker's (2002) study, substance use was related to peer ratings of their popularity (only for seventh grade boys) and popularity also showed modest correlations with delinquent behavior.

Gender Differences

Many of the empirical studies report gender differences across a variety of outcomes. For example, affluent girls reported using cigarettes and marijuana at nearly twice the normative rate while affluent boys' rule-breaking behavior was three to four times national norms (Luthar and Goldstein 2008) and many studies have reported that affluent girls experience high levels of depression (see Ansary and Luthar 2009; Luthar and D'Avanzo 1999; Luthar and Becker 2002).

Affluent boys and girls also exhibit differential behavioral reactions to perceived parenting. Girls reported higher anticipated consequences from parents for misbehavior overall than did boys, particularly for rudeness and delinquency. Boys reported an expectation of more serious parent consequences for academic problems than for unkindness (Luthar and Goldstein 2008). While closeness to parents, particularly mothers, was found to be an important factor in girls' and boys' substance use and boys' delinquency levels; girls' closeness to fathers, not mothers, was related to academic grades. Also predictive of academic grades was problem-behavior for boys and absenteeism for girls (Luthar and Becker 2002).

Gender differences in affluent youth's reactions to peer relationships have also been documented. For example, significant links have been found between boys' substance use and peer ratings of their popularity and between peer regard/social preference and athletic ability (Luthar and D'Avanzo 1999; Luthar and Becker 2002; Becker and Luthar 2007); for girls, peer regard/social preference were strongly linked to physical attractiveness (Becker and Luthar 2007).

Neighborhood Wealth and Positive Outcomes

The work of Luthar and her colleagues has begun to shed light on how family affluence may put youth at risk for psychological difficulties; alternatively, there has been much less empirical work examining how access to resources may be of benefit to youth in affluent families. Brooks-Gunn and her colleagues have studied neighborhood-level characteristics on youth outcomes, finding that youth residing in neighborhoods with higher income families relates to preschoolers' higher verbal ability, higher childhood IQ, fewer teenage births, less dropping out of high school, and fewer behavior problems, even after controlling for family-level SES. Overall, some studies suggest that neighborhood affluence may be a protective factor for youth across the socioeconomic spectrum (e.g., Brooks-Gunn et al. 1993). In line with the suggestion that a curvilinear relationship exists between wealth and youth outcomes (e.g., Csikszentmihalyi 1999), Carpiano et al. (2009) found that increasing concentrations of affluence were related to better developmental outcomes for kindergarten children in neighborhoods characterized by more socioeconomic *heterogeneity*; scores were lower at the opposite ends of the continuum (i.e., neighborhoods with higher proportions of wealthy families or higher proportions of disadvantaged families). The implications of the Carpiano et al. (2009) study for older children remain uncertain.

Conclusions and Future Directions

Affluence is a complex, socially constructed concept. To date, theory and research on affluent youth have been limited and have mostly focused on the relationship between affluence and a limited set of youth outcomes. With the notable exceptions of studies conducted on neighborhood wealth, much of the empirical data on affluent youth has come from the samples recruited by a very small group of scholars. In most of these studies, "affluence" of individual study participants was approximated based on community-level census data rather than collected directly from the participants themselves. The empirical data would be strengthened by more precise operational definitions and measurement of affluence that accounts for income level, as well as other factors that are likely to be important in defining wealth (amount of property ownership/

material goods, total assets, number of wage earners in the family, education level, profession, etc.). To enhance the breadth and depth of the understanding of this group of young people cross-disciplinary, multi-method, longitudinal studies that simultaneously investigate multiple levels of Bronfenbrenner's model are needed. Such studies have the potential to reveal the multifaceted aspects of affluent youths' lives over socio-historical context and developmental period.

Cross-References

► SES
► Underclass

References

Ansary, N., & Luthar, S. (2009). Distress and academic achievement among adolescents of affluence: A study of externalizing and internalizing problem behaviors and school performance. *Development and Psychopathology, 21*, 319–341.

Becker, B., & Luthar, S. (2007). Peer-perceived admiration and social preference: Contextual correlates of positive peer regard among suburban and urban adolescents. *Journal of Research on Adolescence, 17*, 117–144.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Cambridge: Harvard University Press.

Brooks-Gunn, J., Duncan, G., Klebanov, P., & Sealand, N. (1993). Do neighborhoods influence child and adolescent development? *The American Journal of Sociology, 99*(2), 353–395.

Carpiano, R., Lloyd, J., & Hertzman, C. (2009). Concentrated affluence, concentrated disadvantage, and children's readiness for school: A population-based, multi-level investigation. *Social Science & Medicine, 69*(3), 420–432.

Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *The American Psychologist, 54*, 821–827.

Luthar, S. (2003). The culture of affluence: Psychological costs of material wealth. *Child Development, 74*(6), 1581–1593.

Luthar, S., & Ansary, N. (2005). Dimensions of adolescent rebellion: Risks for academic failure among high- and low-income youth. *Development and Psychopathology, 17*, 231–250.

Luthar, S., & Becker, B. E. (2002). Privileged but pressured? A study of affluent youth. *Child Development, 73*(5), 1593–1610.

Luthar, S., & D'Avanzo, K. (1999). Contextual factors in substance use: A study of suburban and inner-city adolescents. *Development and Psychopathology, 11*(4), 845–867.

Luthar, S., & Goldstein, A. (2008). Substance use and related behaviors among suburban late adolescents: The importance of perceived parent containment. *Development and Psychopathology, 20*, 591–614.

Luthar, S., & Latendresse, S. (2005). Comparable "risks" at the socioeconomic status extremes: Preadolescents' perceptions of parenting. *Development and Psychopathology, 17*(1), 207–230.

Luthar, S., Shoum, K., & Brown, P. (2006). Extracurricular involvement among affluent youth: A scapegoat for "ubiquitous achievement pressures"? *Developmental Psychology, 42*(3), 583–597.

McMahon, T., & Luthar, S. (2006). Substance use, emotional distress, delinquent behavior, and social competence: A longitudinal study of affluent, suburban high school students. *Journal of Clinical Child and Adolescent Psychology, 35*, 72–89.

Willie, C. (2001). The contextual effects of socioeconomic status on student achievement test scores by race. *Urban Education, 36*, 461–478.

Yates, T., Tracy, A., & Luthar, S. (2008). Nonsuicidal self-injury among "privileged" youths: Longitudinal and cross-sectional approaches to developmental process. *Journal of Consulting and Clinical Psychology, 76*(1), 52–62.

Age of Consent, Majority, and License

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Adolescents occupy a unique place in law. Typically defined as persons between the ages of 14 and 18, adolescents have traditionally been regarded as "minors" by law. Minors, as a group, are legally disabled. This disability means that they are presumed to lack the necessary skills for capable decision making and presumed to benefit from adults' guidance and protection. Adult-like decision making skills generally are necessary for exercising legal rights. As a result, the law regulates the decision making liberties of minors far more extensively than those of adults. This regulation results in a hodgepodge of laws that are based on different perceptions of adolescents' capacities for making different decisions, the state's interests in allowing them to make those decisions, and the general need to respect the rights of parents to direct their children's upbringing.

Depending on their age, and sometimes other factors, adolescents typically are not yet considered adults nor are they no longer children. For example, the law sometimes treats adolescents as children in instances that they are protected by not being able to receive the death penalty, vote, purchase alcohol, or sign binding contracts. Similarly, adolescents typically cannot marry, join the military, or have surgery without parental consent. Yet, the law sometimes does not distinguish them from adults as it allows them to consent to certain

types of healthcare, be sexually active, purchase contraceptives, and drive vehicles. The legal system also has developed institutions that also take different approaches to adolescents. Some institutions typically treat adolescents as children in need of special supervision and thus less able to control their own rights, such as when they are in schools and seek to express themselves (see Levesque 2002). Some other institutions treat them like children in some instances and adults in others. For example, the justice system can treat some adolescents as juveniles in need of special protections while the system can treat other adolescents as adults without concern for protecting them differently than they would someone who was a hardened, adult criminal (Levesque 2000). Adolescents occupy a liminal and often conflicting position in law.

Understanding adolescents' place in law requires an understanding of their legal ability to exercise their rights. In this regard, some legal concepts are important to distinguish: age of consent, age of majority, and age of license as well as general exceptions to them. Although these ways to mark the end of adolescence are often related, they help highlight the complexities and sometimes conflicting ways that the law deems minors as capable of exercising their own rights.

Age of consent denotes the age at which a minor is deemed mature enough to consent to a specified act. Examples of the age of consent include whether the adolescent can engage in sexual intercourse, make a contract, receive medical treatment, or join the military. If adolescents fall below a prescribed age, the law assumes that they are deemed incapable of fully understanding the consequences of their actions and so are unable to consent. Age of consent may be the same or different from the age of majority.

The age of majority typically denotes the age at which parents are no longer legally responsible for their children. The age of legal majority, that is, of presumed independence, has long been 18, rising to 21 for riskier activities such as the consumption of alcohol. Even that age, however, can vary. Numerous exceptions can be made to this general rule, such as when adolescents are emancipated from parents. These exceptions can be of considerable significance as they can provide adolescents with rights equal to those of adults and remove protections that they would otherwise retain as minors.

The third legal concept, age of license, actually has not been much recognized as a way to demark age but still certainly is of significance. The age of license is the age at which states give someone legal permission to do something. Examples include the right to work, drive, vote, get married, smoke, and drink alcohol. The age of license can be either lower or higher than the age of majority. In addition, the legal age of license may or may not relate to the ability to consent to the extent that a general rule can be made to assume that most adolescents, once they have reached a certain age, are presumed competent to make decisions relating to the specified actions. For example, some states permit marriage below the age of 18 for some youth while other states place it at 18. Similarly, states do vary the ages at which youth can earn a driver's permit or the conditions under which they can drive. Lastly, over the past few decades, states have increased the age at which individuals can purchase alcohol, raising it from 18 to 21, while states have reduced the required age to vote, from 21 to 18.

The three general ways that adolescents' age can matter lead to considerable variation, and that variation can be even more pronounced in that there is considerable variation within any of the three ways that age marks the rights of adolescents. Laws vary considerably in the power they give adolescents to exercise their rights. Some states, for example, permit adolescents to engage in sexual activity at the age of 12, but they limit the age of their partners and the types of sexual acts that they may engage in; other states simply prohibit sexual activity until the age of 18 (see Levesque 2000). Some states permit sexual activity and the right to obtain medical testing but not necessarily the right to medical treatment without parental consent. Perhaps the most conflicting laws are those dealing with juvenile offenders; these laws sometimes require some adolescents to be treated as adults while some can be treated as minors in need of special protection while still others can be treated as either depending on a prosecutor or judge's discretion (Levesque 2000).

The wide variation in laws becomes further varied in the manner that important exceptions have been developed to counter inadequacies of general rules. The most important exception, and one that has garnered much controversy, involves the mature minor doctrine. That doctrine applies, for example, to sometimes limit parents' right to consent to the medical treatment for their minor children. In some states, minors of a certain age have the right to give or

withhold consent to some forms of treatments, such as medications or medical procedures. This principle is known as the Mature Minor Doctrine. That doctrine, a relatively recent development in the area of a minors' right to consent to medical treatment, applies in different situations where the service a minor seeks is quite important and the parents' interest, while still important, can give way to the rights of minors to exercise the rights needed to obtain the service. For example, the doctrine permits minors to give legal consent in a situation where their parents would be abusive or neglectful and their involvement would be detrimental to their well-being. Note that the mature minor rule may require adolescents to seek judicial intervention, a process typically known as a judicial bypass (Bellotti v. Baird 1979). Permitting this type of exception is deemed important to protect the rights of parents, in case their child is not mature enough to make decisions on its own, and it protects the minor in that they could be deemed capable to make important decisions on their own if they could demonstrate sufficient maturity. The mature minor exception challenges the firmly rooted belief that minors universally lack the capacity to make decisions and it also challenges the firmly rooted parental right to raise their children as they see fit (see Levesque 2000).

Cross-References

► Emancipation
► Mature Minor Doctrine

References

Bellotti v. Baird (1979). 443 U.S. 622.

Levesque, R. J. R. (2000). *Adolescents, sex, and the law: Preparing adolescents for responsible citizenship.* Washington, DC: American Psychological Association.

Levesque, R. J. R. (2002). *Dangerous adolescents, model adolescents: Shaping the role and promise of education.* NY: Plenum/Kluwer.

Agency

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Although the term agency can have different meanings, developmental sciences tend to focus on agency in the contexts of people's actions. From this perspective, agency refers to acts that are done with intentionality, to individuals who are producers and shapers of their experiences and circumstances. A sense of agency is a sense that one can be more than reactive to one's environment, having a sense of agency means that one can be generative, creative, proactive, and reflective. Bandura (2000, 2001) has advanced arguably the most influential perspective of agency in the psychological sciences.

Bandura (2001) proposed that agency consists of several key factors. It involves intentionality, the ability to represent a course of action to be performed, to make plans of action. Agency also involves forethought, which is the ability to represent expected outcomes and to make plan accordingly. In addition, agency involves self-reactivity, which is the ability for self-regulation by acting deliberately to ensure that plans that were conceived can be achieved. Lastly, it also involves self-reflectiveness, which is the ability to reflect upon oneself and the adequacy of thoughts and actions. Self-reflectiveness is key to self-efficacy, the extent to which individuals deem themselves capable of exercising some measure of control over their own functioning and over environmental events. While much research focuses on agency in terms of, for example, moral or sexual agency, much of it has been done under the construct of self-efficacy (see Holden et al. 1990).

References

Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science, 9*, 75–78.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26. Links.

Holden, G. W., Moncher, M. S., Schinke, S. P., & Barker, K. M. (1990). Self-efficacy of children and adolescents: A meta-analysis. *Psychological Reports, 66*, 1044–1046.

Aggression

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Aggression traditionally has been viewed as behavior that has the intention of inflicting physical damage on another. Researchers have recognized several types of

aggression, with the two most common being reactive (impulsive) and instrumental (proactive or controlled) aggression. Reactive aggression occurs as a response to an aversive stimulus, such as a deliberate provocation. Instrumental aggression is goal oriented; it is aimed to achieve a reward, such as financial gain (see Vitaro and Brendgen 2005). Researchers now increasingly examine less overt aggression, such as relational aggression aimed at damaging peers' relationships or reputations (e.g., Crick and Grotpeter 1995). Still, the major thrust of research remains on understanding the nature of reactive and proactive aggression (see Hubbard et al. 2010).

Cross-References

- ► Externalizing and Internalizing Symptoms
- ► Proactive and Reactive Aggression
- ► Trajectories of Aggressive-Disruptive Behavior

References

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710–722.

Hubbard, J. A., McAuliffe, M. D., Morrow, M. T., & Romano, L. J. (2010). Reactive and proactive aggression in childhood and adolescence: Precursors, outcomes, processes, experiences, and measurement. *Journal of Personality, 78*, 95–118.

Vitaro, F., & Brendgen, M. (2005). Proactive and reactive aggression: A developmental perspective. In R. E. Tremblay, W. M. Hartup, & J. Archer (Eds.), *The developmental origins of aggression* (pp. 178–201). New York: Guilford.

Agreeableness

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Agreeableness refers to a tendency to be compassionate, generous, cooperative, and empathetic in social situations rather than suspicious or antagonistic. Rather than being Machiavellian and overly concerned about one's own self-interests, people who score highly on agreeableness traits tend to place more trust in others and have a much more positive view of human nature. Given its potential importance to the study of social relationships, agreeableness has received increasing attention. Indeed, it has long been proposed as one of the five basic dimensions of personality, with the others including conscientiousness, openness, extraversion, and neuroticism (see McCrae and Costa 1987, 1997). As with other personality traits, agreeableness is thought to be relatively stable across development, as one of the most enduring personality dimensions (Roberts and DelVecchio 2000), but not with some changes, as agreeableness has shown to increase as people age (see Branje et al. 2007). Given that it has been viewed as a personality disposition, much of the research on the topic comes from personality research and social development.

Research has examined well the numerous links among agreeableness, personality development, and social relationships. Agreeableness appears to emerge developmentally from temperamental self-regulative systems, particularly effortful control (see Rothbart and Bates 1998). Normal development of effortful control leads to agreeableness that serves to regulate frustrations when dealing with social situations, with agreeableness directly relating to the ability to control anger (Ahadi and Rothbart 1994). This ability to control anger helps to explain a well-noted, negative relationship between agreeableness and adolescent antisocial behavior and delinquency (see Robins et al. 1994). Adolescents who are agreeable are more willing to suspend individual interests, control their negative affect and frustration that would emerge from interactions with others, and respond to conflict more constructively (see Jensen-Campbell et al. 2002). Disagreeable youth are not necessarily known to be aggressive or violent; instead, they are likely to be viewed as self-centered, manipulative, disputatious, stubborn, and sometimes prone to negative outbursts of emotionality (Asendorpf and Wilpers 1998). Disagreeableness appears as increasingly significant during adolescence when relationships during this period begin to be dominated by voluntary affiliations and difficulties with mutual exchanges challenge the ability to establish and maintain friendships and gain acceptance by peers.

In addition to being linked to less antisocial behavior, agreeableness links to a higher likelihood of prosocial behavior and more positive social relationships. Although it could be argued that agreeable youth would be agreeable and go along with peer behaviors that are problematic, research indicates otherwise. Prosocial youth readily understand the consequences

that their behavior may have on others and, as a result, are more likely to disapprove of inappropriate or aggressive conduct and, consequently, act more prosocially (see Nelson and Crick 1999). Other research on agreeableness as a dimension of personality and peer relationships reveals how agreeableness contributes to positive relationships. Agreeable peers receive higher levels of peer acceptance and have more mutual friends; and more agreeable youth are less likely to be victimized over time, as they appear able to deflect aggression by communicating to others that they are liked (see Jensen-Campbell et al. 2002). Given that victimization can lead to so many negative outcomes and poor adjustment (see Hanish and Guerra 2002), and that agreeableness can reduce victimization, this line of research alone underscores the potentially deep link between agreeableness and mental health.

Although research examining the place of agreeableness on mental health outcomes is scarce compared to studies of other personality dispositions, research that does exist reveals links between agreeableness and greater subjective well-being (Steel et al. 2008) and reduced risk for clinical symptoms, especially suicide attempts (Brezo et al. 2006) and externalizing problems (Malouff et al. 2005). One 25-year longitudinal study found, for example, that the consequences for being disagreeable during childhood and adolescence are profound; once disagreeable youth reach middle-age they present multiple problems when compared to the more agreeable members of their cohort, with those negative outcomes including elevated levels of alcoholism, criminality, depression, and career instability (Laursen et al. 2002). Adolescents who fail to navigate their social world in a way that allows them to get along well with others place themselves at higher risk of emotional, behavioral, social, and host of other problems.

References

Ahadi, S. A., & Rothbart, M. K. (1994). Temperament, development, and the Big Five. In C. F. Halverson Jr., G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 189–207). Hillsdale: Erlbaum.

Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology, 74*, 1531–1544.

Branje, S. J. T., Van Lieshout, C. F. M., & Gerris, J. R. M. (2007). Big Five personality development in adolescence and adulthood. *European Journal of Personality, 21*, 45–62.

Brezo, J., Paris, J., & Turecki, G. (2006). Personality traits as correlates of suicidal ideation, suicide attempts, and suicide completions: A systematic review. *Acta Psychiatrica Scandinavica, 113*, 180–206.

Hanish, L. D., & Guerra, N. G. (2002). A longitudinal analysis of patterns of adjustment following peer victimization. *Development and Psychopathology, 14*, 69–89.

Jensen-Campbell, L. A., Adams, R., Perry, D. G., Workman, K. A., Furdella, J., & Egan, S. K. (2002). Agreeableness, extraversion, and peer relations in early adolescence: Winning friends and deflecting aggression. *Journal of Research in Personality, 36*, 224–251.

Laursen, B., Pulkkinen, L., & Adams, R. (2002). The antecedents and correlates of agreeableness in adulthood. *Developmental Psychology, 38*, 591–603.

Malouff, J. M., Thorsteinsson, E. B., & Schutte, N. S. (2005). The relationship between the five-factor model of personality and symptoms of clinical disorders: A meta-analysis. *Journal of Psychopathology and Behavioral Assessment, 27*, 101–114.

McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52*, 81–90.

McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *The American Psychologist, 52*, 509–516.

Nelson, D. A., & Crick, N. R. (1999). Rose-colored glasses: Examining the social information-processing of prosocial young adolescents. *Journal of Early Adolescence, 19*, 17–38.

Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin, 126*, 3–25.

Robins, W. R., John, O. P., & Caspi, A. (1994). Major dimensions of personality in early adolescence: The Big Five and beyond. In C. F. Halverson, G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood* (pp. 267–291). Hillsdale: Erlbaum.

Rothbart, M. K., & Bates, J. (1998). Temperament. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology* (Social, emotional and personality development 5th ed., Vol. 3, pp. 105–176). New York: Wiley.

Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin, 134*, 138–161.

Aid to Families with Dependent Children

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Aid to Families with Dependent Children ("AFDC") was a federal assistance program tied to the Social

Security Act of 1935 (1935). AFDC emerged from the Aid to Dependent Children ("ADC") program that was part of the original 1935 social security legislation that served as the cornerstone of the "New Deal." Like AFDC, ADC was administered by the United States Department of Health and Human Services and made federal matching funds available to states that created programs to aid children with a dead, disabled, or absent parent. In 1968, the ADC program was renamed AFDC, with the words "families with" added partly because of concern that the ADC program had discouraged marriage. AFDC eventually became the major program that provided financial assistance to children whose families had low or no income (see Office of Human Services Policy 2010). Although ADC had been a minor part of federal social security legislation, the program became more prominent and more controversial as it became AFDC and became the major and highly expensive antipoverty program. As the AFDC program expanded and national politics shifted, Congress searched for ways to contain or reduce costs. Although Congress engaged in extensive modifications in the 1980s, it was in 1996 that a major shift occurred and essentially resulted in the abolishment of the program.

One of the important points about AFDC is what it eventually became. The program was dramatically remade as it became assimilated into the *Personal Responsibility and Work Opportunity Act* (PRWOA) (1996). The new legislation drastically changed the nature of federal programs aimed to provide for poor children and their families. Among other notable changes, the new legislation imposed a lifetime limit of 5 years for the receipt of benefits; it also increased work participation rate requirements that states needed to meet in order to receive federal assistance to pay for their antipoverty programs. The focus on the limited nature of the replacement program was reinforced by calling AFDC's successor Temporary Assistance for Needy Families ("TANF"). Despite these dramatic shifts, many continue to refer to TANF as "welfare" or AFDC.

PRWOA sought to end the dependence of needy parents on governmental benefits by promoting job preparedness, work, marriage, and several measures aimed at controlling the behaviors of recipients (Smith 2007). The law focused on fostering a stable home environment through marriage and paternal involvement. This thrust came from studies indicating that married households were less likely to fall into distress or poverty. It was hoped that encouraging current welfare recipients to form stable home lives would hasten their transition off the welfare rolls into work, and also would prevent future generations from what many describe as a cycle of welfare dependency. To achieve this end, for example, the law granted states funding to promote marriage education and relationship counseling for men and women, as well as funding for state programs promoting responsible fatherhood. The marriage initiatives became increasingly popular in the early 2000s and continue in popularity, especially in the form of premarital programs (Fawcett et al. 2010).

As expected from massive legislative reforms addressing intractable issues, the reforms have won praise as well as intense criticism. In terms of praise, the reforms have accomplished their goal of reducing direct dependence on governments. The composition of welfare recipients has changed, with a tremendous drop from 12.2 million recipients in 1996 to 4.5 million in 2006, and with the number of families dropping by over 50% (Goldin 2007). Still, critics argue that the reforms focused on those physically and mentally competent to seek employment and failed to provide sufficient funding for adequate child care services so that parents could comply with work requirements (Goldin 2007). Perhaps the strongest criticisms have come from concern about the focus on marriage and continued discrimination, especially against minority women (Smith 2007) as well as the use of control measures and enlistment of the welfare system to control behaviors (like drug use or possession) that historically were in the province of the criminal justice system (see Gustafson 2009).

Cross-References

► Family Poverty, Stress, and Coping

References

Fawcett, E. B., Hawkins, A. J., Blanchard, V. L., & Carroll, J. S. (2010). Do premarital education programs really work? A meta-analytic study. *Family Relations, 59*, 232–239.

Goldin, L. R. (2007). The safety net revisited? The continuing impact of welfare reform in New York city and nationwide. *Cardozo Journal of Law & Gender, 14*, 97–124.

Gustafson, K. (2009). The criminalization of poverty. *Journal of Criminal Law & Criminology, 99*, 643–716.

Office of human services policy (2010). Aid to families with dependent children and temporary aid for need families. U.S. Department of Health & Human Services http://aspe.hhs.gov/HSP/abbrev/afdc-tanf.htm (Accessed 12 January 2010).

Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). (1996). Pub. L. No. 104–193, 110 Stat. 2105.

Smith, A. M. (2007). *Welfare reform and sexual regulation.* Cambridge, MA: Cambridge University Press.

Social Security Act of 1935. (1935). Pub. L. No. 271, tit. IV, 49 Stat. 620.

Alcohol Use

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Overview

While alcohol use is normative among adults and is the most commonly used drug among adolescents, adolescent alcohol use is associated with multiple social, behavioral, and developmental problems (Grant and Dawson 1997), which can persist into adulthood. Use of alcohol during adolescence can also affect brain development, impacting emotional regulation and motivation, during a critical time when abstract thinking and reasoning become possible (Zucker 2006). The factors that put adolescents at risk for alcohol use are multilevel and encompass the home, peer, school, social, and physical environment as well as personal beliefs, attitudes, and behaviors. Several interventions have been developed to prevent or reduce alcohol use; however, alcohol use remains a prevalent behavior among adolescents.

Prevalence of Alcohol Use

Although the rate of alcohol use has declined somewhat since 1999 (Centers for Disease Control and Prevention [CDC] 2004; Johnston et al. 2005), alcohol use among adolescents continues to be prevalent. In 2008, 10.1 million or 26.4% of youth aged 12–20 reported using alcohol in the last month and 6.6 million (17.4%) reported binge drinking (Substance Abuse and Mental Health Services Administration 2009). In 2008, alcohol use initiation, defined as having first used alcohol in the past year, was reported by 4.5 million youth and adults (Substance Abuse and Mental Health Services Administration 2009). Almost 85% (3.8 million) of the 4.5 million new alcohol initiates in 2008 were younger than the legal age of 21 years old at the time of initiation (Substance Abuse and Mental Health Services Administration 2009).

Alcohol use begins early, with 23.8% of ninth graders reporting drinking more than a few sips of alcohol before the age of 13 (Eaton et al. 2008) and 3.4% of 12–13-year-olds currently using alcohol (Substance abuse and Mental Health Services Administration 2009). By the ages of 14–15, the percentage of youth who are currently using alcohol almost quadruples to 13.1% (Substance Abuse and Mental Health Services Administration 2009). Among adolescents in the eighth grade, 38.9% report ever using alcohol and 18% have ever been drunk (Johnston et al. 2009). Alcohol use in the last month is also prevalent with 15.9% of eighth graders reporting current alcohol use and 5.4% reporting they had been drunk at least once in the past 30 days (Johnston et al. 2009). Moreover, the prevalence of alcohol use only increases as adolescents get older. By 12th grade, 71.9% of adolescents reported they had used alcohol and 54.7% had ever been drunk (Johnston et al. 2009). In addition, alcohol use in the past 30 days was reported by 43.1% of 12th graders and 27.6% reported having been drunk at least once during that time (Johnston et al. 2009).

Excessive alcohol use among adolescents is also a widespread problem. The Monitoring the Future Study found that in the 2 weeks prior to the survey 8.1% of eighth graders reported having five or more drinks in a row (Johnston et al. 2009) . For 12th graders, this percentage more than tripled, rising to 24.6% (Johnston et al. 2009). Among students who reported drinking alcohol in their lifetime, 4.2% of 8th graders and 20.5% of 12th graders drank on 40 or more occasions (Johnston et al. 2009). In addition, of all 12th graders surveyed, 8% drank 40 or more times in the last year and 10.3% had been drunk 40 or more times (Johnston et al. 2009). Attitudes toward binge drinking have also been changing from 1991 to 2003 such that a smaller percentage of students consider regular or binge drinking to be a great risk and a smaller percentage disapprove of others who regularly drink alcohol or binge drink (Newes-Adeyi et al. 2005).

Adolescent alcohol use occurs across all segments of the adolescent population. However, alcohol use rates

do vary by race/ethnicity and gender. Alcohol use by age 13 is most common among Hispanics (29%), then Blacks (26.7%), then Whites (21.5%) (Eaton et al. 2008). Across 9th through 12th graders, 77.9% of Hispanic adolescents, 76.1% of White adolescents, and 69.1% of Black adolescents will have had at least one drink of alcohol in their lifetime. Lifetime alcohol use is similar among females and males in 12th grade (72.3%, 71.7% respectively), while in 8th grade, prevalence of lifetime alcohol use is slighter greater among females (39.9%) than males (37.8%) (Johnston et al. 2009). Past year alcohol use is more common among 8th grade females (33.6%) than males (30.7%); however, in 12th grade rates are again similar (65.5%, 65.6 respectively) (Johnston et al. 2009). Alcohol use before age 13, however, is more common among males with 27.4% of males and 20.0% of females reporting use before 13 (Eaton et al. 2008). Rates of heavy drinking among males and females show a similar pattern with more males reporting heavy drinking than females (10th grade: 25.5% vs. 21.8%; 12th grade: 40.4% vs. 32.8%) (Eaton et al. 2008).

Alcohol use among adolescents is prevalent even among youth as young as 13 years. By the time adolescents reach age 18, almost 75% will have tried alcohol in their lifetime and almost half will have used alcohol in the past month. Rates of alcohol use vary by ethnicity with Hispanic youth using the most alcohol at the youngest ages and White youth using the most alcohol at the end of adolescence. Boys begin using alcohol earlier than girls, but girls quickly catch up and even surpass the boys by eighth grade. By 12th grade, however, alcohol use rates among boys and girls are similar.

Consequences of Alcohol Use

Short-Term Consequences

Alcohol has been found to be a "gateway drug," a drug that can lead to the initiation of other substance use, including tobacco, marijuana, and other illicit drugs (Kandel 2002; O'Malley et al. 1998). Adolescents who drink in early adolescence may be more likely to begin smoking (Jackson et al. 2002) and use marijuana or other illicit drugs (Wilson et al. 2002) in middle adolescence than adolescents who do not drink alcohol in early adolescence. Additionally, alcohol use has been found to cluster with other health risk behaviors such as unhealthy weight control practices (Jackson et al. 2002; Petridou et al. 1997) and risky sexual behavior (Bonomo et al. 2001; Halpern-Felsher et al. 1996; The Henry Kaiser Family Foundation 2002). In a review of several studies that addressed alcohol use and risky sexual behavior, Halpern-Felsher et al. (1996), found that high-risk sexual activity was more likely to result after using alcohol. In another study, 36% of youth 15–24 who reported engaging in risky sexual behaviors indicated that alcohol or drug use had influenced their decisions regarding sex (The Henry Kaiser Family Foundation 2002). In the 2007 Youth Risk Behavior Surveillance Survey (YRBSS), 22.5% of sexually active 9th–12th grade students reported having used alcohol or drugs before their last sexual intercourse (Eaton et al. 2008). Alcohol-related fatalities are another serious consequence of alcohol use in adolescence. In 2006, 25% of underage drivers who were killed in car crashes were intoxicated (National Highway Transportation and Safety Administration 2010). The YRBSS found that 29.1% of 9th–12th graders had ridden with a driver who had been drinking alcohol and 10.7% had driven after drinking (Eaton et al. 2008).

Adolescents of ages 12–17, who reported heavy alcohol use (defined as drinking five or more drinks in a row at least 5 days in the past month) were the most likely to have a serious fight at work or school, take part in a group fight, attack someone with the intent to seriously hurt them, steal or try to steal something worth more than $50, sell illegal drugs, and carry a handgun in the past year compared to any other level of drinking (Substance Abuse and Mental Health Services Administration 2005). In addition to violent and deviant behavior, adolescents who use alcohol are also more likely to be depressed than adolescents who do not use alcohol. In a study by Windle and Davies (1999), between 24% and 27% of adolescents who were identified as depressed met the criteria for heavy drinking and between 23% and 27% identified as heavy drinkers also met the criteria for depression. Among those identified as depressed 33–37% of boys also met the criteria for heavy drinking whereas only 16–18.5% of depressed girls met the criteria (Windle and Davies 1999). Suicide is also more common among those who use alcohol (Substance Abuse and Mental Health Services Administration 2002). Adolescents of ages 12–17 who reported any alcohol use in the past year were more than two times more likely than adolescents who did

not report any alcohol use to be at risk for suicide (thought about or tried to kill themselves) in the past year (Substance Abuse and Mental Health Services Administration 2002). Additionally, adolescents who had their first drink of alcohol before age 13 were more likely to have reduced life satisfaction than those who had their first drink of alcohol after 13 (Zullig et al. 2001). Excessive alcohol use in adolescence has also been associated with altered, delayed, or disrupted developmental tasks such as cognitive maturation, moral development, social competence, and school performance (Brody et al. 1998).

Long-Term Consequences

Early onset of drinking has been found to be a strong predictor of lifetime drinking and the development of alcohol use disorders and alcohol problems (Grant 1998). A younger age of first alcohol use has been related to a greater level of alcohol misuse in later adolescence (Hawkins et al. 1997). In addition, the earlier a person uses alcohol, the intensity of alcohol use, and the frequency of heavy drinking all contribute to later problems with alcohol use and dependence (Guo et al. 2000, 2001). Adolescents who began drinking before age 14 have been found to be more likely to ever experience alcohol dependence and to experience alcohol dependence within 10 years of first drinking (Hingson et al. 2006). Early adolescent alcohol initiation is also associated with an increased adulthood risk of drinking and driving, being in a car crash due to drinking (Hingson et al. 2002), driving after five or more drinks, and riding with a driver who was high or drunk (Hingson et al. 2003b). Adults who began drinking at earlier ages in adolescence were also more likely to have been injured while drinking (Hingson et al. 2003b, 2006); and to have been in a fight after drinking (Hingson et al. 2001). College students, who currently drink and who had their first drink of alcohol before age 13, have been shown to be at increased risk for having unplanned sexual intercourse as well as having unplanned intercourse due to drinking as compared to college students who initiated alcohol use at age 19 or older (Hingson et al. 2003a).

In summary, alcohol use among adolescents leads to problems with future alcohol and other drug use including marijuana and other illicit drugs. In addition, risk behaviors such as risky sexual behavior, driving after drinking, riding in a car with someone who has been drinking, delinquency, and violence are more common among those adolescents who use alcohol and these behaviors can persist into adulthood. Alcohol use is also related to depression, increased risk for suicide, developmental problems, and social problems.

Early Adolescent Alcohol Use

Early adolescent alcohol use is related to significant problems later in life. Gruber et al. (1996), found that onset of alcohol use by age 12 was associated with subsequent use of alcohol and problem behaviors in later adolescence including alcohol-related violence, injuries, drinking and driving, and absenteeism from school or work, as well as being at increased risk for using other drugs. Early initiation of alcohol use also mediates nearly all of the identified risk factors for subsequent alcohol use including parental drinking, proactive parenting, school bonding, peer alcohol initiation, and ethnicity (Hawkins et al. 1997). Youth who drink before age 15 are estimated to be four times more likely to develop alcohol dependence than those who begin drinking after age 18 (Grant and Dawson 1997). The odds of alcohol dependence decreases by 14% with each increasing year of age at onset of use and the odds of abuse decreases by 8% (Grant and Dawson 1997). Notably, of those adults of who began to drink before age 12, 16% report being dependent on alcohol in the past year (Substance Abuse and Mental Health Services Administration 2004).

Research has shown that early users of alcohol, those who use alcohol by the start of sixth grade, are significantly different on nearly all socio-environmental, behavioral, and personal risk factors examined, underscoring the need to intervene earlier and across a wide spectrum of behavioral, intrapersonal and socio-environmental factors (Pasch et al. 2009). Early users of alcohol (approximately 17% of the sample) were especially more likely to engage in delinquent and violent behaviors and to have lower self-efficacy, positive outcome expectations, and expectancies concerning alcohol use, greater access to alcohol, higher normative estimates of alcohol use, and a greater number of friends using alcohol than nonusers of alcohol in sixth grade. This research suggests that universal prevention programs targeting students at the start of sixth grade may have already missed a significant portion of students who have already begun using alcohol. Therefore, given that

"users" are a substantial proportion of the sixth grade population, it may be important, then, to design a primary prevention program for teens, prior to sixth grade, that focuses not only on specific alcohol-related risk factors, but also on the important developmental tasks of that age group – academic achievement, appropriate conduct, and pro-social peer relationships. This approach, intervening at earlier ages, would allow for universal messages about alcohol use and yet also provide support for high-risk students who may be lagging developmentally. A developmental approach to reducing adolescent alcohol use was also proposed by several researchers (Brown et al. 2008; Masten et al. 2008; Windle et al. 2008; Zucker et al. 2008).

Determinants of Alcohol Use

Alcohol use in adolescence has been conceptualized as an interaction of social, environmental, intrapersonal, and behavioral factors (Epstein et al. 1995a, b; Hawkins et al. 1992; Newcomb 1995). The most consistent socio-environmental risk factors for early alcohol use are peer and parental factors (Donovan et al. 2004). Regular and consistent parental monitoring, knowing where the child is and who he or she is with, predicts less subsequent onset of alcohol and other drug use (Beck et al. 1999, 2004; Borawski et al. 2003; Cottrell et al. 2003; Donovan 2004; Griffin et al. 2000; Stattin and Kerr 2000), while lower levels of parental monitoring predicts increases in early alcohol use among adolescents (Borawski et al. 2003; Duncan et al. 1998; Ledoux et al. 2002; Li et al. 2000; Pettit et al. 2001).

Authoritative parenting, parenting that is highly demanding and responsive, with discipline that is reasoned, consistent and democratic, with mutual respect and reciprocity between the parent and child, has been found to have an inverse association with deviant behaviors (Simons-Morton and Hartos 2002) and alcohol use (Jackson et al. 1998). Parental support and connectedness, dimensions of authoritative parenting, are protective of alcohol use (Simantov et al. 2000), and involved parents have children who are less likely to initiate alcohol use (Simons-Morton et al. 2001). Unsupportive and demanding family environments and family dysfunction also increase the likelihood of adolescent alcohol use (Colder and Chassin 1999).

Parent–child communication that is open and frequent has been suggested to be protective against adolescent alcohol use (Kelly et al. 2002; Wills et al. 2003). Brody et al. (1998) found that frequent parent–child conversations where both parents' and children's perspectives were expressed helped to orient children to more conservative norms for alcohol use (Brody et al. 1998). In addition, frequent and bidirectional parent–child conversations were associated with children's abstinence-based alcohol use norms (Brody et al. 1998). Wills and colleagues also found that parent–child communication about drugs was related to youth having less favorable views of substance users (Wills et al. 2003). Project Northland, an alcohol prevention intervention sixth to eighth graders, found that parent–child alcohol-related communication was an important mediator of the intervention's effectiveness in reducing alcohol use (Komro et al. 2001).

Parents are important role models for their children. As such, parents who drink alcohol in the home may be modeling that behavior for their children. In fact, parental drinking has been associated with adolescent alcohol use (Dielman et al. 1993; Nash et al. 2005; van der Vorst et al. 2005; White et al. 2000). Mother's alcohol use in particular has been found to put adolescents at increased risk for binge drinking (Reifman et al. 1998) and alcohol use (White et al. 2000). Ennett et al. (2001) found that the nonverbal communication of parent modeling of substance use behavior was a more powerful form of communication than verbal communication about substance use (Ennett et al. 2001). Parental role modeling also includes modeling beliefs about alcohol use as well as overt behavior. Students whose parents reported greater disapproval of adolescent alcohol use reported increased levels of parental warmth and acceptance, increased parental monitoring, better communication, greater self-efficacy to refuse alcohol, less approval of alcohol use among friends, fewer friends and peers who used alcohol, less personal alcohol use, and fewer consequences from alcohol than those students who reported less parental disapproval of adolescent alcohol use (Nash et al. 2005).

Alcohol use by peers, perceptions of peer use, and perceptions of peer influence to use, all significantly increase the likelihood of early alcohol use initiation (Donovan 2004). Hawkins and colleagues found that those children who had alcohol-using peers at ages 10–11 were more likely to initiate early alcohol use and to misuse alcohol when they were older than

children who did not have alcohol-using peers (Hawkins et al. 1997). It has been suggested that adolescents with alcohol and drug use problems are more likely to have had problematic peer relationships in childhood (Hops et al. 1999) or associated with antisocial peers (Patterson et al. 2000) thus increasing their risk of alcohol problems. In fact, one longitudinal study found that children aged 10–11 with antisocial peers were at increased risk for alcohol abuse and dependence at age 21 (Guo et al. 2001). Additionally, associations with antisocial peers in fourth or fifth grades have been found to directly influence substance use initiation in the fifth or sixth grades (Oxford et al. 2000).

In addition to peer and parent factors, access to alcohol, offers of alcohol, and normative expectations help to create an environment that is either conducive or prohibitive of alcohol use. Access to alcohol in the home has been related to alcohol use among adolescents (Komro et al. 2007; Resnick et al. 1997). Adolescents can get access to alcohol through many sources, directly from parents, taking it from home, from friends, from older adults, from other relatives or adults, and through commercial sources. However, for underage youth, the most common sources of alcohol are from parents' supplies or older friends (Hearst et al. 2007; Smart et al. 1996; Wagenaar et al. 1993). Almost 30% of adolescents in the USA report having easy access to alcohol in the home (Swahn et al. 2002). Intrapersonal factors such as normative beliefs and normative estimates are also important predictors of alcohol use (Komro et al. 2001).

Self-efficacy has also been associated with drinking behavior and positive expectations or expectancies about drinking, may also predispose a child to early use (Donovan 2004; Hipwell et al. 2005). Adolescents are more likely to use alcohol at earlier ages when they have fewer negative expectations concerning alcohol use (Hipwell et al. 2005). Additionally, lower levels of achievement and bonding to school have been associated with increased adolescent alcohol use (Guo et al. 2001; Hops et al. 1999). Prior research has also shown an association between early conduct problems at ages 7–9 and alcoholism 25 years later (Fergusson et al. 2005). Early use of other substances such as tobacco or marijuana, feelings of depression, and engaging in deviant or violent behaviors also increase the likelihood of early alcohol initiation among youth (Donovan 2004). Time spent with family members (Sweeting et al. 1998), participation in extracurricular activities and sports (Harrison and Narayan 2003), and in religious activities (Sinha et al. 2006), have all been found to reduce the likelihood of alcohol use among adolescents.

An important environmental influence for adolescent alcohol use is exposure to alcohol advertising. Alcohol advertising has been found to shape adolescent's beliefs, attitudes, and alcohol behaviors (Anderson et al. 2009; Ellickson et al. 2005; Grube and Waiters 2005; Pasch et al. 2007; Smith and Foxcroft 2009; Snyder et al. 2006; Stacy et al. 2004). Exposure to alcohol advertising leads to better brand recall, and youth who have increased exposure are more likely to have positive beliefs about social and ritual uses of alcohol (Committee on Substance Abuse 2001). Alcohol advertisements also shape knowledge, attitudes, and perceptions about alcohol use, which in turn are predictive of positive expectancies and intentions to drink (Fleming et al. 2004; Grube and Wallack 1994).

Increased alcohol marketing receptivity, which has been defined as owning an item or wanting to own an item with an alcohol brand name, has been associated with increased likelihood of initiating alcohol use and increased current drinking among teens (Henriksen et al. 2008; Hurtz et al. 2007; McClure et al. 2009). Additionally, alcohol-branded merchandise ownership has been related to alcohol use susceptibility and predicted the initiation of alcohol use among those who were nondrinkers at baseline (Fisher et al. 2007; McClure et al. 2009).

Interventions to Prevent Adolescent Alcohol Use

Adolescent alcohol use is one of the most difficult behaviors to change because of the acceptability and normative nature of its use (National Research Council and Institute of Medicine 2004) as well as the multilevel nature of the risk factors. Many interventions have been developed to prevent and reduce alcohol use among adolescents. Project ALERT, a 2-year school-based drug use prevention program with students in seventh to eighth grades, found positive results noted for both cigarette and marijuana use, but not for alcohol use (Ellickson et al. 1993). However, a long-term follow-up showed no significant intervention effects at end of 12th grade. In a replication with 55 middle schools in South Dakota, significant intervention effects were

found for alcohol-related problems and misuse but not for alcohol use (Ellickson et al. 2003).

The Life Skills Training Program (LST), also a school-based drug use prevention program that emphasized changes in social and intrapersonal factors as they relate to early drug use, was implemented with seventh graders and booster sessions in eighth to ninth grades. The first evaluation of LST found that the program had a significant impact on cigarette, marijuana use, and drunkenness, but not on regular alcohol use (frequency or amount) (Botvin et al. 1990). A long-term follow-up of these students in 12th grade was conducted with 60.4% of the sample. Among those students who had been exposed to over 60% of the LST activities, long-term outcomes were seen for weekly drinking, problem drinking, and heavy drinking (Botvin et al. 1995). LST was replicated with a sample of inner-city, minority students in a randomized trial of six schools and at the end of ninth grade, program effects were seen for drinking frequency, amount of alcohol, and drunkenness. Overall LST was successful in reducing alcohol use among inner-city adolescents by ninth grade, and suburban/rural adolescents in the long term.

The Iowa Strengthening Families Program (SFP) focused on preventing adolescent drug use through family sessions with parents of all adolescents, not just high-risk teens (Spoth et al. 1999). At 1- and 2-year follow-up, rates of alcohol initiation were significantly lower among students in intervention schools than those in control schools (Spoth et al. 1999). In another study, the SFP was combined with LST and compared with LST alone and a no-treatment control group with seventh to eighth grade students. The relative reductions in alcohol use initiation were 30% in the combined SFP–LST schools, and 4% in the LST schools (Spoth et al. 2002), pointing to the potency of parent interventions as a universal strategy in reducing alcohol use initiation.

A more comprehensive model was used in the Midwestern Prevention Project (MPP) (Johnson et al. 1990). The intervention consisted of classroom curriculum, parent organizing and training, community leader training, and mass media. MPP was evaluated with sixth and seventh grade students and showed a significant impact on cigarette and marijuana use, but no program effects on alcohol use at ninth grade.

Project Northland was the first community-wide intervention program to specifically target young adolescent alcohol use, using a multicomponent intervention involving school curricula, parental education and involvement, peer leadership, and community task forces (Perry et al. 1993, 1996, 2002). The project was successful at reducing young adolescent alcohol use, as well as use among high school students (Perry et al. 2002) in two separate intervention phases. Project Northland Chicago (PNC), a randomized controlled trial of schools and surrounding community areas in the city of Chicago, was conducted to replicated Project Northland in an urban setting (Komro et al. 2004, 2006, 2008). The goals of the PNC intervention were to change personal, social, and environmental factors that support alcohol use among young adolescents in sixth to eighth grade (Komro et al. 2004). Overall, the intervention was not effective in reducing alcohol use. However, secondary outcome analyses to determine the effects of each intervention component separately showed that the home-based programs were associated with reduced substance use (alcohol, marijuana, and tobacco use combined) (Komro et al. 2008).

Cross-References

- ▶ Alcohol Use Disorders
- ▶ Alcoholics Anonymous
- ▶ Binge Drinking

References

Anderson, P., de Bruijn, A., Angus, K., Gordon, R., & Hastings, G. (2009). Impact of alcohol advertising and media exposure on adolescent alcohol use: A systematic review of longitudinal studies. *Alcohol and Alcoholism, 44*(3), 229–243.

Beck, K. H., Shattuck, T., Haynie, D., Crump, A. D., & Simons-Morton, B. (1999). Associations between parent awareness, monitoring, enforcement and adolescent involvement with alcohol. *Health Education Research, 14*(6), 765–775.

Beck, K. H., Boyle, J. R., & Boekeloo, B. O. (2004). Parental monitoring and adolescent drinking: Results of a 12-month follow-up. *American Journal of Health Behavior, 28*(3), 272–279.

Bonomo, Y., Coffey, C., Wolfe, R., Lynskey, M., Bowes, G., & Patton, G. (2001). Adverse outcomes of alcohol use in adolescents. *Addiction, 96*, 1485–1496.

Borawski, E. A., Ievers-Landis, C. E., Lovegreen, L. D., & Trapl, E. S. (2003). Parental monitoring, negotiated unsupervised time, and parental trust: The role of perceived parenting practices in adolescent health risk behaviors. *The Journal of Adolescent Health, 33*(2), 60–70.

Botvin, G. J., Baker, E., Dusenbury, L., Tortu, S., & Botvin, E. M. (1990). Preventing adolescent drug abuse through a multimodal cognitive-behavioral approach: Results of a 3-year study. *Journal of Consulting and Clinical Psychology, 58*(4), 437–446.

Botvin, G. J., Baker, E., Dusenbury, L., Botvin, E. M., & Diaz, T. (1995). Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. *JAMA, 273*(14), 1106–1112.

Brody, G. H., Flor, D. L., Hollett-Wright, N., & McCoy, J. K. (1998). Children's development of alcohol use norms: Contributions of parent and sibling norms, children's temperaments, and parent-child discussions. *Journal of Family Psychology, 12*(2), 209–219.

Brown, S. A., McGue, M., Maggs, J., Schulenberg, J., Hingson, R., Swartzwelder, S., et al. (2008). A developmental perspective on alcohol and youths 16 to 20 years of age. *Pediatrics, 121*(Suppl 4), S290–S310.

Centers for Disease Control and Prevention (CDC). (2004). Youth risk behavior surveillance - United States, 2003. *Morbidity and Mortality Weekly Report, 53*(SS-2), 1–29.

Colder, C. R., & Chassin, L. (1999). The psychosocial characteristics of alcohol users versus problem users: Data from a study of adolescents at risk. *Development and Psychopathology, 11*, 321–348.

Committee on Substance Abuse. (2001). Alcohol use and abuse: A pediatric concern. *Pediatrics, 108*(1), 185–189.

Cottrell, L., Xiaoming, L., Harris, C., D'Alessandri, D., Atkins, M., Richardson, B., et al. (2003). Parent and adolescent perceptions of parental monitoring and adolescent risk involvement. *Parenting: Science and Practice, 3*(3), 179–195.

Dielman, T. E., Butchart, A. T., & Shope, J. T. (1993). Structural equation model tests of patterns of family interaction, peer alcohol use, and intrapersonal predictors of adolescent alcohol use and misuse. *Journal of Drug Education, 23*(3), 273–316.

Donovan, J. E. (2004). Adolescent alcohol initiation: A review of psychosocial risk factors. *Journal of Adolescent Health, 35*(6), 529, e527-e518.

Donovan, J. E., Leech, S. L., Zucker, R. A., Loveland-Cherry, C. J., Hester, J. M., Fitzgerald, H. E., et al. (2004). Really underage drinkers: Alcohol use among elementary students. *Alcoholism, Clinical and Experimental Research, 28*(7), 341–349.

Duncan, S. C., Duncan, T. E., Biglan, A., & Ary, D. (1998). Contributions of the social context to the development of adolescent substance use: A multivariate latent growth modeling approach. *Drug and Alcohol Dependence, 50*(1), 57–71.

Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., et al. (2008). Youth risk behavior surveillance–United States, 2007. *MMWR: Surveillance Summaries, 57*(4), 1–131.

Ellickson, P. L., Bell, R. M., & Harrison, E. R. (1993). Changing adolescent propensities to use drugs: Results from Project ALERT. *Health Education Quarterly, 20*(2), 227–242.

Ellickson, P. L., McCaffrey, D. F., Ghosh-Dastidar, B., & Longshore, D. L. (2003). New inroads in preventing adolescent drug use: Results from a large-scale trial of project ALERT in middle schools. *American Journal of Public Health, 93*(11), 1830–1836.

Ellickson, P. L., Collins, R. L., Hambarsoomians, K., & McCaffrey, D. F. (2005). Does alcohol advertising promote adolescent drinking? Results from a longitudinal assessment. *Addiction, 100*(2), 235–246.

Ennett, S. T., Bauman, K. E., Foshee, V. A., Pemberton, M., & Hicks, K. A. (2001). Parent-child communication about adolescent tobacco and alcohol use: What do parents say and does it affect youth behavior? *Journal of Marriage and the Family, 63*, 48–62.

Epstein, J. A., Botvin, G. J., Diaz, T., & Schinke, S. P. (1995a). The role of social factors and individual characteristics in promoting alcohol use among inner-city minority youths. *Journal of Studies on Alcohol, 56*(1), 39–46.

Epstein, J. A., Botvin, G. J., Diaz, T., Toth, V., & Schinke, S. P. (1995b). Social and personal factors in marijuana use and intentions to use drugs among inner city minority youth. *Developmental and Behavioral Pediatrics, 16*(1), 14–20.

Fergusson, D. M., Horwood, L. J., & Ridder, E. M. (2005). Show me the child at seven: The consequences of conduct problems in childhood for psychosocial functioning in adulthood. *Journal of Child Psychology and Psychiatry, 46*(8), 837–849.

Fisher, L. B., Miles, I. W., Austin, S. B., Camargo, C. A., Jr., & Colditz, G. A. (2007). Predictors of initiation of alcohol use among US adolescents: Findings from a prospective cohort study. *Archives of Pediatrics & Adolescent Medicine, 161*(10), 959–966.

Fleming, K., Thorson, E., & Atkin, C. K. (2004). Alcohol advertising exposure and perceptions: Links with alcohol expectancies and intentions to drink or drinking in underaged youth and young adults. *Journal of Health Communication, 9*(1), 3–29.

Grant, B. F. (1998). Age at smoking onset and its association with alcohol consumption and DSM-IV alcohol abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey. *Journal of Substance Abuse, 10*(1), 59–73.

Grant, B. F., & Dawson, D. A. (1997). Age at onset of alcohol use and its association with DSM-IV alcohol abuse and dependence: Results from the National Longitudinal Alcohol Epidemiologic Survey. *Journal of Substance Abuse, 9*, 103–110.

Griffin, K. W., Botvin, G. J., Scheier, L. M., Diaz, T., & Miller, N. L. (2000). Parenting practices as predictors of substance use, delinquency, and aggression among urban minority youth: Moderating effects of family structure and gender. *Psychology of Addictive Behaviors, 14*(2), 174–184.

Grube, J. W., & Waiters, E. (2005). Alcohol in the media: Content and effects on drinking beliefs and behaviors among youth. *Adolescent Medicine Clinics, 16*(2), 327–343. viii.

Grube, J. W., & Wallack, L. (1994). Television beer advertising and drinking knowledge, beliefs, and intentions among schoolchildren. *American Journal of Public Health, 84*(2), 254–259.

Gruber, E., DiClemente, R. J., Anderson, M. M., Lodico, M. (1996). Early drinking onset and its association with alcohol use and problem behavior in late adolescence. *Preventive Medicine, 25*(3), 293–300.

Guo, J., Collins, L. M., Hill, K. G., & Hawkins, J. D. (2000). Developmental pathways to alcohol abuse and dependence in young adulthood. *Journal of Studies on Alcohol, 61*(6), 799–808.

Guo, J., Hawkins, J. D., Hill, K. G., & Abbott, R. D. (2001). Childhood and adolescent predictors of alcohol abuse and dependence in young adulthood. *Journal of Studies on Alcohol, 62*(6), 754–762.

Halpern-Felsher, B. L., Millstein, S. G., & Ellen, J. M. (1996). Relationship of alcohol use and risky sexual behavior: A review and analysis of findings. *The Journal of Adolescent Health, 19*(5), 331–336.

Harrison, P. A., & Narayan, G. (2003). Differences in behavior, psychological factors, and environmental factors associated with participation in school sports and other activities in adolescence. *The Journal of School Health, 73*(3), 113–120.

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*(1), 64–105.

Hawkins, J. D., Graham, J. W., Maguin, E., Abbott, R., Hill, K. G., & Catalano, R. F. (1997). Exploring the effects of age of alcohol use initiation and psychosocial risk factors on subsequent alcohol misuse. *Journal of Studies on Alcohol, 58*(3), 280–290.

Hearst, M., Fulkerson, J. A., Maldonado, M. M., Komro, K. A., & Perry, C. L. (2007). Who needs liquor stores when parents will do? The importance of social sources of alcohol among teens. *Preventive Medicine, 44*, 471–476.

Henriksen, L., Feighery, E. C., Schleicher, N. C., & Fortmann, S. P. (2008). Receptivity to alcohol marketing predicts initiation of alcohol use. *The Journal of Adolescent Health, 42*(1), 28–35.

Hingson, R., Heeren, T., & Zakocs, R. (2001). Age of drinking onset and involvement in physical fights after drinking. *Pediatrics, 108*(4), 872–877.

Hingson, R., Heeren, T., Levenson, S., Jamanka, A., & Voas, R. (2002). Age of drinking onset, driving after drinking, and involvement in alcohol related motor-vehicle crashes. *Accident Analysis and Prevention, 34*(1), 85–92.

Hingson, R., Heeren, T., Winter, M. R., & Wechsler, H. (2003a). Early age of first drunkenness as a factor in college students' unplanned and unprotected sex attributable to drinking. *Pediatrics, 111*(1), 34–41.

Hingson, R., Heeren, T., Zakocs, R., Winter, M., & Wechsler, H. (2003b). Age of first intoxication, heavy drinking, driving after drinking and risk of unintentional injury among U.S. college students. *Journal of Studies on Alcohol, 64*(1), 23–31.

Hingson, R., Heeren, T., & Winter, M. R. (2006). Age at drinking onset and alcohol dependence: Age at onset, duration, and severity. *Archives of Pediatrics & Adolescent Medicine, 160*(7), 739–746.

Hipwell, A. E., White, H. R., Loeber, R., Southamer-Loeber, M., Chung, T., & Sembower, M. A. (2005). Young girls' expectancies about the effects of alcohol, future intentions and patterns of use. *Journal of Studies on Alcohol, 66*(5), 630–639.

Hops, H., Davis, B., & Lewin, L. M. (1999). The development of alcohol and other substance use: A gender study of family and peer context. *Journal of Studies on Alcohol Supplement, 13*, 22–31.

Hurtz, S. Q., Henriksen, L., Wang, Y., Feighery, E. C., & Fortmann, S. P. (2007). The relationship between exposure to alcohol advertising in stores, owning alcohol promotional items, and adolescent alcohol use. *Alcohol and Alcoholism, 42*(2), 143–149.

Jackson, C., Henriksen, L., & Foshee, V. A. (1998). The Authoritative Parenting Index: Predicting health risk behaviors among children and adolescents. *Health Education & Behavior, 25*(3), 319–337.

Jackson, K. M., Sher, K. J., Cooper, M. L., & Wood, P. K. (2002). Adolescent alcohol and tobacco use: Onset, persistence and trajectories of use across two samples. *Addiction, 97*, 517–531.

Johnson, C. A., Pentz, M. A., Weber, M. D., Dwyer, J. H., Baer, N., MacKinnon, D. P., et al. (1990). Relative effectiveness of comprehensive community programming for drug abuse prevention with high-risk and low-risk adolescents. *Journal of Consulting and Clinical Psychology, 58*(4), 447–456.

Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2005). *Monitoring the future national survey results on drug use, 1975–2004. Vol 1: Secondary school students*. Bethesda: National Institute on Drug Abuse.

Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2009). *Monitoring the Future national survey results on drug use, 1975–2008: Vol I, Secondary school students* (NIH Publication No.09-7402). Bethesda, MD: National Institute on Drug Abuse, 721 pp.

Kandel, D. B. (2002). Examining the gateway hypothesis: Stages and pathways of drug involvement. In D. B. Kandel (Ed.), *Stages and pathways of drug involvement: Examining the gateway hypothesis* (pp. 3–15). New York: Cambridge University Press.

Kelly, K. J., Comello, M. L., & Hunn, L. C. (2002). Parent-child communication, perceived sanctions against drug use, and youth drug involvement. *Adolescence, 37*(148), 775–787.

Komro, K. A., Perry, C. L., Williams, C. L., Stigler, M. H., Farbakhsh, K., & Veblen-Mortenson, S. (2001). How did Project Northland reduce alcohol use among young adolescents? Analysis of mediating variables. *Health Education Research, 16*(1), 59–70.

Komro, K. A., Perry, C. L., Veblen-Mortenson, S., Bosma, L. M., Dudovitz, B. S., Williams, C. L., et al. (2004). Brief report: The adaptation of Project Northland for urban youth. *Journal of Pediatric Psychology, 29*(6), 457–466.

Komro, K. A., Perry, C. L., Veblen-Mortenson, S., Farbakhsh, K., Kugler, K. C., Alfano, K. A., et al. (2006). Cross-cultural adaptation and evaluation of a home-based program for alcohol use prevention among urban youth: The Slick Tracy Home Team Program. *The Journal of Primary Prevention, 27*(2), 135–154.

Komro, K. A., Maldonado-Molina, M. M., Tobler, A. L., Bonds, J. R., & Muller, K. E. (2007). Effects of home access and availability of alcohol on young adolescents' alcohol use. *Addiction, 102*(10), 1597–1608.

Komro, K. A., Perry, C. L., Veblen-Mortenson, S., Farbakhsh, K., Toomey, T. L., Stigler, M. H., et al. (2008). Outcomes from a randomized controlled trial of a multi-component alcohol use preventive intervention for urban youth: Project northland Chicago. *Addiction, 103*(4), 606–618.

Ledoux, S., Miller, P., Choquet, M., & Plant, M. (2002). Family structure, parent-child relationships, and alcohol and other drug use among teenagers in France and the United Kingdom. *Alcohol and Alcoholism, 37*(1), 52–60.

Li, X., Stanton, B., & Feigelman, S. (2000). Impact of perceived parental monitoring on adolescent risk behavior over 4 years. *The Journal of Adolescent Health, 27*(1), 49–56.

Masten, A. S., Faden, V. B., Zucker, R. A., & Spear, L. P. (2008). Underage drinking: A developmental framework. *Pediatrics, 121*(Suppl 4), S235–S251.

McClure, A. C., Stoolmiller, M., Tanski, S. E., Worth, K. A., & Sargent, J. D. (2009). Alcohol-branded merchandise and its association with drinking attitudes and outcomes in US adolescents. *Archives of Pediatrics & Adolescent Medicine, 163*(3), 211–217.

Monitoring the Future Study is the Johnston 2009 reference. The (2009) after Monitoring the Future can be removed.

Nash, S. G., McQueen, A., & Bray, J. H. (2005). Pathways to adolescent alcohol use: Family environment, peer influence, and parental expectations. *The Journal of Adolescent Health, 37*(1), 19–28.

National Highway Transportation and Safety Administration. (2010). *Teen drivers - Additional resources.* Retrieved from http://www.nhtsa.dot.gov/portal/site/nhtsa/template.MAXIMIZE/menuitem.cd18639c9dadbabbbf30811060008a0c/?javax.portlet.tpst=4427b997caacf504a8bdba101891ef9a_ws_MX&javax.portlet.prp_4427b997caacf504a8bdba101891ef9a_viewID=detail_view&itemID=d91cd60670268110VgnVCM1000002fd17898RCRD&viewType=standard

National Research Council and Institute of Medicine. (2004). *Reducing underage drinking: A collective responsibility.* Washington: The National Academies Press.

Newcomb, M. D. (1995). Drug use etiology among ethnic minority adolescents: Risk and protective factors. In G. J. Botvin, S. Schinke, & M. A. Orlandi (Eds.), *Drug abuse prevention with multiethnic youth* (pp. 105–129). Thousand Oaks: Sage.

Newes-Adeyi, G., Chen, C. M., Williams, G. D., & Faden, V. B. (2005). *Surveillance report #74: Trends in underage drinking in the United States, 1991–2003.* Washington: U.S. Department of Health and Human Services, National Institute on Alcohol Abuse and Alcoholism.

O'Malley, P. M., Johnston, L. D., & Bachman, J. G. (1998). Alcohol use among adolescents. *Alcohol Health and Research World, 22*, 85–93.

Oxford, M. L., Harachi, T. W., Catalano, R. F., & Abbott, R. (2000). Preadolescent predictors of substance initiation: A test of both the direct and mediated effect of family social control factors on deviant peer associations and substance initiation. *American Journal of Drug and Alcohol Abuse, 27*(4), 599–616.

Pasch, K. E., Komro, K. A., Perry, C. L., Hearst, M. O., & Farbakhsh, K. (2007). Outdoor alcohol advertising near schools: What does it advertise and how is it related to intentions and use of alcohol among young adolescents? *Journal of Studies on Alcohol and Drugs, 68*(4), 587–596.

Pasch, K. E., Perry, C. L., Stigler, M. H., & Komro, K. A. (2009). Sixth grade students who use alcohol: Do we need primary prevention programs for "tweens"? *Health Education & Behavior, 36*(4), 673–695.

Patterson, G. R., Dishion, T. J., & Yoerger, K. (2000). Adolescent growth in new forms of problem behavior: Macro- and micro-peer dynamics. *Prevention Science, 1*(1), 3–13.

Perry, C. L., Williams, C. L., Forster, J. L., Wolfson, M., Wagenaar, A. C., Finnegan, J. R., et al. (1993). Background, conceptualization and design of a community-wide research program on adolescent alcohol use: Project Northland. *Health Education Research, 8*(1), 125–136.

Perry, C. L., Williams, C. L., Veblen-Mortenson, S., Toomey, T. L., Komro, K. A., Anstine, P. S., et al. (1996). Project Northland: Outcomes of a communitywide alcohol use prevention program during early adolescence. *American Journal of Public Health, 86*(7), 956–965.

Perry, C. L., Williams, C. L., Komro, K. A., Veblen-Mortenson, S., Stigler, M. H., Munson, K. A., et al. (2002). Project Northland: Long-term outcomes of community action to reduce adolescent alcohol use. *Health Education Research, 17*(1), 117–132.

Petridou, E., Zavitsanos, X., Dessypris, N., Frangakis, C., Mandyla, M., Doxiadis, S., et al. (1997). Adolescents in high-risk trajectory: Clustering of risky behavior and the origins of socioeconomic health differentials. *Preventive Medicine, 26*(2), 215–219.

Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72*(2), 583–598.

Reifman, A., Barnes, G. M., Dintcheff, B. A., Farrell, M. P., & Uhteg, L. (1998). Parental and peer influences on the onset of heavier drinking among adolescents. *Journal of Studies on Alcohol, 59*(3), 311–317.

Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., et al. (1997). Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA, 278*(10), 823–832.

Simantov, E., Schoen, C., & Klein, J. D. (2000). Health-compromising behaviors: Why do adolescents smoke or drink?: Identifying underlying risk and protective factors. *Archives of Pediatrics & Adolescent Medicine, 154*(10), 1025–1033.

Simons-Morton, B., & Hartos, J. (2002). Application of the authoritative parenting model to adolescent health behavior. In R. J. DiClemente, R. A. Crosby, & M. C. Kegler (Eds.), *Emerging theories in health promotion practice and research* (pp. 100–125). San Francisco: Jossey-Bass.

Simons-Morton, B., Haynie, D. L., Crump, A. D., Eitel, S. P., & Saylor, K. E. (2001). Peer and parent influences on smoking and drinking among early adolescents. *Health Education & Behavior, 28*(1), 95–107.

Sinha, J. W., Cnaan, R. A., & Gelles, R. J. (2006). Adolescent risk behaviors and religion: Findings from a national study. *Journal of Adolescence, 30*, 231–249.

Smart, R. G., Adlaf, E. M., & Walsh, G. W. (1996). Procurement of alcohol and underage drinking among adolescents in Ontario. *Journal of Studies on Alcohol, 57*(4), 419–424.

Smith, L. A., & Foxcroft, D. R. (2009). The effect of alcohol advertising, marketing and portrayal on drinking behaviour in young people: Systematic review of prospective cohort studies. *BMC Public Health, 9*, 51.

Snyder, L. B., Milici, F. F., Slater, M., Sun, H., & Strizhakova, Y. (2006). Effects of alcohol advertising exposure on drinking among youth. *Archives of Pediatrics & Adolescent Medicine, 160*(1), 18–24.

Spoth, R., Redmond, C., & Lepper, H. (1999). Alcohol initiation outcomes of universal family-focused preventive interventions: One- and two-year follow-ups of a controlled study. *Journal of Studies on Alcohol Supplement, 13*, 103–111.

Spoth, R. L., Redmond, C., Trudeau, L., & Shin, C. (2002). Longitudinal substance initiation outcomes for a universal preventive intervention combining family and school programs. *Psychology of Addictive Behaviors, 16*(2), 129–134.

Stacy, A. W., Zogg, J. B., Unger, J. B., & Dent, C. W. (2004). Exposure to televised alcohol ads and subsequent adolescent alcohol use. *American Journal of Health Behavior, 28*(6), 498–509.

Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development, 71*(4), 1072–1085.

Substance Abuse and Mental Health Services Administration. (2002). *Substance use and the risk of suicide among youths (The NSDUH report)*. http://oas.samhsa.gov/2k4/ageDependence/ageDependence.cfm.

Substance Abuse and Mental Health Services Administration. (2004). *Alcohol dependence or abuse and age at first use (The NSDUH report)*. http://oas.samhsa.gov/2k4/ageDependence/ageDependence.cfm.

Substance Abuse and Mental Health Services Administration. (2005). *The national survey on drug use and health report: Alcohol use and delinquent behaviors among youths*. Rockville: Substance Abuse and Mental Health Services Administration, Office of Applied Statistics.

Substance Abuse and Mental Health Services Administration. (2009). *Results from the 2008 National Survey on Drug Use and Health: National Findings* (Office of Applied Studies, NSDUH Series H-36, HHS Publication No. SMA 09-4434). Rockville, MD.

Swahn, M. H., Hammig, B. J., & Ikeda, R. M. (2002). Prevalence of youth access to alcohol or a gun in the home. *Injury Prevention, 8*(3), 227–230.

Sweeting, H., West, P., & Richards, M. (1998). Teenage family life, lifestyles and life chances: Associations with family structure, conflict with parents, and joint family activity. *International Journal of Law, Policy and the Family, 12*, 15–46.

The Henry Kaiser Family Foundation. (2002). Substance use and risky sexual behavior: Attitudes and practices among adolescents and young adults. *American Journal of Health Education, 33*(5), 278–281.

van der Vorst, H., Engels, R. C., Meeus, W., Dekovic, M., & Van Leeuwe, J. (2005). The role of alcohol-specific socialization in adolescents' drinking behaviour. *Addiction, 100*(10), 1464–1476.

Wagenaar, A. C., Finnegan, J. R., Wolfson, M., Anstine, P. S., Williams, C. L., & Perry, C. L. (1993). Where and how adolescents obtain alcoholic beverages. *Public Health Reports, 108*(4), 459–464.

White, H. R., Johnson, V., & Buyske, S. (2000). Parental modeling and parenting behavior effects on offspring alcohol and cigarette use. A growth curve analysis. *Journal of Substance Abuse, 12*(3), 287–310.

Wills, T. A., Gibbons, F. X., Gerrard, M., Murry, V. M., & Brody, G. H. (2003). Family communication and religiosity related to substance use and sexual behavior in early adolescence: A test for pathways through self-control and prototype perceptions. *Psychology of Addictive Behaviors, 17*(4), 313–323.

Wilson, N., Battistich, V., Syme, S. L., & Boyce, W. T. (2002). Does elementary school alcohol, tobacco, and marijuana use increase middle school risk? *The Journal of Adolescent Health, 30*(6), 442–447.

Windle, M., & Davies, P. T. (1999). Depression and heavy alcohol use among adolescents: Concurrent and prospective relations. *Development and Psychopathology, 11*(4), 823–844.

Windle, M., Spear, L. P., Fuligni, A. J., Angold, A., Brown, J. D., Pine, D., et al. (2008). Transitions into underage and problem drinking: Developmental processes and mechanisms between 10 and 15 years of age. *Pediatrics, 121*(Suppl 4), S273–S289.

Zucker, R. A. (2006). Alcohol use and the alcohol use disorders: A developmental-biopsychosocial systems formulation covering the life course. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology* (2nd ed.). New York: Wiley.

Zucker, R. A., Donovan, J. E., Masten, A. S., Mattson, M. E., & Moss, H. B. (2008). Early developmental processes and the continuity of risk for underage drinking and problem drinking. *Pediatrics, 121*(Suppl 4), S252–S272.

Zullig, K. J., Valois, R. F., Huebner, E. S., Oeltmann, J. E., & Drane, J. W. (2001). Relationship between perceived life satisfaction and adolescents' substance abuse. *The Journal of Adolescent Health, 29*(4), 279–288.

Alcohol Use Disorders

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Overview

Early adolescence is replete with significant transitions. The age period between 10 and 15 years is characterized by changes in self-identity, puberty, greater autonomy, changes in family and peer relations, and development of romantic relationships. This period is also notable for emerging alcohol use. Indeed, alcohol is the most commonly used substance for adolescents. Alcohol use disorders in youth are associated with significant morbidity and mortality. The costs to society are vast, including hospitalizations, disabilities, rapes, premature deaths, suicides, assaults, and fetal alcohol syndrome. Over the past decades, there has been a burgeoning of research on the adolescent alcohol use disorders. This review discussed epidemiology and developmental pathways of the adolescent alcohol use problems. Further, the risk and protective factors are summarized, including individual, family, and environmental influences, as well as the complex interplay between these factors. Assessment, intervention and prevention strategies are also discussed.

Substance misuse is among the most prevalent causes of adolescent morbidity and mortality, and alcohol is the most commonly used substance for adolescents (Brannigan et al. 2004). From adolescent

prospective, drinking may represent a desire to assume the adult social identity by early adoption of behaviors that are characteristic of the "adult" world, may be a form of a rebellion against rules and parental control, or may be a part of the fun and exciting activities (e.g., Bjarnason et al. 2003). Yet, research suggests that alcohol consumption in adolescence is not just limited to occasional experimentation. About 36% of high school seniors report consuming five or more drinks on a single occasion during the month and 7% of eighth graders drink to intoxication on a monthly basis (Grunbaum et al. 2004; Johnston et al. 2004). This problem is widespread and spans across cultures. In USA, about 47% of adolescents between 14 and 20 years of age are drinking and at higher rates than adults (Miller et al. 2006). In England and Wales, about 40% of youths report binge drinking, while in New Zealand, half of the 11-year-olds use alcohol and 4% of 15-year-olds suffer from alcohol abuse (Gilvarry and McArdle 2007). Despite laws on minimum-purchase-age and an increase in the minimum drinking age to 21, youth continue to have access to alcohol. The costs to society are vast, including hospitalizations, disabilities, rapes, premature deaths, suicides, assaults, and fetal alcohol syndrome (e.g., Chaloupka et al. 2002). In USA, about $61.9 billion yearly losses are estimated due to underage drinking in medical care, property damage, work loss, and quality of life (Miller et al. 2006). These estimates exclude long-term consequences, such as cirrhosis, cancers, and reduced educational attainments, all leading to further costs.

Underage drinking is especially concerning, given the importance of psychological, cognitive, and neurobiological development during adolescence. The fine-tuning of brain circuitry that occurs during this period is particularly sensitive to alcohol's neurotoxic properties, while the low sensitivity to alcohol's behavioral effects allows youths to engage in substance use for longer periods and in higher doses than adults (Lubman et al. 2007). Yet, adolescents are more vulnerable than adults to the chemical insult of alcohol, including reduced prefrontal cortex and hippocampal volumes, which affect executive cognitive functions and memory, resulting in lower IQ and neurocognitive deficits in attention and visuospatial functioning (e.g., De Bellis et al. 2000, 2005). Drinking is associated with tobacco and illicit drug use, which cause further alteration in the developing brain. Early onset of alcohol use has also been related to the escalating progression of greater intensity and frequency of drinking and increased lifetime prevalence of alcohol use disorders (Eaton et al. 2006). Further, suicide is the third leading cause of death among adolescents, and alcohol use increases the risk of suicide up to 17 times for male adolescents and up to three times for females (Groves and Sher 2005).

Clinical Features

The classification systems of psychiatric diseases, including the Diagnostic and Statistical Manual -IV (DSM-IV) and the International Classification of Diseases, tenth edition (ICD-10), list two "axes" of alcohol use disorders, namely, abuse and dependence (American Psychiatric Association 1994; World Health Organization 1992). An individual cannot be diagnosed with both disorders, as criteria are hierarchical. A person who meets criteria for dependence cannot be diagnosed with abuse and a diagnosis of abuse necessitates that a person has never met criteria for dependence. The DSM-IV rule that dependence precludes abuse diagnosis implies that abuse is a less severe disorder with earlier onset as compared to dependence.

Diagnosis

Table 1 provides a list of the required symptoms for each "axis" and derives from the DSM-IV system as, presently, most of the diagnostic inventories for substance use disorders are DSM-based. To meet criteria for abuse, an individual has to have at least one of the four symptoms within a 12-month period: a failure to fulfill major role obligations, physically hazardous use, alcohol-related legal problems, and continued use despite social or interpersonal problems. To diagnose alcohol dependence, an individual must have at least three of the seven symptoms within a 12-month period: tolerance, withdrawal, drinking more than expected, failure to engage in important activities due to alcohol use, continued use despite knowledge of the associated problems, and unsuccessful efforts to cut down on drinking.

Limitations in Contemporary Diagnosis

Multiple concerns have been raised regarding the application of the above criteria for adolescents as these criteria were originally developed from research and

Alcohol Use Disorders. Table 1 Major symptoms of alcohol abuse and dependence (Adapted from DSM IV [American Psychiatric Association 1994])

Alcohol abuse
One or more of the following symptoms during a 12-month period
1. Recurrent use resulting in failure to fulfill major role obligations at work, school, or home (skipping classes, suspensions or expulsions, drunk while at school or work)
2. Recurrent use in situations that are physically hazardous (driving or speeding, play dare)
3. Recurrent use–related legal problems (vandalism, theft, or assault while under the influence)
4. Continued use despite persistent or recurrent social or interpersonal problems (fights with significant others about intoxication, loss of friends due to alcohol use)
Alcohol dependence
Three or more of the following symptoms during a 12-month period
1. Tolerance (progressively larger amounts are needed to achieve effect)
2. Withdrawal (two or more symptoms: sweats, increased pulse, hand tremor, insomnia, nausea, anxiety, psychomotor agitation, transient hallucinations, seizures; drinking to relieve/avoid withdrawal)
3. More drank than intended (drink to the point of getting sick or passing out)
4. Time consuming (considerable amount of time spent obtaining and using alcohol or recovering)
5. Important social, occupational, or recreational activities given up or reduced due to use (drop out of school, quit extracurricular activities, stop spending time with significant others)
6. Continued use despite knowledge of persistent or recurrent physical or psychological problems that are likely caused or exacerbated by use (recurrent episodes of getting sick, passing out, depression)
7. Unsuccessful efforts to cut down or control use (repeated expression of desire to cut down without behavioral change)

clinical experiences with adults. These issues include difficulty with interpreting some items for adolescents, instability of alcohol use during this age period, high rate of endorsement of dependence items (e.g., tolerance), and low prevalence of withdrawal and alcohol-related medical problems (e.g., Harrison et al. 1998; Winters et al. 1993). Further, about 10% of adolescents from the general population and over 30% of those in clinical settings may report several dependence symptoms but not meet criteria for abuse (Chung et al. 2002). These individuals have been referred to as "diagnostic orphans." Indeed, "diagnostic orphans" may have more severe alcohol use problems than those with abuse diagnosis and those diagnosed with alcohol abuse may have higher symptom severity than those with dependence (Gelhorn et al. 2008). Thus, concerns have been raised about the utility of alcohol abuse diagnosis for adolescents (e.g., Clark 2004). However, recent evaluation supports DSM-IV abuse criteria for youth, specifically cross-sectional and predictive validities (Schuckit et al. 2008).

Comorbid Disorders

The Center for Substance Abuse Treatment indicates that about 62% of males and 83% of females entering treatment for substance abuse, report one or more emotional or behavioral disorders (U.S. Department of Health and Human Services 2002). Externalizing problems, such as oppositional defiant and conduct disorders, attention deficit and hyperactivity, and antisocial personality, are highly associated with adolescent alcohol use problems, as well as with the transition from abuse to dependence (Moss and Lynch 2001; King and Chassin 2007; Wilens 1997). Younger onset of alcohol use is also associated with depression, anxiety, posttraumatic stress, eating problems, other substance use disorders, as well as with borderline and passive-aggressive personality features (Abram et al. 2007; Franken and Hendriks 2000; Hanna and Grant 1999; McGue et al. 2001; Low et al. 2008).

Epidemiology and Developmental Pathways

Adolescent alcohol dependence begins around age 11 years, peaks near 18 years of age, and rapidly declines from 18 to 25 years (Li et al. 2004). Prevalence rates indicate that 33.9% and 56.7% of eighth and tenth graders, respectively, used alcohol in the past 12 months, and 19.5% and 42.1% of eighth and tenth graders, respectively, reported having been drunk in their lifetime (Johnston et al. 2006a). Similar rates of alcohol use have been noted for male and female eighth and tenth graders and greater prevalence of drinking

for male 12 graders (Johnston et al. 2003). The prevalence of using alcohol at least once in the lifetime jumps from about twothirds for students in tenth grade to over three-quarters for students in the 12th grade. The amount and frequency of drinking escalate further after the high school. More than 80% of the 18- to 20-year-olds reported having used alcohol in their lifetime, 59% indicated using in the past 30 days, and 36.3% stated binge-drinking behaviors (Johnston et al. 2006b). Indeed, among all age groups, 18- to 24-year-olds have the highest rates of alcohol consumption and dependence. Longitudinal data indicates that the overall increase in alcohol use from early adolescence to young adulthood has marked individual differences in the change rates (Schulenberg and Maggs 2001). The most common adolescent drinking patterns include abstainers or light users and stable moderate users with occasional heavy drinking. Although more that 50% of adolescents are in these low-risk alcohol use categories, about 20% are higher-risk early-onset drinkers and time-limited heavy drinkers, and 20% are chronic heavy drinkers (see Table 2).

There are two primary pathways to heavy drinking behaviors: early and late onset. Early-onset heavy drinking is associated with poorer outcomes than a later onset. Early onset emerges before or during the high school years and is associated with high levels of externalizing behaviors and genetic predisposition (e.g., Chassin et al. 2002; McGue et al. 2001; Viken et al. 1999). Later-onset alcohol use occurs after high school, is less affected by the biological factors, and more affected by the environmental influences, such as entering the "adult" world and the culturally normative rite of passage, increased risk taking, greater autonomy, changing living arrangements (e.g., entering college), greater access to alcohol, and more options for social activities (e.g., Chassin et al. 2002; Schulenberg and Maggs 2002). Genetic and environment factors also influence gender differences in alcohol use patterns. Genetic factors affect heavy drinking more in males than females, while environmental factors exert greater influence over the female alcohol use (King et al. 2005; Slutske et al. 2004). Men are also more likely than women to transition to heavy drinking in young adulthood (Jackson et al. 2001).

Alcohol Use Disorders. Table 2 Alcohol use prevalence as per alcohol use patterns for adolescents (Adapted from Brown et al. [2008])

Alcohol use pattern	Prevalence (%)
Abstinence or stable low use	~20–65
Stable moderate use with occasional heavy use	~30
Heavy use with declining use over time	~10
Early onset of use with declining use over time	~10
Early onset of use with stable heavy drinking	<10
Late onset with rapid increase to heavy drinking	<10

Risk Factors

Adolescent alcohol consumption does not necessarily result in clinically significant problems. Some adolescents may quickly adjust their drinking patterns, while others may have greater difficulty with abstaining. The presence of risk and protective factors may influence developmental trajectories and outcomes. Factors associated with the propensity for heavy drinking encompass individual, family, and environmental influences, as well as the complex interplay between these factors (see Table 3 for summary). *Individual factors* include gender, ethnicity, genetic predisposition, difficult temperament, personality trait of low constrain, maturation deviance, low self-esteem, and comorbid disorders. Males are at a higher risk for alcohol misuse, specifically for younger onset and heavier use (e.g., Ohannessian et al. 2004; Young et al. 2002). Caucasian adolescents are more likely to abuse alcohol, as compared to Black and Hispanic youth (e.g., Blum et al. 2000; Maag and Irvin 2005). The social and economic advantages are positively associated with risk-taking attitudes and, thus, may indirectly contribute to alcohol misuse in Caucasians (Watt 2004).

There is at least a threefold increase in risk for alcohol use disorders in the children of parents with alcohol problems (Schuckit 1998, 2000). Some studies report between 50% and 60% of phenotypic variations in alcohol dependence as attributable to genetic contributions, and heritability of alcoholism is estimated to be 48–73% in men and 51–65% in women (Dick and Foroud 2003; Tyndale 2004). Genetic factor also underlies comorbid psychiatric disorders (Siewert et al. 2004).

Alcohol Use Disorders. Table 3 Factors that place youth at risk of alcohol use problems

Individual factors
Gender. Males are at a higher risk than females.
Ethnicity. Caucasian males and females are at a higher risk, specifically as compared to African-Americans
Genetic Predisposition. Children of parents with alcohol problems have a threefold increase in risk of alcohol use disorders.
Temperament. Difficult temperament in childhood, as characterized by high levels of activity, low task orientation, withdrawal orientation, negative mood, inflexibility, and less adaptability to change.
Personality. High novelty seeking, high reward dependence, aggression, impulsivity, low harm avoidance, and difficulty in inhibiting responses.
Maturation deviance. Early maturation for both genders, and late maturation for males.
Comorbid Psychiatric Disorders. Depression, anxiety, posttraumatic stress, conduct disorder, ODD, ADHD, and personality disorders features (antisocial, borderline, passive-aggressive).
Self-Esteem. Emotional distress due to low self-esteem.
Parent and family factors
Psychopathology in the Family. Parental alcoholism, parental depression.
Parental Practices and Nurturance. Coercive parent-child communications, insecure attachment, lack of emotional warmth and support, parental rejection, and disengagement.
Monitoring of the Child. Poor supervision, lack of monitoring of whereabouts, and few rules about where youth can go and when they can return, lax attitudes toward drinking.
Quality of the Family Relationships. Unhappy marital relationships, interpersonal conflict, and aggression of the parents.
Family Structure. Raised by a single parent, especially father, or lives with neither biological parents. Presence of a stepparent does not improve outcomes.
Maltreatment. Physical, emotional, and sexual abuse, neglect.
Siblings. Presence of an older sibling with alcohol use problems.
Environmental factors
Peer Group. Peers with drinking and antisocial behavior problems.
Community. Low SES, disorganized neighborhoods, easy availability of substances, norms favorable toward substance use.
School. Low levels of school adjustment, lenient school policies on drinking, social norms favorable toward substance use, being in trouble with teachers or excluded from school, school location.
Culture. Societies where alcohol availability is greater and heavy drinking is more widespread.

Externalizing behaviors are specifically implicated and may exert their impact through low behavioral control and contact with deviant peers. Further, emotional and behavioral problems may help explain the tendency of those with early-onset drinking to report low self-esteem. Alcohol use in adolescence is negatively concurrently associated with competence and self-confidence components of self-esteem, while social acceptance is positively associated with alcohol use, indicating some social benefits of drinking (Swaim and Wayman 2004). Earlier initiation of alcohol use and alcohol-related problems have been also related to difficult temperament in childhood (e.g., high levels of activity, low task orientation, negative mood, inflexibility), high novelty seeking, reward dependence, aggression, impulsivity, low harm avoidance, and difficulty inhibiting responses (e.g., Brody et al. 1998; Brown et al. 1996). The association between alcohol use and the genetic, personality, and temperamental factors, as well as emotional and behavioral problems,

points to the underlying dispositions toward drinking that can alter the developmental trajectories toward the increased likelihood of negative outcomes.

Some individuals are also maturing in nonnormative ways, and this may increase their vulnerability. Maturation deviance, especially early maturation, predicts higher rates of delinquent behaviors, substance use, and early sexual involvement for both males and females (e.g., Wiesner and Ittel 2002). Early maturation may affect adolescent behaviors through the changes in psychosocial functioning, as well as through a discrepancy between the rates of sexual, cognitive, and social development. Early maturers tend to associate with older peers and have more heterosexual relationships, but may not be yet prepared to handle complicated social situations and additional pressures. Early maturing girls associating with older boys may have difficulty in resisting pressures to drink or engage in sexual activities. Early maturing boys may try to adopt "adult" behaviors (e.g., alcohol or cigarette use) as a way to get access to older peers and to cope with the perceived gap between the biological and social maturities. There is also some evidence linking increased risk of drinking to late maturation in boys (Andersson and Magnusson 1990). Late maturing boys may be drinking to compensate for their "low status" in the peer groups, to look more mature, to increase social acceptance, or to cope with low self-esteem.

Family risk factors encompass parental substance use and psychopathology, problematic family relationships, nonintact family structures, poor supervision, and child abuse. As discussed above, genetic predisposition plays a major role in the propensity for alcohol use disorders. In the sample of male adolescents recruited from a treatment program for substance problems, 33% of variance in alcohol abuse and 56% of the variance in dependence were accounted for by parental transmission factors (Hartman et al. 2006). Parental alcohol use increases the risk of use in offspring also through the shared environment, including poverty, high conflict, and lax attitudes toward drinking (e.g., Ellis et al. 1997; Sartor et al. 2007). Children raised by alcoholic parents may observe more negative interactions and dysfunctional behaviors between family members, may suffer from the lack of emotional warmth and support, and may experience parental rejection and poor monitoring (e.g., Cohen et al. 1994; Velleman and Orford 1993). These factors are related to low self-esteem, increased vulnerability to the negative influences of deviant peer groups, and problems with emotional adjustment (e.g., Lewis 2000; Nillsen and Metha 1994). In Power et al. (2005), longitudinal examination on the patterns of adolescent alcohol use, lenient paternal attitudes about alcohol use, and peer involvement in antisocial behaviors predicted adolescent transition from abstinence to normative drinking; low involvement in prosocial activities with peers and the availability of spending money predicted the transition to high risk drinking; and the problem drinking was predicted by the emotional distress, such as low self-esteem.

Adolescents living with a single biological parent, specifically a single father, or with neither parents, drink more frequently than adolescents living with both biological parents, and the presence of a stepparent does not improve outcomes (Bjarnason et al. 2003). Lack or deficiency in parental control associated with single parenting may contribute to this effect. The level of parental monitoring and the effectiveness of parental supervision are inversely related to the levels of alcohol use in early adolescence, and this relationship is bidirectional (Clark et al. 2008). While low parental supervision predicts higher adolescent alcohol use, adolescents with emotional and behavioral discontrol and drinking problems also resist parental monitoring. Parenting children with behavior problems, emotional dysregulation, and difficult temperament is quite challenging. Such children are more likely to be emotionally neglected by their parents, and parental disengagement can be manifested in poor monitoring during adolescence (Dishion et al. 2004). Adolescents with alcohol use disorders are also 6–12 time more likely to have a history of physical abuse and 18–20 times more likely to have a history of sexual abuse than community controls (Clark et al. 1997). The history of maltreatment is related to the earlier onset of substance use diagnoses, higher rates of comorbid major depression and posttraumatic stress disorder, greater disability, and higher rates of relapse (Clark et al. 2003).

Environmental factors include peer group influences, community and school factors, and sociocultural aspects. Peer group influences are strongly associated with adolescent alcohol use (Henry et al. 2004). Two primary mechanisms may be involved, namely, selection of friends and socialization by friends. That is, adolescents tend to associate with

peers with similar beliefs, attitudes, and behavior patterns, and are influenced by friends' drinking behaviors through imitation, social reinforcement, beliefs, expectation, and shared norms. This process is dynamic, where changes in the number of alcohol-using friends are paralleled by changes in the individual's alcohol consumption (e.g., Bray et al. 2003; Henry et al. 2004). However, adolescent alcohol use does not simply match the peer use. This relationship is moderated by individual's attitudes and beliefs. The greater the propensity for risk taking and the lower the level of the perceived future harm, the stronger is the influence of the peer alcohol use. Further, genetic factors play a key role in the association between individual's and peers' drinking patterns as the shared genetic predisposition to use alcohol may influence peer selection (Hill et al. 2008).

Adolescents living in communities with low SES, disorganized neighborhoods, easy availability of substances, law and community norms favorable toward substance use, have higher drinking rates (e.g., Duncan et al. 2002; Song et al. 2009). Several school factors may also increase risks, including low levels of own and other students adjustment in the school environment, lenient school policies on drinking, social norms favorable toward substance use, being in trouble with teachers or excluded from school, as well as school location (by alcohol outlets density) (Henry et al. 2009; Kuntsche and Kuendig 2005). The extent of alcohol consumption in youths is also imbedded in the cultural norms and social context. In societies where alcohol availability is greater and heavy alcohol use is more widespread, the frequency of individual alcohol consumption among adolescents is greater (Bjarnason et al. 2003). Further, adolescents living in the nonintact families may be more affected by the adverse effects of the societal factors than those living with both biological parents.

Protective Factors

The complex interplay between individual's biological predisposition, personal relationships, and environmental factors influences the developmental pathways. Thus, understanding factors that facilitate positive outcomes is critical. As can be expected from the review of the risk factors, protective factors include high self-esteem, emotional regulation, secure attachment, parental emotional warmth, support, and monitoring, parental abstinence–based norms, peer security and peer involvement in prosocial activities, school involvement, and future aspirations, as well as living in communities with higher employment, greater numbers of married couples, and greater number of grandparents as caregivers (e.g., Brody et al. 1998; Clark et al. 2008; Song et al. 2009; Swaim and Wayman 2004).

Temperamental factors, positive older sibling's influences, and religious involvement are also implicated. Youth with temperaments that promote greater social and emotional support have a decreased risk of negative alcohol-related outcomes. Cuddly and affectionate infants and young children are less likely to develop alcohol use disorders in adolescence and adulthood (Werner and Smith 1992). Involvement in religious activities also reduces this risk, but may be a reflection of stronger family relationships, shared family environmental influences, and genetic factors (Koopmans et al. 1999). Alcohol use patterns of the older siblings may be a protective or a risk factor. In a study of young adolescents with older siblings, 90% reported not using alcohol if their older siblings abstained from alcohol in the past year, while 25% reported drinking if their siblings used alcohol 20 or more times (Needle et al. 1986).

Assessment

Assessment of alcohol use disorders relies primarily on the adolescent self-report (see Table 4 for essentials on assessment). Self-report measures are critical for the assessment of this problem because they can elicit information not apparent to parents, obtainable from institutional records, or evident through direct observations. Recent review of the assessment instruments of the adolescent alcohol use disorders identified 32 inventories that encompass screening tools, diagnostic and multiscale inventories, motivation and self-efficacy instruments and retrospective systematic assessments (Perepletchikova et al. 2008). Screening tools are used to evaluate presence of an alcohol use problem and the level of functioning in related domains. For example, *Alcohol Use Disorders Identification Test* (Babor et al. 1992) is a ten-item measure used to identify hazardous and harmful alcohol consumption before established dependence, and major psychical and psychosocial consequences. Problems identified via screening instruments warrant further evaluation using diagnostic interviews, problem-focused

Alcohol Use Disorders. Table 4 Essentials on assessing alcohol use disorders in adolescents

1. Assuring confidentiality is vital for obtaining reliable data on adolescent substance use.
2. Assessment should involve adolescent self-report, and just obtaining parental report is inadequate.
3. There are no specific assessment instruments that have been established to be individually diagnostic for adolescent substance abuse and dependence.
4. There are no core symptoms associated with making the diagnosis of alcohol abuse and dependence.
5. When a behavior pattern meets both diagnoses, the diagnosis of alcohol dependence takes precedence.
6. Risk and protective factors, including parent-child relationship, parental psychopathology, school and peer group involvement, history of abuse, and comorbid problems, should be assessed for treatment, planning, and delivery.
7. Assessment of biomarker, such as carbohydrate-deficient transferring and gamma-glutamyltransferase, is useful for monitoring alcohol use in adolescents.
8. Urinalysis is recommended in monitoring treatment of adolescents with alcohol use disorders, given the high comorbidity with other substance use problems in this population.

interviews, multiscale questionnaires, and retrospective systematic reviews of drinking behaviors. Diagnostic interviews provide general psychiatric assessment as well as substance use evaluation. The *Adolescent Diagnostic Interview* (Winters and Henly 1993) is a comprehensive 213-item measure that assesses symptoms associated with substance use as per DSM-IV criteria, including substance use history, psychosocial functioning, mental health, and sociodemographic information. Problem-focused interviews typically measure history of substance use and related problems, including functional difficulties and social, legal, academic, and vocational consequences, such as the *Adolescent Drug Abuse Diagnosis* (Fiedman and Utada 1989). Multiscale questionnaires tap into similar domains; however, they are self-administered, usually include scales for detecting distortion in responding, and offer normative data. For example, the *Adolescent Self-Assessment Profile* (Wanberg 1992) is a 225-item measure that assesses frequency, benefits, and consequences of substance use and risk factors. The *Alcohol Time-Line Follow-Back* (Sobell and Sobell 1992) is an example of retrospective assessment and provides an estimate of daily drinking up to 12 months that can be used for treatment planning, evaluation of treatment effects, and follow-up assessments.

Treatment

Multiple interventions have been used to address alcohol use disorders in adolescence, including pharmacotherapy, family therapies, cognitive-behavioral interventions, motivational interviewing, and Alcoholics Anonymous (AA). Table 5 presents information on the treatment approaches, and key points are elaborated below.

Psychosocial Interventions

A resent review identified Multidimentional Family Therapy and group-administered Cognitive Behavioral Therapy (CBT) as having the strongest empirical support for treatment of alcohol use disorders in adolescence (Perepletchikova et al. 2008). The key assumptions of the *Multidimentional Family Therapy* (MDFT) are that the adolescent is involved in multiple domains (e.g., family, school, peer, legal and welfare systems), each of these domains is associated with different risk factors, and, thus, adolescent psychopathology is best managed within a multiple systems approach (Liddle 1992). Treatment focuses on four areas: (1) individual characteristics of the adolescent (e.g., perceptions about alcohol/drug use, using behavior, including coping with urges to use, and emotional regulation processes); (2) the parent(s) (e.g., parenting practices, personal issues); (3) family interaction patterns; and (4) extra-familial sources of influence and development (e.g., school, juvenile justice, medical, and legal systems). The overarching goal of treatment is to reestablish normal developmental processes. Goals and foci areas with the adolescent include building competencies in school, sports, or other domains, reducing involvement with deviant peers, increasing involvement in prosocial activities, and problem solving and affect regulation skills building. For the parent, goals include reducing psychiatric distress, improving social support and parenting skills, and addressing necessary economic issues. At the family level, interventions focus on attachment, communication, and increasing family organization.

Cognitive Behavioral Therapy (CBT) interventions for adolescent alcohol use involve: (1) self-monitoring;

Alcohol Use Disorders. Table 5 Treatment approaches for adolescent alcohol use disorders

Intervention	Key features
Alcoholics anonymous (AA; Winters et al. 2000)	AA offers emotional support through self-help groups and a model of abstinence for people recovering from alcohol dependence, using a 12-step approach. Adolescent treatment programs focus primarily on the first five steps: (1) admitting to the power of substances to make one's life unmanageable; (2) believing there is hope for change if one allows help; (3) learning from the advice of others as one explores making different decisions about life; (4) taking an in-depth moral inventory of one's life; and (5) discussing one's past wrongs with a peer, counselor, or significant other.
Multidimensional family therapy (MDFT; Dennis et al. 2004; Liddle 1992)	MDFT incorporates structural and strategic family therapy approaches, as well as systems approaches, and targets multiple systems, including family, school, peer, legal, and welfare. The goals are: (1) to reestablish normal developmental processes; (2) to build competencies; (3) to reduce involvement with deviant peers and increase involvement in prosocial activities; (4) to build problem solving and affect regulation skills; (5) to reduce parental psychiatric distress, and improve social support and parenting skills; and (6) to improve family communication and organization.
Multisystemic therapy (MST; Henggeler et al. 1999)	MST incorporates CBT strategies, pragmatic, problem-solving models, parent training, and pharmacological treatments. The goals are: (1) to enhance caregiver's capacity to effectively monitor adolescent behavior; (2) to increase family structure; (3) to identify barriers to parent's reinforcement of appropriate behaviors; (4) to decrease adolescent involvement with delinquent peer group and encourage association with prosocial peers; and (5) to promote school performance and/or vocational functioning.
Brief strategic family therapy (BSFT; Santisteban et al. 2003)	BSFT incorporates structural and strategic family therapies approaches and focuses specifically on "within-family" interventions. The main goals are: (1) engagement of treatment-resistant family members; (2) joining with the family; (3) assessment of family communication patterns; and (4) restructuring family interactions to improve limit-setting, monitoring of adolescent behavior, and other parenting practices linked to problematic behaviors.
Cognitive behavior therapy (cBT; Kaminer and Slesnick 2005)	CBT focuses on: (1) self-monitoring; (2) identifying cognitive, social, and emotional triggers of use; (3) developing a repertoire of skills to manage cravings; and (4) identifying alternative reinforcement contingencies.
Motivational enhancement therapy (MET; Bailey et al. 2004; Dennis et al. 2004)	MET targets adolescent's ambivalence concerning whether or not they have a problem with alcohol and other drugs, with a goal to increase their motivation to change.

(2) identifying cognitive, social, and emotional triggers of use; (3) developing a repertoire of skills to manage cravings; and (4) identifying alternative reinforcement contingencies (Kaminer and Slesnick 2005). Communication, problem solving, and alcohol refusal skills are taught, together with relaxation training and anger management. Distorted cognitions are also addressed, and therapy sessions characteristically include modeling, behavior rehearsal, and feedback. Adolescents are frequently resistant to 'homework', and often require in vivo processing of distorted cognitions and problem-solving deficits during therapy sessions. The strongest empirical support to date is for the group-administered CBT in combination with brief individual motivational

enhancement (Dennis et al. 2004). CBT interventions tend to produce rapid short-term effects that are not sustained at longer-term follow-up assessments. Combination of CBT with family-based interventions seems to be promising for longer-term efficacy. Brief Motivational Enhancement Therapy appears to be an important adjunct to CBT, specifically for reducing negative consequences of drinking.

Pharmacological Interventions

Data on pharmacological interventions for adolescent alcohol use disorders is very preliminary. Only a few randomized controlled trials have been performed to establish the effectiveness of medications to address this problem. Given the paucity of research in this area, pharmacological agents will be discussed briefly. Medications that have been tested for use with adolescents, and have some preliminary support, include disulfiram, naltrexone, acamprosate, and serotonergic agents (e.g., tianeptine, and ondansetron). *Disulfiram* alters the metabolism of alcohol and produces a mildly toxic acetaldehyde, which causes anxiety, headache, nausea, and vomiting. The symptoms are noxious enough that most individuals, who are compliant with medication, remain abstinent (Niederhofer and Staffen 2003a). *Naltrexone* is the opioid antagonist and is associated with reduced number of days drinking and lowered reports of craving alcohol in adolescents (Deas et al. 2005; Niederhofer et al. 2003a). Its mechanism of action of a*camprosate* has yet to be established; however, it has been used for the treatment of alcohol dependence in adults, and there is some evidence to its efficacy with adolescent (Niederhofer and Staffen 2003b). Preliminary support for the efficacy of *tianeptine* (Niederhofer et al. 2003b), which facilitates the re-uptake of serotonin, and *ondansetron* (Dawes et al. 2005), a 5HT3 antagonist, have also been reported in adolescents with alcohol use disorders.

Prevention

Over the past few decades, much progress has been made in devising interventions to prevent underage drinking. Recent review identified 400 preventive interventions, of which 127 had some supportive evidence (Spoth et al. 2008). Preventive interventions for alcohol use disorders in adolescent primarily focus on addressing risk and protective factors originating in the family, school, community, as well as in multiple domains. Further, prevention encompasses policy, law, and environmentally focused interventions. *Family-focused preventive interventions*, such as the Nurse–Family Partnership (Olds et al. 1998) and Strengthening Families Program (Spoth et al. 2001), address factors such as parental monitoring and supervision, parent-child bonding, discipline practices, and parental involvement in child's activities. Several interventions integrate family and school components, such as Linking the Interests of Families and Teachers (Eddy et al. 2000). Evaluation of these interventions indicates reduction in disruptive and behavior problems that are associated with alcohol use, as well as delay in alcohol use initiation and reduction in heavy drinking in adolescence.

School-based interventions, such as Keepin' it REAL (Hecht et al. 2003), teach students antidrug norms, peer resistance, social and coping skills, reinforced by booster activities (e.g., role-plays) and media campaigns. Such programs have been shown to be effective in reducing disruptive behaviors problems and early initiation of substance use. *Multidomain programs*, such as Project STAR (Pentz and Valente 1995), intervene in two or more domains (e.g., family, school, worksite, community, policy), and most often focus on children and younger adolescents, as they are less independent and mobile. *Policy and law interventions*, on the other hand, focus more on older adolescents, and include passing out laws raising the minimum drinking age, reducing sales to minor, and better identification checks by vendors, as well as reducing tolerance of the underage sales and drinking in the communities.

Concluding Comments

Early adolescence is replete with significant transitions. The age period between 10 and 15 years is characterized by dramatic changes such as puberty, emotional distancing from parents, changes in peer relations, new parental, teacher and societal expectations, changes in self-identity, greater autonomy and contact with the larger environment, development of romantic relationships, and, in some cases, early-onset sexual behaviors. This period is also notable for emerging alcohol use. Underage drinking is not limited to adolescent experimentation and may lead to clinically significant problems, as the transition from early adolescence to young adulthood is characterized by a substantial increase in

heavy use. Alcohol use disorders come with significant costs to individual and the society. Understanding factors that influence developmental pathways, as well as research on the prevention and intervention strategies are critical. While the past decade has seen marked advances in the assessment, treatment, and prevention of underage drinking problems, as well as in understanding of the associated factors, there is much left to learn.

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Cross-References

► Alcohol Use
► Alcoholics Anonymous

References

Abram, K. M., Washburn, J. J., Teplin, L. A., Emanuel, K. M., Romero, E. G., & McClelland, G. M. (2007). Posttraumatic stress disorder and psychiatric comorbidity among detained youths. *Psychiatric Services, 58*, 1311–1316.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of the mental disorders* (4th ed.). Washington: APA.

Andersson, T. A., & Magnusson, D. (1990). Biological maturation in adolescence and the development of drinking habits and alcohol abuse among young males: A prospective longitudinal study. *Journal of Youth and Adolescence, 19*, 33–41.

Babor, T., de la Fuente, J., Saunders, J., & Grant, M. (1992). *AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care*. Geneva: WHO.

Bailey, K. A., Baker, A. L., Webster, R. A., & Lewin, T. J. (2004). Pilot randomized controlled trial of a brief alcohol intervention group for adolescents. *Drug and Alcohol Review, 23*, 157–166.

Bjarnason, T., Andersson, B., Choquet, M., Elekes, Z., Morgan, M., & Rapinett, G. (2003). Alcohol culture, family structure and adolescent alcohol use: Multilevel modeling of frequency of heavy drinking among 15–16 year old students in 11 European countries. *Journal of Studies on Alcohol, 64*, 200–208.

Blum, R. W., Beuhring, T., Shew, M. L., Bearinger, L. H., Sieving, R. E., & Resnick, M. D. (2000). The effects of race/ethnicity, income, and family structure on adolescent risk behaviors. *American Journal of Public Health, 90*, 1879–1884.

Brannigan, R., Schackman, B. R., Falco, M., & Millman, R. B. (2004). The quality of highly regarded adolescents substance abuse treatment programs: Results of an in-depth national survey. *Archives of Pediatrics & Adolescent Medicine, 158*, 904–909.

Bray, J. H., Adams, G. J., Getz, J. G., & McQueen, A. (2003). Individuation, peers, and adolescent alcohol use: A latent growth analysis. *Journal of Consulting and Clinical Psychology, 71*, 553–564.

Brody, G. H., Flor, D. L., Hollett-Wright, N., & McCoy, J. K. (1998). Children's development of alcohol use norms: Contributions of parent and sibling norms, children's temperament, and parent-child discussions. *Journal of Family Psychology, 12*, 209–219.

Brown, S. A., Gleghorn, A., Schuckit, M. A., Myers, M. G., Mott, M. A., et al. (1996). Conduct disorder among adolescent alcohol and drug abusers. *Journal of Studies on Alcohol, 57*, 314–324.

Brown, S. A., McGue, M., Maggs, J., Schulenberg, J., Hingson, R., Swartzwelder, S., et al. (2008). A developmental perspective on alcohol and youths 16 to 20 years of age. *Pediatrics, 121* (Suppl. 4), S290–S310.

Chaloupka, F. J., Grossman, M., & Saffer, H. (2002). The effects of price on alcohol consumption and alcohol-related problems. *Alcohol Research & Health, 26*, 22–34.

Chassin, L., Pitts, S. C., & Prost, J. (2002). Binge drinking trajectories from adolescence to emergent adulthood in a high-risk sample: Predictors and substance abuse outcomes. *Journal of Consulting and Clinical Psychology, 70*, 67–78.

Chung, T., Martin, C., Armstrong, T., & Labouvie, E. (2002). Prevalence of DSM-IV alcohol diagnoses and symptoms in adolescent community and clinical samples. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 546–554.

Clark, D. B. (2004). The natural history of adolescent alcohol use disorders. *Addiction, 99*, 5–22.

Clark, D. B., Lesnick, L., & Hegedus, A. M. (1997). Traumas and other adverse life events in adolescents with alcohol abuse and dependence. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1744–1751.

Clark, D. B., De Bellis, M. D., Lynch, K. G., Cornelius, J. R., & Martin, C. S. (2003). Physical and sexual abuse, depression and alcohol use disorders in adolescents: Onsets and outcomes. *Drug and Alcohol Dependence, 69*, 51–60.

Clark, D. B., Kirisci, L., Mezzich, A., & Chung, T. (2008). Parental supervision and alcohol use in adolescence: Developmentally specific interactions. *Journal of Developmental and Behavioral Pediatrics, 29*, 285–292.

Cohen, D. A., Richardon, J., & LaBree, L. (1994). Parenting behaviors and the onset of smoking and alcohol use: A longitudinal study. *Pediatrics, 94*, 368–375.

Dawes, M. A., Johnson, B. A., Ait-Daoud, N., Ma, J. Z., & Cornelius, J. R. (2005). A prospective, open-label trial of ondansetron in adolescents with alcohol dependence. *Addictive Behaviors, 30*, 1077–1085.

Deas D, May M. P., Randall C, Johnson N, Anton R. (2005). Naltrexone treatment of adolescent alcoholics: an open-label pilot study. *Journal of Child & Adolescent Psychopharmacology, 15*, 723–728.

De Bellis, M. D., Clark, D. B., Beers, S. R., Soloff, P. H., Boring, A. M., Hall, J., et al. (2000). Hippocampal volume in adolescent-onset alcohol use disorders. *The American Journal of Psychiatry, 157*, 737–744.

De Bellis, M. D., Narasimhan, A., Thatcher, D. L., Keshavan, M. S., Soloff, P., & Clark, D. B. (2005). Prefrontal cortex, thalamus and cerebellar volumes in adolescents and young adults with adolescent onset alcohol use disorders and co-morbid mental disorders. *Alcoholism, Clinical and Experimental Research, 29*, 1590–1600.

Dennis, M., Godley, S. H., Diamond, G., Tims, F. M., Babor, T., Donaldson, J., et al. (2004). The Cannabis Youth Treatment (CYT) study: Main findings from two randomized trials. *Journal of Substance Abuse Treatment, 27*, 197–213.

Dick, D. M., & Foroud, T. (2003). Candidate genes for alcohol dependence: A review of genetic evidence from human studies. *Alcoholism, Clinical and Experimental Research, 27*, 868–879.

Dishion, T. J., Nelson, S. E., & Bullock, B. M. (2004). Premature adolescent autonomy: Parent disengagement and deviant peer process in the amplification of problem behavior. *Journal of Adolescence, 27*, 515–530.

Duncan, S. C., Duncan, T. E., & Strycker, L. A. (2002). A multilevel analysis of neighborhood context and youth alcohol and drug problems. *Prevention Science, 3*, 125–133.

Eaton, D. K., Kann, L., & Kinchen, S. (2006). Youth risk behavior surveillance: United States, 2005. *MMWR: Surveillance Summaries, 55*, 1–108.

Eddy, M. J., Reid, J. R., & Fetrow, R. A. (2000). An elementary school-based prevention program targeting modifiable antecedents of youth delinquency and violence. Linking the Interest of Families and Teachers (LIFT). *Journal of Emotional and Behavioral Disorders, 8*, 165–176.

Ellis, D. A., Zucker, R. A., & Fitzgerald, H. E. (1997). The role of family influences in development and risk. *Alcohol Health and Research World, 21*, 218–226.

Fiedman, A. S., & Utada, A. (1989). A method for diagnosing and planning the treatment of adolescent drug abusers (the Adolescent Drug Abuse Diagnosis [ADAD] instrument). *Journal of Drug Education, 19*, 285–312.

Franken, I. H. A., & Hendriks, V. M. (2000). Early-onset of illicit substance use is associated with greater axis-II comorbidity, not with axis-I comorbidity. *Drug and Alcohol Dependence, 59*, 305–308.

Gelhorn, H., Hartman, C., Sakai, J., Stallings, M., Young, S., Rhee, S. H., et al. (2008). Towards DSM-V: An item response theory analysis of the diagnostic process for DSM-IV alcohol abuse and dependence in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*, 1329–1339.

Gilvarry, E., & McArdle, P. (2007). *Alcohol, drugs, and young people: Clinical Approaches. Clinics in developmental medicine* (p. 172). London: MacKeith.

Groves, S. A., & Sher, L. (2005). Letter to the editor: Gender differences in suicidal behavior and alcohol abuse in adolescents. *International Journal of Adolescent Medicine and Health, 17*, 307–308.

Grunbaum, J. A., Kass, L., Kinchen, S., Ross, J., Hawkins, J., Lowry, R., et al. (2004). Youth risk behavior surveillance – United States, 2003. *Morbidity and Mortality Weekly Report, 53*(SS-02), 1–96.

Hanna, E. Z., & Grant, B. F. (1999). Parallels to early onset alcohol use in the relationship of early onset smoking with drug use and DSM-IV drug and depressive disorders: Findings from the National Longitudinal Epidemiologic Survey. *Alcoholism, Clinical and Experimental Research, 23*, 513–522.

Harrison, P. A., Fulkerson, J. A., & Beebe, T. J. (1998). DSM-IV substance use disorder criteria for adolescents: A critical examination based on a statewide school survey. *The American Journal of Psychiatry, 155*, 486–492.

Hartman, C. A., Lessem, J. M., Hopfer, C. J., Crowley, T. J., & Stallings, M. C. (2006). The family transmission of adolescent alcohol abuse and dependence. *Journal of Studies on Alcohol, 67*, 657–664.

Hecht, M. L., Marsiglia, F. F., Elek, E., Wagstaff, D., Kulis, S., Dustman, P., et al. (2003). Culturally grounded substance use prevention: An evaluation of the keepin' it R.E.A.L curriculum. *Prevention Science, 4*, 233–248.

Henggeler, S. W., Pickrel, S. G., & Brondino, M. J. (1999). Multisystemic treatment of substance-abusing and dependent delinquents: Outcomes, treatment fidelity, and transportability. *Mental Health Services Research, 1*, 171–184.

Henry, K. L., Slater, M. D., & Oetting, E. R. (2004). Alcohol use in early adolescence: The effect of changes in risk taking, perceived harm and friends" alcohol use. *Journal of Studies on Alcohol, 66*, 275–283.

Henry, K. L., Stanley, L. R., Edwards, R. W., Harkabus, L. C., & Chapin, L. A. (2009). Individual and contextual effects of school adjustment on adolescent alcohol use. *Prevention Science, 10*, 236–247.

Hill, J., Emery, R. E., Harden, K. P., Mendle, J., & Turkheimer, E. (2008). Alcohol use in adolescent twins and affiliation with substance using peers. *Journal of Abnormal Child Psychology, 36*, 81–94.

Jackson, K. M., Sher, K. J., Gotham, H. J., & Wood, P. K. (2001). Transitioning into and out of large-effect drinking in young adulthood. *Journal of Abnormal Psychology, 110*, 378–391.

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2003). *Monitoring the future: National survey results on drug use, 1975–2002: Vo. 1. Secondary School Students* (NIH Pub. No. 03-5375). Bethesda: National Institute of Drug Abuse.

Johnston, L. D., O'Malley, P. M., Bachmn, J. G., & Schulenberg, J. E. (2004). *Monitoring the future: National survey results on drug use, 1975–2003* (NIH Publication No. 04-5507). Bethesda: Department of Drug Abuse.

Johnston, L. D., O'Malley, P. M., Bachmn, J. G., & Schulenberg, J. E. (2006a). *Monitoring the Future: National survey results on drug use, 1975–2005: Vo. 1. Secondary school students* (NIH Publication No. 06-5883). Bethesda: National Institute of Drug Abuse.

Johnston, L. D., O'Malley, P. M., Bachmn, J. G., & Schulenberg, J. E. (2006b). *Monitoring the future: National survey results on drug use, 1975–2005: Vo. I1. College students and adults ages 19–45* (NIH Publication No. 06-5884). Bethesda: National Institute of Drug Abuse.

Kaminer, Y., & Slesnick, N. (2005). Evidence-based cognitive-behavioral and family therapies for adolescent alcohol and other substance use disorders. *Recent Developments in Alcoholism, 17*, 383–405.

King, K. M., & Chassin, L. (2007). A prospective study of the effects of age of initiation of alcohol and drug use on young adults substance dependence. *Journal of Studies on Alcohol, 68*, 256–265.

King, S. M., Burt, A., Malone, S. M., McGue, M., & Iacono, W. G. (2005). Etiological contributions to heavy drinking from late adolescence to young adulthood. *Journal of Abnormal Psychology, 112*, 587–598.

Koopmans, J. R., Slutske, W. S., van Baal, G. C. M., & Bloomsma, D. I. (1999). The influence of religion on alcohol use initiation: Evidence for genotype x environment interaction. *Behavior Genetics, 29*, 445–453.

Kuntsche, E. N., & Kuendig, H. (2005). Do school surroundings matter? Alcohol outlet density, perception of adolescent drinking in public, and adolescent alcohol use. *Addictive Behaviors, 30*, 151–158.

Lewis, S. H. (2000). Psychosocial adjustment of adult children of alcoholics: A review of the recent empirical literature. *Clinical Psychology Review, 20*, 311–337.

Li, T. K., Hewitt, B. G., & Grant, B. F. (2004). Alcohol use disorders and mood disorders: A national institute on alcohol abuse and alcoholism perspective. *Biological Psychiatry, 56*, 718–720.

Liddle, H. A. (1992). A multidimensional model for treating the adolescent drug abuser. In W. Snyder & T. Ooms (Eds.), *Empowering families, helping adolescents: Family-centered treatment of adolescents with mental health and substance abuse problems*. Washington: US Government Printing Office.

Low, N. C., Lee, S. S., Johnson, J. G., Williams, J. B., & Harris, E. S. (2008). The association between anxiety and alcohol versus cannabis abuse disorders among adolescents in primary care settings. *Family Practice, 25*, 321–327.

Lubman, D. I., Bonomo, Y., & Yucel, M. (2007). Drug use in young people: Short-term effects and long-term harms. In E. Gilvarry, & P. McArdle (Eds.), *Alcohol, drugs, and young people: Clinical Approaches. Clinics in Developmental Medicine, 172* (pp. 18–50). London: MacKeith.

Maag, J. W., & Irvin, D. M. (2005). Alcohol use and depression among African-American and Caucasian adolescents. *Adolescence, 40*, 87–101.

McGue, M., Iacono, W. G., Legrand, L. N., Malone, S., & Elkins, I. (2001). The origins of age at first drink: I. Associations with substance-use disorders, disinhibitory behavior and psychopathology, and P3 amplitude. *Alcoholism, Clinical and Experimental Research, 25*, 1156–1165.

Miller, T. R., Levy, D. T., Spicer, R. S., & Taylor, D. M. (2006). Societal costs of underage drinking. *Journal of Studies on Alcohol, 67*, 519–528.

Moss, H. B., & Lynch, K. G. (2001). Comorbid disruptive behavior disorder symptoms and their relationship to adolescent alcohol use disorders. *Drug and Alcohol Dependence, 64*, 75–83.

Needle, R., McCubbin, H., & Reineck, R. (1986). Interpersonal influences in adolescent drug use: The role of older siblings, parents and peers. *The International Journal of the Addictions, 21*, 739–766.

Niederhofer, H., & Staffen, W. (2003a). Comparison of disulfiram and placebo in treatment of alcohol dependence of adolescents. *Drug and Alcohol Review, 22*, 295–297.

Niederhofer, H., & Staffen, W. (2003b). Acamprosate and its efficacy in treating alcohol dependent adolescents. *European Child & Adolescent Psychiatry, 12*, 144–148.

Niederhofer, H., Staffen, W., & Mair, A. (2003a). Comparison of naltrexone and placebo in treatment of alcohol dependence of adolescents. *Alcoholism Treatment Quarterly, 21*, 87–95.

Niederhofer, H., Staffen, W., & Mair, A. (2003b). Tianeptine may be a useful adjunct in the treatment of alcohol dependence of adolescents. *Alcoholism, Clinical and Experimental Research, 27*, 136.

Nillsen, D. M., & Metha, A. (1994). Parental behavior and adolescent self-esteem in clinical and nonclinical samples. *Adolescence, 29*, 525–542.

Ohannessian, C. M., Hesselbrock, V. M., Kramer, J., Kuperman, S., Bucholz, K. K., Schuckit, M. A., et al. (2004). The relationship between parental alcoholism and adolescent psychopathology: A systematic examination of parental comorbid psychopathology. *Journal of Abnormal Child Psychology, 32*, 519–533.

Olds, D., Henderson, C. R., Cole, R., Eckenrode, J., Kitzman, H., Luckey, D., et al. (1998). Long-term effects of nurse home visitation on children's criminal and antisocial behavior: A 15-year follow-up of a randomized controlled trial. *Journal of the American Medical Association, 280*, 1238–1244.

Pentz, M. A., & Valente, T. (1995). Project STAR: A substance abuse prevention campaign in Kansas city. In T. E. Backer & E. M. Rogers (Eds.), *Successful health communications campaigns: Organizational dimensions* (pp. 37–60). Thousand Oaks: Sage.

Perepletchikova, F., Kaufman, J., & Krystal, J. H. (2008). Practitioner review: Assessment and treatment of adolescent alcohol use disorders. *Journal of Child Psychology and Psychiatry, 49*, 1131–1154.

Power, T. G., Steward, C. D., Hughes, S. O., & Arbona, C. (2005). Predicting patterns of adolescent alcohol use: A longitudinal study. *Journal of Studies on Alcohol, 66*, 74–81.

Santisteban, D. A., Perez-Vidal, A., Coatsworth, J. D., Kurtines, W. M., Schwartz, S. J., LaPerriere, A., et al. (2003). Efficacy of brief strategic family therapy in modifying Hispanic adolescent behavior problems and substance use. *Journal of Family Psychology, 17*, 121–133.

Sartor, C. E., Lynskey, M. T., Heath, A. C., Jacob, T., & True, W. (2007). The role of childhood risk factors in initiation of alcohol use and progression to alcohol dependence. *Addiction, 102*, 216–225.

Schuckit, M. A. (1998). Biological, psychological and environmental predictors of the alcoholism risk: A longitudinal study. *Journal of Studies on Alcohol, 59*, 485–494.

Schuckit, M. A. (2000). Genetics of the risk for alcoholism. *American Journal of Addiction, 9*, 103–112.

Schuckit, M. A., Danko, G. P., Smith, T. L., Bierut, L. J., Bucholz, K. K., Edenberg, H. J., et al. (2008). The prognostic implications of DSM-IV abuse criteria in drinking adolescents. *Drug and Alcohol Dependence, 97*, 94–104.

Schulenberg, J. E., & Maggs, J. L. (2001). Moving targets: Modeling developmental trajectories of adolescent alcohol misuse, individual and peer risk factors, and intervention effects. *Applied Developmental Science, 5*, 237–253.

Schulenberg, J. E., & Maggs, J. L. (2002). A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *Journal of Studies on Alcohol, 14*, 54–70.

Siewert, E. A., STalling, M. C., & Hewitt, J. K. (2004). Genetic influence on vulnerability to, and protective factors for adolescent drinking. *Twin Research, 7*, 617–625.

Slutske, W. S., Hunt-Carter, E. E., Nabors-Oberg, R. E., Sher, K. J., Bucholz, K. K., Madden, P. F., et al. (2004). Do college students dink more than their non-college-attending peers? Evidence from a population-based longitudinal female twin study. *Journal of Abnormal Psychology, 113*, 530–540.

Sobell, L. C., & Sobell, M. B. (1992). Timeline follow-back: A technique for assessing self-reported ethanol consumption. In J. Allen & R. Z. Litten (Eds.), *Measuring alcohol consumption: Psychological and biological methods*. Totowa: Human.

Song, E. U., Reboussin, B. A., Foley, K. L., Kaltenbach, L. A., Wagoner, K. G., & Wolfson, M. (2009). Selected community characteristics and underage drinking. *Substance Use & Misuse, 44*, 179–194.

Spoth, R., Redmond, C., & Shin, C. (2001). Randomized trial of brief family interventions for general population: Adolescent substance use outcomes 4 year following baseline. *Journal of Consulting and Clinical Psychology, 69*, 627–642.

Spoth, R., Greenberg, M., & Turrisi, R. (2008). Preventive interventions addressing underage drinking: Stae of the evidence and steps toward public health impact. *Pediatrics, 121*(Suppl. 4), S311–S336.

Swaim, R. C., & Wayman, J. C. (2004). Multidimensional self-esteem and alcohol use among Mexican American and White non-Latino adolescents: Concurrent and prospective effects. *The American Journal of Orthopsychiatry, 74*, 559–570.

Tyndale, R. F. (2004). Genetics of alcohol and tobacco use in humans. *Annals of Medicine, 35*, 94–121.

U.S. Department of Health and Human Services. (2002). *Report to congress on the prevention and treatment of co-occurring substance abuse and mental disorders*. Rockville: Substance Abuse and Mental Health Services Administration.

Velleman, R., & Orford, J. (1993). The adult adjustment of offspring of parents with drinking problems. *The British Journal of Psychiatry, 162*, 503–516.

Viken, R. J., Kaprio, J., Koskenvuo, M., & Rose, R. J. (1999). Longitudinal analyses of the determinants of drinking and of drinking to intoxication in adolescent twins. *Behavior Genetics, 29*, 455–461.

Wanberg, K. W. (1992). *Adolescent self-assessment profile*. Arvada: Center for Alcohol/Drug Abuse Research and Evaluation.

Watt, T. T. (2004). Race/ethnic differences in alcohol abuse among youth: An examination of risk- taking attitudes as a mediating factor. *Journal of Ethnicity in Substance Abuse, 3*, 33–47.

Werner, E. E., & Smith, R. S. (1992). *Overcoming the odds: High risk children from birth to adulthood*. Ithaca: Cornell University Press.

Wiesner, M., & Ittel, A. (2002). Relations of pubertal timing and depressive symptoms to substance use in early adolescence. *Journal of Early Adolescence, 22*, 5–23.

Wilens, T. E. (1997). AOD use and attention deficit/hyperactivity disorder. *Alcohol Health and Research World, 22*, 127–130.

Winters, K. C., & Henly, G. A. (1993). *Adolescent diagnostic Interview schedule and manual*. Los Angeles: Western Psychological Services.

Winters, K. C., Stinchfield, R. D., Fulkerson, J., & Henly, G. A. (1993). Measuring alcohol and cannabis use disorders in an adolescent clinical samples. *Psychology of Addictive Behaviors, 7*, 185–196.

Winters, K. C., Stinchfield, R. D., Opland, E., Weller, C., & Latimer, W. W. (2000). The effectiveness of the Minnesota Model approach in the treatment of adolescent drug abusers. *Addiction, 95*, 601–612.

World Health Organization. (1992). *The ICD 10 classification of mental and behavioral disorders*. Geneva: WHO.

Young, S. E., Corley, R. P., Stallings, M. C., Rhee, S. H., Crowley, T. J., & Hewitt, J. K. (2002). Substance use, abuse and dependence in adolescence: Prevalence, symptom profiles and correlates. *Drug and Alcohol Dependence, 68*, 309–322.

Alcoholics Anonymous

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Alcoholics Anonymous (AA) is an association of alcohol-dependent persons devoted to the achievement and maintenance of sobriety of its members through self-help and mutual support. AA has been deemed helpful for many problem drinkers, and referral to it by treatment providers is common. The program is widely known for its "12 steps" to recovery; its principles include a firm belief in God or higher power, frank self appraisals, willingness to admit and correct wrongs done to others, and a dedication to assisting others who seek to conquer their own alcoholism. Despite its popularity, little is known about why it leads to abstinence. In fact, research on the effectiveness of AA is controversial and subject to divergent interpretations (Kelly et al. 2009). Although treatment providers and juvenile court systems have recommended AA-type programs for adolescents, whether it is appropriate to do so and whether they can be effective, at least in its dominant form, remains debatable. Controversy surrounds more than its effectiveness (which, as will be seen below, is potentially problematic); much controversy centers on the potentially religious overtones of programs that, for example, raise important issues when the programs would be funded by the government or might have youth participate in them (see Levesque 2002).

Few studies have examined the effects of the age compositions of AA groups. Existing studies show that although adolescents may be helped by AA, they tend not to attend, and if they do they are more likely to

discontinue earlier than adults. This lack of success tends to have been seen as the result of other members' being older and not necessarily relating well to adolescents (Kelly et al. 2005). These findings have led to developing different groups that are more age appropriate, which has shown to contribute to increasing attendance and the likelihood of engaging in the 12 steps of recovery (Kelly et al. 2005). Still, the 12-step model has been deemed somewhat problematic when applied for adolescents. This has been seen in AA's stance that the substance is the cause of most presenting problems when, for adolescents, substance abuse may only be part of a much larger behavioral pattern or a temporary one that may not be alcoholism. The program also has been seen as potentially problematic in that adolescents may be even less likely than other groups to be open to changing their abuse habits. Still, some studies have shown that attending a 12-step program reduces adolescent substance involvement even after program termination (Kelly et al. 2000). Despite some of these positive findings, when it comes to adolescents, reviews of existing research reveal that studies have yet to support the utility and effectiveness of adult-derived 12-step approaches (Kelly and Myers 2007).

Cross-References

► Alcohol Use
► Alcohol Use Disorders

References

Kelly, J. F., Magill, J., & Stout, R. L. (2009). How do people recover from alcohol dependence? A systematic review of the research on mechanisms of behavior change in Alcoholics Anonymous. *Addiction Research & Theory, 17*, 236–259.

Kelly, J., & Myers, M. G. (2007). Adolescents' participation in Alcoholics Anonymous and Narcotics Anonymous: Review, implications and future directions. *Journal of Psychoactive Drugs, 39*, 259–269.

Kelly, J. F., Myers, M. G., & Brown, S. A. (2000). A multivariate process model of adolescent 12-step attendance and substance use outcome following inpatient treatment. *Psychology of Addictive Behaviors, 14*, 376–389.

Kelly, J. F., Myers, M. G., & Brown, S. A. (2005). The effects of age composition of 12-Step groups on adolescent 12-Step participation and substance use outcome. *Journal of Child & Adolescent Substance Abuse, 15*, 63–72.

Levesque, R. J. R. (2002). *Not by faith alone: Religion, adolescence and the law*. New York: New York University Press.

Alternative Schools

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Overview

Parents of American adolescents who are unsuccessful in a regular public school environment are often faced with difficult decisions on where they can best educate their adolescent. Since the 1960s, alternative schools have grown as a response to this quandary. Alternative schools offer smaller classrooms, intensive emotional and behavioral supports, and at times specialized curriculum to address the needs of students who have struggled in their home school. Ideally, alternative schools represent an often last-ditch effort of parents, adolescents, and schools to find positive and productive school environments for them to continue their education. Despite the hopes that many have for alternative schools to engage and graduate at-risk adolescents, the evidence that these schools are effective in carrying out their mission is mixed at best, with multiple critiques of alternative schools' failure to provide adequate supports to these challenging student populations. This essay will review the history of alternative schooling in USA, brief descriptions of types of alternative schools offered, and a review of the research on the impacts of alternative schools on at-risk adolescents.

Populations Generally Studied/ Sources of Data

The most recently available data indicates that there are more than 10,000 public alternative schools in USA that offer education to roughly 1.3% of the US K-12 public school population (National Center for Education Statistics 2002). Many of those schools focus on students in the middle school and high school years, focusing on providing academic, emotional, and behavioral supports to at-risk adolescents. More than 90% of secondary level districts offered some form of alternative education program, often housed in a separate educational building or facility (National

Center for Education Statistics 2002). Students can be enrolled in these schools through a variety of pathways, but most typically, students are referred to these schools by their home school districts due to significant behavioral and emotional problems that have impacted the student's learning and have resulted in multiple suspensions and even expulsion. Indeed, a recent study showed that 20% of the students in alternative public schools have individualized education plans (IEPs) that require special education services (Lehr and Lange 2003).

Only about 70% of American youth make it through high school with a regular diploma (Smink and Reiner 2005). Most policymakers and researchers agree that it is no longer possible to build a viable adult life without a high school diploma or at the minimum, a certificate of General Educational Development (GED). Those youth who don't finish school are at risk for a host of negative social, economic, and health outcomes in adulthood compared to peers who graduate high school. They earn less, have poorer job prospects, have poorer health, and are overrepresented in the US prison population (National Center for Education Statistics 2005). Only about one-half (52%) of students in the principal school systems of the 50 largest cities complete high school with a diploma. There is a large gap for ethnic minorities and males, as well as a 15-point percentage gap between the suburbs and urban areas with urban areas having much worse dropout rates (Swanson 2008). Other longitudinal analyses of dropout data suggest that the dropout crisis is more concentrated in lower socioeconomic areas and mostly exists in about 20% of America's high schools (Mishel and Joydeep 2007). Researchers have found that low socioeconomic status was associated with dropout status regardless of ethnic group. Poverty is certainly a risk factor for all youth. Table 1 details research on the diverse factors that cause students to drop out, and the successful addressing of these factors will form the basis of this essay's appraisal of the literature for alternative school effectiveness discussed below.

It is important to note that while not all students at risk of dropping out are served by alternative schools, a major feature of the initial legislation that created alternative schools (The Elementary and Secondary Education Act of 1965) was to create educational opportunities for disenfranchised and at-risk populations, including students who are for whatever reason unsuccessful in their home school environment. The risk factors for this population are more than just that of special education and/or low-income status: that just as many of these students have IEPs for academic or behavioral concerns, they have significant rates of substance abuse problems and have also significant rates of being victimized by violence and sexual abuse (Dupper 2006).

Controversies

Given these sobering statistics, it is not surprising that school districts have utilized alternative schools as an option for engaging at-risk students. However, the trend toward adopting "zero-tolerance" policies toward students with significant behavior problems in schools (particularly drug use and violent behavior) has caused the alternative school to move in dramatically different directions from its initial progressive education focus of engaging and graduating alienated

Alternative Schools. Table 1 Reasons for dropping out (Franklin and Kelly 2010)

Individual reasons	Family reasons	School-related and academic reasons
• Poor daily attendance • Misbehavior • Alcohol and drug use • Feeling alienated from other students • Mental health issues • Special education • High mobility and frequent moves • Trouble with the law or juvenile justice involvement	• Parents not engaged in child's schooling • Teen pregnancy • Students getting married • Financial and work responsibilities • Permissive parenting style • Negative emotional reactions and sanctions for bad grades • Child abuse and neglect • Foster care placement	• Student/teacher ratio (too big) • Failure to be promoted to the next • Grade • Quality of teachers • Want smaller school size • School safety concerns • Not feeling welcomed at the school

and at-risk youth. Scholars and policymakers note the shift, and describe the two major camps of alternative schools as primarily addressing either "fixing the school environment" (more progressive, therapeutic and holistic schools) or "fixing the student" (more structured, compliance-oriented, and punitive). As concerns about school violence and adolescent drug and gang behavior continue to grab headlines, the tendency for school districts to embrace a more punitive "fix the student" approach appears to be growing, despite concerns that these schools do little to effect the students themselves and may result in simply keeping the at-risk students away from their age-mates by warehousing them in alternative schools (Dupper 2006).

Measures and Measurement Issues

There are at least three significant measurement issues in the field of alternative schools for adolescents: The first involves defining and counting alternative schools, the second involves assessing whether alternative schools "work" at their chosen mission of engaging and successfully educating at-risk youth, and the third involves the relative paucity of empirical research on the topic itself. Despite the seeming enduring preference school districts have for supporting and creating alternative schools, the review conducted for this essay (using an array of educational and academic databases e.g., ERIC, PSYC INFO, and Social Work Abstracts) yielded only limited current data on how many alternative schools there are in the USA and whether they are effective in their work with youth. The most current survey of state-level data on alternative schools dates from 2003, and the most far-reaching federal data is even older, dating from 2001 (Lehr and Lange 2003; National Center for Education Statistics 2002).

The most recent data shows that while alternative schools can have both progressive and punitive components, the strong trend is toward states creating alternative schools to "fix the student." Alternative schools are increasingly defining their mission as treating students who have been expelled from their home school, are considered in some way disruptive in their regular home school environment, and meet other at-risk criteria for youth (Lehr and Lange 2003). Whether the school is in a separate building or a smaller school-within-a-school in a larger secondary school building, the emphasis appears to be on focusing on student behavior and getting students to comply with rules that they had failed to comply with in the regular setting. What is not clear from the current data is how much time is spent on teaching basic academic skills and preparing these students for the transition to work via vocational education and community-based learning (Lehr and Lange 2003; National Center for Education Statistics 2002).

Additionally, answering the questions of whether these schools "work" are elusive, as there is limited evidence on alternative schools' effectiveness. Part of this owes to basic research design issues: The most recent meta-analysis on alternative schools is 15 years old, and even that study could find scant evidence of experimental designs testing these schools' effectiveness and conducting extended follow-up of program results (Cox et al. 1995). Additionally, the findings from that 1995 meta-analysis indicated that on the key issue of preventing and reducing adolescent delinquency, alternative schools had no effect (Cox et al. 1995). Data from the early 2000s indicates that 99% of home school districts have some stated policy of allowing students placed in alternative schools to re-enter their home school, but no national statistics are being collected at present to indicate how many students in fact do transition back to their home school (National Center for Education Statistics 2002). For the purpose of this essay, the overarching outcome of graduation rates has been chosen, in part because it is at least something that is collected at both state and federal levels with some consistency and rigor. However, even this measure proves to be elusive here, as research directly on graduation rates for alternative school students isn't yet being disaggregated from larger school district data. What is clear is that students in urban, high-poverty areas are more likely to have alternative schools available to them, and given that these populations have high relative rates of school dropout to other adolescent populations, further research on how alternative schools do (or don't) help students avoid dropout appears to be needed (Dupper 2006).

Rather than simply wait for this research to be conducted, this essay's authors (Franklin and Kelly) as well as other leading school social work scholars like Dupper (2006) have begun to examine the components of effective alternative education/treatment programs for at-risk adolescents. Findings from a prior review of this literature are summarized in Table 2

Alternative Schools. Table 2 Dropout prevention and intervention programs: results from the EBP search (Franklin and Kelly 2009)

Effective programs and interventions	Rigorous research design	Relevant population studied (adolescent at-risk youth)	One year follow-up
Career academies Career development/job training; mentoring; other: alternative program	X	X	X
Project graduation really achieves dreams (project GRAD) Academic support; case management; family strengthening; school/classroom environment; other: college preparation and scholarships	X	X	X
Advancement via individual determination (AVID) Academic support; family strengthening; structured extracurricular activities; other: college preparation	X	X	X
Big brothers big sisters After-school; mentoring	X	X	X
Check and connect Academic support; behavioral intervention; case management; family strengthening; mentoring; truancy prevention	X	X	X
Functional family therapy Behavioral intervention; family therapy	X	X	X
Multidimensional family therapy Behavioral intervention; court advocacy/probation/transition; family strengthening; family therapy; mental health services; structured extracurricular activities; substance abuse prevention	X	X	X
Quantum opportunities Academic support; after-school; life skills development; mentoring; structured extracurricular activities; other: planning for future	X	X	X
Talent development high schools Academic support, after school, behavioral support, mental health services, school/classroom environment	X	X	X
Talent search Academic support, career development/job training, family engagement, life skills development, mental health services, other: college planning	X	X	X
Twelve together Academic support, after school, life skills development, mentoring, structured extra-curricular activities	X	X	X

(see Franklin and Kelly 2009 for more details on the review process). Effective alternative education programs targeting at-risk youth appear to mix mentoring, job training, therapeutic treatment, and family engagement to provide a supportive context for the at-risk adolescent to succeed. Encouragingly, the components of a successful program for at-risk youth in an alternative education setting are already known: What isn't yet known is how many alternative schools use these components, how many are focused primarily on compliance, and how many have school climate issues that adversely affect the implementation of these key

components. (For one example of a successful alternative school targeting dropout prevention for at-risk youth in Austin, Texas, see Franklin et al. 2007 for more information).

Gaps in Knowledge

As it is likely clear at this point from this review, there are significant and persistent gaps in the knowledge base for alternative schools. Survey estimates indicate there are upward of 10,000 alternative public schools whose content, mission, and effectiveness is little known; this is concerning, especially as the increased pressure for test-score accountability via the No Child Left Behind (NCLB) legislation is likely to put increased pressure on school leaders to find alternative school arrangements for students who are viewed as adversely impacting the educational environment. One important concern that surfaced periodically in the literature found for this review was alienation theory, which in part may explain why so many adolescents feel disenfranchised from their home school and choose to act out those feelings through school violence or other delinquent behavior. Related to alienation theory, teacher caring and school connectedness appear to be promising areas of research to help educators, parents, and school-based mental health professionals understand how best to create school environments that work for all students (Schussler and Collins 2006). While not directly addressing issues of alternative schooling, the work of Bowen, Richman, and Bowen on the School Success Profile and its related instruments (Bowen et al. 2001) offers some promise in helping schools asses their student and family needs and gauge how responsive their schools are to the very at-risk youth that alternative schools typically enroll.

Beyond these promising areas of research, some basic research is needed for alternative schools to fulfill their mission to educate the most at-risk youth in US public schools. As basic as this sounds, regular census data on the number, type, and functions of alternative schools is crucial to tracking the growth and evolution of these schools. Additionally, rigorous evaluation of model alternative schools is essential, for while over 90% of secondary school districts have some form of alternative school program on offer, little is known about how these schools measure their effectiveness and even less is known about the effectiveness of these schools. Having a new batch of well-designed experimental studies of alternative schools would facilitate larger policy and practice discussions about how best to mix the divergent goals of "fixing the school environment" and "fixing the student" in the alternative schools of the twenty-first century.

References

Bowen, G., Woolley, M. E., Richman, J. M., & Bowen, N. (2001). Brief intervention in schools: The school success profile. *Brief Treatment and Crisis Intervention, 1*(1), 43–54.

Cox, S. M., Davidson, W. S., & Bynum, T. S. (1995). A meta-analytic assessment of deliquency-related outcomes of alternative education programs. *Crime & Delinquency, 41*(2), 219–234.

Dupper, D. (2006). Guides for designing and establishing alternative school programs for dropout prevention. In C. Franklin, M. B. Harris, & P. Allen-Meares (Eds.), *School services sourcebook: A guide for school-based professionals.* Oxford: Oxford University Press.

Franklin, C., & Kelly, M. S. (2009). Becoming evidence-informed in the real world of school social work practice. *Children & Schools, 31*(1), 46–56.

Franklin, C., & Kelly, M. S. (2010). Dropped out and failing: Helping with school problems. In C. Franklin & R. Fong (Eds.), *The church leaders resource book for mental health and social problems.* New York: Oxford University Press.

Franklin, C., Streeter, C. L., Kim, J. S., & Tripodi, S. J. (2007). The effectiveness of brief, solution-focused therapy is a public alternative school for dropout prevention/retrieval. *Children & Schools, 29*(3), 133–144.

Lehr, C. A., & Lange, C. M. (2003). Alternative schools and students they serve: Perceptions of state directors of special education. *Policy Research Brief, 14*(1). Minneapolis: University of Minnesota, Research and Training Center on Community Living. From http://ici.umn.edu/products/prb/141/default.html.

Mishel, L., & Joydeep, R. (2007). Where our high school dropout crisis really is? *Education Digest, 72*, 12–21.

National Center for Education Statistics. (2002). *Public alternative schools and programs for students at risk of education failure: 2000–2001.* Retrieved on February 20, 2010 from http://nces.ed.gov/surveys/frss/publications/2002004/index.asp.

National Center for Education Statistics. (2005). *Youth indicators 2005: Trends in the well-being of American youth.* Retrieved June 28, 2008, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid = 2005050.

Schussler, D. L., & Collins, A. (2006). An empirical exploration of the who, what, and how of school care. *Teachers College Record, 108*(7), 1460–1495.

Smink, J., & Reiner, M. S. (2005). *Research report: Fifteen effective strategies for improving student attendance and truancy prevention.* Clemson, SC: National Dropout Prevention Center/Network.

Swanson, C. B. (2008). *Cities in crisis: A special analytic report on high school graduation.* Bethesda: Editorial Project in Education (EPE).

Altruism

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The term altruism has long been one of the most widely used by psychologists to refer to studies concerning adolescents' positive behaviors. Along with the terms such as caring, kindness, and prosocial behavior, "altruism" primarily invokes behaviors intended to benefit others, as opposed to proving beneficial for one's own self and interests (Roker et al. 1999). Some researchers argue that there is really no real altruism, that altruism often benefits the self through, for example, the power, status, reward, psychological benefits gained from acting altruistically (Piliavin 2009).

Although many fields of study have examined altruism, the field of adolescent research has not addressed it directly but, instead, through such constructs as prosocial and helping behavior as well as conceptions of citizenship and moral development. Researchers have shown how, as adolescents develop their emerging sense of self, their behavior will likely vacillate between actions that serve their own interests and behavior meant to provide benefits to other people. For example, research has shown that learning about citizenship and being exposed to diverse and different cultures, peoples, and viewpoints can help an adolescent expand his or her viewpoint (see Flanagan and Gallay 1995). As this process progresses, adolescents can cultivate social maturity through these enlarged horizons; in turn, they can gain a sense of having membership in the goals of collective society, and simultaneously, develop leadership skills and responsibility toward others. Through this process, and through appropriate service opportunities, adolescents learn about the intrinsic benefits of devoting more of their time and efforts to contributions that will serve other people, and the larger community (Metz et al. 2003).

References

Flanagan, C., & Gallay, L. S. (1995). Reframing the meaning of "political" in research with adolescents. *Perspectives on Political Science, 24*, 34–41.

Metz, E., McLellan, J., & Youniss, J. (2003). Types of voluntary service and adolescents' civic development. *Journal of Adolescent Research, 18*, 188–203.

Piliavin, J. A. (2009). Altruism and helping: The evolution of a field: The 2008 Cooley-Mead presentation. *Social Psychology Quarterly, 72*, 209–225.

Roker, D., Player, K., & Coleman, J. (1999). Exploring adolescent altruism: British young people's involvement in voluntary work and campaigning. In M. Yates & J. Youniss (Eds.), *Roots of civic identity: International perspectives on community service and activism in youth* (pp. 56–96). Cambridge: Cambridge University Press.

Amicus Brief

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An amicus brief, the shortened term used to refer to amicus curiae ("friend of the court") brief, is a legal document filed by someone (typically an organization) that is not party to a case under appeal but who has an interest in the case's development. The content of these briefs ranges widely, with some commentators viewing them as too often simply repeating the claims of the parties before the court (see Walbolt and Lang 2003). In this regard, effective briefs have been shown to be those that raise arguments or legal authorities that the actual parties have not raised, propose intermediate or different positions than those provided by the parties, bring useful technical and scientific knowledge to the court's attention, or suggest practical effects of decisions in contexts that parties may not be interested or aware (see Kearney and Merrill 2000). Although originally meant to be neutral, amicus briefs now almost invariably align themselves with one of the parties. Although they may bring perspectives and arguments different from the parties to the case, they really are not acting as "friends of the court" as much as friends of a party to the court. Even though they may align themselves with a party, effective briefs can impact the court's decision-making process in the manner they influence cases' outcomes or the court's expressed rationale used for reaching outcomes (see Kearney and Merrill 2000).

United States Supreme Court cases dealing with minors' rights often have drawn considerably from amicus briefs, including briefs that bring social science evidence to the Court's attention. This was the case, for example, in the landmark 2005 decision abolishing the

juvenile death penalty, *Roper v. Simmons* (2005), where the Court cited to the American Psychological Association's (2004) brief providing evidence regarding the inherent immaturity of adolescents, as compared to adults. Importantly, the amicus position, on its face, was the opposite of another brief the association had filed over a decade earlier in a parental notification case involving minors seeking abortions, *Hodgson v. Minnesota* (1990). In that case, the American Psychological Association had argued that adolescents had decision-making skills comparable to those of adults and, as a result, evidence showed no reason to require teenagers to notify their parents before terminating a pregnancy (American Psychological Association 1987, 1989). Thus, in *Roper*, the American Psychological Association argued that science showed that adolescents were not as mature as adults, whereas, in *Hodgson*, it earlier had argued that the science showed that they were not that much different. As the use of amicus briefs in these cases reveals, providing courts with scientific research can be challenging and controversial, even though what appears contradictory to nonexperts is entirely reasonable to those who conduct research. This has been shown by leading researchers who do not view the American Psychological Association's briefs as making "flip-flops" in their understanding of maturity and how the psychological understanding of maturity could affect different cases entirely differently (see Steinberg et al. 2009). Even those well-reasoned arguments, however, are not immune from criticisms, even by researchers who share a similar expertise (see Fischer et al. 2009). Given the nature of social science evidence as well as the law itself, these criticisms are likely to continue. Still, these developments reflect the remarkable extent to which some jurists are open to types of evidence that typically had not figured prominently in jurisprudence. The developments also point to the potential power of social science research relating to the adolescent period.

Cross-References

► Appeal
► Legal Methods

References

American Psychological Association. (1987, March 16). [Amicus curiae brief filed in the U.S. Court of appeals for the eighth circuit in Hodgson v. Minnesota, 497 U.S. 417 (1990)]. Retrieved December 31, 2010, from http://www.apa.org/about/offices/ogc/amicus/index-chron.aspx

American Psychological Association. (1989, September 1). [Amicus curiae brief filed in U.S. Supreme court in Ohio v. Akron center for reproductive health, Inc., 497 U.S. 502 (1990) and Hodgson v. Minnesota, 497 U.S. 417 (1990)]. Retrieved December 31, 2010, from http://www.apa.org/about/offices/ogc/amicus/index-chron.aspx

American Psychological Association. (2004, July 19). [Amicus curiae brief filed in U.S. Supreme court in Roper v. Simmons, 543 U.S. 551 (2005)]. Retrieved December 31, 2010, from http://www.apa.org/about/offices/ogc/amicus/index-chron.aspx

Fischer, K., Stein, Z., & Heikkinen, K. (2009). Narrow assessments misrepresent development and misguide policy: Comment on Steinberg, Steinberg, Cauffman, Woolard, Graham, and Banich (2009). *The American Psychologist, 64*, 595–600.

Hodgson v. Minnesota, 497 U.S. 417 (1990).

Kearney, J. D., & Merrill, T. (2000). The influence of Amicus Curiae briefs on the Supreme Court. *University of Pennsylvania Law Review, 148*, 743–855.

Roper v. Simmons, 543 U.S. 551 (2005).

Steinberg, L., Cauffman, E., Woolard, J., Graham, S., & Banich, M. (2009). Are adolescents less mature than adults? Minors' access to abortion, the juvenile death penalty, and the alleged APA "flip-flop". *American Psychologist, 64*, 583–594.

Walbolt, S. H., & Lang, J. H. (2003). Amicus briefs: Friend or foe of Florida courts? *Stetson Law Review, 32*, 269–308.

Amusement Sites and Adolescents' Rights

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One of the most important aspects of adolescent development involves leisure activities and the ability to associate with others. These activities typically involve meeting in public places which, as such, can be regulated in many ways. Most notably, they can be regulated to prevent adolescents from entering them or to prevent others from entering them to interact with adolescents. The major issue that arises involves the freedom given to states seeking to regulate those activities. In the United States, the Supreme Court directly addressed the issue in *City of Dallas v. Stanglin* (1989). In that case, the Court gave states considerable power to regulate adolescents' meeting places by finding that

social gatherings intended for leisure and diversion do not qualify for extra constitutional protection and, as a result, may be regulated by the government for any rational purpose. This rule is of considerable significance in that it demonstrates the power states have in determining when and with whom adolescents can associate. By doing so, it highlights the limited rights of adolescents, as well as the limited rights of their parents when dealing with matters outside of their homes.

The *Stanglin* case involved an ordinance regulating access to dance halls. The city of Dallas had enacted an ordinance that restricted the ages of admission to a certain class of dance halls to persons between the ages of 14 and 18, except for parents and guardians of persons inside such a hall, law enforcement, and dance hall personnel. The ordinance also limited the dance hall's hours of operation. The purpose of the ordinance was to provide a place where teenagers could socialize with each other without being subject to the potentially detrimental influences of older teenagers and young adults.

The operator of a roller-skating rink in Dallas created a dance hall that followed regulations. He did so by dividing the floor of the rink. On the skating side, no age or hour restrictions were applicable. On the dance hall side, the ordinance's age and hour restrictions were enforced, but admission was otherwise granted to anyone who paid an admission fee. Most of the dance hall patrons were strangers to each other, and the hall served as many as 1,000 customers per night. There was no evidence of any particular trouble among the youth who frequented the establishment.

The operator of the dance hall argued, among other points, that the ordinance unconstitutionally infringed on the right of dance hall patrons to associate with persons outside their age bracket. He argued that a minor's right of association should not be abridged simply on the premise that he "might" associate with those who would persuade him into bad habits. A trial court ruled against the operator on the grounds that the ordinance was rationally related to the city's legitimate interest in insuring the safety and welfare of children. An appeals court, however, ruled in its favor by striking down the age restriction on the ground that it unduly intruded on the dance hall patrons' right of "social association" under the Constitution's First Amendment freedom of association clause. It also reasoned that the age restriction inhibited the parental role in child rearing, that it was parents' primary responsibility, not the City, to tell a minor how old his dance partner may be, with the exception that the city could do so to protect them from criminal influence (which in this case it did not).

The City appealed to the Supreme Court, which rejected the dance hall operator's claim. The Court held that the ordinance's age restriction did not violate the First Amendment associational rights of the dance hall patrons. It did so on the rationale that coming together to engage in recreational dancing is not a form of intimate association protected by the First Amendment. It further found that the First Amendment did not recognize a generalized right of "social association" that includes chance encounters in dance halls. The majority also ruled on Equal Protection grounds noting that the age restriction was valid. The Court did so on the grounds that dance hall patrons are not a suspect classification (e.g., they are not a group in need of special protection that typically is based on nationality, race, and so forth). It also found that the age restriction did not infringe on any right protected by the Federal Constitution. Lastly, it ruled that a rational relationship existed between the age restriction and the city's interest in promoting the welfare of teenagers.

The Supreme Court's position and reasoning are of considerable significance to understanding adolescents' rights. The case highlights how the government has considerable freedom to regulate environments that would involve adolescents. Adolescents, as a group, do not have a special status that would require a court to protect it from a state's rational effort to protect them. In this case, the facts show that the state could limit the freedoms of youth (and those who would argue for their freedoms) even in situations where there is no particular evidence that there is just cause for the limitations or there is no evidence brought forth to show that the state could not reach its goals without those limitations.

References

City of Dallas v. Stanglin, 490 U.S. 19 (1989).

Anger

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The study of adolescence reveals much about externalizing and aggressive problems, but it has yet to pay comparable attention to adolescents' experiences and expressions of anger. Yet, it is known that anger can sour relationships, contribute to considerable distress, and even play a critical role in the development of psychopathology. It is known, for example, that elevated anger during adolescence links with physical responses (such as higher blood pressure and heart rate) that set adolescents on a path toward elevated health risks (see Hauber et al. 1998). Anger eventually places individuals at risk for long-term health problems that range from hypertension and cardiovascular disease to asthma and headaches to cancer (Rice and Powell 2006). Levels of anger even predict mortality rates (Harburg et al. 2003). Still, research has only begun to examine the origins of anger and its expression, the effects of anger on interpersonal relationships, and anger's relationship to adolescents' mental health outcomes.

Although one might think that anger is easy to define and recognize, it appears far from it. Researcher and commentaries often focus on aggression, which can be an expression of anger but need not be equated to it (Averill 1982). Even the outward expression of anger may not be aggressive. Anger can take nonaggressive forms, such as displaying an angry facial expression or making physical gestures. Anger does not necessarily lead to aggression. Still, aggression, defined as verbal or physical acts aimed at hurting or upsetting others (either directly or indirectly), may be predicted by anger (e.g., Clay et al. 1996). By comparing aggression to anger, one learns that anger consists of two components. Anger has an emotional component, which is a state of arousal resulting from threats or frustrations, and is often described by researchers as state anger. Anger also has a component that involves behaviors and thoughts relating to the state anger that emerges from the specific circumstances felt to be threats or frustrations. This latter component consists of attitudes and thoughts used to assess and interpret the situations that are inducing the state anger. The thoughts and attitudes, what the field now calls social cognitions, are thought to be stable over time and are termed trait anger (see Rice and Powell 2006). Thus, how one responds to situations depends on one's trait anger. That expression may be inward or outward; it can be suppressed or expressed.

Research that details the experience of anger and its expression has been developed by borrowing from research using samples and theories relating to adults. Those theories and constructs have been validated quite well with adolescent populations (e.g., del Barrio et al. 2004; Hagglund et al. 1994). Some of that research has examined, for example, the links between high levels of experienced anger and its expression. That research finds that adolescents who report high levels of anger are more likely to endorse an outward way of experiencing anger; and boys (not girls) with high levels of anger are less able to suppress inward expressions of it either (Clay et al. 1996). High trait anger, which is the disposition to be more angry than not, also links to high levels of outward anger, and that link appears strong for both genders (Rice and Powell 2006). That research also reveals that, for older children, high levels of anger-suppression correlate with low levels of trait anger.

How adolescents express anger (inwardly or outwardly) or even experience it at all has been a subject of study that has focused on parenting. Although these studies focus on interactions between parents and their children, it is important to highlight that one's temperament may well be a factor. That is, the tendency has been to focus on parents' actions when, in fact, there is likely to be interactive effects. Regrettably, research in this area has not been as strong as would have been expected given the significance of the research. The bulk of studies are correlational. Equally limiting, the bulk of research focuses on children. Still, existing findings point us toward important conclusions.

Despite a focus on children and not using longitudinal studies, this area of research does reveal interesting findings relevant to adolescents. Research does confirm a strong link between children's anger and parenting; for example, Snyder et al. (2003) found that young children (average age of 5) were more likely to exhibit anger when parents used insensitive and negative responses; Zhou et al. (2004) found that authoritarian parenting, marked by coercive control

and low responsiveness, positively associated with anger/frustration among a large group of first and second graders. In addition, studies have shown that family conflict and violence also may serve as a model for anger control; maltreatment has been associated with poorer anger control and coping among 6–12 year olds (Shipman and Zeman 2001; Ortiz and del Barrio Gandara 2006) and anger-based marital conflict associates with ratings of anger and anger expressions among 4–8 year olds (Jenkins 2000). As might be expected, parents' negative behaviors (such as anger and threats) directed toward their children elicit their children's anger (Snyder et al. 2003). When studying young adolescents (ages 11–13), research focuses more on personality dispositions and temperament, and those, such as perfectionism, relate to the outward expression of anger (Hewitt et al. 2002).

Research also has investigated the expression of anger. Several findings have emerged. In terms of outward expressions of anger, a general rule is that it is expressed less as children age (Shipman and Zeman 2003; Underwood et al. 1999; Zeman and Garber 1996). A reason that anger is more suppressed as children age is that they feel that it is less acceptable, especially with those outside of the peer group (Shipman and Zeman 2003). Importantly, older children are significantly more likely to express anger with peers than with teachers (Underwood et al. 1999), but little difference seems to exist between peers and parents (Zeman and Shipman 1996). Adolescents use negotiation more frequently than children to cope with anger (von Salisch and Vogelgesang 2005).

One of the most important areas of research examines associations between the negative effects of anger and adolescents' physical and mental health. Although links have long been found for adults, this research has now been extended to examine the effects of anger on adolescents' poor health and maladjustment. Links have now been shown between anger and depression among adolescents, not only young children. For example, inpatient youth's levels of hopelessness have been linked with high levels of outward anger and low levels of anger control (Kashani et al. 1997); and anger control reliably differentiates between depressed and non-depressed inpatient youth (Kashani et al. 1995). Anger also links with suicide attempts (Goldston et al. 1996; Boergers et al. 1998). Research that has examined links between anger and externalizing behaviors finds outward expressions of anger predictive of externalizing problem behaviors at school and at home; and they report that the ability to regulate anger predicts lower levels of externalizing problems (Rydell et al. 2003). Higher levels of anger in adolescents associate with elevated blood pressure and heart rate, which are associated with poor health outcomes (Hauber et al. 1998; Mueller et al. 2001). Adolescents' levels of anger also link concurrently with psychosomatic symptoms and poor self-perceived health (Piko et al. 2006). The links between forms of anger and negative outcomes appear well established. Despite these findings, it is important to note that one has yet to understand the role that these links will play as adolescents develop and transition into adulthood.

Importantly, research examining the effects of anger has moved toward distinguishing among its potential forms. Outward expression (often referred to as "Anger-Out") links to externalizing disorders in adolescents (Gjerde et al. 1988) as well as internalizing problems such as sadness (Clay et al. 1996) and hopelessness (Kashani et al. 1997). But, the suppression of anger (often referred to as "Anger-In") also links to negative responses. Suppressed anger has been deemed common among schoolchildren who exhibit social withdrawal (Jacobs et al. 1989) and has been linked to depressive symptoms (Renouf and Harter 1990). Children who are able to express their anger constructively appear to be better adjusted, as revealed by studies that compare various types of anger expression with their links to depressive affect and adjustment problems (Kashani et al. 1995; Cole et al. 1996). Importantly, although the vast majority of the anger-health literature uses a dichotomous approach to distinguish anger coping styles, research now reveals that anger is more likely to be a multidimensional construct than a simple split between anger-in and anger-out; and that more complex view recently has been confirmed by efforts that have found a variety of responses to anger relating differently to higher levels of self-reported somatic complaints among adolescents (Miers et al. 2007).

Research on adolescents' anger, although sometimes focusing on older children and early adolescents, provides important information. One now realizes that anger is an important area of study. But, one has just started to understand when it is felt, the circumstances that lead it to be expressed, and its short- and long-term effects. Given the significance of close

relationships to mental health, and given the established links between adults' anger and negative outcomes, it would be difficult to play down the importance of this area of study.

References

Averill, J. R. (1982). *Anger and aggression: An essay on emotion.* New York: Springer.

Boergers, J., Spirito, A., & Donaldson, D. (1998). Reasons for adolescent suicide attempts: Associations with psychological functioning. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 1287–1293.

Clay, D. L., Hagglund, K. J., Kashani, J. H., & Frank, R. G. (1996). Sex differences in anger expression, depressed mood, and aggression in children and adolescents. *Journal of Clinical Psychology in Medical Settings, 3*, 79–92.

Cole, P. M., Zahn-Waxler, C., Fox, N. A., Usher, B. A., & Welsh, J. D. (1996). Individual differences in emotion regulation and behavior problems in preschool children. *Journal of Abnormal Psychology, 105*, 518–529.

del Barrio, V., Aluja, A., & Spielberger, C. (2004). Anger assessment with the STAXI-CA: Psychometric properties of a new instrument for children and adolescents. *Personality and Individual Differences, 37*, 227–244.

Gjerde, P. F., Block, J., & Block, J. H. (1988). Depressive symptoms and personality during late adolescence: Gender differences in the externalization–internalization of symptom expression. *Journal of Abnormal Psychology, 97*, 475–486.

Goldston, D. B., Daniel, S., Reboussin, D. M., Kelly, A., Ievers, C., & Brunstetter, R. (1996). First-time suicide attempters, repeat attempters, and previous attempters on an adolescent inpatient psychiatry unit. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 631–639.

Harburg, E., Julius, M., Kaciroti, N., Gleiberman, L., & Schork, M. A. (2003). Expressive/suppressive anger-coping responses, gender, and types of mortality: A 17-year follow-up (Tecumseh, Michigan, 1971–1988). *Psychosomatic Medicine, 65*, 588–597.

Hauber, R. P., Rice, M. H., Howell, C. C., & Carmon, M. (1998). Anger and blood pressure readings in children. *Applied Nursing Research, 11*, 2–11.

Hagglund, K. J., Clay, D. L., Frank, R. G., Beck, N. C., Kashani, J. H., & Hewett, J. (1994). Assessing anger expression in children and adolescents. *Journal of Pediatric Psychology, 19*, 291–304.

Hewitt, P. L., Caelian, C. F., Flett, G. L., Sherry, S. B., Collins, L., & Flynn, C. A. (2002). Perfectionism in children: Associations with depression, anxiety, and anger. *Personality and Individual Differences, 32*, 1049–1061.

Jacobs, G. A., Phelps, M., & Rohrs, B. (1989). Assessment of anger expression in children: The pediatric anger expression scale. *Personality and Individual Differences, 10*, 59–65.

Jenkins, J. M. (2000). Marital conflicts and children's emotions: The development of an anger organization. *Journal of Marriage and the Family, 62*, 723–736.

Kashani, J. H., Dahlmeier, J. M., Borduin, C. M., Soltys, S., & Reid, J. C. (1995). Characteristics of anger expression in depressed children. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 322–326.

Kashani, J. H., Suarez, L., Allan, W., & Reid, J. C. (1997). Hopelessness in inpatient youths: A closer look at behavior, emotional expression, and social support. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1625–1631.

Miers, A. C., Rieffe, C., Meerum, T. M., Cowan, R., & Linden, W. (2007). The relation between anger coping strategies, anger mood and somatic complaints in children and adolescents. *Journal of Abnormal Child Psychology, 35*, 653–664.

Mueller, W. H., Grunbaum, J., & Labarthe, D. R. (2001). Anger expression, body fat, and blood pressure in adolescents: Project heartbeat! *American Journal of Human Biology, 13*, 531–538.

Ortiz, M. A. C., & del Barrio Gandara, V. (2006). Study on the relations between temperament, aggression, and anger in children. *Aggressive Behavior, 32*, 207–215.

Piko, B. F., Keresztes, N., & Pluhar, Z. F. (2006). Aggressive behavior and psychosocial health among children. *Personality and Individual Differences, 40*, 885–895.

Renouf, A. G., & Harter, S. (1990). Low self-worth and anger as components of the depressive experience in young adolescents. *Development and Psychopathology, 2*, 293–310.

Rice, M., & Powell, C. (2006). Differences in trait anger among children with varying levels of anger expression patterns. *Journal of Child and Adolescent Psychiatric Nursing, 19*, 51–61.

Rydell, A., Berlin, L., & Bohlin, G. (2003). Emotionality, emotion regulation, and adaptation among 5- to 8-year-old children. *Emotion, 3*, 30–47.

Shipman, K. L., & Zeman, J. (2001). Socialization of children's emotion regulation in mother–child dyads: A developmental psychopathology perspective. *Development and Psychopathology, 13*, 317–336.

Shipman, K. L., & Zeman, A. E. (2003). Children's strategies for displaying anger and sadness: What works with whom? *Merrill-Palmer Quarterly, 49*, 100–122.

Snyder, J., Stoolmiller, M., Wilson, M., & Yamamoto, M. (2003). Child anger regulation, parental responses to children's anger displays, and early child antisocial behavior. *Social Development, 12*, 335–360.

Underwood, M. K., Hurley, J. C., Johanson, C. A., & Mosley, J. E. (1999). An experimental, observational investigation of children's responses to peer provocation: Developmental and gender differences in middle childhood. *Child Development, 70*, 1428–1446.

von Salisch, M., & Vogelgesang, J. (2005). Anger regulation among friends: Assessment and development from childhood to adolescence. *Journal of Social and Personal Relationships, 22*, 837–855.

Zeman, J., & Garber, J. (1996). Display rules for anger, sadness, and pain: It depends on who is watching. *Child Development, 67*, 957–973.

Zeman, J., & Shipman, K. (1996). Children's expression of negative affect: Reasons and methods. *Developmental Psychology, 32*, 842–849.

Zhou, Q., Eisenberg, N., Wang, Y., & Resier, M. (2004). Chinese children's effortful control and dispositional anger/frustration: Relations to parenting styles and children's social functioning. *Developmental Psychology, 40*, 352–366.

Animal Cruelty by Juveniles

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The most frequently used definition of animal cruelty by social scientists is "socially unacceptable behavior that intentionally causes pain, suffering, or distress to, and/or death of, an animal" (Ascione 1993, p. 228). This definition omits behaviors that may be socially and culturally acceptable or condoned in other contexts. Such behavior may include, but is not limited to, laboratory research, hunting, and agricultural and veterinary practices. While there is general consensus over the definition of animal cruelty, there remains little to no consensus as to the relationship between childhood acts of animal cruelty and later acts of interpersonal violence. Attempts to show the possible relationship between animal cruelty and violence toward humans have produced contradictory results, especially given the numerous methodologies undertaken to examine various aspects of this phenomenon. Thus, the association proposed by academic literature between childhood acts of violence against animals and later acts of violence against humans remains controversial among scholars, animal rights activists, and policy makers.

For nearly 5 decades, researchers have sought to unravel the link between juvenile animal cruelty and later interpersonal violence. In 1961, McDonald introduced a triad of characteristics (enuresis, fire setting, and cruelty toward animals), which he believed to be predictive of a child's propensity to commit later acts of violence toward humans (Macdonald 1961). Three years later, Mead suggested that childhood cruelty to animals may indicate the formation of a spontaneous, assaultive character disorder. She argued that juvenile animal cruelty "could prove a diagnostic sign, and that such children, diagnosed early, could be helped instead of being allowed to embark on a long career of episodic violence and murder" (p. 22). The impact of Mead's recommendation was evident over 20 years later when the American Psychiatric Association took note.

In 1987, animal cruelty was added to the *Diagnostic and Statistical Manual of Mental Disorders-III R* (*DSM-III R*) as a symptom of childhood conduct disorders and was later kept in the 1994 *DSM-IV* and the 2000 *DSM-IV-TR* (American Psychiatric Association 1987; American Psychiatric Association 1994; American Psychiatric Association 2000). According to the *Diagnostic and Statistical Manual-IV*, a conduct disorder is "a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated" (American Psychiatric Association 1994, p. 90). To be diagnosed with a conduct disorder, an individual must have demonstrated a minimum of 3 of the 15 identified symptoms in the past year. The 15 recognized symptoms of conduct disorder include cruelty to animals; frequent bullying or threatening; frequently starting fights; use of a weapon that could potentially cause serious harm; cruelty to people; theft with confrontation; forcing sex upon someone; intentionally setting fires to cause significant damage; intentional destruction of property; breaking into the property of others; frequently using deception for personal gain; stealing; deliberately disobeying parents' rules; running away; and frequent truancy. The *Diagnostic and Statistical Manual-IV* also explains that "a substantial proportion [of children diagnosed with conduct disorder] continue to show behaviors in adulthood that meet criteria for antisocial personality disorder" (American Psychiatric Association 1994, p. 89). Thus, animal cruelty is recognized as an important indicator of a serious psychological problem.

Defining animal cruelty as a symptom of conduct disorder lends further validity to the research examining the link between animal cruelty and later violence against humans. For law enforcement officials, cruelty to animals has long served as a red flag for identifying extremely violent offenders. Correspondingly, the expansive literature about serial killers has often cited juvenile cruelty to animals as a precursor to subsequent violence against humans (Ressler et al. 1998; Wright and Hensley 2003). Moreover, other studies using inmate samples have supported the link between animal abuse and later interpersonal violence (Hensley et al. 2009;

Merz-Perez and Heide 2004; Merz-Perez et al. 2001; Tallichet and Hensley 2004).

Research on Juvenile Animal Cruelty

Numerous studies have been conducted in the last 15 years to examine the association between childhood acts of cruelty toward animals and adult acts of violence against humans. In an attempt to discover a relationship between these behaviors, various methodological techniques and different sample participants have been studied with less than satisfactory results. The results of these studies have been inconsistent and oftentimes contradictory in their attempt to show a link between childhood animal cruelty and adult acts of violence perpetrated against humans. In fact, some studies reveal no association at all or no apparent time order between the behaviors (Arluke et al. 1999; Miller and Knutson 1997), while still others support both the association and the temporal sequencing of the acts (Flynn 1999; Hensley et al. 2009; Merz-Perez and Heide 2004; Merz-Perez et al. 2001; Ressler et al. 1998; Tallichet and Hensley 2004; Verlinden 2000; Wright and Hensley 2003).

A 1987 review by Felthous and Kellert of 15 studies, which explored the association between juvenile animal cruelty and human violence revealed that many of the studies comparing violent and nonviolent prisoners and psychiatric patients throughout the 1970s and 1980s were unable to establish a clear link or that the data supporting the association were "soft and of dubious reliability" (p. 69). The focus of the review was to examine whether the previous studies had supported a relationship between recurring acts of childhood animal cruelty and serious and persistent acts of later violence against humans. Felthous and Kellert (1987) excluded studies of aggressive behavior that were not clearly "dangerous or injurious" or reports of single cases involving cruelty toward animals (p. 69).

Ten of the 15 studies did not find a relationship between childhood animal cruelty and subsequent violence against humans. Felthous and Kellert (1987) contended that many of these studies had significant limitations. First, most were unsuccessful in clearly defining the behaviors being studied (i.e., animal cruelty and interpersonal violence). Second, all but one of the studies that did not find a relationship between childhood animal cruelty and later violence examined only single acts of violence toward humans. However, investigators who found an association between animal cruelty and interpersonal violence had examined recurrent interpersonal violence. Third, over half of the studies that were unable to discover a relationship between animal cruelty and later human violence relied on the chart method of data gathering rather than direct interviews with respondents. In contrast, all of the studies that found a relationship relied entirely on direct interviews with subjects. Felthous and Kellert (1987) argued that investigators should not exclusively rely on clinical records because they may not contain sufficient historical information. Furthermore, researchers should not focus on interviews that examine only singular acts of animal cruelty or violence toward humans.

In 1997, Miller and Knutson found no association between the types of crimes that had been committed by 314 male and female inmates and a composite measure of their passive and active experiences with childhood animal cruelty. Moreover, their inmate sample data revealed only a modest connection between exposure to animal cruelty and "the aversive childhood histories of the subjects," as well as their physical or sexually coercive behavior in dating or intimate relationships (p. 59). Within the same study, Miller and Knutson performed a follow-up study with 308 undergraduate students to examine whether high exposure to animal cruelty was distinctive only to the incarcerated sample. Again, modest associations were found between animal cruelty and undergraduates' "punitive and acrimonious" childhood histories (p. 59). They also found that 16.4% of the inmates had hurt an animal compared to only 9.7% of the students, 32.8% of the inmates had killed a stray compared to only 14.3% of the students, and 12% of the inmates had killed a pet compared to only 3.2% of the students. The reported methods used by subjects to kill animals were poisoning ($n = 17$), drowning ($n = 5$), hitting, beating, or kicking ($n = 43$), shooting ($n = 77$), strangling/smothering ($n = 6$), stabbing ($n = 6$), burning ($n = 5$), throwing against an object ($n = 9$), exploding ($n = 7$), accidental ($n = 16$), and other methods ($n = 6$). These figures only included childhood animal abuse in which the subject was the prime perpetrator and excluded abuse that did not result in the death of the animal. Unfortunately, the authors did not discuss

their findings concerning animal cruelty methods within their control sample of college students. The authors did note two limitations of their study. First, they found fairly high base rates of exposure to animal cruelty in both the incarcerated sample and the undergraduate student sample. Second, the distribution of scores on the combined measure of exposure to animal cruelty was positively skewed and leptokurtic, severely compromising correlational analysis (i.e., making it more difficult to yield significant findings).

A later study by Arluke et al. (1999) examined the criminal records of 153 animal abusers and 153 control participants. They found that the childhood animal abusers were more likely than the control participants to be interpersonally violent. However, they were also more likely to commit property, drug, and public disorder offenses later in life. Consequently, the data indicated that animal abuse was associated with a variety of antisocial behaviors inclusive of, but not limited to, violence. The authors also noted that the abuse of animals was not more likely to precede antisocial behavior than to follow it, casting doubt on the allegation that individuals who are cruel to animals eventually move on or "graduate" to committing acts of violence against humans (known as the "graduation hypothesis"). Significant limitations of this study pertain to the time order relationship between childhood cruelty and subsequent acts of violence. First, while Arluke et al. (1999) analyzed official criminal records to determine the relationship between cruelty toward animals and violence toward humans, they were unsuccessful in obtaining criminal records for participants under the age of 17, which is likely to have contributed to the finding that there was no significant time order relationship between childhood cruelty and later interpersonal violence. In addition, they analyzed data only in cases of single acts of animal cruelty rather than those involving repeated acts.

Other studies specifically examined the graduation hypothesis, proposing that those who commit childhood acts of animal cruelty are more likely to engage in interpersonal violence as adults. Ressler et al. (1998) conducted a study exploring the link between animal cruelty and sexual homicide. They examined various behavioral characteristics of 36 sexual murderers, all but seven of whom were serial murderers. Of the 36 men, 28 were tested for certain childhood characteristics. The authors discovered that many of the 28 convicted sexual murderers had engaged in animal cruelty. Thirty-six percent of these offenders had perpetrated animal cruelty as children, 46% had been cruel to animals as adolescents, and 36% continued to abuse animals as adults.

Wright and Hensley (2003) examined 354 cases of serial murder and discovered that childhood animal cruelty was present in 75 cases. Moreover, the authors developed case studies examining the childhood histories of five specific serial murderers (Carroll Edward Cole, Jeffery Dahmer, Edmund Kemper, Henry Lee Lucas, and Arthur Shawcross). During childhood, each of the five serial killers had turned to animals to displace their anger. Using the framework of the graduation hypothesis, Wright and Hensley (2003) found that the serial murderers who engaged in animal cruelty as youths graduated to aggressive behavior toward humans. After a series of aggressive acts toward animals, the serial killers gradually increased the extent of their abuse as a way of gaining further satisfaction from the venting of their repressed frustration and humiliation. This ultimately resulted in violent acts against humans, allowing them to gain some type of satisfaction. Therefore, abusing and torturing animals as a child was a precursor for future violence against humans. The authors also found that the methods used to kill animals during childhood were then later used by the serial murderers on their adult victims.

In 2000, Verlinden examined the link between childhood animal abuse and school shootings. She found that 5 of the 11 offenders (in nine separate incidents) had histories of childhood animal abuse. Evan Ramsey (Bethel, Alaska) often amused himself by throwing rocks at dogs. Eric Harris and Dylan Klebold (Littleton, Colorado) frequently discussed their mutilation of animals with friends. Additionally, Kipland "Kip" Kinkel (Springfield, Oregon) bragged to his peers about beheading cats and blowing up a cow with explosives. One particularly well-documented case linking animal cruelty and a school shooting involved Luke Woodham (Pearl, Mississippi). Prior to killing his mother and two schoolmates, Woodham tortured and killed his pet dog.

Flynn (1999) distributed questionnaires to 267 undergraduate psychology and sociology students to test whether committing animal cruelty as a child was associated with the endorsement of interpersonal violence, particularly against women and children.

He identified animal abuse as killing a pet, stray or wild animal, hurting or torturing an animal, touching sexually, or having sex with an animal. The possible responses for animal type were cats, dogs, small animals such as rodents, reptiles, birds, or poultry, or large animals (livestock). At least one act of animal abuse was reported by 17.6 % of all the respondents. More than one in six respondents reported hurting or killing an animal during childhood. Moreover, men were four times more likely to have done so than women. Nearly all animal abusers had abused animals more than once. Small animals and dogs were most often abused; however, small animals were killed most often. Small animals (50%) were also more likely to be hurt or tortured, followed by dogs (44.4%). The most common type of animal killed was a stray (13.1%) compared with killing a pet (2.6%). Around 35% reported killing a stray or wild animal in one circumstance, nearly 40% had twice, and 25% had in three or more circumstances. For these individuals, 70.6% reported the occurrence during adolescence. For 29.4%, killing an animal occurred between the age of 6 and 12. Fifty percent of those who hurt or tortured animals also occurred between age 6 and 12.

Flynn gave two explanations for the finding that respondents were more likely to have actually killed a wild or stray than to have hurt or tortured any type of animal. Since small animals (77.1%) were likely to be killed, socially accepted behaviors (i.e., killing a rodent or snake) were probably reported more often. Nevertheless, to hurt or torture an animal with the intent to inflict pain may be considered more deviant than actually taking an animal's life because torturing an animal is never a socially accepted behavior. According to Flynn, to torture an animal for a thrill should be more alarming than actually killing an animal, which explains why it was reported less often.

Merz-Perez and Heide (2004) and Merz-Perez et al. (2001) interviewed 45 violent and 45 nonviolent offenders incarcerated in a Florida maximum-security prison. Participants were coded as violent or nonviolent based on the offense for which each individual was convicted. The information was verified by institutional record and through the interview itself. Fifty-six percent of the violent offenders reported committing acts of childhood animal cruelty as compared to only 20% of the nonviolent offenders. They also discovered that the ways in which the violent offenders abused animals were quite similar to the methods that they later used to perpetrate crimes against their human victims.

Both violent and nonviolent inmates committed animal cruelty more often toward wild animals followed by farm animals and pets. However, the respective proportions were quite different. Violent offenders committed acts of cruelty on wild animals (29%), pets (26%), and farm animals (14%), while nonviolent offenders were also particularly cruel to wild animals (13%) followed by pets (7%) and farm animals (2%). Only violent offenders reported abusing stray animals (11%). Violent offenders were significantly more likely than nonviolent offenders to have been cruel to pet and stray animals. Merz-Perez et al. (2001) also found that many of the nonviolent inmates committed animal cruelty against wild animals in the company of their peers, but all violent offenders reported abusing animals alone. Finally, nonviolent offenders more often expressed remorse over their animal cruelty acts than violent offenders in the study.

The qualitative data indicated that nonviolent offenders were more likely to be involved in methods of abuse that could be categorized as less severe or distanced acts of cruelty. For example, nonviolent offenders reported having committed childhood animal cruelty by methods of "articulated fear" ($n = 1$), shooting ($n = 6$), and forced fighting ($n = 3$). These acts could be committed without close physical contact with the animal. Violent offenders, however, reported having committed acts of cruelty that required actual physical abuse at the hands of the offender. For example, these offenders committed direct acts of violence by engaging in sexual activity with the animal ($n = 3$), beating, kicking, or stomping ($n = 5$), stabbing ($n = 1$), pouring chemical irritants on ($n = 2$), burning ($n = 1$), and dismembering ($n = 2$). Nonviolent offenders did not report committing any of these severe acts of animal cruelty that included physical contact.

In a 2004 study, Tallichet and Hensley explored the relationship between recurrent childhood animal cruelty and subsequent violence toward humans. They surveyed 261 inmates in a Southern state to determine if male inmates convicted of repeated violent crimes against humans had also committed repeated acts of childhood animal cruelty. Although multiple demographic characteristics (race, education, residence, parents' marital status, and number of siblings) were

analyzed, Tallichet and Hensley (2004) found that only repeated acts of childhood animal cruelty and number of siblings predicted later violence against humans. Additionally, all the reported acts of childhood animal cruelty occurred prior to conviction, emphasizing the time order relationship between animal cruelty and later interpersonal violence. These results were also found in a study by Hensley et al. (2009). Using a sample of 180 inmates from a different Southern state, they found that only repeated acts of childhood animal cruelty were predictive of later recurrent acts of violence toward humans, again showing a relationship between the two.

Using the first sample of 261 inmates, Tallichet et al. (2005a) assessed the impact of demographic characteristics (race, education, and childhood residence) and situational factors (if they hurt or killed the animal alone, if they tried to conceal the cruelty, and if they felt upset after abusing the animal, the frequency of youthful acts of animal cruelty, and the age of onset) on the type of animal abused. They found that inmates who had abused animals as youths were more likely to hurt or kill dogs, cats, and wild animals and tended to target them exclusively. Respondents who had hurt or killed dogs were more likely to have done so alone. Those inmates who had hurt or killed cats were more likely to have started at a younger age.

Similarly, Tallichet and Hensley (2005) investigated how demographic, familial differences and species type had contributed to the frequency of acts of childhood animal cruelty. In general, the early exposure to animal abuse was a strong predictor of the subsequent behavior. Rural inmates learned to be cruel toward animals by watching family members exclusively, while urban inmates learned from family members and friends. Moreover, urban inmates chose dogs, cats, and wild animals as their target animals, but rural inmates chose only cats.

Hensley and Tallichet (2005b) also addressed how demographic characteristics and childhood experiences with animal abuse may have affected the recurrence and onset of childhood and adolescent cruelty as a learned behavior. Findings revealed that inmates who experienced animal cruelty at a younger age were more likely to demonstrate recurrent animal cruelty themselves. In addition, respondents who observed a friend abuse animals were more likely to hurt or kill animals more frequently. Finally, inmates who were younger when they first witnessed animal cruelty also hurt or killed animals at a younger age.

Tallichet et al. (2005b) also examined the influence of demographic attributes (race, education, and residence while growing up) and situational factors (if the abuse was committed alone, if the abuser attempted to conceal the act, if the abuser was upset by the abuse, the perpetrators's age of initial animal cruelty, and the frequency of animal abuse) on a range of specific methods of animal cruelty (shooting, drowning, hitting/kicking, choking, burning, and having sex). They found that White inmates tended to shoot animals more frequently and were less likely to be upset or cover up their actions than non-Whites. Inmates who had sex with animals were more likely to have acted alone and to conceal their cruelty toward animals than non-bestialics. Hensley and Tallichet (2009) then examined the relationship between these same methods of animal cruelty and their commission of interpersonal violence. They found that drowning and having sex with an animal during childhood were predictive of later violence toward humans.

Hensley and Tallichet (2005a) also examined the impact of demographic attributes and situational factors relating specifically to a range of animal cruelty motivations (for fun, out of anger, dislike for the animal, to shock people, fear of the animal, to impress someone, for revenge against someone else, to control the animal, for sex, and imitation). Respondents who reported hurting or killing animals alone were more likely to commit the acts out of anger, but less likely to have committed them to impress others, for sex, or to imitate others. Using the sample of 261 inmates, Hensley and Tallichet (2008) then used these same motives for committing animal cruelty to examine their power to predict interpersonal violence. They found that abusing an animal for fun was the only salient motive for predicting later interpersonal violence.

Finally, Tallichet and Hensley (2009) examined the effects of age of onset and frequency of animal cruelty, the covertness of animal cruelty, the commission of animal cruelty within a group or in isolation, and empathy for the abused animals. They found that inmates who had covered up their childhood animal cruelty were more likely to have been convicted of repeated acts of interpersonal violence, demonstrating that the role of empathy and individuals present during

acts of animal cruelty were less important than concealing those acts.

As most of these studies have shown, although not all violent individuals have been previously cruel to animals, the majority have been cruel to animals. Consequently, this potential relationship demands further analysis as researchers and policy makers search to identify potential warning signs to curb violent crime. As Ascione (2001) noted, "taken together, these studies suggest that animal abuse may be characteristic of the developmental histories of between one in four and nearly two in three violent adult offenders" (p. 4). In light of these findings, it may be especially important to further explore and understand the relationship between these two types of aggression beyond that which was previously suspected. In other words, as one of several red flags or warning signs of interpersonal violence, childhood animal cruelty is one malevolent behavior that demands further study.

Cross-References

► Delinquency

References

American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd rev. ed.). Washington: American Psychiatric Association.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: American Psychiatric Association.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., Text revision). Washington: American Psychiatric Association.

Arluke, A., Levin, J., Luke, C., & Ascione, F. R. (1999). The relationship of animal abuse to violence and other forms of antisocial behavior. *Journal of Interpersonal Violence, 14*, 963–976.

Ascione, F. R. (1993). Children who are cruel to animals: A review of research and implications for developmental psychopathology. *Anthrozoos, 6*(4), 226–247.

Ascione, F. R. (2001, September). Animal abuse and youth violence. *Juvenile Justice Bulletin*, 1–15.

Felthous, A. R., & Kellert, S. R. (1987). Childhood cruelty to animals and later aggression against people: A review. *American Journal of Psychiatry, 144*, 710–717.

Flynn, C. P. (1999). Animal abuse in childhood and later support for interpersonal violence in families. *Society & Animals, 7*(2), 161–171.

Hensley, C., & Tallichet, S. E. (2005a). Animal cruelty motivations: Assessing demographic and situational influences. *Journal of Interpersonal Violence, 20*(11), 1429–1443.

Hensley, C., & Tallichet, S. E. (2005b). Learning to be cruel?: Exploring the onset and frequency of animal cruelty. *International Journal of Offender Therapy and Comparative Criminology, 49*(1), 37–47.

Hensley, C., & Tallichet, S. E. (2008). The effect of inmates' self-reported childhood and adolescent animal cruelty motivations on the number of convictions for adult violent interpersonal crimes. *International Journal of Offender Therapy and Comparative Criminology, 52*(2), 175–184.

Hensley, C., & Tallichet, S. E. (2009). Childhood and adolescent animal cruelty methods and their possible link to adult violent crimes. *Journal of Interpersonal Violence, 24*(1), 147–158.

Hensley, C., Tallichet, S. E., & Dutkiewicz, E. L. (2009). Recurrent childhood animal cruelty: Is there a relationship to adult recurrent interpersonal violence? *Criminal Justice Review, 34*(2), 248–257.

Macdonald, J. M. (1961). *The murderer and his victim*. Springfield: Charles C. Thomas.

Merz-Perez, L., & Heide, K. M. (2004). *Animal cruelty: Pathway to violence against people*. Lanham: Rowman & Littlefield.

Merz-Perez, L., Heide, K. M., & Silverman, I. J. (2001). Childhood cruelty to animals and subsequent violence against humans. *International Journal of Offender Therapy and Comparative Criminology, 45*, 556–573.

Miller, K. S., & Knutson, J. F. (1997). Reports of severe physical punishment and exposure to animal cruelty by inmates convicted of felonies and by university students. *Child Abuse and Neglect, 21*, 59–82.

Ressler, R. K., Burgess, A. W., Hartman, C. R., Douglas, J. E., & McCormack, A. (1998). Murderers who rape and mutilate. In R. Lockwood & F. A. Ascione (Eds.), *Cruelty to animals and interpersonal violence* (pp. 179–193). West Lafayette: Purdue University Press.

Tallichet, S. E., & Hensley, C. (2004). Exploring the link between recurrent acts of childhood and adolescent animal cruelty and subsequent violent crime. *Criminal Justice Review, 29*(2), 304–316.

Tallichet, S. E., & Hensley, C. (2005). Rural and urban differences in the commission of animal cruelty. *International Journal of Offender Therapy and Comparative Criminology, 49*(6), 711–726.

Tallichet, S. E., & Hensley, C. (2009). The social and emotional context of childhood and adolescent animal cruelty: Is there a link to adult interpersonal crimes? *International Journal of Offender Therapy and Comparative Criminology, 53*(5), 596–606.

Tallichet, S. E., Hensley, C., O'Bryan, A., & Hassel, H. (2005a). Targets for cruelty: Demographic and situational factors affecting the type of animal abused. *Criminal Justice Studies, 18*(2), 173–182.

Tallichet, S. E., Hensley, C., & Singer, S. D. (2005b). Unraveling the methods of childhood and adolescent cruelty to nonhuman animals. *Society & Animals, 13*(2), 91–107.

Verlinden, S. (2000). *Risk factors in school shootings*. Unpublished doctoral dissertation. Pacific University, Forest Grove.

Wright, J., & Hensley, C. (2003). From animal cruelty to serial murder: Applying the graduation hypothesis. *International Journal of Offender Therapy and Comparative Criminology, 47*(1), 72–89.

Antisocial Personality Disorder

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Overview

Antisocial personality disorder (ASPD) is a maladaptive personality style marked by the violation of the rights of others. It has a long history as a clinical phenomenon but, unlike other personality disorders, ASPD has an age onset criterion that precludes its application to individuals younger than 18. However, new research suggests that the ASPD criteria are useful in identifying severely antisocial adolescents who differ from those with conduct disorder (CD). Although more research is needed on the construct validity of ASPD in adolescents, clinicians could begin using the ASPD criteria to identify adolescents who are most in need of intervention.

Introduction

Antisocial personality disorder (ASPD) reflects a pervasive pattern of disregard for and violation of the rights of others (American Psychiatric Association 2000). This disorder affects 2–3% of the general population and upward of 60% of prison samples and is associated with a multitude of medical and social problems making this disorder a serious public health concern (Moran 1999). Symptoms of the diagnosis include failure to conform to social norms, deceitfulness, impulsivity, aggressiveness, disregard for safety, irresponsibility, and lack of remorse shown since the age of 15 (APA 2000). Prior to age 15, the person must show "evidence" of conduct disorder (CD), which includes symptoms of lying, fighting, stealing, fire setting, and other indicators of antisociality. Personality disorders are more broadly conceptualized as maladaptive personality styles in the *Diagnostic and Statistical Manual of Mental Disorders-IV-TR* (APA 2000). There is an explicitly stated expectation that personality disorders can be evident though perhaps not fully realized in adolescence (APA 2000, p. 685). Despite this expectation, ASPD maintains a criterion such that individuals less than 18 years of age cannot be considered for the diagnosis (APA 2000). The utility and validity of this age limit is the focus of this essay as new research is beginning to demonstrate that the ASPD diagnosis can help identify a subset of adolescents with a more serious clinical profile than those with just a CD diagnosis.

The conceptualization of the ASPD diagnosis was informed by early descriptions of psychopathy, a personality style identified by Hervey Cleckley (1941). Psychopathy is a multifactorial construct, and researchers have developed measures to assess various facets of this personality style (e.g., Frick and Hare 2001; Hare 1991; Levenson et al. 1995; Lilienfeld and Andrews 1996; Patrick et al. 2009). Cleckley's (1941) initial description of psychopathy included a constellation of affective and interpersonal features along with symptoms of antisocial behavior. Hare (1991) later operationalized Cleckley's description of psychopathy by creating a checklist to assess for these symptoms, which included measurement of two components: one that reflected the incapacity to experience empathy and guilt (referred to as Factor 1) and another (Factor 2) that reflected the antisocial lifestyle characteristic of ASPD (Cleckley 1976; Walsh and Kosson 2008).

Early in the history of the DSM, the diagnostic criteria for "antisocial personality" were parallel to Cleckley's (1941) initial description of psychopathy, which included symptoms such as an incapacity for loyalty, callousness, irresponsibility, impulsivity, and an inability to feel guilt (APA 1968). Over time, the criteria for "antisocial personality" in the DSM drifted away from the core personality symptoms of psychopathy in an attempt to form a more reliable diagnosis. As such, the current conceptualization of ASPD focuses on behavioral indicators that can be assessed more reliably than features such as callousness or incapacity for loyalty inherent in the original descriptions of psychopathy (Patrick 2007). Even so, ASPD and psychopathy continue to have overlapping features, especially concerning chronic behavioral deviance and lack of remorse. In fact, the ASPD criteria when measured dimensionally as a symptom count are highly correlated with scores on the Psychopathy Checklist – Revised, which is a widely used measure of psychopathy in experimental research (Hare 2003).

Despite similarities between ASPD and psychopathy, one important difference involves the age restriction for diagnosis. Unlike ASPD, psychopathy is not

a DSM-based diagnosis and is not restricted to adults. A large literature supports the extension of this diagnosis to children and adolescents (Salekin 2006). Research has shown that psychopathic traits can be reliably assessed in children and are parallel to those found in adult psychopathy (Frick et al. 1994). Nonetheless, the downward extension of the adult psychopathy construct has been criticized and there continues to be debate about whether juvenile psychopathy should be assessed given the potential dangers of assigning such a label to a child (Frick et al. 1994). This debate is about whether severe antisocial personality *should* be diagnosed in adolescents and even younger individuals. The bulk of the evidence suggests that psychopathy *can* be assessed in children and adolescents and the construct has validity and utility. Similar evidence is being compiled to suggest that ASPD *can* be assessed in adolescents and is valid and potentially useful.

Predictors of ASPD

A developmental perspective of antisocial behavior is useful in evaluation of the age criterion for the diagnosis of ASPD. While CD is a good predictor of the development of ASPD, most youth with CD do not develop ASPD (Robbins 1966). However, most adults diagnosed with ASPD begin their antisocial behavior in childhood (Robbins 1966). In other words, there is a process of multifinality among children who are demonstrating antisocial behaviors resulting either in the continuation of their antisocial behavior or desistence. Which trajectory a child follows can depend on any number of factors, including both biological and environmental risk factors (Moffitt 2003).

One key predictor that has emerged in the literature regarding the persistence of antisocial behavior is age at onset, or the age at which an individual begins displaying antisocial behavior (DiLalla and Gottesman 1989; Moffitt 1993, 2003). Age at onset has been shown to differentiate two distinct trajectories of antisocial behavior, depending on whether the onset is early (e.g., childhood) or late (e.g., adolescence). The early onset group, labeled life-course persistent, has been postulated to be more likely to demonstrate an increase in severity and rate of antisocial behavior over time and more likely to persist into adulthood (Moffitt 2003). Indeed, a large-scale US epidemiological study showed that the average number of adult antisocial symptoms increased as the number of childhood conduct problems before age 15 increased (Robins et al. 1991). The adolescent-onset group, labeled adolescence-limited, is thought to be the outcome of an exaggerated process of adolescent rebellion and these individuals cease their antisocial behavior by the time they reach adulthood (Moffitt 2003). The majority of children diagnosed with CD fall into the adolescent-onset category and do not go on to develop ASPD (Moffitt 2003).

Several studies have examined the degree of genetic and environmental influences on antisocial behavior subtypes defined by age at onset as a means of validating them. Moffitt's (1993) theory suggests that genes play a larger role in the etiology of early onset, life-course-persistent antisocial behavior, whereas late onset, adolescence-limited antisocial behavior is predominantly influenced by environmental factors like peers. Using twin study methodology, Taylor et al. (2000) found that adolescent boys who began exhibiting antisocial behavior at an early age (before 12) had substantial genetic effects on their antisocial behavior. However, genetic effects were smaller (and environmental effects were larger) on antisocial behavior that began in adolescence (after age 12). Further, Silberg et al. (2007) examined longitudinal prospective twin data and identified a single genetic factor contributing to antisocial behavior that began at an early age and continued through adulthood. On the other hand, a shared environmental effect contributed to antisocial behavior that began later in adolescence. Thus, the literature suggests that more persistent forms of antisocial behavior that can be identified in adolescence have a greater level of genetic influence that likely contributes to the continuity of the behavior. This literature also supports the idea that there are different developmental trajectories of antisocial behavior with some adolescents showing a more persistent form that could be likened to a personality style.

Even though there is a clearly identifiable form of antisocial behavior among adolescents that begins early and is persistent, the onset restriction for the ASPD diagnosis can be useful in that it avoids putting a lasting label on a child who may desist in their antisocial behavior. However, the study of Taylor et al. (2000) indicates a strong genetic component associated with an early age at onset of antisocial behavior. Other research has shown that this group is most likely to evince an increase in severity and rate of antisocial

behavior, and may eventually meet criteria for ASPD (Moffitt 2003). Therefore, it could be that the early age of onset is biologically driven to some extent, and the trajectory that these children follow is more likely to be one that extends into adulthood. Strictly enforcing the age limit on ASPD could cause clinicians and researchers to overlook this qualitatively different group of antisocial adolescents who may meet criteria for ASPD before age 18. The symptoms of ASPD may be developmentally appropriate for some older adolescents, such as youth 16 and 17 years of age. Individuals at this age are old enough to begin engaging in the more severe symptoms of ASPD and are also old enough to have established a pattern of chronic antisocial behavior as a child. This group may be important to assess from a clinical standpoint as adolescents who meet criteria for ASPD before the age of 18 would by definition be a more severe group of individuals compared to adolescents who only meet criteria for CD.

In addition, as an extension of Moffit's (1993) theory about the taxonomy of delinquency, research has indicated that earlier onset of CD and other types of conduct problems is associated with poorer academic performance and poorer prognosis in terms of trajectory of antisocial behavior (Moffitt and Caspi 2001). A similar pattern may emerge if adolescents meet criteria for ASPD before the age of 18, as this early demonstration of severe symptoms may place them at a higher risk of poor prognosis and related comorbid conditions, such as substance abuse. If the above observation is correct, then the speculation would be that the ASPD criteria could form the basis of assessing just the sort of severe antisocial phenotype that is predictive of these negative outcomes. The classification of these youth would be valuable for guiding research on causal variables as well as early and specific strategies for intervention. However, two areas need to be addressed before establishing the utility of ASPD as a diagnosis in adolescents. First, it would be important to investigate whether there is stable continuity of antisocial personality from adolescence into adulthood in order to reliably assess for this personality disorder in adolescence. Second, it would be important to investigate whether ASPD in adolescence is similar in manifestation compared to adult ASPD by researching the symptomatology, prognosis, and comorbid conditions in this subset of youth. Research has been conducted in both areas as outlined below.

Personality Stability in Adolescents

The literature indicates that personality traits can be reliability measured in early adolescence and certain personality profiles are associated with delinquency and externalizing psychopathology at that age (John et al. 1994). Despite this apparent continuity of personality, pathological antisociality in adolescents is diagnostically captured by the CD diagnosis until age 18, yet CD is not conceptualized in the DSM as a maladaptive personality style. In support of this diagnostic distinction, an exploratory factor analysis using data from 1,253 adolescent twins shows that the CD and ASPD criteria sets are largely reproduced as separate factors (see Table 1), suggesting that the antisocial behaviors tapped by each set of criteria are related ($r = 0.42$ between factors) but distinct. Despite the distinction between the CD and ASPD criteria sets, CD is a good predictor of ASPD in adulthood (Gelhom et al. 2007). However, CD is not necessarily superior to ASPD as an indicator of antisocial behavior problems during adolescence.

There is an important, ongoing debate about the future of the classification of personality disorders in the DSM framework and whether personality disorders should be viewed as discrete categories or as dimensions with underpinnings in broad personality trait constructs (e.g., Widiger and Trull 2007). Though that debate is beyond the scope of this essay, it is an instructive reminder of the nature of personality disorders as maladaptive personality styles and the large body of literature showing associations of personality disorders with normal range personality traits (e.g., Saulsman and Page 2004). If ASPD is a valid diagnostic construct in adolescents, then its associated personality trait profiles should differ from CD in quality and/or severity and this is what the data are beginning to show.

The Multidimensional Personality Questionnaire yields three higher-order personality factors: constraint (low scorers tend to be impulsive and thrill seeking and lack adherence to social norms), negative emotionality (high scorers tend to be aggressive and prone to negative emotional states), and positive emotionality (high scorers are achievement oriented and connected to their social network). Each of these factors is comprised of at least three lower-order personality factors (e.g., constraint is derived from harm avoidance, traditionalism, and control). Low constraint and high negative emotionality is a pattern of personality traits that has

Antisocial Personality Disorder. Table 1 Exploratory factor analysis using promax rotation of conduct disorder and antisocial personality disorder symptoms in a sample of 1,253 17-year-old twins

Symptom	Factor 1 loading	Factor 2 loading
Stolen without confrontation	0.619	
Cruel to people	0.596	
Destroyed someone's property	0.588	0.327
Used a weapon in a fight	0.585	
Broken into a home or car	0.573	
Set fires deliberately	0.530	
Often initiates physical fights	0.497	
Ran away overnight	0.444	
Often lies	0.404	0.329
Cruel to animals	0.394	
Often truant	0.368	
Stolen with confrontation	0.357	
Failure to conform to social norms	0.489	0.655
No regard for the truth		0.637
Inconsistent work behavior		0.574
Failure to plan/impulsivity		0.561
Reckless regard for safety of self/others		0.488
Irritable and aggressive	0.403	0.475
Lacks remorse		0.380
Failure to honor financial obligations		0.376

Antisocial Personality Disorder. Table 2 Correlates showing a significant difference between conduct disorder only and antisocial personality disorder (ASPD) diagnosed in adolescence

Correlate	Pattern of Significant Difference
Constraint (personality trait)	Conduct disorder only > ASPD
Aggression (personality trait)	Conduct disorder only < ASPD
Depression	Conduct disorder only < ASPD
Alcohol abuse and dependence	Conduct disorder only < ASPD
Cannabis abuse and dependence	Conduct disorder only < ASPD
Other illicit drug abuse and dependence	Conduct disorder only < ASPD
Performance IQ > verbal IQ discrepancy	Conduct disorder only < ASPD
Antisocial peers	Conduct disorder only < ASPD
Science achievement	Conduct disorder only > ASPD

Note: Table summarizes findings from Taylor et al. (2007) and Taylor and Iacono (2007)

been associated with antisocial behavior (e.g., Moffitt et al. 1996). Taylor and Iacono (2007) examined these personality traits in three groups of adolescents: one group that had no CD or ASPD through young adulthood, a second group that had CD that did not progress to ASPD, and a final group with CD that progressed to ASPD by young adulthood. Personality was measured at age 17 and groups differed significantly on constraint and all its lower-order factors and on negative emotionality and its lower-order factors of alienation and aggression (see Table 2). Adolescents who had progressed to ASPD had significantly more pathological scores on the constraint personality trait and its lower-order factors as compared to adolescents with CD only and controls who did not differ significantly from each other. Adolescents with CD only were intermediate on the negative emotionality scale and its component scales of alienation and aggression. Thus, the personality traits associated with ASPD are similar in type to those associated with CD only but the profile associated with ASPD is more extreme and this is evidenced *before* age 18 when ASPD can be diagnosed.

Manifestation of ASPD in Adolescents

A final piece of evidence for the validity of the ASPD diagnosis in adolescents comes from a direct examination of the issue using a large epidemiological sample of twins. Taylor et al. (2007) identified adolescent boys and girls who had CD by age 17 but no progression to ASPD by age 20, another group that met criteria for ASPD in adolescence before age 18, another group that met criteria for ASPD between ages 18 and 20, and a control group of adolescent boys and girls with no

CD or ASPD through age 20. Groups were compared on the rates of CD and ASPD symptoms to assess differences in the clinical presentations as well as on several domains of functioning including IQ, achievement, peer affiliations, family history of ASPD, and comorbid psychopathology (see Table 2).

The CD only, adolescent ASPD, and ASPD groups had similar presentations of CD symptoms, suggesting that the clinical presentation of CD is similar in those who persist to ASPD and those who desist (Taylor et al. 2007). The presentation of ASPD symptoms was similar across the two ASPD groups, suggesting that adolescents who do not yet meet DSM criteria for ASPD because of the age onset criterion nonetheless have a clinical presentation of pathological antisocial personality that is similar to those who do meet the age onset criterion. In terms of comorbid psychopathology, the adolescent ASPD group had significantly higher rates of depression and substance use disorders than adolescents with CD only and controls who did not differ significantly from each other (Taylor et al. 2007). Moreover, the adolescents with ASPD and the ASPD group that met the age onset criterion did not differ in their rates of depression or substance use disorders at age 20, but the adolescents with ASPD had significantly more alcohol abuse, nicotine dependence, and cannabis use disorder at age 17 than the ASPD group that onset after age 17 (Taylor et al. 2007). These results suggest that ASPD is an important clinical diagnosis in adolescence as it signals depression and substance use disorder rates that are well above those found in adolescents with CD only.

The validity of the ASPD diagnosis in adolescence was further demonstrated by the differences found across cognitive and social functioning. Taylor et al. (2007) found that adolescents with ASPD and those with ASPD after age 17 had significantly higher discrepancies between their performance and verbal IQ scores than those with CD only and controls (which were similarly low in their IQ discrepancies). A similar pattern was found for antisocial peers and academic achievement. Thus, across multiple domains, adolescents diagnosed with ASPD looked similar to young adult men and women with ASPD. This inference suggests that the ASPD criteria signal a group of adolescents whose clinical, cognitive, academic, and social presentation is worse than when only the CD criteria are used to identify psychopathology related to antisocial behavior.

Clinical Implications

The findings of Taylor et al. (2007) suggest that the ASPD diagnosis can provide a means to identify adolescents with a serious clinical profile of psychopathology that goes beyond persistent antisocial behavior. These findings further indicate that clinicians and researchers should assess the criteria for ASPD in their adolescent samples even if they would only give out a provisional diagnosis until a person reached the age of 18. Taylor et al. (2007) found that CD presentations did not differ among those with CD only and those with the ASPD. Therefore, if only the CD criteria are used with adolescent samples, then a severely antisocial group will be overlooked. It is important for researchers to continue to investigate the observable and testable clusters of symptoms and impairments associated with ASPD in adolescents, as this information is likely to provide direction in deliberate and precise targets for rehabilitation and treatment. Current research supports the use of cognitive behavioral therapy (CBT) for the treatment of ASPD among adults as it reduces verbal and physical aggression and alcohol use, and increases social functioning (Davidson et al. 2009). It is possible that adolescents with ASPD would respond similarly to CBT, though this remains an empirical question.

Caveats

It is important not to overstate the implications from the study conducted by Taylor et al. (2007). Given that it appears to be the only study that has directly examined the construct validity of the ASPD diagnosis in adolescence, the findings would need to be replicated before changes to the ASPD diagnostic criteria could even be considered. Also, despite the promise of this research and the potential utility of assessing for ASPD among adolescents, clinicians should be cautioned in assessing for this disorder in younger adolescents given that prior studies on the issue have only been conducted on older adolescents (i.e., 16 and 17 years of age). Children certainly are not appropriate for assessment of ASPD given the symptom quality and severity inherent in this diagnosis, and the applicability of the research regarding continuity of this disorder and associated prognoses may not be relevant to children or younger adolescents. Finally, there is a need for balance in the upward extension of CD and the

downward extension of ASPD as there may be ages at which these diagnoses overlap. For instance, adolescents aged 15–17 years old may have symptoms of CD and ASPD at the same time. In these cases, clinical discretion should be used in determining which disorder best characterizes the adolescent's clinical presentation.

Conclusions

In summary, the research presented in this essay indicates that adolescents diagnosed with ASPD are similar to adults diagnosed with ASPD in terms of clinical, cognitive, academic, and social presentations. The existing literature is compelling but it should be replicated to ensure the reliability of these results. Nonetheless, clinicians and researchers could begin to assess the criteria for ASPD in their adolescent samples as a means to provide more information regarding clinical presentation as well as likely prognosis. From a clinical perspective, assessing for ASPD in adolescents could prove to be an efficient means of identifying persistent antisocial behavior that could help accelerate the timeline for and perhaps even the success of intervention.

References

American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.). Washington: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: Author. text revision.

Cleckley, H. (1941). *The mask of sanity.* St. Louis: Mosby.

Cleckley, H. (1976). *The mask of sanity* (5th ed.). St. Louis: Mosby.

Davidson, K., Tyrer, P., Tata, P., Cooke, D., Gumley, A., Ford, I., et al. (2009). Cognitive behavior therapy for violent men with antisocial personality disorder in the community: an exploratory randomized controlled trial. *Psychological Medicine, 39*, 569–577.

DiLalla, L. F., & Gottesman, I. I. (1989). Heterogeneity of causes for delinquency and criminality: Lifespan perspectives. *Development and Psychopathology, 1*, 339–349.

Frick, P. J., & Hare, R. D. (2001). *Antisocial process screening device.* Toronto: Multi-Health Systems.

Frick, P. J., O'Brien, B. S., Wootton, J. M., & McBurnett, K. (1994). Psychopathy and conduct problems in children. *Journal of Abnormal Psychology, 103*(4), 700–707.

Gelhom, H. L., Sakai, J. T., Price, R. K., & Crowley, T. J. (2007). DSM-IV conduct disorder criteria as predictors of antisocial personality disorder. *Comprehensive Psychiatry, 48*, 529–538.

Hare, R. D. (1991). *The Hare psychopathy checklist-revised (PCL-R).* Toronto: Multi-Health Systems.

Hare, R. D. (2003). *The Hare psychopathy checklist – revised* (2nd ed.). Toronto: Multi-Health Systems.

John, O. P., Caspi, A., Robins, R. W., Moffitt, T. E., & Stouthamer-Loeber, M. (1994). The "Little Five": Exploring the nomological network of the five-factor model of personality in adolescent boys. *Child Development, 65*, 160–178.

Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a non-institutionalized population. *Journal of Personality and Social Psychology, 68*, 151–158.

Lilienfeld, S. O., & Andrews, B. P. (1996). Development and preliminary validation of a self-report measure of psychopathic personality. *Journal of Personality Assessment, 66*, 488–524.

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674–701.

Moffitt, T. E. (2003). Life-course persistent and adolescence-limited antisocial behavior: A 10 year research review and research agenda. In B. B. Lahey, T. E. Moffitt, & A. Caspi (Eds.), *Causes of conduct disorder and juvenile delinquency* (pp. 49–75). New York: Guilford.

Moffitt, T. E., & Caspi, A. (2001). Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways in males and females. *Development and Psychopathology, 13*, 399–424.

Moffitt, T. E., Caspi, A., Dickson, N., Silva, P., & Stanton, W. (1996). Childhood-onset versus adolescent-onset antisocial conduct problems in males: Natural history from ages 3 to 18 years. *Development and Psychopathology, 8*, 399–424.

Moran, P. (1999). The epidemiology of antisocial personality disorder. *Social Psychiatry and Psychiatric Epidemiology, 34*, 231–242.

Patrick, C. J. (2007). Antisocial personality disorder and psychopathy. In W. O'Donohue, K. A. Fowler, & S. O. Lilienfeld (Eds.), *Personality disorders: Toward the DSM-V* (pp. 109–166). Thousand Oaks: Sage.

Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. *Development and Psychopathology, 21*, 913–938.

Robbins, L. N. (1966). *Deviant children grow up.* Baltimore: Williams & Wilkins.

Robbins, L. N., Tipp, J., & Pryzbeck, T. (1991). Antisocial personality. In L. N. Robbins & D. A. Regier (Eds.), *Psychiatric disorders in America: The epidemiological catchment area study* (pp. 258–290). New York: The Free Press.

Salekin, R. T. (2006). Psychopathy in children and adolescents. In C. J. Patrick (Ed.), *Handbook of psychopathy* (pp. 156–171). New York: Guilford.

Saulsman, L. M., & Page, A. C. (2004). The five-factor model and personality disorder empirical literature: A meta-analytic review. *Clinical Psychology Review, 23*, 1055–1085.

Silberg, J. L., Rutter, M., Tracy, K., Maes, H. H., & Eaves, L. (2007). Etiological heterogeneity in the development of antisocial behavior: The Virginia twin study of adolescent behavioral development and the young adult follow-up. *Psychological Medicine, 37*, 1193–1202.

Taylor, J., Elkins, I. J., Legrand, L., Peuschold, D., & Iacono, W. G. (2007). Construct validity of adolescent antisocial personality disorder. *Journal of Youth and Adolescence, 36*, 1048–1057.

Taylor, J., & Iacono, W. G. (2007). Personality trait differences in boys and girls with clinical or sub-clinical diagnoses of conduct disorder versus antisocial personality disorder. *Journal of Adolescence, 30*, 537–547.

Taylor, J., Iacono, W. G., & McGue, M. (2000). Evidence for a genetic etiology of early-onset delinquency. *Journal of Abnormal Psychology, 109*(4), 634–643.

Walsh, Z., & Kosson, D. S. (2008). Psychopathy and violence: The importance of factor level interactions. *Psychological Assessment, 20*, 114–120.

Widiger, T. A., & Trull, T. J. (2007). Plate techtonics in the classification of personality disorder: Shifting to a dimensional model. *The American Psychologist, 62*, 71–83.

Anxiety Disorders

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Overview

Anxiety disorders are common among adolescents, often causing distress and impairment in their daily lives. Adolescents with anxiety disorders suffer peer difficulties, underperform in school, have difficulty getting along with their families, and are at risk for other emotional problems. For example, youth with anxiety disorders are more likely to develop depression and have problems with substance use. Anxiety disorders run a chronic course and tend to persist without treatment. Two treatment approaches, cognitive behavior therapy and medication, have been found to effectively treat anxiety disorders in adolescents. More research is needed to further adapt these treatments for adolescents, as research studies have tended to focus on a younger population. Additionally, efforts are needed to make treatments more widely available to anxious youth.

Anxiety disorders are among the most prevalent forms of psychopathology in youth, occurring in approximately 10% of all youth and are associated with significant impairment in daily functioning (Costello et al. 2003). Socially, youth with anxiety disorders experience peer rejection more frequently than youth without anxiety disorders. Educationally, youth with anxiety disorders struggle in school, often withdrawing prematurely from school compared to their same age peers. Youth with anxiety disorders also experience problematic family relationships and tend to have parents who are more controlling and rejecting than those of comparison youth without anxiety. In addition to the impairment that adolescents experience in family, social, and academic functioning, anxious youth are also at high risk for developing additional psychological disorders including adult anxiety disorders, depression, and substance use problems – and these disorders can cause further impairment in functioning. The impairment that anxious adolescents experience is not temporary, as untreated anxiety disorders generally run a chronic course extending into adulthood. The high prevalence and negative consequences of untreated anxiety disorders in youth suggest that anxiety disorders are a significant public health concern that requires continued research and clinical attention. Unfortunately, many, if not most youth with clinically significant anxiety disorders have not received an appropriate empirically supported treatment.

The Importance of Adolescence

Adolescence is a time of tremendous biological, cognitive, and social change. During adolescence, secondary sex characteristics emerge, growth spurts occur, and reproductive systems mature. Social awareness develops, independence and autonomy become important, and concerns about academic matters, dating, and interpersonal relationships become prominent. The capacity for higher order thought and systematic problem solving also develops in adolescence, enabling adolescents to recognize their thought processes, discover patterns within their thinking, and identify how their thoughts have evolved over time.

The developmental changes of adolescence do not occur in isolation; these changes impact the nature of the anxiety experienced by adolescents. Anxiety disorders are typically diagnosed when a youth is experiencing fears and distress that are interfering and that persist over time. Teenagers commonly experience increased anxiety related to biological changes, peer

perceptions, social relationships, and academic matters. Youth with anxiety disorders also experience these fears, though they experience them more intensely and with greater interference. Anxiety-disordered youth also frequently struggle with developing autonomy and independence. These youth often require assistance to manage their emotions, yet at the same time, they may be afraid and resistant to receive this assistance. Although these youth are likely very cognitively aware of their thoughts and worries, they lack the skills to manage their anxiety. In addition, adolescents with anxiety disorders are at higher risk for depression and substance use.

Although adolescence is a unique developmental time period, the majority of research on anxiety disorders has been conducted on adults or on children. Although many studies include both children and adolescents, Foa et al. (2005) note that it is critical that research begins to look at risk and protective factors that are specific to adolescence. Identifying these factors may lead to improvements in the prevention and treatment of adolescent anxiety disorders.

Anxiety Disorders in Adolescence

Although anxiety is common in adolescence, anxiety *disorders* only occur in a subset of adolescents. Specifically, anxiety disorders are diagnosed when anxiety causes distress, persists, and contributes to meaningful interference in daily functioning. The American Psychiatric Association (APA 1994) provides specific definitions of discrete anxiety disorders; however, many teenagers with anxiety disorders will likely meet criteria for more than one psychological disorder. A brief overview of the examples of anxiety disorders is included below.

Two commonly observed anxiety disorders in adolescent populations are social phobia (SP) and generalized anxiety disorder (GAD). GAD is characterized by the presence of uncontrollable, excessive worry. For adolescents, these worries may include concerns about school, health, friendships, their appearance, and personal harm. Although most teenagers worry at times, youth with GAD worry more days than not over an extended time period (at least 6 months) and these worries cause interference in their lives. Adolescents with GAD also experience at least one physical symptom of anxiety; common symptoms include restlessness and difficulty sleeping. Rather than experiencing general worries, adolescents with social phobia experience excessive fear in social or evaluative situations in which the youth may experience possible negative evaluation by others. As noted previously, social concerns become increasingly salient in adolescence, given the heightened importance of social status and peer relationships.

Anxiety disorders in adolescents may take other forms. Obsessive-compulsive disorder (OCD) is a disorder characterized by obsessions (recurrent, persistent, and intrusive thoughts, images, or impulses) and/or compulsions (repetitive behaviors or mental acts) that are distressing, time-consuming, or cause significant interference in daily functioning. Obsessions among adolescents with OCD often relate to fears of harm or other negative outcomes to self and others. Commonly observed compulsions among adolescents include ritualized and/or excessive hand washing, cleaning, and checking (e.g., Rettew et al. 1992).

Posttraumatic stress disorder (PTSD) is another form of anxiety seen in adolescents. Youth with PTSD display a collection of symptoms that develop in response to a trauma in which the youth either personally experienced or witnessed an event involving serious injury or death. The PTSD event(s) are experienced as terrifying and horrifying and the youth feels helpless. Youth often express disorganized or agitated behavior in response to these events. In addition to feeling horrified, youth with PTSD persistently reexperience the event through recurrent and intrusive distressing recollections of the event, recurrent distressing dreams of the event, or acting or feeling as if the event were actually recurring. Youth with PTSD experience severe psychological and/or physiological distress upon exposure to internal or external cues that symbolize or are similar to a feature of the event. Youth with PTSD also avoid stimuli associated with the trauma; this avoidance may present as numbing of general responsiveness.

Although panic disorder and agoraphobia are less commonly observed among adolescents in comparison to adults, these disorders begin to emerge around this period of development. Adolescents with panic disorder experience recurrent panic attacks, which are discrete episodes of intense fear and emotional distress that have a sudden onset and brief duration. During these attacks, the individual experiences the physical and cognitive

symptoms of anxiety and is afraid of these symptoms. In panic disorder, these attacks appear to happen without an obvious trigger and the youth experiencing these attacks must exhibit at least 1 month of concern about the recurrence of these attacks and their consequences. Youth with agoraphobia are fearful and tend to avoid situations that they believe would be difficult to escape from were they to experience panic symptoms. Not all youth who have panic attacks develop agoraphobia. Indeed, given that adolescents are often not fully independent, there may be less room for avoidance of feared situations.

Other anxiety disorders in adolescents include specific phobias and separation anxiety disorder. Specific phobias are common and often include fears of animals, heights, and needles. Separation anxiety disorder, a disorder characterized by a fear of being away from family members or from home, is less common in adolescents. However, when present, it may be particularly distressing as it can interfere with the adolescent's ability to develop autonomy and independence.

Although the frequency of separation anxiety disorder decreases from childhood to adolescence, the prevalence of other disorders increases over time. For example, there are higher prevalence rates of social phobia in adolescents than in younger children and the prevalence of this disorder continues to increase throughout adolescence (Essau et al. 1999). A modest increase in GAD in middle adolescence has also been found (Costello et al. 2003). Indeed, prevalence estimates continue to increase with age among children and adolescents for GAD, social phobia, panic disorder, and agoraphobia; however, an increase of the same magnitude is not seen for specific phobia or separation anxiety disorder (Beesdo et al. 2009).

Assessment of Anxiety Disorders

A thorough diagnostic assessment, conducted by a trained and reliable mental health professional, is necessary to accurately diagnose an anxiety disorder. Anxiety disorders in adolescents are best assessed using information from (a) the adolescents themselves, (b) their parents or primary caregivers, (c) teacher reports, (d) semi-structured clinical interviews, and (e) behavioral observations, as each of these sources of information provides valuable information. Assessments of anxiety disorders evaluate the onset of symptoms, determine the context in which the symptoms occur, and review a child's medical, familial, social, and academic history. Consideration need be given to comorbid psychological disorders, as comorbid psychological disorders are common in youth diagnosed with anxiety disorders.

Accurate assessments use reliable, valid, and developmentally appropriate symptom measures that examine symptoms over time, discriminate between disorders, assess anxiety severity, include multiple observers (e.g., parent and child report), and are sensitive to therapeutic change. Structured clinical interviews, such as the Anxiety Disorders Interview Schedule for Children/Parents (ADIS-C/P; Albano and Silverman 1996), are ideal clinician-administered measures that capture changes in anxiety disorder severity occurring over the course of treatment. Self-report measures of anxiety (e.g., the Multidimensional Anxiety Scale for Children; MASC-C; March et al. 1997) provide information about the adolescent's subjective experience of anxiety. Self-report measures are quick to administer and are generally less expensive than structured interviews; however, they do not always yield enough information about the adolescent's specific anxiety concerns to reach a diagnostic decision. Parent and teacher reports are useful, especially with younger adolescents, as they may provide information about the adolescent's functioning in different environments and from different perspectives. Finally, behavioral observations provide clinicians with valuable information (e.g., avoidance of eye contact, quiet speech, reassurance seeking) that is wise to consider. Of course, one needs to be aware that the adolescent may behave differently while in the presence of the professional relative to their daily environment.

Gathering information from a variety of sources is important, yet total agreement among informants is not to be expected. Parents and teachers may not be aware of the adolescent's internal experiences of anxiety, and adolescents may be unable or unwilling to report their own experiences of anxiety. For example, a socially phobic 13-year-old may not be comfortable divulging his or her fears to a stranger. Alternately, a parent of a 17-year-old may be unaware of their child's functioning in social situations. A proper evaluation of anxiety disorders in adolescents takes these factors into account.

Treating Anxiety in Adolescents: Efficacy of Cognitive-Behavioral Therapy

Although there are several theories and approaches for the treatment of anxiety in adolescents, one approach, Cognitive-Behavioral Therapy (CBT), has received the most empirical support for the treatment of youth with anxiety disorders (Kazdin and Weisz 1998; Silverman et al. 2008). The American Psychological Association (APA) Task Force on Promotion and Dissemination of Psychological Procedures (1995) has provided guidelines for determining whether treatments should be considered "well-established," "probably efficacious," or simply "experimental." Clearly, the preferred designation is that which is supported by the most data. For a treatment to be deemed an empirically supported treatment (EST), it is necessary for the treatment to demonstrate efficacy across several randomized clinical trials (RCTs) by multiple research investigators (Chambless and Hollon 1998). Behavioral techniques and contingency management strategies have been labeled "probably efficacious" or "well-established" for the treatment of phobias. CBT has been deemed "probably efficacious" for treating other anxiety disorders and, given recent reports (Kendall et al. 2008; Walkup et al. 2008), is said to now qualify as "efficacious."

To illustrate, consider the results of RCTs that evaluated CBT for the treatment of youth with anxiety disorders (e.g., Barrett et al. 1996; Kendall et al. 1997). For example, the trial conducted by Kendall and colleagues investigated the efficacy of CBT for 9–13-year-olds who met diagnostic criteria for anxiety disorders. The youth were highly comorbid and typical of those seen in anxiety clinics. Following treatment, approximately two-thirds of youth did not meet criteria for their principal anxiety disorder and maintained their treatment gains at 1-year follow-up. A majority of these participants also maintained significant improvements in anxiety at long-term follow-up and positive responders to treatment had a reduced degree of substance use involvement and related problems 7.4 years later (Kendall et al. 2004). In Australia, Barrett et al. (1996) evaluated a CBT intervention based on Kendall's *Coping Cat* program (Kendall and Hedtke 2006) to an intervention that provided a family intervention along with CBT for youth ages 7–14 with a primary diagnosis of overanxious disorder (now GAD), SAD, or SP. The results were favorable: 60% of youth in both treatment conditions achieved a nondiagnosis status posttreatment and gains were largely maintained at 1-year follow-up.

Accumulating evidence from other RCTs of CBT is consistent, and continue to demonstrate that the treatment of youth anxiety disorders can be efficacious. Results of two recent studies confirm that about two-thirds of treated youth no longer meet criteria for their principal anxiety disorder or are rated by independent evaluators as "treatment responders" (very much improved, or much improved) following 12–16 sessions of the *Coping cat* program (Kendall et al. 2008; Walkup et al. 2008). In one study, the beneficial effects of CBT for youth ages 7–17 were augmented by the addition of a selective serotonin reuptake inhibitor (SSRI; Walkup et al. 2008).

Specifics of CBT

CBT for anxious youth is premised on several core strategies and beliefs. A core assumption of CBT is that not all anxiety is maladaptive, and that anxiety can be an evolutionarily adaptive response to stressors that helps individuals in danger. This anxiety, though generally adaptive, is interfering and maladaptive in individuals with anxiety disorders – the amount of anxiety experienced is in excess of what is appropriate. The goal of CBT for anxiety is not to completely eliminate anxiety, but to help youth recognize anxious arousal, manage and reduce it, and cope with their anxiety such that they no longer experience anxiety as distressing and interfering.

Anxiety has three core components: physiological, cognitive, and behavioral. Physiologically, anxiety is the "flight or flight" response that occurs when an individual is in a provocative situation. Evolutionarily, this response enables individuals to leave situations that could cause bodily harm by physiologically preparing the body to either fight or flee. Specifically, anxiety activates the autonomic nervous system, which increases functions required for fighting or fleeing such as heart rate, respiration, and perspiration and decreases functions that are not necessary for immediate survival such as digestion and sexual arousal. In anxiety disorders, this response is activated too frequently and thereby interferes with daily function.

The cognitive component of anxiety refers to the thoughts (self-talk) that accompany anxious arousal and distress. A broad range of thoughts are included in this component. Often these thoughts catastrophize the situation, making it seem more harmful or dangerous than it actually is. For example, an anxiety-disordered adolescent with social phobia may misinterpret a social situation and think a peer's silence reflects dislike and total rejection, even when this is unlikely. These thoughts are distressing and often lead to avoidance of feared situations.

The choice to stay away from or leave an anxiety-provoking situation is avoidance. Behaviorally, anxious youth avoid situations that they see as distressing or potentially distressing. This avoidance provides the youth with a sense of an immediate anxiety relief. In the case of youth with anxiety disorders, avoidance prevents the youth from fully engaging in their environment and results in social isolation, academic difficulties, and strained familial relations. Additionally, avoidance prevents youth from learning when a situation is not harmful or dangerous, and thereby creates a cycle in which the youth continues to avoid situations that could be mastered. Avoidance may seem to work in the short term, but it maintains anxiety in the long term.

CBT for anxious youth combines physiological (relaxation), cognitive (problem solving, threat appraisal), and behavioral strategies (modeling, exposure, contingency management) to help youth learn to cope with excessive anxiety. Most CBT protocols for anxious youth include a combination of all of these components in addition to psychoeducation, cognitive restructuring, and relapse prevention plans.

Psychoeducation and affective education provide information about emotions and anxiety disorders. Emotional identification strategies help youth identify emotions in themselves and others. Anxious youth often misidentify emotions, leading to negative feedback from their environment and increased anxiety levels. Properly recognizing emotions, especially anxiety, enables youth to determine what strategies to use to help themselves feel better. For example, a youth would learn to appropriately discriminate when physical symptoms they experience may be due to anxiety as opposed to physical illness by taking into account the context in which the symptom occurs. When youth identify their anxiety and differentiate it from other feeling states, they are better able to cope with their anxiety.

Once youth have mastered emotional identification and have developed an increased awareness of their somatic reactions to anxiety, relaxation training may be used to help youth develop awareness and control over their own physiological and muscular reactions to anxiety. Relaxation training enables the youth to take the aroused physical state as a signal to begin relaxation procedures, and awareness of one's unique response to distress enables the youth to target specific muscle groups that tense when he or she becomes anxious. Progressive muscle relaxation and relaxation scripts are commonly employed in the treatment of anxious youth.

Cognitive restructuring within CBT for anxious youth focuses on identifying and challenging youth's distorted cognitions. Cognitive restructuring highlights the role of maladaptive thinking in dysfunctional behavior and seeks to adjust distorted cognitive processing in order to develop more constructive ways of thinking. Cognitive strategies include teaching the youth to test out and reduce negative self-talk, challenging unrealistic or dysfunctional negative self-statements, generating positive self-statements and coping thoughts, and devising a plan to cope with feared situations. The goal is to build a new cognitive structure that is based on coping. It is important to note that this new cognitive template is not intended to get rid of all the youth's anxiety, but rather to "turn down the volume" on anxiety by enabling the youth to use coping strategies in the face of formerly distressing misperceptions and arousal.

Problem solving is another cognitive component of CBT. Problem solving helps youth develop confidence in their own ability to help themselves deal with challenges that arise in their lives. The therapist and youth identify problems and collaboratively brainstorm possible solutions without judgment as to their viability. The youth learns to evaluate each alternative and select the most appropriate solution. By learning how to problem solve, the youth acquires the skills to generate solutions in situations that initially appeared hopeless.

Reinforcement, a behavioral component of CBT, is based on operant conditioning principles. Reinforcement procedures focus on facilitating approach responses through appropriate reward and reinforcement rather

than focusing exclusively on the reduction of anxiety. Anxious youth are reminded that when initially attempting to accomplish a daunting task, perfect performance is not expected. Reinforcement delivered in a timely manner as well as graduated practice help youth develop confidence and lead to a growing sense of competence.

Exposure is an essential component of CBT for anxiety disorders. Exposure tasks help the youth habituate to a distressing situation and provide the youth with opportunities to practice coping skills by experiencing either real-life or simulated anxiety-provoking situations. Exposures can be approached in graduated measures or by flooding. In gradual exposure, the child approaches feared situations sequentially in a hierarchy of feared situations that range from least to most-anxiety provoking. In flooding, a youth is exposed to a feared stimulus or situation and remains in its presence until his or her self-reported anxiety level decreases. Flooding is usually accompanied by response prevention, where the child is prevented from engaging in avoidance behavior (or compulsions) during the exposure.

Integrated CBT programs specifically for the treatment of anxiety disorders in adolescents have been developed. One example, is the CAT Project (Kendall et al. 2002), a program that facilitates learning by presenting the main principles of anxiety management using the FEAR acronym: The "F" (Feeling Frightened?) step focuses on recognizing somatic symptoms of anxiety, the "E" (Expecting Bad Things to Happen?) step helps youth identify anxious cognitions, the "A" (Attitudes and Actions that Can Help) step helps the youth develop coping skills to implement in anxiety-provoking situations (e.g., coping thoughts, problem solving, relaxation), and the "R" (Results and Rewards) step allows youth to rate their effort and earn rewards for facing feared situations. The structured treatment program consists of 16 sessions, with the first 8 sessions focused on skills training and the second 8 sessions consisting of skills practice. This treatment program, like most CBT programs, includes assignment of weekly take-home tasks that provide youth with opportunities to practice the skills learned in session in their everyday lives. However, more research is needed to examine the efficacy of treatment protocols for adolescents, as most of the treatment outcome literature examines children ages 13 and under.

Unique Issues in Application of CBT for Adolescents

When implementing CBT, attention to the youth's unique needs and developmental level, including social, emotional, and cognitive functioning is essential. Treatment for adolescents with anxiety disorders requires some adaptations to address their different needs. Confidentiality issues are especially important for adolescents, as they are becoming more independent and may not want their parents to know about their emotions and behaviors. Thus, it is important to make clear what information will be shared with parents, so that the therapeutic alliance is not disrupted if such a disclosure needs to be made, and to help foster an environment where the adolescent can feel comfortable sharing his or her experiences with the therapist.

Additionally, youth may often be reluctant to share their thoughts and feelings with a therapist. Adolescents may not believe they need treatment and may feel that they are being forced by their parents. If they are reluctant, youth should be given the choice to attend a few trial sessions before they commit to treatment. It may also be helpful to provide adolescents with journals for recording the exercises, as journaling can facilitate open communication about thoughts and feelings. This technique can also help illuminate the adolescents' personal treatment goals, which helps them to gain self-efficacy.

Finally, treatment should encourage adolescents to develop appropriate social relationships with peers and to develop autonomy and independence from their parents. To do so, adolescents may need encouragement to make decisions rather than deferring to adults. Encouragement to spend time with peers or interact with peers from different peer groups may be needed. Unlike in childhood, forming relationships with peers may be more challenging for adolescents, especially when an adolescent is unsure of what type of peer group he or she will best fit in with. As a result, it is important to help adolescents explore their own personal identity and to help them become more willing to have a variety of experiences with peers.

Medication

Medications have also been used to treat anxiety disorders in youth. SSRIs are the most frequently used medications in youth as they are generally well tolerated. With the exception of sertraline, which has been

approved for the treatment of OCD in youth, psychiatric medications have generally not been approved for use in adolescents. However, research suggests that sertraline is associated with meaningful reductions in anxiety symptoms. Walkup et al. (2008) compared medication (sertraline) to CBT alone or a combination of CBT and medication with a pill placebo. This study found that all active treatments led to significant reductions in anxiety symptoms. Youth treated with CBT and sertraline had the greatest reductions in symptoms, suggesting that combining these treatments may lead to the greatest reductions in anxiety.

Future Directions

Although there are effective treatments of anxiety disorders, more research is needed to refine these treatments, especially given that approximately 30% of youth do not respond to CBT or medication alone. It may be that adaptations of the treatments to help adolescents cope with sadness or social isolation may bolster the outcomes produced by these treatments. Also, the effective treatments need to be more widely available for youth. One possible method to disseminate the treatments is through the development of Internet-based treatments for adolescents.

Cross-References

► Anxiety Sensitivity

References

Albano, A. M., Silverman, W. K. (1996). *The Anxiety Disorders Interview Schedule for Children for DSM-IV: Clinician Manual (Child and Parent Versions)*. San Antonio, TX: Psychological Corporation.

American Psychiatric Association (APA). (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington: American Psychiatric Association (APA).

Amercian Psychological Association Task Force on Promotion and Dissemination of Psychological Procedures (1995). Training in and dissemination of empirically-validated psychological treatments: Report and recommendations. *Clinical Psychologist, 48*, 3–24.

Barrett, P., Dadds, M., & Rapee, R. (1996). Family treatment of child anxiety: A controlled trial. *Journal of Consulting and Clinical Psychology, 64*, 333–342.

Beesdo, K., Knappe, S., & Pine, D. S. (2009). Anxiety and anxiety disorders in children and adolescents: Developmental issues and implications for DSM-V. *Psychiatric Clinics of North America, 32*, 483–524.

Chambless, D., & Hollon, S. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology, 66*, 7–18.

Costello, E. J., Mustillo, S., Erkanli, A., Keeler, G., & Angold, A. (2003). Prevalence and development of psychiatric disorders in childhood and adolescence. *Archives of General Psychiatry, 60*(8), 837–844.

Essau, C. A., Conradt, J., & Petermann, F. (1999). Frequency and comorbidity of social phobia and social fears in adolescents. *Behaviour Research and Therapy, 37*, 831–843.

Foa, E., Costello, E., Franklin, M., Kagan, J., Kendall, P. C., Klein, R. et al. (Commission on anxiety disorders in adolescents). (2005). Research agenda for anxiety disorders (pp. 247–253). In D. L. Evans, E. Foa, R. Gur, H. Hendin, C. O'Brien, M. Seligman, & B. Walsh (Eds.), *Treating and preventing adolescent mental health disorders: What we know and what we don't know*. New York: Oxford University Press/The Annenberg Foundation Trust at Sunnylands/the Annenberg Public Policy Center of the University of Pennsylvania.

Kazdin, A., & Weisz, J. (1998). Identifying and developing empirically supported child and adolescent treatments. *Journal of Consulting and Clinical Psychology, 66*, 100–110.

Kendall, P. C., & Hedtke, K. (2006). *Cognitive-behavioral therapy for anxious children: Therapist manual* (3rd ed.). Ardmore: Workbook Publishing.

Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S. M., Southam-Gerow, M., Henin, A., & Warman, M. (1997). Therapy for youths with anxiety disorders: A second randomized clinical trial. *Journal of Consulting and Clinical Psychology, 65*, 366–380.

Kendall, P., Choudhury, M., Hudson, J., & Webb, A. (2002). *The C.A.T. project manual*. Ardmore: Workbook Publishing.

Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child anxiety treatment: Outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *Journal of Consulting and Clinical Psychology, 72*, 276–287.

Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disordered youth: A randomized clinical trial evaluating child and family modalities. *Journal of Consulting and Clinical Psychology, 76*, 282–297.

March, J., Parker, J. D. A., Sullivan, K., Stallings, P., & Conners, C. K. (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor structure, reliability, and validity. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 554–565.

Rettew, D., Swedo, S. E., Leonard, H. L., Lenane, M. C., & Rapport, J. L. (1992). Obsessions and compulsions across time in 79 children and adolescents with obsessive-compulsive disorders. *Journal American Academy of Child and Adolescent Psychiatry, 31*, 1050–1056.

Silverman, W. K., Pina, A. A., & Viswesvarana, C. (2008). Evidenced based psychosocial treatment for phobic and anxiety disorders in children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 37*, 105–130.

Walkup, J., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S., Sherrill, J., et al. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *New England Journal of Medicine, 359*, 2753–2766.

Anxiety Sensitivity

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Overview

Anxiety sensitivity (AS) is a cognitive individual difference factor involving an enduring fear of anxiety-related arousal sensations (e.g., increased heart rate) that arises from the tendency to catastrophize about these sensations, believing they will have serious psychological, physiological, and/or social consequences. AS may have particular relevance for adolescents as the onset of puberty heralds the arrival of a wide range of new and unexpected bodily sensations, as well as changes in cognitive and social development. Research has implicated AS in the development and maintenance of a number of mental health disorders in adolescents including panic disorder, social phobia, posttraumatic stress disorder, chronic pain, substance misuse, and depression. Furthermore, AS has been shown to be composed of several lower-order factors (e.g., Physical, Social, and Psychological Concerns), which may have unique associations with psychopathology. Understanding AS will help in the identification of youth at risk for mental health problems and might have implications for prevention and intervention.

Anxiety Sensitivity: The Concept, Its Link to Psychopathology, and Its Relevance in Adolescence

Anxiety sensitivity (AS) is a cognitive individual difference factor involving an enduring fear of anxiety-related arousal sensations (e.g., increased heart rate, dizziness). This fear arises from the tendency to interpret these sensations catastrophically, believing that they will have serious physical, psychological, and/or social consequences (Reiss 1991; Reiss and McNally 1985). For instance, an individual with high AS might fear experiencing heart palpitations because he or she believes they are a warning sign of an impending heart attack. Similarly, an individual with high AS might interpret an inability to think clearly as a sign that he or she is "going crazy." In contrast, individuals with low AS regard these sensations as unpleasant but harmless (McNally 1999). The importance of AS is reflected in its implication in the development and maintenance of anxiety and related disorders (McNally 2002).

Reiss and McNally's (1985; Reiss, 1991) expectancy theory of anxiety explains the link between AS and anxiety disorders. This theory posits that when an individual with high AS experiences otherwise benign physiological anxiety symptoms (e.g., breathlessness), he or she is likely to fear that these symptoms will have harmful consequences. Such catastrophic misinterpretations lead to increased levels of anxiety, which serve to further exacerbate physiological anxiety symptoms. This results in a vicious positive feedback cycle and ultimately leads to a panic attack or maladaptive behaviors for dealing with anxiety such as avoidance or escape. This conceptualization of AS has led to a line of research (e.g., Schmidt et al. 2006) suggesting that AS is a predisposing cognitive risk factor for anxiety disorders.

Research has proposed a number of pathways through which AS may be acquired. Heritability studies (e.g., Stein et al. 1999) have identified a strong correspondence between AS levels in identical, as compared to fraternal, twins. This research suggests that genetics may play an important role in the development of AS as approximately half of the variance in AS could be accounted for by genetics. Environmental factors, including learning experiences, likely also make an important contribution. Retrospective research with nonclinical university students (mean age approximately 20 years; Watt et al. 1998; Watt and Stewart 2000) has suggested a role for learning history factors in the development of AS. Both instrumental learning (i.e., positive reinforcement for exhibiting anxiety symptoms) and observational learning (i.e., modeling of fear reactions by parents or verbal transmission of

beliefs about the harmful nature of anxiety symptoms) mechanisms have been implicated. Partial replication of these findings comes from a youth self-report study by Muris et al. (2001a), who found that parents' verbal transmission of their beliefs about the danger of somatic symptoms, but not parental reinforcement of somatic symptoms or observational learning, was significantly related to AS in nonclinical adolescents (12–14 years old). As such, questions remain about the relevance of specific types of early learning experiences to the development of AS. For instance, these discrepant results may reflect the possibility that different types of learning experiences (e.g., verbal transmission and observational learning) manifest as elevated AS at different developmental stages. Moreover, further research is needed to elucidate the importance of the interaction between genetic factors and environmental factors in developing AS. A recent large-scale behavioral-genetic analysis suggests that genetic and environmental factors are relevant for women, while only environmental factors contribute to variance in men's AS (Taylor et al. 2008).

Anxiety sensitivity has been widely explored in adult populations; it has been implicated in the development and maintenance of a number of anxiety disorders (e.g., panic disorder, posttraumatic stress disorder, social phobia) and has been linked to other related conditions including depression, substance use disorders, hypochondriacal concerns, and chronic pain (for reviews, see Olatunji and Wolitzky-Taylor 2009 and Watt and Stewart 2008). Taken together, research with adults has convincingly shown that AS should be considered a vulnerability factor for anxiety and related disorders. Studies investigating AS among adolescents have largely drawn from this body of research. Research into AS among adolescents, however, only began in earnest following the development of the Childhood Anxiety Sensitivity Index (CASI; Silverman et al. 1991) and, as such, is still growing.

The CASI, a measure of AS among children and adolescents, is a developmentally sensitive modification of the Anxiety Sensitivity Index (ASI; Peterson and Reiss 1992), the most widely used measure of AS among adults. The CASI is a self-report questionnaire consisting of 18 items (16 items directly mirroring the adult ASI items but in developmentally appropriate language, plus two additional child-specific items). CASI items ask youth to report how aversively they view anxiety symptoms (i.e., "It scares me when I feel like I am going to throw up" or "When I am afraid, I worry that I might be crazy") on a three-point scale (1 = *none*, 2 = *some*, 3 = *a lot*). Total scores range from 18 to 54 by summing across all items, with higher scores representing higher levels of AS. Findings from a representative sample of socioeconomically and ethnically diverse adolescents suggest that the mean CASI score among nonclinical adolescents (12–17 years) is 27.19 (SD = 6.4; Weems et al. 2007). Studies consistently show girls to have significantly higher mean CASI scores than boys (e.g., Calamari et al. 2001; Ginsburg and Drake 2002; Silverman et al. 1991; van Widenfelt et al. 2002; Weems et al. 2007).

The psychometric properties of the CASI were originally explored in a nonclinical sample of 76 youth (11–15 years of age) and a clinic-referred sample of 33 youth (8–15 years of age) with a range of mental health disorders (Silverman et al. 1991). The CASI was found to possess good internal consistency estimates (α = .87) for both samples and test–retest reliability of .76 (2 weeks) and .79 (1 week) for the nonclinical and clinical samples, respectively (Silverman et al. 1991). Similar estimates of internal consistency have been found in other studies of both clinical and nonclinical adolescents (e.g., α = .89, Bernstein et al. 2006; α = .92, Chorpita and Daleiden 2000; α = .87, McLaughlin et al. 2007; α = .84, Muris et al. 2001b). Estimates of test–retest reliability vary as a function of the test–retest time interval. For instance, research with nonclinical adolescents (African-American and Dutch samples) has yielded 2-week test–retest reliabilities between .70 and .80 (e.g., Lambert et al. 2004a; van Widenfelt et al. 2002). In contrast, research among nonclinical African-American adolescents over a 6-month period has shown test–retest reliability estimates of .48 and .51 (Ginsburg and Drake 2002; Ginsburg et al. 2004).

With respect to convergent validity, CASI scores correlate well, and in a theoretically meaningful way, with other self-report measures of child anxiety and fear (e.g., Silverman et al. 1991). For instance, van Widenfelt et al. (2002) found that scores on the CASI were significantly associated with scores on the Fear Survey Schedule for Children – Revised (FSSC-R; Ollendick 1983; r = .64) and the State Trait Anxiety Inventory for Children – Trait Subscale (STAIC-T; Spielberger et al. 1973; r = .58) among a sample of

nonclinical adolescents. Similarly, other studies with nonclinical adolescents have found significant correlations between CASI scores and self-report measures of anxiety symptoms including the Revised Child Manifest Anxiety Scale (RCMAS; Reynolds and Richmond 1979), the Multidimensional Anxiety Scale for Children (MASC; March et al. 1997; $r = .74$ and $r = .47$, respectively; Lambert et al. 2004a), and the Spence Children's Anxiety Scale (SCAS; Spence 1997; $r = .57$; Essau et al. 2010).

Given the sizable correlations between AS and measures of adolescents' fear and anxiety, researchers initially expressed concern that AS did not represent a construct distinct from other anxiety-related variables. In particular, there was concern that while trait anxiety (the general tendency to respond fearfully to potentially anxiety-provoking stimuli; McNally 2002) and AS (a specific fearful response to one's own anxiety symptoms) appeared conceptually different, this distinction would not hold up to empirical scrutiny. Since then, empirical research with adolescents has clearly demonstrated that, while related to trait and manifest anxiety, AS is indeed a unique construct. Studies investigating the incremental validity of the CASI in nonclinical populations have shown that AS accounts for significant additional variance on scales of fear (e.g., FSSC-R; Silverman et al. 1991; van Widenfelt et al. 2002) and on anxiety symptom measures (e.g., RCMAS; Muris et al. 2001b) beyond that accounted for by trait anxiety or anxiety frequency. In clinical samples, studies have revealed similar findings. For instance, one study (Weems et al. 1998) with adolescents with anxiety disorders revealed that adolescents' CASI scores predicted significant unique variance on a measure of fear beyond that accounted for by both trait anxiety and anxiety frequency. Another study with adolescent psychiatric inpatients showed AS to account for significant variance in anxiety symptoms after accounting for trait anxiety and depressive symptoms (Joiner et al. 2002). As such, it is generally accepted that AS and trait anxiety are conceptually and empirically distinct constructs that account for unique variance in anxiety symptomatology.

As a distinct construct, research with adolescents has also shown an association between AS and anxiety symptoms and disorders. Early cross-sectional research demonstrated that youth with anxiety disorders had significantly higher CASI scores than those with no diagnosis (e.g., Rabian et al. 1993). Furthermore, AS has been associated with panic symptoms and panic disorder in clinical and nonclinical adolescent samples. For instance, cross-sectional research has shown significant associations between elevated AS and panic attack symptoms among adolescents (Ginsburg and Drake 2002; Hayward et al. 1997; Lau et al. 1996). Kearney et al. (1997) found that adolescents diagnosed with panic disorder had higher levels of AS than adolescents with other (non-panic) anxiety disorders. Moreover, longitudinal research with a large sample of nonclinical adolescents has shown AS to prospectively predict the onset of panic attacks, as defined by endorsement of experiencing a panic attack with at least 4 of 13 associated symptoms (Hayward et al. 1997). It should be noted, however, that some research has challenged the AS-panic association. In one study, Ginsburg and Drake (2002) found that, cross-sectionally, adolescents with high AS were more likely to experience panic attacks than those with lower AS; however, longitudinally, AS failed to predict levels of panic 6 months later after controlling for initial levels of panic.

Calamari et al. (2001) examined the incremental validity of the CASI in predicting panic disorder symptoms while controlling for general measures of anxiety and depression (i.e., RCMAS; STAIC; Children's Depression Inventory, Kovacs 1992). In two studies with nonclinical populations, they found that the CASI predicted additional variance in panic disorder symptoms and on the SCAS after controlling for general anxiety and depression symptoms. Further research by Leen-Feldner et al. (2005) provides additional empirical evidence for the incremental validity of AS in predicting anxious responding. In their study, 151 adolescents completed a 3-min voluntary hyperventilation challenge, after which they rated their anxiety (using a Subjective Units of Distress rating) and panic symptoms. Results showed that adolescents' baseline AS predicted additional variance in post-challenge anxiety ($\Delta R^2 = .03$) and panic symptoms ($\Delta R^2 = .06$) after controlling for negative affect (as measured by the Positive and Negative Affect Scale) and pre-challenge state anxiety levels. Taken together, these studies suggest that AS is an important cognitive vulnerability factor for panic.

Anxiety sensitivity has also been implicated in a number of other anxiety disorders in adolescents in theoretically meaningful ways. For instance,

physiological theories of social phobia posit that individuals with social phobia experience elevated arousal sensations in social situations, which they interpret as a warning of impending danger (Gerlach et al. 2004). Individuals might also fear that their physiological arousal will become embarrassingly visible to others, another important aspect of AS. In accordance, one study found significantly higher levels of AS, as measured by the CASI, in adolescents with social phobia as compared to non-anxious adolescents (Anderson and Hope 2009). Other research has identified a relation between AS and posttraumatic stress symptoms. Kiliç et al. (2008) investigated this relation among children and adolescents who had experienced a traumatic earthquake in Turkey 5 years previously. These youth had similar AS levels as a matched control sample who had not experienced any trauma. Multiple regression analyses among the youth who had experienced the earthquake revealed that posttraumatic stress symptoms were predicted by CASI scores above and beyond the effect of trait anxiety. Similarly, Hensley and Varela (2008) found that CASI scores explained an additional 6% of the variance in posttraumatic stress symptoms after accounting for gender, level of exposure to trauma, and trait anxiety among adolescents who had experienced Hurricane Katrina. Kiliç et al. (2008) hypothesized that those high in AS would be more sensitive to arousal-related sensations experienced at the time of trauma exposure and would struggle to overcome these effects. Moreover, these youth might be more vulnerable to trauma reminders, as they would elicit greater physiological distress and catastrophizing than they would for those with low AS (Kiliç et al. 2008).

Adult AS researchers have also proposed that AS is an important consideration in the development and maintenance of chronic pain and pain-related anxiety. Fear-avoidance theories posit that AS exacerbates one's fear of pain and leads to pain-related avoidance behaviors, which serve to maintain and enhance fear and pain-related disability (Asmundson 1999; Stewart and Asmundson 2006). Muris et al. (2001c) found that AS was a significant predictor of pain-related anxiety symptoms, as measured by the Pain Anxiety Symptoms Scale (McCracken et al. 1992), with 200 healthy adolescents, even after controlling for trait anxiety, panic symptoms, somatization symptoms, and the experience of pain. Similarly, AS has been shown to account for unique variance in fear of pain among youth with chronic pain after accounting for general anxiety and depressive symptoms and pain intensity (Martin et al. 2007). Furthermore, Tsao et al. (2006) used structural equation modeling to illustrate the relation between AS and pain intensity in response to three laboratory pain tasks (cold pressor task, pressure task, and thermal task) with nonclinical adolescents. Their model did not show a direct association between AS and pain intensity. Rather, CASI scores predicted anticipatory anxiety, which in turn predicted pain intensity. These findings support the conceptualization of AS as a cognitive vulnerability factor in the subjective experience of pain among adolescents through its association with anxiety/fear related to the pain experience.

AS has also been linked to substance use behaviors in adolescents. Researchers have shown that high levels of AS among high school students are associated with risky reasons for using alcohol, cigarettes, and marijuana, such as coping motives (to avoid/reduce negative emotions) or conformity motives (to avoid/reduce social censure; Comeau et al. 2001). More specifically, high AS was a significant predictor of drinking and using marijuana for conformity reasons. It may be that individuals high in AS use alcohol and marijuana for their anxiolytic properties in order to cope with anxiety experienced in social contexts and to avoid negative evaluation by their peers (Comeau et al. 2001). This study also showed that high AS moderated the association between trait anxiety and coping-motivated alcohol and cigarette use. Adolescents who experience anxiety frequently and who fear anxiety sensations may be more likely to turn to substances to control their anxiety (Comeau et al. 2001). Coping-motivated and conformity-motivated drinking are concerning, because previous research has demonstrated an association between these negative-reinforcement motives and substance-related problems (e.g., Carey and Correia 1997). As such, recent interventions for substance misuse among high school students have been targeted at individuals with high AS. For instance, high school students who received a brief intervention, which teaches cognitive and behavioral coping skills training for AS, reported significantly less alcohol-related problems and significantly greater abstinence rates 4 months later than students with high AS who had not received the intervention (Conrod et al. 2006). A similar intervention

with older adolescent and young adult women with high AS has also resulted in a reduction in hazardous alcohol use (Watt et al. 2006).

Research has also found a link among substance use, AS, and panic symptoms. In accordance with an affect regulation model (Zvolensky et al. 2003), smoking produces a number of affective bodily sensations including increased heart rate (Benowitz 1996), which, when combined with high AS, might create a unique vulnerability to panic. Leen-Feldner et al. (2006) assessed smoking status, panic symptoms, and AS levels among a sample of nonclinical adolescents and found that AS moderated the association between smoking status and panic symptoms such that panic symptoms were the highest among those with the highest AS who also reported being current smokers.

Along with anxious symptoms, pain, and substance use, investigators have looked for an association between AS and depression. It is possible that depressive symptoms such as difficulty concentrating and making decisions could be amplified among individuals with AS who fear such sensations (i.e., may interpret them catastrophically), consequently exacerbating their depressive symptoms (Taylor et al. 1996). Empirical support for this supposition, however, is conflicting. Some research has highlighted a significant association between AS and depressive symptoms among adolescents, even after controlling for manifest and trait anxiety (Muris 2002; Weems et al. 1997). However, Joiner et al. (2002) as well as Lambert et al. (2004b) showed that AS was not significantly related to depressive symptoms after controlling for anxious symptomatology.

Despite conflicting findings with respect to its association with depressive symptoms, there is an accumulation of evidence for the association of AS with a number of anxiety disorders and other mental health problems. As such, the next stride taken by researchers has been to look more closely at the factor structure of AS and consider the manner in which its component parts might be uniquely associated with different aspects of psychopathology. The factor structure of AS remains a contentious issue. Nonetheless, research largely supports a hierarchical multidimensional factor structure, similar to that identified in factor analytic studies of the ASI. In this conceptualization, AS constitutes a single construct at a higher-order level that is split into a number of lower-order factors detailing fear of specific types of anxiety symptoms and associated catastrophic consequences. The identification of these distinct lower-order factors is important, as the relations between individual factors and psychopathology may reflect unique mechanisms through which AS acts as a vulnerability factor for specific disorders. Uncertainty remains, however, about the exact number and nature of lower-order factors.

Models with two (e.g., Chorpita and Daleiden 2000), three (e.g., van Widenfelt et al. 2002), and four (e.g., Silverman et al. 2003) lower-order factors have each been proposed, of which the latter two are the most widely supported. In the first factor analytic study on the CASI, Silverman et al. (1999) used both a clinical sample of youth with anxiety disorders and a nonclinical sample and found evidence to support that the CASI could best be conceptualized as consisting of one higher-order factor and either three or four lower-order factors. The four-factor solution (Physical Concerns, Mental Incapacitation Concerns, Social Concerns, and Control) provided the best fit for the data; however, the Social Concerns factor consisted of only two items and the correlation between these two items was less than .30. As such, the authors favored the three-factor solution (Physical Concerns, Concerns about Publicly Observable Symptoms, and Mental Incapacitation Concerns; Silverman et al. 1999). Subsequent research among Dutch adolescents also suggested that the CASI was best modeled with either three or four lower-order factors (Muris et al. 2001b). Van Widenfelt et al. (2002) also found that three lower-order factors accounting for Physical Concerns, Mental Incapacitation Concerns, and Publicly Observable Concerns best fit the data among a similar sample of nonclinical Dutch adolescents. They did, however, find relatively low reliability for the mental concerns (α = .49) and social concerns (α = .52) subscales.

In 2003, Silverman and colleagues conducted a large cross-cultural confirmatory factor analytic study in which they tested the fit of a number of previously proposed AS factor structures. Results revealed strong support for a hierarchical structure with one higher-order factor and four lower-order factors, which they labeled Disease Concerns, Unsteady Concerns, Mental Incapacitation Concerns, and Social Concerns. This factor structure held across a non-referred sample and a referred sample (Silverman et al. 2003), as well as

a German sample of typically developing adolescents (Adornetto et al. 2008). Silverman and colleagues found that scores on the Disease Concerns factor were higher among youth with anxiety disorders as compared to nonclinical youth, youth with specific phobia, and youth with other mental health diagnoses. Furthermore, results showed adolescents with social phobia scored significantly higher on the Social Concerns factor than nonclinical adolescents.

The results of several studies (Chorpita and Daleiden 2000; McLaughlin et al. 2007; Silverman et al. 1999; van Widenfelt et al. 2002) suggest that the AS factor(s) representing concerns related to the physical sensations of anxiety (differentially labeled as "Physical Concerns," "Disease Concerns," and "Unsteady Concerns," or "Fear of Respiratory Symptoms," and "Fear of Cardiovascular Symptoms") is the most robust of the lower-order factors. The remaining factors are somewhat less reliable (e.g., Muris et al. 2001b; van Widenfelt et al. 2002). Muris (2002) stipulated that the 18-item CASI has too few items to permit examination of the lower-order factors of AS and proposed including additional items to better identify these lower-order factors. As such, in accordance with a similar revision of the ASI among adults (Taylor and Cox 1998), Muris developed the 31-item Children's Anxiety Sensitivity Index – Revised (CASI-R; Muris 2002). CASI-R scores were reliable (α = .93) and correlated well with CASI scores in a sample of 518 nonclinical adolescents. Confirmatory factor analyses found the data best fit a hierarchical factor structure with four lower-order factors: Fear of Publicly Observable Anxiety Reactions, Fear of Cognitive Dyscontrol, and physical concerns reflected in two distinct factors – Fear of Cardiovascular Symptoms and Fear of Respiratory Symptoms (α's ranged from .81 to .88).

Taken together, these factor analytic studies support the existence of three or four lower-order factors reflecting Physical concerns (i.e., fear of arousal-related physiological sensations due to the belief that these sensations will have catastrophic health consequences), Psychological concerns (i.e., fear of anxiety-related mental sensations, such as difficulty concentrating, because of the belief that they are indicative of impending mental illness), and Social/Control concerns (i.e., fear that anxiety-related arousal sensations will be publicly visible and lead to social censure or embarrassment). Several studies have highlighted the unique associations of these lower-order factors with psychopathological traits (e.g., Dia and Bradshaw 2008). For instance, a longitudinal study conducted with a large sample of nonclinical adolescents (N = 2,246) showed the psychological and physical subscales of AS, but not the social subscale, to prospectively predict behavioral avoidance, suggesting that AS might precede and exacerbate this important maintenance factor for anxiety disorders (Wilson and Hayward 2006).

McLaughlin et al. (2007) investigated the incremental and construct validity of the Physical, Social, and Psychological Concerns lower-order factors in a nonclinical sample of 349 children and adolescents. They examined whether these factors predicted unique variance in anxiety disorder symptoms (as measured by the Spence Children's Anxiety Scale; SCAS) while controlling for trait anxiety. They found CASI total scores accounted for unique variance on each of the SCAS symptom scales (panic/agoraphobia, separation anxiety disorder, social phobia, generalized anxiety disorder/overanxious disorder, physical injury fears, and obsessive-compulsive disorder), even after controlling for trait anxiety. With respect to the three lower-order factors, the Physical Concerns factor emerged as a global predictor of anxiety symptoms, accounting for significant additional variance over trait anxiety on all SCAS symptom scales. The relationship between the Social and Psychological Concerns factors and anxiety symptoms were more conceptually specific. The Social Concerns factor accounted for significant additional variance on social phobia, generalized anxiety, and physical injury fears subscales, reflecting the importance of social evaluation concerns among youth with these symptom patterns (i.e., youth with social phobia may be embarrassed to show anxiety symptoms such as sweating or shaking in front of others). The Psychological Concerns factor accounted for significant additional variance on panic/agoraphobia, separation anxiety disorder, and obsessive-compulsive scales, reflecting fears about loss of mental control characteristic of youth with these disorders (i.e., youth with obsessive-compulsive disorder may fear uncontrollable intrusive thoughts as indicative of impending mental catastrophe). These findings support the clinical importance of distinguishing among the unique lower-order factors of AS.

The factor structure of AS has also been shown to be invariant across gender (Dehon et al. 2005). Conclusions about gender differences across subscales, however, are less definitive. Van Widenfelt et al. (2002) found that girls had significantly higher scores across subscales while Walsh et al. (2004), using factor scores, found that girls scored significantly higher on Physical and Social/Control Concerns but not on Psychological Concerns. While gender differences with respect to the Physical Concerns subscale are in line with research among adults, gender differences on the Social/Control Concerns subscale among adolescents are not. Within gender, comparisons have shown that girls score higher on the Physical Concerns factor than the Social/Control or Psychological Concerns factors (Walsh et al. 2004). In contrast, boys have significantly higher scores on the Psychological and Social/Control Concerns factors than on the Physical Concerns factor, and significantly higher scores on the Psychological than Social/Control Concerns factor (Walsh et al. 2004). Observed gender differences with respect to AS subscales may be the result of gender-specific learning histories and sex-role socialization as youth mature (Stewart et al. 1997). For instance, Walsh et al. (2004) proposed that girls might be rewarded for expressing somatic complaints while boys might learn that it is less acceptable for them to outwardly display anxiety symptoms or loss of control.

It should be noted that additional work examining the structure of AS among adolescents has explored its taxonicity (i.e., categorical nature). The basic question that this type of research addresses is whether AS is better conceptualized as a categorical variable (where one either has high AS or does not; a qualitative distinction) or a dimensional construct (where AS levels vary along a continuum; a quantitative distinction). Similar to research among adults, this work has suggested that AS is taxonic in youth (Bernstein et al. 2006, 2007). In other words, there is evidence that AS is discontinuous in nature such that it can be dichotomized into adaptive and maladaptive latent forms. Similar to the presence of a psychological disorder such as panic disorder, one either has or does not have the maladaptive form of AS (i.e., the high AS taxon). Bernstein et al. (2007) have suggested that the high AS taxon might result from emotional learning or gene–environment interactions that change the nature of AS to become maladaptive. Research has also shown that the base rate of the high AS taxon differs across gender (.12 among girls and .07 among boys; Bernstein et al. 2006), which might help to explain the gender differences in mean AS levels observed in other studies, as discussed previously. This finding also suggests that it might be clinically useful to use gender-specific AS norms for identifying those belonging to the high AS taxon.

It may also be useful to explore cultural differences in AS. Several studies have found elevated levels of AS in African-American (Lambert et al. 2004a), Asian (Weems et al. 2002), and Latin American (Varela et al. 2007) youth. However, this finding has not been replicated in all studies (e.g., Ginsburg and Drake 2002) and more research is needed to confirm any robust cultural differences in AS. Interestingly, despite Latin American youth showing elevated AS, research has shown that heightened AS was not associated with panic symptoms for Latino youth as strongly as it was for Caucasian youth (Weems et al. 2002). As theorized by Varela et al. (2007), this may be because fear of anxiety-related sensations and the somatic experience of emotions are more normative in Latino culture. Hence, exposure to these ideas might weaken the link between AS and anxiety symptoms among this population.

Taken together, the research examining AS among adolescents has highlighted the clinical importance of this individual difference factor. Research suggests that there are both genetic and environmental influences on the development of AS. However, further research is needed to elucidate the interaction between these influences and their relative importance. Numerous studies have shown that AS, as measured by the CASI, is significantly associated with a range of mental health disorders. Increasingly, recent work has been supporting the conceptualization of AS as a cognitive vulnerability factor in the development of panic disorder. The importance of AS in the development of other disorders, including social phobia, posttraumatic stress disorder, pain, substance use disorders, and depression has also been highlighted. Much of this research has been cross-sectional in nature and as such, more prospective and longitudinal studies are needed to better understand the role of AS in the development and maintenance of these disorders. Moreover, further research into the lower-order factors of AS and their unique associations with psychopathology will help

us to better understand the clinical relevance of AS physical, social, and psychological concerns to a range of anxiety and related disorders.

Finally, the study of AS may have unique importance for adolescents. Adolescence is heralded by the onset of puberty and its accompanying biopsychosocial changes. Many of these changes are characterized by the experience of a range of new and unexpected bodily sensations (Patton and Viner 2007). Leen-Feldner et al. (2006) proposed that adolescents with high AS, as compared to those with low AS, may perceive the body sensations experienced during puberty as threatening and anxiety provoking. They posited that the repeated experiencing of these sensations and accompanying anxiety may result in a learned association between bodily sensations and anxiety states, leading those with high AS to fear body sensations. Indeed, they found a significant interaction between pubertal status and AS in predicting adolescents' anxious responding to a voluntary hyperventilation task. In other words, among adolescents with higher AS, those at a more advanced pubertal stage reported the greatest post-challenge anxiety with respect to body sensations, while among those with low AS, pubertal status had less of an effect.

In addition to these physiological changes, adolescence is also a time of important cognitive, social, and emotional development. These changes, including identity formation and the development of executive functioning, among others, might interact with AS with implications for adolescents. For instance, adolescence involves the development of metacognition (Arnett 2004). However, at its early stages of formation, adolescents struggle to distinguish their own and others' perspectives. As such, they develop a distinctive egocentrism, one aspect of which is the feeling that an imaginary audience is watching and thinking about their every move (Arnett 2004). This cognitive and social experience might be particularly salient for those adolescents high in AS who experience a pronounced fear that others are aware of any outward signs of anxiety they might display. It is certainly possible to speculate about how these and other complex developmental changes might interact with AS during adolescence.

When considered in the context of the physical, cognitive, and social development of adolescence, the relevance of AS during adolescence might also have implications for psychopathology. Research shows that this important developmental period witnesses an increased emergence of symptoms of panic (Hayward et al. 1992), social phobia (Wittchen et al. 1999), and substance use and abuse (Patton et al. 2004). The concordance of these timelines suggests a possible link between adolescent development, anxiety sensitivity, and psychopathology. It may be that the particular changes adolescents experience interact with high AS increasing the likelihood of the development of mental health problems. For example, when an adolescent with high AS enters puberty and begins to experience unexpected and undesired body sensations, as well as a new awareness of their peers' perspective, their likelihood of developing panic attacks or social phobia might increase. Given this possibility, longitudinal research examining changes in AS from childhood to adulthood is needed. A comprehensive understanding of AS will help in the identification of adolescents at risk for psychopathology during this particularly vulnerable life stage. Furthermore, targeting AS through early intervention might have implications for the treatment and prevention of a range of mental health problems. For example, providing adolescents high in AS with psychoeducation about normal bodily sensations and with cognitive strategies useful in challenging catastrophic thoughts about bodily sensations might allay the development of more severe psychopathology in the long term. Ultimately, these possibilities suggest that adolescence may be a pivotal time period for the study of AS.

Cross-References

▶ Anxiety Disorders

References

Adornetto, C., Hensdiek, M., Meyer, A., In-Albon, T., Federer, M., & Schneider, S. (2008). The factor structure of the Childhood Anxiety Sensitivity Index in German children. *Journal of Behavior Therapy and Experimental Psychiatry, 39*, 404–416.

Anderson, E. R., & Hope, D. A. (2009). The relationship among social phobia, objective and perceived physiological reactivity, and anxiety sensitivity in an adolescent population. *Journal of Anxiety Disorders, 23*, 18–26.

Arnett, J. J. (2004). *Adolescence and emerging adulthood: A cultural approach.* Upper Saddle River: Pearson Education.

Asmundson, G. J. G. (1999). Anxiety sensitivity and chronic pain: Empirical findings, clinical implications, and future directions. In S. Taylor (Ed.), *Anxiety sensitivity: Theory, research, and*

treatment of the fear of anxiety (pp. 269–285). Mahwah: Lawrence Erlbaum.

Benowitz, N. L. (1996). Pharmacology of nicotine: Addiction and therapeutics. *Annual Review of Pharmacology and Toxicology, 36*, 597–613.

Bernstein, A., Zvolensky, M. J., Stewart, S. H., Comeau, M. N., & Leen-Feldner, E. W. (2006). Anxiety sensitivity taxonicity across gender among youth. *Behaviour Research and Therapy, 44*, 679–698.

Bernstein, A., Zvolensky, M. J., Stewart, S. H., & Comeau, N. (2007). Taxometric and factor analytic models of anxiety sensitivity among youth: Exploring the latent structure of anxiety psychopathology vulnerability. *Behavior Therapy, 38*, 269–283.

Calamari, J. E., Hale, L. R., Heffelfinger, S. K., Janeck, A. S., Lau, J. J., Weerts, M. A., et al. (2001). Relations between anxiety sensitivity and panic symptoms in nonreferred children and adolescents. *Journal of Behavior Therapy and Experimental Psychiatry, 32*, 117–136.

Carey, K. B., & Correia, D. J. (1997). Drinking motives predict alcohol-related problems in college students. *Journal of Studies on Alcohol, 58*, 100–105.

Chorpita, B. E., & Daleiden, E. L. (2000). Properties of the Childhood Anxiety Sensitivity Index in children with anxiety disorders: Autonomic and nonautonomic factors. *Behavior Therapy, 31*, 327–349.

Comeau, N., Stewart, S. H., & Loba, P. (2001). The relations of trait anxiety, anxiety sensitivity, and sensation seeking to adolescents' motivations for alcohol, cigarette, and marijuana use. *Addictive Behaviors, 26*, 803–825.

Conrod, P. J., Stewart, S. H., Comeau, N., & Maclean, A. M. (2006). Efficacy of cognitive-behavioral interventions targeting personality risk factors for youth alcohol misuse. *Journal of Clinical Child and Adolescent Psychology, 35*, 550–563.

Dehon, C., Weems, C. F., Stickle, T. R., Costa, N. M., & Berman, S. L. (2005). A cross-sectional evaluation of the factorial invariance of anxiety sensitivity in adolescents and young adults. *Behaviour Research and Therapy, 43*, 799–810.

Dia, D. A., & Bradshaw, W. (2008). Cognitive risk factors to the development of anxiety and depressive disorders in adolescents. *Child and Adolescent Social Work Journal, 25*, 469–481.

Essau, C. A., Sasagawa, S., & Ollendick, T. H. (2010). The facets of anxiety sensitivity in adolescents. *Journal of Anxiety Disorders*, *24*, 23–29.

Gerlach, A. L., Mourlane, D., & Rist, F. (2004). Public and private heart rate feedback in social phobia: A manipulation of anxiety visibility. *Cognitive Behaviour Therapy, 33*, 36–45.

Ginsburg, G. S., & Drake, K. L. (2002). Anxiety sensitivity and panic attack symptomatology among low-income African-Americans. *Journal of Anxiety Disorders, 16*, 83–96.

Ginsburg, G. S., Lambert, S. F., & Drake, K. L. (2004). Attributions of control, anxiety sensitivity, and panic symptoms among adolescents. *Cognitive Therapy and Research, 28*, 745–763.

Hayward, C., Killen, J. D., Hammer, L. D., Litt, I. F., Wilson, D. M., Simmonds, B., et al. (1992). Pubertal stage and panic attack history in sixth- and seventh-grade girls. *American Journal of Psychiatry, 149*, 1239–1243.

Hayward, C., Killen, J. D., Kraemer, H. C., Blair-Greiner, A., Strachowski, D., Cunning, D., et al. (1997). Assessment and phenomenology of nonclinical panic attacks in adolescent girls. *Journal of Anxiety Disorders, 11*, 17–32.

Hensley, L., & Varela, R. E. (2008). PTSD symptoms and somatic complaints following Hurricane Katrina: The roles of trait anxiety and anxiety sensitivity. *Journal of Clinical Child and Adolescent Psychology, 37*, 542–552.

Joiner, T. E., Jr., Schmidt, N. B., Schmidt, K. L., Laurent, J., Catanzaro, S. J., Perez, M., et al. (2002). Anxiety sensitivity as a specific and unique marker of anxious symptoms in youth psychiatric inpatients. *Journal of Abnormal Child Psychology, 30*, 167–175.

Kearney, C. A., Albano, A. M., Eisen, A. R., Allan, W. D., & Barlow, D. H. (1997). The phenomenology of panic disorders in youngsters: An empirical study of a clinical sample. *Journal of Anxiety Disorders, 11*, 49–62.

Kiliç, E. Z., Kiliç, C., & Yilmaz, S. (2008). Is anxiety sensitivity a predictor of PTSD in children and adolescents? *Journal of Psychosomatic Research, 65*, 81–86.

Kovacs, M. (1992). *Children's depression inventory manual*. North Tonawanda: Multi-Health Systems.

Lambert, S. F., Cooley, M. R., Campbell, K. D. M., Benoit, M. Z., & Stansbury, R. (2004a). Assessing anxiety sensitivity in inner-city African American children: Psychometric properties of the Childhood Anxiety Sensitivity Index. *Journal of Clinical Child and Adolescent Psychology, 33*, 248–259.

Lambert, S. F., McCreary, B. T., Preston, J. L., Schmidt, N. B., Joiner, T. E., & Ialongo, N. S. (2004b). Anxiety sensitivity in African-American adolescents: Evidence of symptoms specificity of anxiety sensitivity components. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 887–895.

Lau, J. J., Calamari, J. E., & Waraczynski, M. (1996). Panic attack symptomatology and anxiety sensitivity in adolescents. *Journal of Anxiety Disorders, 10*, 355–364.

Leen-Feldner, E. W., Feldner, M. T., Bernstein, A., McCormick, J. T., & Zvolensky, M. J. (2005). Anxiety sensitivity and anxious responding to bodily sensations: A test among adolescents using a voluntary hyperventilation challenge. *Cognitive Therapy and Research, 29*, 593–609.

Leen-Feldner, E. W., Reardon, L. E., McKee, L. G., Feldner, M. T., Babson, K. A., & Zvolensky, M. J. (2006). The interactive role of anxiety sensitivity and pubertal status in predicting anxious responding to bodily sensations among adolescents. *Journal of Abnormal Child Psychology, 34*, 799–812.

March, J. S., Parker, J. D., Sullivan, K., Stallings, P., & Conners, C. K. (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor structure, reliability, and validity. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 554–565.

Martin, A. L., McGrath, P. A., Brown, S. C., & Katz, J. (2007). Anxiety sensitivity, fear of pain and pain-related disability in children and adolescents with chronic pain. *Pain Research & Management: The Journal of the Canadian Pain Society, 12*, 267–272.

McCracken, L. M., Zayfert, C., & Gross, R. T. (1992). The pain anxiety symptoms scale: Development and validation of a scale to measure fear of pain. *Pain, 50*, 67–73.

McLaughlin, E. N., Stewart, S. H., & Taylor, S. (2007). Childhood Anxiety Sensitivity Index factors predict unique variance in DSM-IV anxiety disorder symptoms. *Cognitive Behaviour Therapy, 36*, 210–219.

McNally, R. J. (1999). Theoretical approaches to the fear of anxiety. In S. Taylor (Ed.), *Anxiety sensitivity: Theory, research, and treatment of the fear of anxiety* (pp. 3–16). Mahwah: Erlbaum.

McNally, R. J. (2002). Anxiety sensitivity and panic disorder. *Biological Psychiatry, 52*, 938–946.

Muris, P. (2002). An expanded childhood anxiety sensitivity index: Its factor structure, reliability, and validity in a non-clinical adolescent sample. *Behaviour Research and Therapy, 40*, 299–311.

Muris, P., Merckelbach, H., & Meesters, C. (2001a). Learning experiences and anxiety sensitivity in normal adolescents. *Journal of Psychopathology and Behavioral Assessment, 23*, 279–283.

Muris, P., Schmidt, H., Merckelbach, H., & Schouten, E. (2001b). Anxiety sensitivity in adolescents: Factor structure and relationships to trait anxiety and symptoms of anxiety disorders and depression. *Behaviour Research and Therapy, 39*, 89–100.

Muris, P., Vlaeyen, J., & Meesters, C. (2001c). The relationship between anxiety sensitivity and fear of pain in healthy adolescents. *Behaviour Research and Therapy, 39*, 1357–1368.

Olatunji, B. O., & Wolitzky-Taylor, K. B. (2009). Anxiety sensitivity and the anxiety disorders: A meta-analytic review and synthesis. *Psychological Bulletin, 135*, 974–999.

Ollendick, T. H. (1983). Reliability and validity of the revised Fear Survey Schedule for Children (FSSC-R). *Behaviour Research and Therapy, 21*, 685–692.

Patton, G. C., & Viner, R. (2007). Pubertal transitions in health. *The Lancet, 369*, 1130–1139.

Patton, G. C., McMorris, B. J., Toumbourou, J. W., Hemphill, S. A., Donath, S., & Catalano, R. F. (2004). Puberty and the onset of substance use and abuse. *Pediatrics, 114*, 300–306.

Peterson, R. A., & Reiss, S. (1992). *Anxiety sensitivity index manual* (2nd ed.). Worthington: International Diagnostic Services.

Rabian, B., Peterson, R. A., Richters, J., & Jensen, P. S. (1993). Anxiety sensitivity among anxious children. *Journal of Clinical Child Psychology, 22*, 441–446.

Reiss, S. (1991). Expectancy model of fear, anxiety, and panic. *Clinical Psychology Review, 11*, 141–153.

Reiss, S., & McNally, R. J. (1985). The expectancy model of fear. In S. Reiss & R. R. Bootzin (Eds.), *Theoretical issues in behavior therapy* (pp. 107–122). New York: Academic.

Reynolds, C. R., & Richmond, O. B. (1979). What I think and feel: A revised measure of children's manifest anxiety. *Journal of Personality Assessment, 43*, 281–283.

Schmidt, N. B., Zvolensky, M. J., & Maner, J. K. (2006). Anxiety sensitivity: Prospective prediction of panic attacks and axis I pathology. *Journal of Psychiatric Research, 40*, 691–699.

Silverman, W. K., Fleisig, W., Rabian, B., & Peterson, R. A. (1991). Childhood Anxiety Sensitivity Index. *Journal of Clinical Child Psychology, 20*, 162–168.

Silverman, W. K., Ginsburg, G. S., & Goedhart, A. W. (1999). Factor structure of the childhood anxiety sensitivity index. *Behaviour Research and Therapy, 37*, 903–917.

Silverman, W. K., Goedhart, A. W., Barrett, P., & Turner, C. (2003). The facets of anxiety sensitivity represented in the childhood anxiety sensitivity index: Confirmatory analyses of factor models from past studies. *Journal of Abnormal Psychology, 112*, 364–374.

Spence, S. H. (1997). Structure of anxiety symptoms among children: A confirmatory factor-analytic study. *Journal of Abnormal Psychology, 106*, 280–295.

Spielberger, C. D., Edwards, C. D., Lushene, R. E., Montuori, J., & Platzek, D. (1973). *The State-Trait Anxiety Inventory for Children (preliminary manual)*. Palo Alto: Consulting Psychologists.

Stein, M. B., Jang, K. L., & Livesley, W. J. (1999). Heritability of anxiety sensitivity: A twin study. *American Journal of Psychiatry, 156*, 246–251.

Stewart, S. H., & Asmundson, G. J. G. (2006). Anxiety sensitivity and its impact on pain experiences and conditions: A state of the art. *Cognitive Behavioural Therapy, 35*, 185–188.

Stewart, S. H., Taylor, S., & Baker, J. M. (1997). Gender differences in dimensions of anxiety sensitivity. *Journal of Anxiety Disorders, 11*, 179–200.

Taylor, S., & Cox, B. J. (1998). Anxiety sensitivity: Multiple dimensions and hierarchic structure. *Behaviour Research and Therapy, 36*, 37–51.

Taylor, S., Koch, W. J., Woody, S., & McLean, P. (1996). Anxiety sensitivity and depression: How are they related? *Journal of Abnormal Psychology, 105*, 474–479.

Taylor, S., Jang, K. L., Stewart, S. H., & Stein, M. B. (2008). Etiology of the dimensions of anxiety sensitivity: A behavioral-genetic analysis. *Journal of Anxiety Disorders, 22*, 899–914.

Tsao, J. C. I., Lu, Q., Kim, S. C., & Zeltzer, L. K. (2006). Relationships among anxiety symptomatology, anxiety sensitivity and laboratory pain responsivity in children. *Cognitive Behaviour Therapy, 35*, 207–215.

van Widenfelt, B. M., Siebelink, B. M., Goedhart, A. W., & Treffers, P. D. A. (2002). The Dutch Childhood Anxiety Sensitivity Index: Psychometric properties and factor structure. *Journal of Clinical Child and Adolescent Psychology, 31*, 90–100.

Varela, R. E., Weems, C. F., Berman, S. L., Hensley, L., & Rodriguez de Bernal, M. C. (2007). Internalizing symptoms in Latinos: The role of anxiety sensitivity. *Journal of Youth and Adolescence, 36*, 429–440.

Walsh, T. M., Stewart, S. H., McLaughlin, E., & Comeau, N. (2004). Gender differences in Childhood Anxiety Sensitivity Index (CASI) dimensions. *Journal of Anxiety Disorders, 18*, 695–706.

Watt, M. C., & Stewart, S. H. (2000). Anxiety sensitivity mediates the relationships between childhood learning experiences and elevated hypochondriacal concerns in young adulthood. *Journal of Psychosomatic Research, 49*, 107–118.

Watt, M. C., & Stewart, S. H. (2008). *Overcoming the fear of fear: How to reduce anxiety sensitivity*. Oakland: New Harbinger Publications.

Watt, M. C., Stewart, S., Birch, C., & Bernier, D. (2006). Brief CBT for high anxiety sensitivity decreases drinking problems, relief alcohol outcome expectancies, and conformity drinking motives: Evidence from a randomized controlled trial. *Journal of Mental Health, 15*, 683–695.

Watt, M. C., Stewart, S. H., & Cox, B. J. (1998). A retrospective study of the learning history origins of anxiety sensitivity. *Behaviour Research and Therapy, 36*, 505–525.

Weems, C. F., Hammond-Laurence, K., Silverman, W. K., & Ferguson, C. (1997). The relation between anxiety sensitivity and depression in children and adolescents referred for anxiety. *Behaviour Research and Therapy, 35*, 961–966.

Weems, C. F., Hammond-Laurence, K., Silverman, W. K., & Ginsburg, G. S. (1998). Testing the utility of the anxiety sensitivity construct in children and adolescents referred for anxiety disorders. *Journal of Clinical Child Psychology, 27*, 69–77.

Weems, C. F., Hayward, C., Killen, J., & Taylor, C. B. (2002). A longitudinal investigation of anxiety sensitivity in adolescence. *Journal of Abnormal Psychology, 111*, 471–477.

Weems, C. F., Costa, N. M., Watts, S. E., Taylor, L. K., & Cannon, M. F. (2007). Cognitive errors, anxiety sensitivity, and anxiety control beliefs: Their unique and specific associations with childhood anxiety symptoms. *Behavior Modification, 31*, 174–201.

Wilson, K. A., & Hayward, C. (2006). Unique contributions of anxiety sensitivity to avoidance: A prospective study in adolescents. *Behaviour Research and Therapy, 44*, 601–609.

Wittchen, H.-U., Stein, M. B., & Kessler, R. C. (1999). Social fears and social phobia in a community sample of adolescents and young adults: Prevalence, risk factors and co-morbidity. *Psychological Medicine, 29*, 309–323.

Zvolensky, M. J., Schmidt, N. B., & Stewart, S. H. (2003). Panic disorder and smoking. *Clinical Psychology: Science and Practice, 10*, 29–51.

Appeal

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An appeal refers to a legal proceeding by which a lower court decision is reviewed by a higher court. Appeals are relevant to youth to the extent that both the child welfare system and the juvenile justice system permit appeals, as do criminal courts if juveniles are transferred to them and civil courts when youth are, for example, subjects in family courts (e.g., in custody disputes). When involved in the child welfare or family court systems, parents typically bring appeals; when in the juvenile justice or criminal justice system, appeals typically are brought by minors themselves. The party appealing is known as either the petitioner or appellant; the one responding to the appeal is the respondent or appellee. Appeals are argued through written briefs and oral arguments. There are different types of appeals, such as direct appeals to higher courts or post-conviction appeals. Typically, appeals are based on legal issues; not on matters of fact. Thus, courts that hear appeals do not rule on newly introduced testimony or evidence. If reversible errors are found, then the court may vacate, modify, or reverse a lower court rule; if no reversible errors are found, then it will affirm the lower court's discussion.

Appeals have been determined to be part of important due process rights, but their recognitions are limited. Appeals are, for example, offered as critical ways to remedy actual errors that occur during legal processes as well as perceived errors to maintain trust in the system of justice (see Cavallaro 2002). Despite its potential significance, the Supreme Court long ago ruled that there is no constitutional right to appeal even a criminal conviction in the first instance (McKane v. Durston 1894). Neither now nor at common law has an appeal of the final judgment in a criminal case been seen as a necessary element of due process of law, which means that the right to appeal is purely a statutory right (Uhrig 2008). This means that states determine for themselves whether an appeal should be allowed and, if so, under what circumstances or on what conditions. Importantly, the Supreme Court, in the leading case granting juveniles due process rights in juvenile justice systems, declined to address whether juveniles have a right to appeal (see In re Gault 1967). Still, although appellate rights generally are found in statutes, it does not mean that they lack importance (see Arkin 1992). In fact, once they are recognized in statutes, the Constitution protects how they are implemented (such as through rights to trial transcripts and, in some cases, representation of counsel depending on the nature of the court; see *M. L. B. v. S. L. J.* (1996)).

The importance of appeals, however, is not reflected well in research in that appeals tend to not be the subject of studies, especially as they relate to youth. Part of that gap in research in the understanding of the nature and implementation of the appellate rights of juveniles likely has to do with the nature of proceedings. Given that child welfare and juvenile justice proceedings are meant to be rehabilitative, cases in them have tended to not be challenged as much as would have been expected. When dealing with juvenile dispositions, for example, practical matters lead to avoiding appeals, such as rehabilitation

programs that center on the admission of guilt as a vital step in rehabilitation, which leads some defense counsel to opt out of appeals to protect the long-term developmental needs of their clients. In a real sense, the very nature of the juvenile justice system creates situations that have appeals run the risk of undermining the juvenile courts' efforts to rehabilitate youth (see Cooper et al. 1998; Fedders 2010). The same could be said of child welfare proceedings that, as it turns out, actually rarely do go through formal court proceedings simply because families tend to be involved voluntarily and are not under court supervision (see Levesque 2008). In delinquency proceedings, however, juveniles likely have fewer appellate rights in that post-disposition (convictions) appeals in juvenile courts are a statutory right, and not every state affords juveniles full appellate rights. This means, for example, that juveniles may not have a right to counsel to make appeals (Kinkeade 1999; Fedders 2010). Not surprisingly, reviews find that appeals of juvenile dispositions are strikingly rare (see Drizin and Luloff 2007).

Cross-References

► Amicus Brief
► Legal Methods

References

Arkin, M. M. (1992). Rethinking the constitutional right to a criminal appeal. *UCLA Law Review, 39*, 503–579.

Cavallaro, R. (2002). Better off dead: Abatement, innocence, and the evolving right of appeal. *University of Colorado Law Review, 73*, 943–986.

Cooper, N. L., Puritz, P., & Shang, W. (1998). Fulfilling the promise of In re Gault: Advancing the role of lawyers for children. *Wake Forest Law Review, 33*, 651–679.

Drizin, S. A., & Luloff, G. (2007). Are juvenile courts a breeding ground for wrongful convictions? *Northern Kentucky Law Review, 34*, 257–322.

Fedders, B. (2010). Losing hold of the guiding hand: Ineffective assistance of counsel in juvenile delinquency representation. *Lewis & Clark Law Review, 14*, 771–819.

In re Gault, 387 U.S. 1 (1967).

Kinkeade, E. (1999). Appellate juvenile justice in Texas-It's a crime! Or should be. *Baylor Law Review, 51*, 17–61.

Levesque, R. J. R. (2008). *Rethinking child maltreatment law: Returning to first principles*. New York: Springer.

M. L. B. v S. L. J., 519 U.S. 102 (1996).

McKane v. Durston, 153 U.S. 684 (1894).

Uhrig, E. G. (2008). A case for a constitutional right to counsel in habeas corpus. *Hastings Law Journal, 60*, 541–604.

Apprenticeships

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Overview

This essay discusses the renewal of apprenticeship for high school-aged youth. The author enumerates and illustrates the attributes of this distinctive institution and explores its developmental benefits that complement the period of adolescence. Benefits gained by participants are included.

In a recent commentary entitled "Let Teenagers Try Adulthood," Bard College president Leon Botstein (1999) argues that most high schools in the United States serve most of their students poorly, failing equally to engage their minds and hearts and to help them begin to prepare for adult life. Although Botstein's (1999) commentary is focused on the lack fit between high school as an institution and young people's developmental needs, it applies equally to the culture at large. Too many young people in American society lack access to the kinds of vital, productive learning experiences that would enrich their present lives and provide a foundation for adulthood (Eccles 2004). Adults worry that young people are growing up too fast and yet those same adolescents remain isolated from the fullness and complexity of the adult world – its places and endeavors, occupations and disciplines, problems and dilemmas (Larson 2000). Young people themselves report that "something is missing," although they are not sure what it is nor how to find it.

One approach to structuring learning that addresses what seems to be missing for young people is apprenticeship. In many corners of society there has been a kind of reinvention – and a reconceptualization – of the institution that for hundreds of years practically defined this period of life for young people. Apprenticeship can be broadly defined as an experience in which a young person has opportunity (1) to work in a sustained and gradually deepening way on tasks/projects in a specific discipline, field of work, or service; (2) under the tutelage of, and sometimes alongside, an adult skilled in that discipline; (3) through that work begins to master the attendant knowledge, skills, practices, and habits; and (4) perhaps also begins to acquire

the social identity of one who works in that discipline or field (Halpern 2009; Lerman 2010).

Not surprisingly, learning/producing domains reflect the full richness and diversity of cultural endeavor. Halpern (2009) elaborated on the broad nature of apprenticeships; the visual, performing and literary arts, hand-crafts, media and design, basic or applied sciences, community development, environmental stewardship, entrepreneurship, culinary arts, and sustainable agriculture are all possibilities. And there are many more domains, he suggests, including some explicitly vocational. As implied by the breadth of fields, apprenticeships are rooted in an enormous variety of settings.

Participating youth are diverse in background, educational status, and life experience. Sponsors are diverse as well (United States Department of Labor 2010). They include youth serving agencies, arts, cultural and civic organizations, high schools, universities, and businesses (Halpern 2009). Sponsors may provide an apprenticeship experience themselves – that is, they may be or create a workplace of sorts – or they may place youth with other public or private organizations. Individual mentors may be paid to do this work or volunteer (Halpern 2009). Youth likewise are sometimes paid for their work, at other times not (Lerman et al. 2009). An individual youth may work with one adult or be part of the staff of a department (Collins et al. 1989). In some settings apprentices learn primarily from adult teachers; in others they may learn a good deal from more experienced peers (Halpern 2009).

Why Call It Apprenticeship?

Although the experiences described here are apprenticeship-like in spirit and dynamics, they are not formal Department of Labor-registered apprenticeships, nor could they be (Halpern 2009). Such apprenticeships require 4,000 or more hours of work, take from 3 to 6 years to complete, and serve adults almost exclusively (United States Department of Labor 2010). The term is apt because, even separated from its traditional connotations, it captures what is most essential about this particular set of experiences.

These experiences provide youth a sense of joining and contributing to a tradition, as embodied in a specific discipline or civic sphere (Halpern 2009). Apprentices are, typically, working and learning in the setting in which a craft, trade, or discipline is practiced (Borham 2004; Steedman et al. 1998). Both adult and youth are active and share responsibility for the work to be done and the products to be created, although each has a different role (Halpern 2009). The adult mentor is responsible for sharing his or her disciplinary knowledge and skills with youth (Collins et al. 1989). Youth are responsible for working hard to begin to become proficient at something specific, and for contributing to the community which they have joined (Rauner 2007).

Tasks and projects have real meaning and use – making a documentary about housing conditions, designing a logo for a business, surveying a fish habitat, growing organic produce to be sold and donated to low-income families. Greg Gale, associate director of The Food Project, notes "If we do not farm well and productively, people go hungry, land lies wasted, and families do not have access to the life-giving produce we grow" (Gale 2006, p. 11). Learning and work are structured to lead young people through complete production cycles with results judged by the established standards of a discipline (Halpern 2009).

According to Halpern (2009), constraints are characteristic of those found in professional work in the fields involved. Young people work with deadlines, have demanding clients who sometimes change their minds, answers and solutions are not known ahead of time, and unexpected difficulties are commonplace. Young people learn through observation, imitation, trial and error, and reiteration – in other words through force of experience. Though professionalism and care are expected, perfection is not.

Adult mentors hold the discipline for the apprentice, sequencing and controlling task demands to keep them on the constructive side of difficulty notes Halpern (2009). They direct apprentices' attention, demonstrate and sometimes collaborate, act as the embodiment of a discipline, and also model skilled practice and the general behavior of one with that particular identity (Hamilton 1990). Apprentices may get to watch their mentors at work, addressing a problem, running a meeting, or simply interacting with others.

The Experience of Apprenticeship and Its Effects: A Growing Experience

Apprenticeship seems to leave an "indelible impression" on many who experience it (Sigaut 1993,

p. 105). To start with, it is a powerful teaching and learning model (Hamilton 1990). From a developmental perspective, apprenticeship experiences provide opportunity for the real accomplishment that Erik Erikson (1968) noted as so important during adolescence (Halpern 2009). They create that transitional space where young people can be both playing and working, pretending to be and practicing at being what they might become and yet genuinely participating in a particular adult community (Winnicott 1971; Csikszentmihalyi and Schneider 2000).

Yet, Halpern (2009) adds, apprenticeships are often genuinely unprecedented contexts for youth – about learning but not at all like school; serious and demanding, but accepting of struggles and mistakes. It takes time for some youth to learn to trust the apprenticeship framework, including the very different relationship with adults. It is a challenge for some to be active, to work hard, to learn to work with care, to work deeply and to persist, whether to accept the idea that the quality of produce grown is critical or to not stop working on a design with the first idea that comes to mind. He notes that some youth struggle with the realization that there is little room in apprenticeship for either bravado or self-abnegation; these attitudes are brushed aside by the demands and standards of the work (Halpern 2009; Hamilton 1990).

With time young peoples' sense of difficulty, disorganization, or just tentativeness is increasingly balanced by more complex feelings (Collins et al. 1989). What begin as external demands become internalized (Collins et al. 1989). Young people adjust to what they once thought they could not (Halpern 2009). They get better at the work and begin to believe they can do it – and have a right to be doing it (Hamilton 1990). Young people note being glad to be able to be themselves, to not have to pose or front or try to fit in (Halpern 2009). An apprentice in Chicago's Marwen Arts notes that "nobody is telling you to be any way. You do what you need to do" (Yenawine 2004, p. 6).

Not least, Halpern (2009) states that young people like being around adults who enjoy their work, are passionate about a particular field, and draw their identity from it. Identification with mentors provides both a spur for mastery and a model for identity work. Who mentors are, what they have done, the path they have taken, and even how they behave is instructive, interesting, and often novel to apprentices (Halpern 2009).

What Apprentices Learn, How and Why They Grow

Apprenticeship provides a powerful spur for many kinds of growth, and this growth derives both from the demands of the work itself and from the context for those demands. Skills and dispositions develop in apprenticeship because they have to – one is faced with a new or persistent problem, constraints of time, resources, or materials (Rose 2004) – and because the young person is motivated to cope with the difficulties faced (Halpern 2009). The intricacy or complexity of tasks and the genuine need for resulting products demand care and teach the apprentice to work more carefully (Hamilton 1990). Working through complete production cycles gives the experience coherence and deepens its meaning (Halpern 2009). The sense of realness and genuineness of contributions made reinforce the experience: Rocking the Boat apprentices working with other organizations to restore the Bronx River saw the return of beavers to the river for the first time in 200 years (Halpern 2009).

Some growth in apprenticeship is discipline specific. Apprentices exert gradually greater control over their own efforts, a kind of discipline-specific self-regulation; they are better able to steer those efforts (Halpern 2009). Apprentices working with a professional muralist on one project learn to work large, to keep the elements connected (Larson and Walker 2006). A film-making apprentice uses a film-editing program in an innovative way (Halpern 2009). With time the apprentice begins to learn how to look at things in a particular field to understand them, to recognize patterns, to know what is important, to sense when a work at hand feels right (Polanyi 1966). For instance, the cabinet-making apprentice develops what Mike Rose (2004, p.92) calls "cabinet sense."

Halpern (2009) notes some more general growth which is also to a degree generalizable. Young people acquire skills in approaching and engaging tasks as such. They learn, for instance, to prepare before plunging in, learn to get started or move ahead without waiting for instructions or guidance, learn to attend to detail, to edit, and to revise. They also learn to seek out needed information and to draw on others' experience, and grow more adept at working with a measure of uncertainty. They do not freeze when faced with problems and obstacles, and become able to view them as just part of the work (Halpern 2009).

Apprentices gain knowledge and skill in design and production processes Hamilton (1990). According to Halpern (2009), they learn to compress ideas to fit constraints – of time, materials, human resources, their own experience, or the marketplace. Apprentices learn to cope with things out of their control. Young people learn, as one boat-building teacher puts it, to work with as well as work through mistakes – they learn that mistakes go along with the imperfections of craftsmanship. In learning how to work as part of a team, apprentices learn what it means to be responsible to a team or ensemble, and what it means to make a contribution to a larger effort (Halpern 2009).

Some of the most powerful, if subtle, effects of apprenticeship experience can be described as self effects: how young people view and understand themselves, including what they think they are capable of, what they enjoy and are good at (Hamilton 1990). It is also visible in how they approach the opportunities and difficulties in different settings, including willingness to take risks, work hard, and be active (Halpern 2009). Young people's public behavior begin to change in a variety of ways – they began to use language and share their thoughts more carefully, to take more responsibility for themselves, their public behavior became more serious and appropriately assertive, they become more patient with themselves and with others.

For some youth, an apprenticeship experience seems to have a self organizing effect, pulling them together, waking them up, mobilizing their energies, providing a sense of direction (Halpern 2009). Young people may try to carry the skills and dispositions acquired in apprenticeship to other settings in their lives.

More globally, apprenticeship experiences lead some youth to reevaluate how they are approaching high school (Halpern 2009). They may come to think more closely about what it might take to pursue particular disciplines or careers, and how much time and effort it takes to get good at a chosen endeavor (Lerman et al. 2009). In some instances, apprenticeship experiences open up paths to college (Halpern 2009). Youth make new adult relationships, enter into new networks, and are connected to new institutions, all of which may be located outside of their existing social world (Halpern 2009). The acquisition of this new capital comes at a crucial time, as apprentices are beginning the transition from high school to either further schooling or work or both (Hamilton 1990).

Some Implications

The societal context for youth apprenticeship is both challenging and potentially receptive (Hamilton 1990). On the challenging side, work has been noted to have become more fluid – a series of personal encounters, more abstract – involving manipulation of symbols and information, more focused on process and less reliant on specific (or fixed) content (Halpern 2009). Breadth of skills seems as or more important than depth (Halpern 2009). It can be argued nonetheless that substantive, discipline-specific knowledge and skills are not becoming irrelevant and in fact are gaining renewed appreciation as a foundation for entrance into many critical professions.

Paralleling the changing narrative of work is a narrative describing a less well-defined and less straightforward transition from high school to work or post-secondary education for the majority of American youth (Halpern 2009). Both the transition itself and the labor market as a whole lack transparency, and it is difficult for youth to make sense of the context in which they have to make decisions (Lehmann 2005). Again, apprenticeship experiences offer potential to help with this difficult process in a number of ways, and in some instances they can nurture the beginnings of a career (Hamilton 1990).

For the many youth not ready to begin a career process, apprenticeship still provides experiences that help clarify educational and work-related decision-making processes, and introduce young people to the variety of adult work and disciplinary knowledge (Hamilton 1990). And becoming a nascent photographer or engineer or journalist even for a year or two enriches an adolescent's self and provides a bridge or interim identity for her as she strives to figure out who she is, who and what she wants to be (Halpern 2009).

The learning model embodied in apprenticeship holds a number of implications for high school reform, first and foremost as a conceptual model of good learning design for youth (Eccles 2004). Only a handful of reform efforts have emphasized how fundamentally the assumptions and practices of high school would have to change to better meet young people's developmental needs, as Botstein (1999) puts it, to engage their hearts and minds and prepare them for the future. To do so high schools would have to rethink almost every practice, including: the nature of core learning resources and tasks; where, when, and under what conditions learning

takes place; the meaning of making mistakes; what the products of learning consist of; how growth is conceptualized and how learning is assessed; who teaches and how teaching is done; how time is organized (every day and over the years); and what other institutions should be involved (Eccles 2004). As far as I can tell, apprenticeship addresses each of these points of practice.

Second, apprenticeship is relevant as an actual learning experience as part of the high school curriculum: this is already happening, in some themed high schools, in unique high school models like Big Picture, and most significantly in career/technical education programs and centers (Lerman 2009). Third, it is relevant in the sense that high schools cannot meet young people's developmental needs alone: this requires working across the boundaries of service systems and sectors of society (Crockett and Petersen 1993).

That in turn means shared responsibility and mutual learning between schools and the community – organizations, cultural institutions, single-cause organizations, the business community, higher education and workforce development agencies, among others (Hamilton 1990). Apprenticeship-like settings can help schools with their tasks but also offer potential to change schools' understanding of those tasks. The attributes of apprenticeship are not only developmentally compelling to youth but seem to address many of the goals that school reformers have for their own work.

In Halpern's (2009) eyes, few leaders are crying out for "more youth apprenticeship" for the nation's high school age youth. He notes that in Wisconsin, a superlative statewide youth apprenticeship program had to fight for years to stay alive. Still, Halpern (2009) notices the need for apprenticeship; an urgent sense at every level of society that the United States must address the puzzle of adolescence, of young people going through the motions, barely hanging on in school without exactly knowing why, fantasizing about becoming rock stars or professional athletes, looking at the adult world with puzzlement and sometimes cynicism, and, most critically, having little specific idea of what they might actually strive to become.

Conclusion

Youth apprenticeships offer many opportunities for youth to develop career skills, as well as their sense of identity and maturity. While youth apprenticeship program differ from Department of Labor-registered apprenticeships, the set of experiences that the program embodies is similar: academic education, skill development, and mentorship. Although many researchers have advocated for programs that fit the developmental abilities present in adolescence (Hamilton 1990; Eccles 2004; Halpern 2009), many schools have not yet recognized the opportunity of youth apprenticeships.

Acknowledgments

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References

Borham, N. (2004). Oriented the work-based curriculum toward work process knowledge: A rationale and German case study. *Studies in Continuing Education, 26*, 209–227.

Botstein, L. (1999). Let teen-agers try adulthood. *The New York Times*. Retrieved from http://www.nytimes.com/1999/05/17/opinion/let-teen-agers-try-adulthood.html

Botstein, L. (2008). Let teenagers try adulthood. *NSSE, 107*(2), 118–121.

Collins, A., Brown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnic (Ed.), *Knowing, learning, and instruction* (pp. 453–494). Hillsdale: Lawernce Erlbaum.

Crockett, L. J., & Petersen, A. C. (1993). Adolescent development: Health risks and opportunities for health promotion. In S. G. Millstein, A. C. Petersen, & E. O. Nightingale (Eds.), *Promoting the health of adolescents: New directions for the twenty-first century* (pp. 13–37). New York: Oxford University Press.

Csikszentmihalyi, M., & Schneider, B. (2000). *Becoming adult*. New York: Basic Books.

Eccles, J. S. (2004). Schools, academic motivation, and stage-environment fit. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 125–153). Hoboken: Wiley.

Erikson, E. H. (1968). *Identity: Youth in crisis*. New York: WW Norton.

Gale, G. (2006). *Growing together*. Boston: The Food Project.

Halpern, R. (2009). *The means to grow up: Reinventing apprenticeship as a developmental support in adolescence*. New York/London: Routledge.

Hamilton, S. F. (1990). *Apprenticeship for adulthood: Preparing youth for the future*. New York: The Free Press.

Larson, R. W. (2000). Toward a psychology of positive youth development. *The American Psychologist, 55*(1), 170–183.

Larson, R., & Walker, C. (2006). Learning about the real world in an urban arts youth program. *Journal of Adolescent Research, 21*, 244–268.

Lehmann, W. (2005). I'm still scrubbing the floors: Experiencing youth apprenticeships in Canada and Germany. *Work Empowerment Society, 19*, 107–129.
Lerman, R. I. (2010). *Expanding apprenticeship: A way to enhance skills and careers.* Washington, DC: Urban Institute.
Lerman, R. I., Eyster, L., & Chambers, K. (2009). *The benefits and challenges of registered apprenticeship: The sponsors' perspective.* Washington, DC: Urban Institute.
Lerman R. (2008a). 'Are skills the problem? Reforming the education and training system in the United States', Upjohn Institute for Employment Research.
Lerman, R. (2008b). 'Widening the scope of standards through work-based learning', Presentation at the Thirtieth Annual APPAM Research Conference November 6, 2008 Los Angeles, California.
Polanyi, M. (1966). *The tacit dimension.* New York: Doubleday.
Rauner, F. (2007). Vocational education and training: A European perspective. In A. Brown, S. Kirpal, & F. Rauner (Eds.), *Identities at work.* Dordrecht, The Netherlands: Springer.
Rose, M. (2004). *The mind at work.* New York: Viking.
Sigaut, F. (1993). Learning, teaching, and apprenticeship. *New Literary History, 24*, 105–114.
Steedman, H., Gospel, H., & Ryan, P. (1998). *Apprenticeship: A strategy for growth.* London: London School of Economics.
United States Department of Labor. (2010). *Registered Apprenticeship.* Retrieved from http://www.doleta.gov/oa/
Winnicott, D. (1971). *Playing and reality.* London: Tavistock.
Yenawine, P. (2004). *Addressing the needs of youth in fuel: Giving youth the power to succeed.* Chicago: Marwen Arts.

Arranged Marriage

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An arranged marriage refers to a marriage in which at least one member of the couple had little to no influence on the selection of their partner. Arranged marriages curtail courtship in that, in some instances, the couple may have never met. While arranged marriage is thought to be a part of Western civilization's past, it continues to be a part of the present in some subcultures within Western society and others across the world. This method of family formation is important to a cross-cultural understanding of adolescent development, although how it relates to adolescents generally has not been the subject of empirical studies focusing on adolescents, with the notable exception of child marriages (which relates to but certainly is not synonymous with arranged marriages; see Hampton 2010).

Cultures that do practice arranged marriage vary greatly (see Ghimire et al. 2006; Tek'ce 2004). Different groups have a range of ways of determining who is eligible for marriage. For example, some allow cousins to marry one another while others may allow children to marry either another child or even an adult. Sometimes, gifts from the bride or groom's families are given in exchange for the marriage. Social status and wealth often factor in these types of marriages because, in many of these cultures, marriage is viewed as more than just a union of two individuals but as a merging of families. The individuals who are actually involved in the arranging also differ greatly by group. Parents generally have the most control while the bride and groom may have varying degrees of decision making power. Some families may even seek advice from religious leaders. Importantly, in some societies, girls are married to gods and live in temples, a practice that has been linked to child prostitution (see Levesque 1999). This wide range of practices continues to change, especially when they are influenced by Western ideologies of family formation and child development.

Research has sought to compare arranged marriages with other types of marriages, but such differences are difficult to evaluate given how other cultural forces likely influence a society's views of marriage as well as supports for marriage as an institution. For example, some research reports that arranged marriages have equal or somewhat lower divorce rates and equivalent levels of marital satisfaction as couples who chose their partners based on love or other factors. As expected, these findings can be deceiving. Several cultural differences likely influence those who engage in arranged marriages versus those who adopt love-based marriages. The way these cultures view divorce may be very different; for example, in arranged marriage cultures, divorce carries much more shame than it does in most societies that base their marriages on love or other bases for commitment. It is also important to note that, while in arranged marriages, families choose spouses based on wealth, religion, and social status, both types of marriages often result in spouses who are very similar to one another. This similarity has been linked to marital satisfaction in younger couples. However, what one culture may view as satisfactory in

a marriage another may not. Researchers have yet to study how satisfaction within these types of marriages may change over time. Although existing research may be subjected to important criticisms, the search nevertheless shows the importance of recognizing the wide variety of ways individuals can marry and the need to proceed cautiously before pronouncing judgment on the variety of ways martial relationships form.

Despite being practiced in countries around the globe and the acknowledged need to respect sociocultural differences, arranged marriages continue to be the subject of concern. Due to couples having little say in who they marry, there is concern that partners may not acquire the ability to make decisions on their own. An additional concern centers on the manner marriage traditions will be impacted by the ever-impeding borders of different societies and their cultural customs. Also concerning is the practice's relationship to the status of women, with its being linked to women's lower status and to their being viewed as property. In societies that practice arranged marriages, women often are subjugated and mistreated. Despite those findings, it also is true that many women also suffer considerable violence in relationships that are not arranged and the status of women continues to not be as equal to that of men in societies that do not embrace arranged marriages. Again, differences in practice as well as other forms of marriage create complexities that challenge efforts to understand them, and these complexities are exacerbated by the constant change in the nature of marriage, close relationships, as well as broader social, religious, economic, and legal changes.

Cross-References

► Marital Rights
► Marriage

References

Ghimire, D., Axinn, W., Yabiku, S. T., & Thornton, A. (2006). Social change, premarital nonfamily experience, and spouse choice in an arranged marriage society. *American Journal of Sociology, 111*, 1181–1218.

Hampton, T. (2010). Child marriage threatens girls' health. *JAMA: Journal of the American Medical Association, 304*, 509–510.

Levesque, R. J. R. (1999). *Child sexual abuse: A human rights perspective*. Bloomington: Indiana University Press.

Tek'ce, B. (2004). Paths of marriage in Istanbul: Arranging choices and choice in arrangements. *Ethnography, 5*, 173–201.

Art Therapy

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Teen violence and delinquency is one of the most vexing and enduring trends faced in contemporary society. The pervasiveness of the problems delinquency creates has been answered through institutionalizing an increasingly large number of alienated and rebellious teenagers. Understanding how adolescents experience institutional life is a matter of importance to the adolescents, their care, and to society. Those who work with institutionalized adolescents have much to learn about how they influence the behavior of teenagers in their care. As well, society has not quite grasped how adolescents who are given negative labels such as "delinquent" or "deviant" continues to maintain these identities through their interactions in society. While certain interactions may perpetuate these behaviors, they can also help reverse these tendencies. This essay will first introduce a summary of how an interactionist perspective can be applied to understanding the notions of deviance and delinquency. It will then address the institutionalization of the disaffected youth, present self-appraisal and labeling theories within this context, and ultimately use these theories and vignettes to explore and illustrate how the act of creating art and art therapy can be used to help reverse this trend. Please note that this essay has been modified from the book chapter, "The deviant adolescent: Creating healthy interactions and relabeling through art therapy," published in Doris Arrington's *Art, Angst and Trauma: Right Brain Interventions with Developmental Issues*, with permission from Charles C. Thomas, Publishers.

Social and Symbolic Interactionism

The theories of interactionism emerged from the philosophies of James, Cooley, Dewey, Mead, and Blumer. William James claimed that the social self is developed through the interaction of the individual and social groups (James 1890/1918). Cooley saw "... interactionism as a framework through which social reality was to be interpreted" (1964, p. 9) and that there is a joint interdependence between the social

environment and individuals. People interpret what others see in them by noting the actions of those with whom they interact; "... the self emerges in a process of communication and interaction as the individual responds to and internalizes aspects of ways others have of acting toward the person" (Hall 1979, p. 50). Dewey (1930) maintained that people, their environments, and their thoughts are interconnected, forming a larger whole.

Mead claimed that it was the self's interactions with others through social experiences that defined situations (Mead 1964). He believed that the self developed from such experiences and activities "... as a result of his relations to that process as a whole and to other individuals within that process" (p. 199). However, the self not only interacts with others, but also with his or her own thoughts and ideas (Mead 1964), through self-reflection.

This notion that the self is created and defined through interactions with non-corporeal objects was similar to Blumer's (1969) theoretical perspective of interactionism. Blumer (1969) claimed that a person will interpret others' gestures and will then act on what they perceive the meaning to be from this translation (Blumer 1969). However, he also stressed the interaction between people and objects. Objects have meaning for people "... not intrinsic to the object but arises from how the person is initially prepared to act toward it" (Blumer 1969, pp. 68–69). Objects can include ideas and thoughts as well as something tangible. It is the sharing of these objects, and the interpretations thereof, that define the action and interaction. Those who subscribe to interactionism claim that meaning emerges from the interaction between people (and objects). Thus, meanings and interpretations are social products. Ideas lead to action and the construction of a practice and/or product.

It is through these interpretations that a societal context and the roles of the people that make up this society – including teenagers – are defined. In simple terms, through interactions, people are defined. Therefore, meanings and interpretations are social products. Such actions are also maintained through self-appraisals, and societal categorical definitions, or labeling.

Self-appraisal and Labeling

Role taking is an important aspect of interactionism (Blumer 1969); this consists of "projecting oneself into the role of others, and appraising from their standpoint the situation, oneself in the situation, and possible lines of action" (Bartusch and Matsueda 1996, p. 147). This aspect influences how a person views oneself and can ultimately sway the person's self-concept and identity. Once this identity is acted upon, and if negative behavior ensues, the labeling that occurs perpetuates this identity, and creates a cycle that is difficult to break (Becker 1963). For example, Zimbardo et al. (1973) recognized that people may develop aggressive and dominating characteristics after roles and labels are assigned and accepted. In their study, a Stanford University class was divided into two groups – one group role-played prison guards and one group played the inmates – to:

> ... understand more about the process by which people called "prisoners" lose their liberty, civil rights, independence, and privacy, while those called "guards" gain social power by accepting the responsibility for controlling and managing the lives of their dependent charges. (p. 38)

The guards locked up and watched over the inmates in the basement of the psychology building. The study had to be terminated earlier than originally planned because both groups inhabited their roles more seriously than anticipated. The original identities of the students were quickly transformed. The guards became aggressive toward their "wards," and the "inmates" became docile and cunningly resistive. Through self-appraisals and perpetuation of these identities by those around them, the participants became their roles, and that their aggressive actions or reactions emerged from their labeled identities (Zimbardo 2007).

Some have contended that labeling a child as delinquent or simply "bad" may be a result of the child's economic background, and may include those who are socioeconomically disadvantaged or of a minority (Bartusch and Matsueda 1996). Although it is not clear if such labeling influences the self-image more if it is a "formal" label (i.e., through the courts, schools, psychiatric or detention facilities), or an informal label (i.e., by peers and family), Paternoster and Iovanni (1989) stressed that it is more important to focus on informal rather than official descriptors. Thus, although a court may deem that an adolescent requires institutionalization for his or her behavior, it is the perpetuation of that label through his or her peers

that may create the sustained identity. However, regardless of the type of label, one thing was made clear: labeling informs self-appraisals, and in turn, can perpetuate delinquent and deviant tendencies.

Deviance and Delinquency

Rules and sanctions against those that violate rules established by society (and in a smaller sense, an institution), and thus the norms, are created through a social act (Lauer and Handel 1977). Deviants, or those that belong to a deviant group, are those who have been sanctioned. Social problems are defined by normative groups, or the "normals." "Social norms are two-sided. A prescription implies the existence of a prohibition and *vice-versa* (italics are the authors). . . . norms that define legitimate practices also implicitly define illegitimate practices" (Cloward and Ohlin 2001, p. 359). By simply creating a standard of acceptance, society is indicating that anyone who engages in behavior out of bounds of the given standard is a deviant.

Spector and Kitsuse (1973) believed that social problems emerged through grievances from members of groups or societies. "[B]ehaviors are not recognized as deviant, or criminal, unless others, as members of cultural groups, react to them as such" (Hagan 2001, p. 6). Merton explained deviance through what he labeled the "strain theory"; if people are unable to meet their goals, through acceptable means, they may try to achieve these goals through deviant means. "[W]hen individuals (or groups) discover, for example, that no matter how hard they work/try, they cannot achieve the levels of satisfaction or material wealth to which they have been taught to aspire, deviant behavior may be the result" (Merton, as cited in Rouncefield 2003, para 8).

Becker (1963/1991) claimed that many theoretical perspectives and definitions exist for deviance. Yet, what they all seem to have in common is their belief that any member in a society who tends to reduce stability is considered a deviant. Ultimately, deviants belong to the groups within the society that do not fit in – the "outsiders."

Much like Spector and Kitsuse, Becker believed that the society is responsible for creating, or defining, deviance. Sagarin (1975) believed that people and behavior that provoke hostile reactions are considered deviant. Nevertheless, Sagarin also made a clear distinction between deviance and criminality, indicating that deviance and crime overlap but not entirely – there are some that are both criminal and deviant, another that is deviant but not criminal, and another that is criminal and not deviant. For the sake of this essay, the notion of deviance corresponds with that of delinquent or offending tendencies.

The problem with relying on labeling theory to explain the genesis of deviant behavior is that it puts the entire responsibility for such anomies on society and disregards biological and psychological impulses (Hagen 2001). While this may be true in some cases, in others it is not. As Hagen conceded, one can assume that a more proper explanation for the cause of deviance and delinquent tendencies is a combination of the two – natural impulses may be present, but societal interactions perpetuate and maintain deviant tendencies. Dryfoos (1996) outlined six significant risk factors for deviant behavior: (1) poor parenting, (2) interactions in school and response to the schooling process, (3) peer influences, (4) psychological difficulties such as depression or bipolar tendencies, (5) living in an impoverished and crime-ridden neighborhood, and (6) race and ethnicity. Four of the six risk factors involve societal and environmental interactions and all factors influence interaction and labeling to instigate and perpetuate deviant tendencies.

Adolescents may act out and express their anger and frustration in dangerous and unacceptable ways, that is, unacceptable by society's standards. This, in turn, can cause retribution or punishment and sanctions by societal members, including the institutionalization of these disaffected youths in detention facilities. Such invalidation of these feelings may cause the adolescent to form further self-perceptions as a deviant, perpetuating a cycle.

As well, according to the interactionist perspective, such deviant behaviors may be learned through observation and through interaction with other deviants, either within institutions or on the streets. This is similar to the process by which gang members operate, or the phenomena that happens in juvenile and adult correctional facilities where newer inhabitants learn continual deviant behavior, in some cases necessary for survival, from those who are more institutionalized. Such behaviors are not only accepted within that subculture but are expected (Gussak 1997). Such interactions also create an identity within the adolescent, one that would be difficult to replace with one more acceptable.

Thus, simply "locking someone up" may not only be insufficient, but may very well continue the cycle through strengthening the deviant self-appraisal. As Rubington and Weinberg (2002) indicated, the deviant identity is maintained through an interactive process between those that break the rules and those that enforce them. The punishment does not deter the behavior but does in fact confirm for the perpetrator that they are indeed a deviant; "how others respond is therefore crucial to the process of acquiring a deviant identity" (Brownfield and Thompson 2005, p. 23).

Reinforcing or Reversing Labels: The Interaction of Art Therapy

As social interaction creates, defines, and maintains deviant behavior, so it can also help remove the deviant label and interrupt the cycle of unacceptable behavior. It is through positive social interaction that new behaviors and identities can be developed and validated, and redefining the actions of those considered deviant or delinquent that such tendencies can be halted and even reversed. The art therapist can help facilitate this through the art-making process to aid in developing appropriate interactions and decrease aggressive tendencies (Gussak 2006).

Blumer (1969) indicated that symbolic interaction can occur between people and objects as well as between two people: "... objects—all objects—are social products in that they are formed and transformed by the defining process that takes place in social interaction" (pp. 68–69). Actions and interactions are initiated and reinforced through active interpretation of corporeal and non-corporeal objects. What is more, societal norms can be defined through the shared meanings of objects, and connections and interactions can be secured through the shared use of such objects.

Art has been used to create and define interactive relationships through their visual cues. For example, art is a prevalent form of communication and definition between members of adolescent street gangs. These gang members communicate through several different visual cues including hand gestures, color codes, and graffiti (Jackson and McBride 1986). Graffiti images are used to create an identity, a sense of belonging, a means of communication within the gang, and are designed to separate the gang set from rival gangs or outsiders (Huff 1990; Padilla 1992). Different gangs have different lettering styles and the images can be quite stylized and intricate, serving as a means of self-labeling within the gang. "Taggers" (graffiti artists) are well respected within their own group. To "strike out" a gang sign or gang member's logo is considered a high insult and challenge to the turf, and is grounds for serious retaliation. Gang members are even willing to die to protect the integrity of their own visual identity (Decker and van Winkle 1996).

The images demand respect; honoring the visual cues, in essence, values the members. By using images to communicate, reciprocation is more likely. Padilla (1992) indicated that some gang members want to become legitimate, accepted into the society, but they have been embroiled into a subculture for so long they may not know how to separate themselves for acceptance into the conventional society.

Experience with gang members and "gang wannabes" in a therapeutic context proved complicated. (The gang wannabes wanted to be gang members, and took on the attributes but were not yet gang members – it was a commonly held belief by staff members who work with wannabes in therapeutic settings that they are worse than actual gang members, as they may have had more to prove.) They chose to interact primarily with those in their own group. They tend to believe that those outside their group clearly did neither understand, nor accept them. Sometimes, a new form of communication and self-expression can develop and emerge when art materials are introduced.

The art therapist can take advantage of these natural tendencies for identity and acceptance through visual imagery. Introducing art materials to clients considered delinquent creates a new interaction, a new social pattern. Interacting with the materials and the art product, clients will begin to redefine their images, and eventually will be more acceptable to others. Where previously the deviant individual had difficulty connecting with others, by using the art materials together, the individual's previous label becomes blurry. It is at this time that a new sense of self can be created; this can occur through the art process, specifically, the deviant person may now be "an artist" as well. Likewise, a different relationship is established between the artist and the therapist. Both currently belong to the same socially acceptable context, the art world, constructed and maintained

through the shared conventions of the collective media (Becker 1982). Teaching a client how to use art materials for self-expression creates a new mode of interaction. Mastery of the materials promotes a new sense of self-worth apart from previously established hostile and deviant identities.

Rick (first introduced in Gussak 2006) was an 11-year-old boy who was in a facility for "acting out" and for aggressive behavior. He was proud that he belonged to a gang. His deviant behavior was initiated and maintained through continual support from his gang peers, *and* through the strong reaction and sanctioned labels provided by the staff at the facility. He was seen as a deviant, as a delinquent, and he did little to convince the facility otherwise. It was not until new labels were created for Rick that he was able to eventually construct a new identity. Through art, Rick was able to create a new label, with a more appropriate and healthy self-appraisal.

Rick constantly "tagged" his gang moniker on the unit walls in which he was housed. As there was a rule against displaying gang insignias, let alone writing on the walls, he frequently got in trouble with the facility's staff. He became angry when the graffiti was washed off the walls; he at times attacked those who did so. Rick perceived this as a disrespectful act, reflecting that the staff did not accept who he was.

After several other similar interactions, a deal was made with Rick after receiving permission from the unit administrator. He was first reminded of the institution's regulations. However, he was then told that he could do the gang tags on separate paper but he had to keep them in his desk drawer. He also had to promise that he would not hang the drawings up. He agreed to this, and he spent several afternoons drawing quietly with pencils on white paper. Each drawing was meticulously completed. After completing several of these drawings, it was then suggested that instead of illustrating his gang's name, he was asked to do a drawing of the name his gang called him. Eventually, the drawing evolved into an embellishment of his real name. These he would show proudly, and they would be hung on the wall in his room. By the time he left the unit, he was more compliant with staff directives and less aggressive than before. Through this process, Rick was validated, forming a self-label that was deemed "acceptable." Concurrently, his behavior was altered to conform to social norms. Simultaneously, his own concept of self was strengthened, he developed a healthier self-appraisal, and he saw himself as an individual within a different societal context.

The art therapy process provides a means to interrupt the cycles of deviance and delinquency by strengthening a sense of self; providing an avenue to express negative emotions in an acceptable and appropriate manner; creating new meanings; and tapping into empathic responses (Gussak 1997, 2004; Gussak et al. 2003). While it is common to believe that the client creates an art piece with little thought to the viewer, all artists take into account what the viewer may think of the result:

> ... [I]t is crucial that, by and large, people act with the anticipated reactions of others in mind. This implies that artists create their work, at least in part, by anticipating how other people will respond, emotionally and cognitively, to what they do. (Becker 1982, p. 200)

Even when the artist creates an image with hostile content, he or she may be doing it as a means to "attack" the viewer. However, art is an acceptable way to express hostility and the therapist can use the pictures to promote acceptance and success. As sessions continue, the client understands that these images, and by extension the client himself, are accepted. Once a client feels validated, the images may begin to evolve into more complex and thought-inducing products. For example, Kevin (a pseudonym) was a 17-year-old biracial resident of a juvenile detention facility (his mother was white and his father was African-American). Kevin had sporadic contact with his father who was addicted to drugs; he saw his mother often, but she was considered "nice – a pushover" by her son. This split was one of the initial difficulties Kevin had in gaining a damaged self-appraisal; he was often made fun of by the peers on his unit for his lack of racial identity, and he constantly talked about being confused with his own sense of self; "I feel like I don't belong." In a sense, he seemed to be missing a label.

His initial arrest was for drug-related activities, that is, possession, consumption, and distribution. Kevin's drug history was quite extensive while on the streets; even when in the facility, Kevin would use illicit drugs, or would find unique methods to take his medication inappropriately such as "snorting his aspirin." He was recognized by the staff of the facility as being difficult, and was subsequently labeled a deviant. Kevin, for his

part, seemed to reinforce this label through displaying inappropriate attention-seeking behavior; he told his peers on the unit that his sister was kidnapped. He also told them that his family lived in New Orleans and was unreachable after the hurricane that affected the region in the fall of 2005. When staff and peers voiced sympathy and pity, he laughed, letting them know that he was only kidding. He seemed to be trying to develop a new label.

Kevin became angry if he thought he was being wronged or disrespected; generally, his anger just resulted in him grinding his teeth and clenching his jaw. If his anger persisted, it developed into "acting out" behavior, most commonly through verbal abuse and threats"; several times his angry outbursts and threats resulted in days added to his sentence.

He enjoyed doing art, but initially drew images that were inappropriate and against the facility rules, such as gang symbols. He did enjoy working with the art therapists of the facility, using the opportunity to articulate personal issues. However, initially he had some difficulties expressing himself such as when asked to write and draw an advertisement about whom he was, focusing on self-identity. He was unable to complete it, and became quite frustrated, demonstrating the difficulty of not having a clear label for oneself. Nevertheless, he was able to build a strong rapport with an art therapist.

After approximately 7 months in the facility, Kevin completed Fig. 1, a black-and-white painting of a large dragon attacking a tiny person; the stick-person is ineffectively shooting the dragon with a bow and arrow.

Art Therapy. Fig. 1 *A large dragon*, by Kevin

After he completed it, he told the art therapist – intern from the Florida State University Graduate Art Therapy Program – that he was the dragon, specifically representing what he is like when he gets angry. He indicated, "When I get angry, it's like I grow horns." He pointed out what the individual components of the drawing represent – the white on the tips of the horn is hate, as is the white part of the stomach. The white part (hate) in his stomach comes out his mouth past his tongue, and gets vomited out, which he pointed out manifests into cursing and acting out. Yet, the art piece is hopeful – he said the gray area in his head is new, it is where he is working out his anger, and that the round shape around his head is the shield he puts up to protect him from the projectiles that the stick figure is shooting at him. Although he was somewhat unclear on whom the stick figure was, it was most likely "a peer who was kissing up with the staff." He did not provide any more information, but seemed satisfied with how the image expressed how he felt.

Kevin was able to process this piece with the art therapist, who accepted what Kevin said and consequently accepted him. This piece seemed to represent a turning point for Kevin, one where he began to use the art process to express himself, where he saw his work validated by someone else; as a result, he demonstrated an authentic representation of himself without fear of rejection.

Kevin of course did not demonstrate a complete reformation, and he still at times made inappropriate decisions. For example, after he discovered that he would be leaving the facility soon, he wrote up a "hit list" of all the people he was going to kill, complete with dates and location. However, it became clear that he did this as a means to extend his sentence; he told the art therapist that he was afraid to leave, as his parents were not effective in providing for him and that he was reluctant to go back to the streets, back to his gang. The art therapist was able to work on Kevin's ability to work through these feelings through the art, and develop options rather than extending his stay at the facility. In short, Kevin felt validated by the art therapist and by the art-making process, and was subsequently able to begin altering his own self-appraisal.

In Rick's and Kevin's cases, the art process was used to initiate the reversal of negative labeling and poor self-appraisal. What became evident is that not only

can the art process facilitate change in an individual, but it can also facilitate change of a group label.

Changing a Group Label

Art therapy sessions were conducted in a special need, behaviorally focused school in a poor, rural section of the Florida panhandle. The school provided education to approximately 60 students, ranging in age from 12 to 18. The students were primarily African-American; they were placed in this institution after they were removed from their previous schools for severe deviant behavior, including assault, drug violations, and larceny; many of the students either belonged to street gangs, or were gang wannabes. Many of the students were territorial and were strongly aligned with their school district, even when they denigrated the school and the teachers from which they came. Although the students were placed in this school to avoid juvenile jail time, many of the students were still in the court system, awaiting sentences for various violations. Because these students were from different schools within this particular county, there were often conflicts based on these territorial issues. The teachers and behavioral specialists were taught conflict management, and there was a security guard and often a county sheriff on campus. Since the majority of the all of the students were seen in art therapy sessions, the students attended the groups in the class groups they were already put in; thus, the participants saw the session as "just another class." The group members were seen throughout the school year, unless the student was removed from the school to do some time in a juvenile correctional facility, or were deemed appropriate enough to return to the public school.

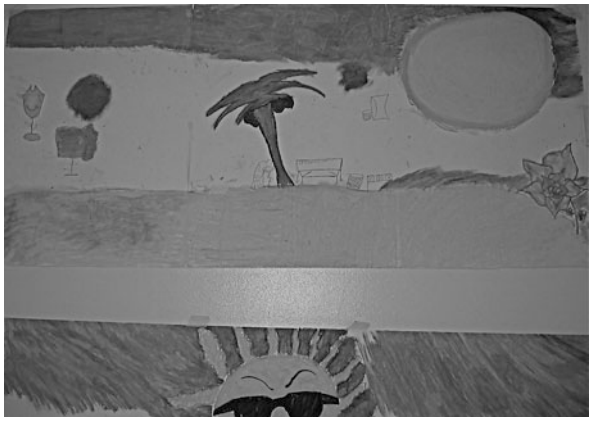
Throughout the year, the art activities generally focused on individual tasks, addressing anger management, problem solving, and socialization skills. Rarely could the students work together to produce a group project; some of the older students were able to construct simple group paper sculptures, or take part in a pass-around drawing, but these activities were infrequently attempted. It took a long time for a rapport to be built with the students, and even then, it was tentative at best. However, 10 weeks before the end of the school year, it was announced to all the students that they would all participate in a mural that would be painted directly on the activities room wall. All of the students became excited about the idea of painting on a wall and they agreed to the established rules of the group. These rules generally focused on appropriate behavior, decrease in aggression toward others in the group, follow directions, respect each others' space while painting, and respect the materials; and of course, the most important one – respect the art therapist, and listen to what he had to say. They understood that if these rules were broken the offender could not return to the mural. They readily agreed.

Because there were approximately 60 students in various groups, a system was established in which they would all plan, organize, and work on the mural while in their respective collectives, rather than together all at once. Although this approach would have some drawbacks, including the possibility that something they were working on in one session may be altered prior to the next, it was believed that the drawbacks were far outweighed by the need for safety. They were all told about the possibility of something they worked on would be painted over, but were told that as it was a group mural, it belonged to all the students at the school, and they all had the right to make changes. Again, they surprisingly, if not begrudgingly, agreed to this, and proceeded.

The first step was to design the mural that would go on the selected walls. Each group of six to ten students was provided butcher-block paper, and was told to draw a scene of their choice using oil pastels, colored pencils, and markers. From these drawings, the art therapists and faculty would look for consistencies and discuss with all of the group members what the final theme would be on the wall. Surprisingly, all five groups drew a beach scene without knowing what the other groups drew; there were differences, such as one had a palm tree, one had an overlarge sun with sunglasses (Fig. 2), or one had a hut with a man fishing off a pier.

However, the consistency made planning the mural theme easy.

During the course of the year, the participants singled out several students as artistic. The drawings were roughly outlined on the walls by the art therapist, his art therapy student intern from the Florida State University Graduate Art Therapy Program, and two of these students. The initial drawing was kept a simple outline with few details to provide flexibility for the participants. For the next 6 weeks, all of the students painted the mural, making many changes, painting and



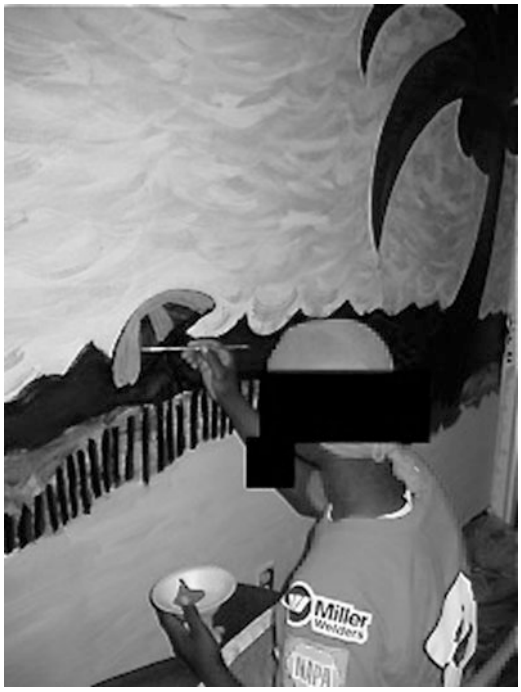
Art Therapy. Fig. 2 Mural ideas

Art Therapy. Fig. 3 Students working on beach scene mural

repainting various details, and ultimately covering the walls with a large extended beach scene (Figs. 3–6).

Creating the mural was not entirely free of difficulties. Three of the participants were asked to leave the groups, and there were times, despite previous discussions and warnings, when several of them became upset at what they had completed previously were changed. There were days where there was much cajoling to get them to focus on the task, and overall, redirection became the norm. However, these difficulties were eclipsed by the successes.

Most of the participants, regardless of their territorial affiliations or prior difficulties were able to work together. One student, who up until the creation of this mural was obstinate, aggressive, and hostile, became a leader, offering to help some of the younger students,



Art Therapy. Fig. 4 Student working on beach scene mural

Art Therapy. Fig. 5 A beach scene mural

and would stick around and help the art therapists clean up after. If others became belligerent, he would often talk with them to get them to calm down.

Many of the students claimed ownership, even when their contribution was as simple as painting the beige tones for the sand; this ownership was encouraged. At one point, one of the participants began painting his name and a stylized lettering of the town in which he came, possibly evident of gang relations; his peer, one that he was close to, told him to stop it, and

Art Therapy. Fig. 6 A beach scene mural

brought it to the attention of the art therapist. With only a little resistance, the offender repainted the section. He was also reassured when told that all the names of the participants would be on the mural. The students proudly showed their work to the faculty and staff, who in turn greatly complimented their efforts and the finished product.

Overall, the mural activity proved successful in creating a new interaction that provided some initial steps in reversing the labeling. Those who participated developed a sense of pride and identity in an activity that was not only acceptable, but also encouraged, by the faculty and parents. The participants' self-appraisals were more positive, as seen by their pride in displaying their work, and their eagerness to have their name included on the mural. Granted, this one project did not reverse what years of societal, familial, and institutional interactions have instilled, but it did provide a glimpse of the power that the art may have in helping reverse the deviant label by increasing self-esteem and a sense of acceptance within societal norms.

Conclusion

Through social interactions, people are labeled. Through these labels, the roles of social participants are defined, including adolescents who are branded deviant or delinquent. Such labels are accordingly maintained through self-appraisals, making it difficult to break the cycle that can eventually be reinforced through institutionalization. The art therapist has unique tools that can design new interactions and aid in relabeling people, validating and reinforcing new behaviors and identities, and can assist in reversing the labels associated with deviance and delinquency. In turn, a positive self-appraisal can be established and can ultimately end the cycle of the deviant identity.

References

Bartusch, D. J., & Matsueda, R. L. (1996). Gender, reflected appraisals, and labeling: A cross-group test of an interactionist theory of delinquency. *Social Forces, 75*(1), 145–176.

Becker, H. S. (1963/1991). *Outsiders: Studies in the sociology of deviance.* New York: Free Press.

Becker, H. S. (1982). *Art worlds.* Berkeley: University of California Press.

Blumer, H. (1969). *Symbolic interactionism: Perspective and method.* Berkeley: University of California Press.

Brownfield, D., & Thompson, K. (2005). Self-concept and delinquency: The effects of reflected appraisals by parents and peers. *Western Criminology Review, 6*(1), 22–29.

Cloward, R. A., & Ohlin, L. E. (2001). Illegitimate means and delinquent subcultures. In B. R. E. Wright & R. B. McNeal Jr. (Eds.), *Boundaries: Readings in deviance, crime and criminal justice* (pp. 359–380). Boston: Pearson Custom Publishing.

Cooley, C. H. (1964). *Human nature and the social order.* New York: Schocken Books.

Decker, S. H., & Van Winkle, B. (1996). *Life in the gang: Family, friends, and violence.* Cambridge: Cambridge University Press.

Dewey, J. (1930). *Human nature and conduct: An introduction to social psychology.* New York: The Modern Library.

Dryfoos, J. G. (1996). Adolescents at risk: Shaping programs to fit the need. *The Journal of Negro Education, 65*(1), 5–18.

Gussak, D. (1997). Breaking through barriers: Art therapy in prisons. In D. Gussak & E. Virshup (Eds.), *Drawing time: Art therapy in prisons and other correctional settings* (pp. 1–11). Chicago: Magnolia Street Publishers.

Gussak, D. (2004). A pilot research study on the efficacy of art therapy with prison inmates. *The Arts in Psychotherapy, 31*(4), 245–259.

Gussak, D. (2006). Symbolic Interactionism, aggression and art therapy. In F. Kaplan (Ed.), *Art Therapy and Social Action* (pp. 142–156). London: Jessica Kingsley.

Gussak, D., Chapman, L., Van Duinan, T., & Rosal, M. (2003). *Plenary session: Witnessing aggression and violence – responding creatively.* Paper presented at the annual conference of The American Art Therapy Association, Chicago.

Hagan, J. (2001). Seven approaches to the definition of crime and deviance. In B. R. E. Wright & R. B. McNeal Jr. (Eds.), *Boundaries: Readings in deviance, crime and criminal justice* (pp. 1–12). Boston: Pearson Custom Publishing.

Hall, P. (1979). Structuring symbolic interaction: Communication and power. *Communication Yearbook, 4*, 49–60.

Huff, C. R. (Ed.). (1990). *Gangs in America.* Newbury: Sage.

Jackson, R. K., & McBride, W. D. (1986). *Understanding street gangs.* Placerville: Custom Publishing.

James, W. (1890). *The principles of psychology (Vols. 1 and 2).* New York: Henry Holt and Company.

Lauer, R. H., & Handel, W. H. (1977). *The theory and application of symbolic interactionism.* Boston: Houghton Mifflin.
Mead, G. H. (1964). *On social psychology.* Chicago: University of Chicago Press.
Padilla, F. M. (1992). *The gang as an American enterprise.* New Brunswick: Rutgers University Press.
Paternoster, R., & Iovanni, L. (1989). The labeling perspective and delinquency: An elaboration of the theory and assessment of the evidence. *Justice Quarterly, 6*, 359–394.
Rouncefield, P. (2003). *Robert Merton-Strain theory.* (http://www.homestead.com/rouncefield/files/a_soc_dev_14.htm) Retrieved August 28, 2010.
Rubington, E., & Weinberg, M. (2002). *Deviance: The interactionist perspective.* Boston: Allyn and Bacon.
Sagarin, E. (1975). *Deviants and deviance: An introduction to the study of disvalued people and behavior.* New York: Praeger Publishers.
Spector, M., & Kitsuse, J. I. (1973). Social problems: A re-formulation. *Social Problems, 21*(3), 145–159.
Zimbardo, P. (2007). *The Lucifer effect: Understanding how good people turn evil.* New York: Random House.
Zimbardo, P. G., Haney, C., Banks, W. C., & Jaffe, D. (1973, April 8). The mind is a formidable jailer: A Pirandellian prison. *The New York Times Magazine, Section 6*, pp. 38, ff.

Asperger Syndrome

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Overview

Asperger Syndrome (AS) is the term used to describe individuals who have qualitative impairments of reciprocal social interaction in association with rigid and ritualistic patterns of behavior, including a tendency to circumscribed patterns of interest, of developmental onset. The term "Asperger Syndrome" was coined by Lorna Wing in 1981 (Wing 1981) in recognition of the similarities in presentation between a group of children and young adults that she had clinically characterized and those children who had been described by Hans Asperger in 1944 (Asperger 1944) as having "autistic psychopathy" (or in translation, "autistic personality disorder," Asperger 1944 translated in Frith 1991). Since Wing's paper, interest in Asperger Syndrome has increased enormously, as attested by the fact that over 1,000 publications have been devoted to it, and following its subsequent inclusion in both ICD-10 (International Classification of Diseases, Volume 10, WHO 1992) and DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Volume IV, APA 1994, where it is referred to as Asperger's Disorder) it is used increasingly as a diagnostic label.

In Wing's (1981) and subsequent publications, the similarities to another developmental disorder, "infantile autism," first described by Leo Kanner in 1943 (Kanner 1943), have been highlighted. At the time of publication of Wing's paper, infantile autism was already an established diagnosis, and, while Asperger believed that there were some essential differences between Kanner's autism and his "autistic psychopathy," any such differences have since been de-emphasized such that Asperger Syndrome and autism are now conceptualized as forming a spectrum of disorders, the "autism spectrum disorders" (ASDs). This relationship is far from universally accepted, and a significant number of articles continue to be published attempting to understand the relationship between these two disorders. The discussion of Asperger Syndrome begins with a consideration of this literature, before describing its clinical features and the wider considerations such as its epidemiology, etiology, management, and prognosis.

Conceptual Issues

In 1944, Hans Asperger, a pediatrician working in Vienna, described four boys aged between 6 and 11 years who all presented with a similar pattern of strengths and vulnerabilities (Asperger 1944 translated in Frith 1991). Most notably, although they were cognitively and verbally reasonably high functioning, they all exhibited severe difficulties interacting socially with others. Their interactions tended to be one sided, and they would give long-winded accounts on topics that represented areas of special interest to them, without appreciating the nonverbal cues given by their interlocutor. The interests that they would talk about tended to be precocious, the pursuit of which would occupy much of their time to the detriment of social interaction and everyday functional adaptive skills. Asperger coined the term "autistic psychopathy" after Bleuler (for a discussion of Bleuler's concept of "autism" see Kuhn and Cahn 2004), who used this term to describe the severe egocentrism seen in schizophrenia.

Over the next 4 decades, the wider English-speaking scientific community failed to recognize this syndrome,

until, in 1981, Lorna Wing described 34 children and adults who presented in a similar way to those described by Asperger (Wing 1981). She coined the term Asperger Syndrome, and, although many of the features she described were the same, she did make a number of modifications. Notably, while Asperger did not feel that the condition could be recognized prior to the age of 3 years, Wing suggested a number of socio-communicative impairments might be evident as early as the first 24 months of life. In doing so, she drew parallels with another developmental syndrome, namely infantile autism. This developmental syndrome had been described 1 year prior to Asperger's by Leo Kanner. In his paper on "autistic disturbances of affective contact," he described 11 mostly preschool children with poor or absent social relatedness associated with profound communication impairments and resistance to changes in their environments. However, unlike Asperger's cases, Kanner's children were cognitively less able and either mute or profoundly limited in even basic communication skills. Nonetheless, the marked similarities between the two, as highlighted by Wing (1981), has subsequently resulted in the two being conceptualized as forming an "autism spectrum of disorders" (ASDs).

While Kanner's autism was first operationalized and included in third edition of the DSM and the ninth volume of the ICD, it was not until the subsequent edition of both of these diagnostic manuals that the syndrome described by Asperger was fully recognized. Nonetheless, following Wing's 1981 paper, clinicians, eager to diagnose the syndrome and study it further, made attempts to provide formal criteria by which it could be diagnosed. However, the more widely recognized of these, most notably those of Gillberg (Gillberg and Gillberg 1989) and Tantam (Tantam 1988), appeared to be based primarily on characteristics described by Wing rather than Asperger. Moreover, yet other clinicians tended to use the term "Asperger Syndrome" to describe "milder" cases of autism (Szatmari et al. 1989), or use to term synonymously with Pervasive Developmental Disorder Not Otherwise Specified (PDDNOS, Towbin 2005). This DSM-IV term, similar to ICD-10's "atypical autism," refers to subthreshold cases of autism spectrum disorders.

With the subsequent inclusion of Asperger Syndrome in the ICD-10 and DSM-IV, the core criteria were operationalized, alleviating some of the inconsistencies and at last allowing clinicians and researchers to have a benchmark for diagnosis. Purposefully avoiding nosologic heterogeneity, the ICD-10 and later DSM-IV both adopted the same set of criteria. In particular, drawing on Wing's conceptualization, the core diagnostic impairments included qualitative impairments of social interaction (as for autism) and restricted and repetitive stereotyped patterns of behavior (as for autism). Also included in the definition was the requirement for no history of significant delay in spoken language, and self-help and adaptive behavior at a level consistent with normal development. In addition to this "onset rule" was the "hierarchy rule," whereby if an individual met the diagnosis for autism, that should take precedence. Of note, both systems did not include the need for any specific communication disorder, even though Asperger, and later Wing and others, all identified a characteristic pattern of communication impairments.

Since achieving nosological status, the concept of Asperger Syndrome has continued to be plagued by some of the old confusions and controversies. Perhaps most strikingly, a huge body of scientific literature has been devoted to understanding the relationship between Kanner's autism vis-à-vis Asperger Syndrome, but the similar diagnostic criteria used for both confounds any investigation to establish external validity, and therefore most research to date is difficult to interpret because of the tautological issues that undermine its conclusions (Klin et al. 2005). Nonetheless, some significant group differences have been found, notably with AS subjects having relatively higher Verbal IQ (VIQ) scores than Performance IQ (PIQ), with the reverse pattern among those with High Functioning Autism (HFA) (see Klin et al. 2005 for a detailed discussion).

Other studies examining the external validity of AS vis-à-vis HFA have been published, but the results are far from conclusive (discussed in Klin et al. 2005). It is likely that these differences between research studies may be, in part at least, a result of the methodologies used, with broad criteria failing to identify differences, whereas more narrow criteria being more successful at identifying differences. Until more robust data are available, which can measure differences independent on the criteria used to assign group membership, it is difficult to draw any conclusions. For example, it may be that the impairments of communication and/or

motor control represent a core defining feature of AS, and may form the basis of distinguishing it as a unique orthogonal dimension of social disability. Their de-emphasis is unfortunate, and it is anticipated that in subsequent revisions of the ICD and DSM manuals they may either be reintroduced or, its validity remaining doubtful, Asperger Syndrome may be dropped altogether.

Another controversy has focused on whether it is possible to make a diagnosis of AS given the onset and precedence rules. Some have argued that as a result of these rules making a diagnosis is a near impossibility, although research has not consistently supported this view (Woodbury-Smith et al. 2005). Indeed, a reanalysis of the cases originally seen by Asperger also demonstrated that the majority would remain in the AS category (Hippler and Klicpera 2003).

These issues notwithstanding, another area of confusion has been with the relationship between Asperger Syndrome and a number of other labels that have emerged from different clinical specialisms to describe individuals with a primary disturbance of social interaction, such as Nonverbal Learning Disability (NLD) from neuropsychology, semantic–pragmatic disorder from psycholinguistics, and schizoid disorder of childhood from psychiatry. A full discussion of this is beyond the scope of this essay, but certain points of similarity and difference between each of these and Asperger Syndrome can be made. First, schizoid personality of childhood, as described by Wolff and colleagues, is also characterized by a primary social impairment and marked abnormalities of empathy, but the outcome for individuals with this label is significantly better than among those with AS (Wolff 2000). Moreover, the relationship between schizoid personality of childhood and schizophrenia, discussed below, is stronger than it is for AS (Wolff 2000). It may be that schizoid disorder of childhood forms part of the "schizophrenia spectrum of disorders," in which case ASDs and schizophrenias are likely to have overlapping genetic risk, due to single genes of major effect (Kilpinen et al. 2008), or perhaps at the level of some shared common genetic variants.

Secondly, NLD, which refers to a pattern of neuropsychological strengths in the verbal domains relative to vulnerabilities in the nonverbal domains, is also associated with difficulties in social interaction as well as a number of other cognitive difficulties (Rourke and Tsatsanis 2000). Strikingly, research has identified that many cases with AS will show a profile of "NLD" on standardized tests of general intelligence, but such a relationship is far from universal (Klin et al. 2005). And finally, in semantic–pragmatic disorder, individuals have preserved formal language skills, but their everyday use, in terms of semantics and pragmatics, is impaired (Bishop 1989). The focus in this disorder is on pragmatics of communication impairment as the primary impairment, and again its relationship to AS remains unclear. Until the relationship between these two disorders and AS is more fully understood, and while they remain absent from the ICD-10 or DSM-IV, a diagnosis of autism or Asperger Syndrome should always be given if an individual meets the diagnostic criteria for either of these disorders. One important reason for this is that accessing services is dependent on diagnostic category, and so recognized labels should be used where possible.

Assessment

The clinical assessment for Asperger's, as with any of the other ASDs, requires both an informant-based history as well as direct observation and interaction with the child. The informant needs to be a person who knew the individual during their formative years and can thereby provide a detailed developmental history. The semi-structured Autism Diagnostic Interview-Revised (ADI-R, Lord et al. 1994) can facilitate the gathering of information, but in itself merely approximates good clinical judgment. The ADI-R does not have an algorithm for AS specifically, and so therefore some interpretation of the scores obtained is required. Conversely, another semi-structured interview, the Diagnostic Interview for Social and Communication Disorder (DISCO) (Wing et al. 2002), does contain an algorithm, but in other respects is very similar to the ADI-R. There are no pathognomonic signs or symptoms and no laboratory investigations that facilitate the diagnostic process. Being a syndrome, it is diagnosed according to a threshold number of symptoms in the key diagnostic domains, and in accordance also with specific exclusion criteria. As discussed previously, diagnosis is based on demonstration of impairments in the domains of social interaction and communication, and ritualistic and repetitive patterns of behavior.

It should be noted that the symptoms are the same as those for autism, yet there is no requirement for any

impairments in the communication domain, and, unlike autistic disorder, there should be no developmental abnormality during the first 3 years. Indeed, diagnosis should be deferred until it is certain that language has developed normally (in simple terms, the acquisition of phrase speech before 36 months). IQ also needs to be in the normal range (IQ $>$ 70). Although there are no communication items in the diagnostic criteria, abnormalities are often seen in the volume, rate, and prosody of speech. Individuals with AS may speak in a loud, monotone voice, or in staccato like explosive bursts that are difficult to follow.

The diagnostic assessment should also include a screen to rule out medical, genetic, and psychiatric illness. As will become apparent later in this essay, the prevalence of mental health problems among individuals with Asperger Syndrome is significant, and not always straightforward to diagnose. There are no recommended laboratory or routine genetic tests, unless the history indicates a specific reason for doing so. For example, a history of seizure-like episodes would be an indication for sleep deprived video telemetry, and dysmorphology or associated medical problems would prompt a referral to medical genetics. Neuropsychological assessments may be indicated to identify particular cognitive strengths and vulnerabilities to aid in management planning. In addition, it is usual to obtain a measure of adaptive function to determine strengths and weaknesses in everyday functioning.

In addition to the informant interview, it is also important to observe the children directly, and interact with them to assess their social and communication skills, including their use of eye-to-eye contact, conventional gestures, play preferences, and joint attention skills as well as their speech, socio-emotional reciprocity, and information regarding their interests and friendships. This can be facilitated using the Autism Diagnostic Observation Schedule (ADOS-G, Lord et al. 2000), which structures the interaction and consists of four modules, the choice of which is guided by the child (or adults) level of language and intellectual functioning. The diagnostic algorithm is not specific for Asperger's, but again, it should only be used to complement the clinical assessment rather than diagnostically in an absolute sense.

Much attention has been focused on early screening for ASDs, as evidence points toward early intervention improving outcome (Rogers and Vismara 2008). Certain early signs, such as failure to use eye contact or to share positive emotion, reduced or atypical play, and repetitive motor movements at 12–18 months, have been described as predicting the subsequent development of autism (Zwaigenbaum et al. 2009), although most of these early abnormalities are likely to be absent in children who go on to develop Asperger Syndrome (simply by definition, according to the "onset rule"). Notwithstanding this inference, parents of children with AS will often retrospectively identify some early "clues," although these are unlikely to be of the severity seen in autism, and, therefore, early screening initiatives may be less likely to pick up AS cases. It is certainly true that AS is not diagnosed until later than autism (Howlin and Asgharian 1999), and this is likely to reflect the subtlety of presentation in the early years. However, it is also unclear whether the early intervention programs, generally Applied Behavior Analysis (ABA) in nature, will benefit those who are higher functioning.

There are a number of screening instruments that can be used among children for whom a diagnosis is suspected (see Woodbury-Smith and Volkmar 2009), including the Autism Screening Questionnaire (ASQ), and the Autism Quotient (AQ). There are also other relatively brief measures purported to be more useful in the diagnostic process, including the Asperger Syndrome Diagnostic Scale (ASDS), Gilliam Asperger Diagnostic Scale (GADS), and Asperger Syndrome Diagnostic Interview (ASDI). Most of these have data on validity and reliability and are commercially available.

Epidemiology

The exact prevalence of Asperger Syndrome is unclear. Many studies have measured the prevalence of ASDs, but failed to specifically look at the prevalence of Asperger Syndrome. A meta-analysis of epidemiologic studies of the prevalence of all autism spectrum disorders (Fombonne 2009) has provided an estimate of 60/10,000, making ASD one of the most frequent childhood neurodevelopmental disorders. Median prevalence for autistic disorder is 20/10,000 and for AS is 6/10,000. It should also be noted that approximately 25% of individuals with ASDs function intellectually in the normal range, from which it can be estimated that the median prevalence for all higher-functioning

autism spectrum disorders is approximately 14/10,000, thereby indicating that the prevalence of HFA and AS are roughly equal.

In terms of gender ratio, males are affected four times more commonly than females when all ASDs are considered, but this ratio changes across the spectrum of intelligence. Among those who are most impaired, the ratio approximates unity, while among the higher-functioning individuals the ratio increases to as many as 9:1, favoring males.

It is important to point out that much of the epidemiological data are from Western countries, and so little is known about the prevalence of AS worldwide.

Etiology

Much of the research literature has focused on investigating the etiology of autism as a spectrum of disorders, and, as such, research on the etiology of Asperger syndrome as an entity in its own right is relatively scant. Considered as part of the autism spectrum, however, there is now a vast knowledgebase concerning its genetic basis and the pathophysiological factors mediating the clinical syndrome.

Genetics

The twin and family studies from the 1970s and the 1980s provided the first clues to the strongly genetic basis for ASDs, with twin studies leading to heritability estimates in the region of 90% (for a discussion see Rutter 2005). In support of overlap between AS and other autistic disorders, family studies of AS probands have found a higher incidence of AS and autism in first-degree relatives, and families of autism probands have similarly found higher rates of both AS and autism in first-degree relatives (Ghaziuddin 2005; Volkmar et al. 1998). At a genetic level at least, therefore, there seems to be evidence of overlapping genes responsible for the ASDs. Subsequent efforts have been focused on linkage methods to identify regions harboring susceptibility, and association studies to test for candidacy of key genes. Although no candidate genes have been identified, linkage to a number of regions has been demonstrated (for review see Abrahams and Geschwind 2008).

Only one study has performed a genomewide scan on AS probands (Ylisaukko-oja et al. 2004). Seventeen Finnish families ascertained for Asperger Syndrome with a strictly defined phenotype were examined for evidence of genetic linkage. Evidence for linkage was highest on chromosome 1q21-q22 (maximum 2-point lod score of 3.58), followed by chromosome 3p24-p14 (maximum 2-point lod score of 2.50), and chromosome 13q31-q33 (maximum 2-point lod score of 1.59). This same group also identified association between AS and DISC1 (Kilpinen et al. 2008). The DISC1 gene is of particular interest as it is also associated with schizophrenia, which perhaps might explain the increased rates of schizophrenia seen in Wolff's series of cases discussed above.

More recent studies have focused on identifying Copy Number Variants (CNVs) among ASD samples, and many de novo and rare inherited CNVs have been demonstrated (Marshall et al. 2008). However, the pattern of genetics seems to support the possibility that these CNVs are more common among "syndromal" cases of autism (i.e., those cases with associated medical problems and congenital birth defects), many of whom will have comorbid intellectual impairment and therefore will not meet the diagnostic criteria for Asperger Syndrome (Marshall et al. 2008). A theory is emerging, in which simplex nonfamilial cases of ASD are the result of de novo or rare inherited CNVs, and tend to be "syndromal" in presentation, whereas multiplex cases are associated with higher familiality, and are due to common variants (Virkud et al. 2009).

Environmental

Much has been written on the alleged association between MMR and Thimerosal and autism. The research has consistently found an absence of any relationship, and therefore it seems reasonable to conclude that there is no relationship between either of these disorders and the development of an ASD, including Asperger's (DeStefano 2007). There is no currently evidence of a role for any other environmental risk factor and the subsequent development of an ASD.

Pathophysiology

The mechanism by which the genetic and environmental risk factors mediate the clinical presentation in ASDs is not well understood. Nonetheless, there has been a number of consistent neuropsychological and neuroimaging findings that help to explain some of AS's clinical manifestations.

The neuropsychological literature has identified a consistent pattern of weakness in certain cognitive

domains across the autism spectrum, although with some evidence of group differences when high functioning cases of autism are compared with AS. Summarizing the major findings (see Klin et al. 2005 for a detailed discussion), while individuals with autism of all abilities seem to have metalizing difficulties, this finding is less consistent among those with AS independent of intellectual ability. Similarly, verbal memory appears to differentiate between autism and AS cases. In contrast, executive function appears to be impaired across the spectrum. Finally, as discussed previously, there is some evidence of VIQ/PIQ differences between autism and AS. However, it remains unclear how these neuropsychological findings translate into the everyday clinical vulnerabilities.

A number of studies have also examined the autism spectrum using MRI or CT (Schultz et al. 2000; Williams and Minshew 2007). Unfortunately, most of these studies have collapsed samples into "ASDs," and so the extent to which those who meet criteria for Asperger Syndrome perform similar to their peers with autism is uncertain. Nonetheless, several case studies or small case series have revealed temporal lobe pathology, occipital hypoperfusion, and abnormalities in other cortical areas. More recent findings include subcortical abnormalities (Hardan et al. 2008), and evidence that children with HFA had smaller gray matter volumes in predominantly fronto-pallidal regions, while children with Asperger's had less gray matter in mainly bilateral caudate and left thalamus, again suggesting evidence for HFA/AS distinction (McAlonan et al. 2008).

Functional neuroimaging has also been conducted among individuals with ASDs, in which brain function is measured during the performance of social experimental paradigms (Schultz et al. 2000; Williams and Minshew 2007). The studies that included people with AS demonstrated, along with their autism counterparts, abnormal patterns of "activation" in the inferior temporal sulcus (the fusiform face area), areas of frontal dysactivation during the performance of neuropsychological tests, and functional integration abnormalities in the amygdala and parahippocampal gyrus.

Finally, while there are no postmortem studies of individuals specifically with AS, a small number have examined more impaired individuals with ASDs and demonstrated hypoplasia of the cerebellar vermis, and reduced numbers in the cerebellar Purkinje cell layer, although the significance of these findings is far from clear (Kemper and Bauman 2002).

Several challenges remain before a better understanding of brain-behavior mechanisms is achieved. First, studies of just AS probands need to be conducted and replicated rather than simply assuming that the findings among individuals with ASDs are directly applicable to those with AS. Secondly, experimental paradigms that are more ecologically valid need to be devised and included in studies. And finally, larger sample sizes need to be studied through multisite collaboration.

Theoretical Perspectives on Asperger Syndrome

Theoretical models concerning the ASDs have been put forward over the years, but no one model has been able to explain the complete clinical phenotype in terms of an overriding theory. For example, following the early theory of mind studies, a fundamental biological disorder of the "theory of mind mechanism" was suggested (Baron-Cohen et al. 1985). Unfortunately, neither did this theory explain all the clinical features, nor was it applicable to those higher-functioning individuals, many of whom had AS and most of whom were not impaired on the domain of theory of mind. Another early theory was that of "absent central coherence," in which it was argued that people with ASDs lacked a biologically based ability to perceive a gestalt, instead viewing the world in terms of its parts rather than its "whole" (Happe 2005). This theory, too, failed to make sense of the complete phenotype.

A more recent set of papers has considered ASDs as resulting from a disturbance of neural connectivity, either as a surfeit or as a deficit (Belmonte et al. 2004). The idea of connectivity refers to the "signal to noise" ratio of incoming sensory stimuli. It is too soon to draw any conclusions regarding the applicability of this theory, not least because of the ongoing confusion with terminology (including differentiating local from global connectivity), but this may prove to be a useful theoretical basis on which to draw together the diverse autism literature (Belmonte et al. 2004).

One final theory warrants special attention due to its particular relevance to those who are higher functioning, and this is the "extreme male brain" theory of autism (Baron-Cohen 2005, 2009). This theory

postulates that autism represents an extreme of the male brain, whereby traits more common among males, such as relatively poor socio-empathic reciprocity associated with relative strengths in the domain of systemizing, are exaggerated among those with ASDs. This idea is certainly supported by the neuropsychological literature (Baron-Cohen 2009), but further research is required.

Finally, an intriguing body of work has used eye-tracking technology to attempt to see and measure what a person with autism focuses on in their environment. In a sophisticated set of studies, the focus of gaze among infants and adults with autism was measured while they were watching socially loaded stimuli (Klin et al. 2005). Strikingly, while normal controls focused on the emotionally laden eye region among the protagonists in the scene, the ASD individuals instead looked at mouths and other environmental stimuli. An "enactive mind" theory is postulated, which takes into consideration the motivational process of attending to social stimuli, and, crucially, the interaction between an individual and his or her environment. Moreover, it is suggested that, as a consequence, brain development and its "specialization" is influenced by these experiences.

Comorbidity

The comorbidity among those with ASDs is extremely high for both other developmental disorders, such as tic disorders (Ringman and Jankovic 2000) and Attention Deficit Hyperactivity Disorder (ADHD) (Sturm et al. 2004), and also more specific mental health problems, such as depression and anxiety (Woodbury-Smith and Volkmar 2009). Among those who are higher functioning, many of whom will meet the criteria for AS, the prevalence of depression and anxiety disorders appears to be significantly higher than in the general population, with the highest rates of depression and anxiety in adolescents and young adults. This is presumably due to the increased social demands associated with these ages. The prevalence of psychotic and bipolar disorders appears to be low, and similar findings have been shown across the autism spectrum. Interestingly, however, one study found a significant number of people with ASDs, both higher and lower functioning, exhibiting catatonia, although the significance of this is uncertain (Wing and Shah 2000). Another study has suggested a genetic relationship between ASDs and bipolar disorder, although there is not strong evidence in favor of this from the most recent clinical and genetic studies.

Diagnosing anxiety and depressive disorders is relatively straightforward among those who are higher functioning, and standard criteria as set out in ICD and DSM should be adhered to as far as possible. Some verbal higher-functioning individuals may have difficulty verbalizing their emotions, and such "alexithymia" has been demonstrated to be a possible endophenotype for ASDs (Szatmari et al. 2008). Therefore, the clinician must pay close attention to other symptomatology in such individuals that may indicate possible mental disorder. For example, any change in behavior in association with life events might raise the suspicion. Moreover, relatively minor life events may be of particular significance to people with ASDs and so changes in behavior following, for example, disruption of routines or changes in the environment, must be given particular attention.

A particular challenge is with the diagnosis of obsessive-compulsive disorder (OCD), even among those who are higher functioning and verbal. Ritualistic and repetitive patterns of behavior and resistance to change in routine and environment form an integral part of the autism spectrum, and so differentiating these from OCD symptomatology needs a special degree of expertise. The differentiation is ultimately based upon whether the symptoms observed are "egosyntonic" (as would be seen in ASDs), or "egodystonic" (as would be seen in OCDs), but such a differentiation is almost never possible in younger children and those of any age who are nonverbal. In such cases, diagnosis will be based on a combination of "index of suspicion" combined with response to appropriate psychopharmacological management (discussed below).

Management

Although there is no treatment that will "cure" AS, there are a number of behavioral and other psychological techniques that are likely to have a positive impact on the developmental trajectory of the disorder, and certain psychopharmacological options for the management of behavioral disorders and mental health problems. Among individuals who are higher functioning, the aim should be to engender social inclusion, facilitate the developmental of independent living

skills, and manage behavior and mental health comorbidity. Unfortunately, there has been little research focusing on the effectiveness of treatment programs for higher-functioning individuals with ASDs, but a number of recommendations can be made (for a detailed discussion of treatment see, e.g., Klin and Volkmar 2000; Woodbury-Smith and Volkmar 2009).

Psychological Interventions

Ideally, children with AS should be integrated with their peers, from whom they will be able to learn social and communicative skills, and with whom they can practice these skills. Such a process can be facilitated by developing a peer support system, either through "buddying," or developing a "circle of friends" (Woodbury-Smith and Volkmar 2009). Additional explicit social training can also be useful, particularly in the form of social skills groups, whereby skills can be taught in a group setting. Such a group may involve peer modeling and role-play, including the use of social stories (Quirmbach et al. 2009). There is emerging evidence of the effectiveness of such groups (Tse et al. 2007). In addition, there are commercially available computer packages, such as *Mind Reading: An Interactive Guide to Human Emotions* (Golan and Baron-Cohen 2006), that some children may be more responsive too. One issue with training such as this, though, is ensuring that the skills taught are generalized and put into practice. Ongoing support and supervision is often required for several months after the group has finished to achieve this.

Consideration also needs to be given to the educational context. Children with AS, although cognitively able, often have a scatter of scores, such that although general intelligence may be in the normal range, other skills, such as processing speed or working memory, may be disproportionately impaired and impact on performance. Because of this, it is often necessary for children with AS to be allowed extra time to complete tasks. Similarly, some individuals with AS may have a pattern of nonverbal learning disability, with relatively preserved language and rote verbal memory skills masking underlying deficits in visuospatial perception, attention, and memory. Such children are likely to benefit from explicit verbal-based information taught in a "parts to whole" manner, whereby instructions are presented in a concrete and sequenced manner. It is therefore often necessary for children with a diagnosis of AS to undergo detailed psychoeducational assessment to identify their pattern of strengths and vulnerabilities to inform strategies that will form part of an Individualized Education Plan (IEP).

Individuals with AS will often show a relative impairment of their adaptive skills, such that attending to their daily living and self care requirements is only completed as a result of prompting by a parental figure, or as part of highly structured routine. An absence of skills in this area is therefore often most noticeable when the person transitions to independent living, and therefore anticipating such difficulties and providing the necessary intervention and support to practice these skills in a different setting is important.

Psychological interventions may also be necessary for those individuals who present with challenging behaviors or mental health problems. The principles of applied behavior analysis, which is based on operant conditioning, can be useful in such situations, whereby positive reinforcement contingencies are associated with certain behaviors, thereby allowing behavior to be molded in a positive fashion. Alternatively, if problematic behaviors occur in particular contexts, mutually agreed problem-solving strategies can be explicitly taught as a "social script." Finally, cognitive-behavior strategies may also be useful for individuals with anxiety and mood disorders (Wood et al. 2009). It is particularly important not to assume that the individual will be able to learn cognitive strategies in a similar way to their neurotypical peers, and therefore special attention will need to be given to their neuropsychological profile.

Psychopharmacological Interventions

There is no medication that modifies the core phenotypic features or the course of the disorder. However, medication is indicated for the treatment of (i) irritability that may arise as a direct consequence of the disorder, (ii) ritualistic patterns of behavior, or (iii) comorbid mental health problems. In general, studies examining the efficacy and safety profile of medication use among individuals with AS is rather limited, but it seems reasonable to assume that the response may be similar to their general population peers. Importantly, however, individuals with ASDs may be more sensitive to medication and it is therefore sensible to start with low doses and titrate slowly, carefully monitoring both desired effects and for the emergence of unwanted

effects. Unless indicated, the research discussed in the following sections includes subjects with ASDs, and none has specifically focused on effectiveness among those with AS.

Symptomatology Arising from the Core Phenotype

Irritability: The atypical antipsychotic, risperidone, is licensed for the management of "irritability" in autism, with support for its effectiveness and safety derived from large double-blind placebo-controlled studies (Research Units on Pediatric Psychopharmacology [RUPP] 2002). Although "irritability" is a nonspecific term, it is derived from the Aberrant Behavior Checklist (ABC), and, as a symptom, is often seen among children and adults with ASDs. It is important that before initiating any treatment, an understanding of the environmental triggers is sought and modified where possible. Medication should only be used where such modification has not had any positive impact, or, alternatively, where its use will facilitate the use of psychological interventions. Certain stimuli, such as social overstimulation, boredom, disruption to routine, and communication breakdown are common causes of irritability. However, the possibility of mental illness should also be considered for a person presenting with irritability, and so detailed psychiatric evaluation is indicated in a person with an ASD presenting with irritability.

Ritualistic behavior: Rigidity and ritualistic patterns of behavior are often seen in AS and form an integral feature of the disorder. While the SSRIs are effective for the management of ritualistic behavior that forms part of a diagnosis of OCD, their efficacy for such symptoms in ASDs is less clear (Woodbury-Smith and Volkmar 2009). In one randomized controlled study, fluvoxamine was shown to be superior to placebo in reducing repetitive behaviors among adults (McDougle et al. 1996). However, in an open-label trial of fluvoxamine among children, several experienced serious side effects, including hyperactivity and irritability (Martin et al. 2003). It was shown that such symptoms could be avoided with a lower starting dose and slower titration. Another randomized controlled study showed fluoxetine had superior efficacy compared with placebo in treating repetitive behaviors among children with ASDs, with no significant side effects reported (Hollander et al. 2005). Noteworthy also is the fact that the tricyclic antidepressant clomipramine has also been shown to be effective in two randomized controlled studies (Gordon et al. 1993; McDougle et al. 1992).

Inattention/motor restlessness: Symptoms of inattention and motor restlessness and/or hyperactivity are also seen among children and adults with ASDs. There is now emerging evidence for the effectiveness and safety of the psychostimulant methylphenidate (Research Units on Pediatric Psychopharmacology 2005; Jahromi et al. 2009), but the risk of side effects, including stereotypies, tics, and social withdrawal, appears to be relatively high in this group (Handen et al. 2000).

Comorbid Mental Illness

There are no clinical trials at the time of writing that specifically evaluate the effectiveness of standard antidepressant and anxiolytic psychopharmacology among those with Asperger Syndrome. There is no reason to believe that the efficacy of these agents would be any less than in the general population, and so until specific guidelines are available, cautious prescribing is appropriate. There is some evidence, albeit from small open-label studies, for the effectiveness of sertraline and citalopram for symptoms of anxiety among adolescents with ASDs, and for clomipramine for the treatment of "obsessive-compulsive symptoms" (Woodbury-Smith and Volkmar 2009).

Outcome

There is now evidence that as many as 20% "grow out" of their disorder, failing to meet the diagnostic criteria in adulthood, with many others showing significant improvement of their symptoms (Seltzer et al. 2003). In contrast, however, studies investigating social adjustment, in terms of employment, opportunities, and friendship, have indicated that significant social exclusion and poor quality of life are prevalent among adults with Asperger Syndrome (Tantam 2003). The challenge now is to identify the factors that predict outcome among individuals with AS, and to develop strategies to facilitate better social inclusion.

Asperger Syndrome and the Criminal Justice System

Since the widespread recognition of Asperger's in the 1980s, a small yet significant number of publications have been concerned with the apparent association

between AS and problematic behaviors, including behavior of an unlawful and/or antisocial nature (Dein and Woodbury-Smith 2010). Indeed, Asperger himself had described antisocial behavior and "autistic acts of malice" among his cases, but this feature was discarded from subsequent descriptions of the core features. Nonetheless, Wing too described "bizarre antisocial acts" (Wing 1981, p. 116), and since then case studies have continued to be published that describe individuals with AS who have engaged in unlawful behaviors.

Although the exact prevalence of such behavior is unknown, it is certainly rare in community samples, and there appears to be no pattern to the type of offense (Dein and Woodbury-Smith 2010). It is possible that among some, the risk is the consequence of comorbidity for antisocial personality disorder, although in some cases it may be the result of the pursuit of a circumscribed interest (Dein and Woodbury-Smith 2010). It is important not to overinflate this potential risk, but, on the other hand, it is vital to recognize this as a potential complication to ensure that individuals with AS are given the necessary support as they negotiate the criminal justice system (Dein and Woodbury-Smith 2010).

Future Directions

At this stage, the future of Asperger Syndrome as a clinical entity is under close scrutiny as revisions of the DSM are considered. Research is crucially needed, therefore, that establishes its external validity without the tautological limitations that have characterized much of the research so far. This will facilitate a growing understanding of its core features and relationships to other disorders, including pervasive developmental disorders and the schizophrenia spectrum. Finally, further expertise is required in the diagnosis and management of complications of AS, including mental health comorbidity, and more wider strategies are required to facilitate better social inclusion throughout the life span.

Cross-References

► Autism Spectrum Disorders

References

Abrahams, B. S., & Geschwind, D. H. (2008). Advances in autism genetics: On the threshold of a new neurobiology. *Nature Reviews. Genetics, 9*(5), 341–355.

American Psychiatric Association (APA). (1994). *DSM-IV diagnostic and statistical manual of mental disorders* (4th ed.). Washington: American Psychiatric Association.

Asperger, H. (1944). Die "autistichen Psychopathen" im Kindersalter. *Archive fur psychiatrie und Nervenkrankheiten, 117*, 76–136.

Baron-Cohen, S. (2005). Testing the extreme male brain (EMB) theory of autism: Let the data speak for themselves. *Cognitive Neuropsychiatry, 10*(1), 77–81.

Baron-Cohen, S. (2009). Autism: The empathizing–systemizing (E–S) theory. *Annals of the New York Academy of Sciences, 1156*, 68–80.

Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a "theory of mind"? *Cognition, 21*(1), 37–46.

Belmonte, M. K., Cook, E. H., Jr., Anderson, G. M., Rubenstein, J. L. R., Greenough, W. T., Beckel-Mitchener, A., et al. (2004). Autism as a disorder of neural information processing: Directions for research and targets for therapy. *Molecular Psychiatry, 9*(7), 646–663.

Bishop, D. V. (1989). Autism, Asperger's syndrome and semantic-pragmatic disorder: Where are the boundaries? Special Issue: Autism. *The British Journal of Disorders of Communication, 24*(2), 107–121.

Dein, K., & Woodbury-Smith, M. (2010). Asperger syndrome and criminal behaviour. *Advances in Psychiatric Treatment, 16*, 37–43.

DeStefano, F. (2007). Vaccines and autism: Evidence does not support a causal association. *Clinical Pharmacology and Therapeutics, 82*(6), 756–759.

Fombonne, E. (2009). Epidemiology of pervasive developmental disorders. *Pediatric Research, 65*(6), 591–598.

Frith, U. (1991). *Autism and Asperger's syndrome*. Cambridge: Cambridge University Press.

Ghaziuddin, M. (2005). A family history study of Asperger syndrome. *Journal of Autism and Developmental Disorders, 35*, 177–182.

Gillberg, I. C., & Gillberg, C. (1989). Asperger syndrome – some epidemiological considerations: A research note. *Journal of Child Psychology and Psychiatry, 30*(4), 631–638.

Golan, O., & Baron-Cohen, S. (2006). Systemizing empathy: Teaching adults with Asperger syndrome or high-functioning autism to recognize complex emotions using interactive multimedia. *Developmental Psychopathology, 18*(2), 591–617.

Gordon, C. T., State, R. C., Nelson, J. E., Hamburger, S. D., et al. (1993). A double-blind comparison of clomipramine, desipramine, and placebo in the treatment of autistic disorder. *Archives of General Psychiatry, 50*(6), 441–447.

Handen, B., Johnson, C., & Lubetsky, M. (2000). Efficacy of methylphenidate among children with autism and symptoms of attention-deficit hyperactivity disorder. *Journal of Autism and Developmental Disorders, 30*(3), 245–255.

Happe, F. (2005). The weak central coherence account of autism. In F. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (pp. 640–649). Hoboken: Wiley.

Hardan, A. Y., Girgis, R. R., Adams, J., Gilbert, A. R., Melhem, N. M., Keshavan, M. S., et al. (2008). Brief report: Abnormal association between the thalamus and brain size in Asperger's disorder. *Journal of Autism and Developmental Disorders, 38*(2), 390–394.

Hippler, K., & Klicpera, C. (2003). A retrospective analysis of the clinical case records of 'autistic psychopaths' diagnosed by

Hans Asperger and his team at the University Children's Hospital, Vienna. *Philosophical Transactions of the Royal Society of London – Series B: Biological Sciences, 358*(1430), 291–301.

Hollander, E., Phillips, A., Chaplin, W., Zagursky, K., Novotny, S., Wasserman, S., et al. (2005). A placebo controlled crossover trial of liquid fluoxetine on repetitive behaviors in childhood and adolescent autism. *Neuropsychopharmacology, 30*(3), 582–589.

Howlin, P., & Asgharian, A. (1999). The diagnosis of autism and Asperger syndrome: Findings from a survey of 770 families. *Developmental Medicine and Child Neurology, 41*(12), 834–839.

Jahromi, L. B., Kasari, C. L., McCracken, J. T., Lee, L. S., Aman, M. G., McDougle, C. J., et al. (2009). Positive effects of methylphenidate on social communication and self-regulation in children with pervasive developmental disorders and hyperactivity. *Journal of Autism and Developmental Disorders, 39*(3), 395–404.

Kanner, L. (1943). Autistic disturbances of affective contact. *The Nervous Child, 2*, 217–250.

Kemper, T. L., & Bauman, M. L. (2002). Neuropathology of infantile autism. *Molecular Psychiatry, 7*(Suppl 2), S12–S13.

Kilpinen, H., Ylisaukko-Oja, T., Hennah, W., Palo, O. M., Varilo, T., Vanhala, R., et al. (2008). Association of DISC1 with autism and Asperger syndrome. *Molecular Psychiatry, 13*(2), 187–196.

Klin, A., Jones, W., Schultz, R. T., & Volkmar, F. R. (2005). The enactive mind from actions to cognition: Lessons from autism. In F. R. Volkmar, A. Klin, R. Paul, & D. J. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (3rd ed., Vol. 1, pp. 682–703). Hoboken: Wiley.

Klin, A., McPartland, J., & Volkmar, F. R. (2005). Asperger syndrome. In F. R. Volkmar, A. Klin, R. Paul, & D. J. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (3rd ed., Vol. 1, pp. 88–125). Hoboken: Wiley.

Klin, A., & Volkmar, F. R. (2000). Treatment and intervention guidelines for individuals with Asperger syndrome. In A. Klin & F. R. Volkmar (Eds.), *Asperger syndrome* (pp. 340–366). New York: Guilford Press.

Kuhn, R., & Cahn, C. H. (2004). Eugen Bleuler's concepts of psychopathology. *History of Psychiatry, 15*(59,Pt3), 361.

Lord, C., Risi, S., Lambrecht, L., Cook, E. H., Leventhal, B. L., DiLavore, P. C., et al. (2000). The autism diagnostic observation schedule – generic: A standard measure of social and communication deficits associated with the spectrum of autism. *Journal of Autism and Developmental Disorders, 30*(3), 205–223.

Lord, C., Rutter, M., & Le Couteur, A. (1994). Autism diagnostic interview – revised: A revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders. *Journal of Autism and Developmental Disorders, 24*(5), 659–685.

Marshall, C. R., Noor, A., Vincent, J. B., Lionel, A. C., Feuk, L., Skaug, J., et al. (2008). Structural variation of chromosomes in autism spectrum disorder. *American Journal of Human Genetics, 82*(2), 477–488.

Martin, A., Koenig, K., Anderson, G. M., & Scahill, L. (2003). Low-dose fluvoxamine treatment of children and adolescents with pervasive developmental disorders: A prospective, open-label study. *Journal of Autism and Developmental Disorders, 33*(1), 77–85.

McAlonan, G. M., Suckling, J., Wong, N., Cheung, V., Lienenkaemper, N., Cheung, C., et al. (2008). Distinct patterns of grey matter abnormality in high-functioning autism and Asperger's syndrome. *Journal of Child Psychology and Psychiatry, 49*(12), 1287–1295.

McDougle, C. J., Naylor, S. T., Cohen, D. J., Volkmar, F. R., Heninger, G. R., & Price, L. H. (1996). A double-blind, placebo-controlled study of fluvoxamine in adults with autistic disorder (comment). *Archives of General Psychiatry, 53*(11), 1001–1008.

McDougle, C. J., Price, L. H., Volkmar, F. R., Goodman, W. K., Ward-O'Brien, D., Nielsen, J., et al. (1992). Clomipramine in autism: Preliminary evidence of efficacy (comment). *Journal of the American Academy of Child and Adolescent Psychiatry, 31*(4), 746–750.

Quirmbach, L. M., Lincoln, A. J., Feinberg-Gizzo, M. J., Ingersoll, B. R., & Andrews, S. M. (2009). Social stories: Mechanisms of effectiveness in increasing game play skills in children diagnosed with autism spectrum disorder using a pretest posttest repeated measures randomized control group design. *Journal of Autism and Developmental Disorders, 39*(2), 299–321.

Research Units on Pediatric Psychopharmacology Autism, N. (2002). Risperidone in children with autism and serious behavioral problems. *The New England Journal of Medicine, 347*, 314–321.

Research Units on pediatric Psychopharmacology. (2005). Randomized, controlled, crossover trial of methylphenidate in pervasive developmental disorders with hyperactivity. *Archives of General Psychiatry, 62*(11), 1266–1274.

Ringman, J. M., & Jankovic, J. (2000). Occurrence of tics in Asperger's syndrome and autistic disorder. *Journal of Child Neurology, 15*(6), 394–400.

Rogers, S. J., & Vismara, L. A. (2008). Evidence-based comprehensive treatments for early autism. *Journal of Clinical Child and Adolescent Psychology, 37*(1), 8–38.

Rourke, B. P., & Tsatsanis, K. D. (2000). Nonverbal learning disabilities and Asperger syndrome. In A. Klin & F. R. Volkmar (Eds.), *Asperger syndrome* (pp. 231–253). New York: Guilford Press.

Rutter, M. (2005). Genetic influences and autism. In F. R. Volkmar, A. Klin, R. Paul, & D. J. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (3rd ed., Vol. 1, pp. 425–452). Hoboken: Wiley.

Schultz, R. T., Romanski, L. M., & Tsatsanis, K. D. (2000). Neurofunctional models of autistic disorder and Asperger syndrome: Clues from neuroimaging. In A. Klin & F. R. Volkmar (Eds.), *Asperger syndrome* (pp. 172–209). New York: Guilford Press.

Seltzer, M. M., Krauss, M. W., Shattuck, P. T., Orsmond, G., Swe, A., & Lord, C. (2003). The symptoms of autism spectrum disorders in adolescence and adulthood. *Journal of Autism and Developmental Disorders, 33*(6), 565–581.

Sturm, H., Fernell, E., & Gillberg, C. (2004). Autism spectrum disorders in children with normal intellectual levels: Associated impairments and subgroups (see comment). *Developmental Medicine and Child Neurology, 46*(7), 444–447.

Szatmari, P., Bartolucci, G., & Bremner, R. (1989). Asperger's syndrome and autism: Comparison of early history and outcome. *Developmental Medicine and Child Neurology, 31*(6), 709–720.

Szatmari, P., Georgiades, S., Duku, E., Zwaigenbaum, L., Goldberg, J., & Bennett, T. (2008). Alexithymia in parents of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 38*(10), 1859–1865.

Tantam, D. (1988). Annotation: Asperger's syndrome. *Journal of Child Psychology and Psychiatry, 29*(3), 245–255.

Tantam, D. (2003). The challenge of adolescents and adults with Asperger syndrome. *Child and Adolescent Psychiatric Clinics of North America, 12*(1), 143–163. vii–viii.

Towbin, K. E. (2005). Pervasive developmental disorder not otherwise specified. In F. R. Volkmar, A. Klin, R. Paul, & D. J. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (3rd ed., Vol. 1, pp. 165–200). Hoboken: Wiley.

Tse, J., Strulovitch, J., Tagalakis, V., Meng, L., & Fombonne, E. (2007). Social skills training for adolescents with Asperger syndrome and high-functioning autism. *Journal of Autism and Developmental Disorders, 37*(10), 1960–1968.

Virkud, Y. V., Todd, R. D., Abbacchi, A. M., Zhang, Y., & Constantino, J. N. (2009). Familial aggregation of quantitative autistic traits in multiplex versus simplex autism. *American Journal of Medical Genetics. Part B: Neuropsychiatric Genetics, 150B*(3), 328–334.

Volkmar, F. R., Klin, A., & Pauls, D. (1998). Nosological and genetic aspects of Asperger syndrome. *Journal of Autism and Developmental Disorders, 28*(5), 457–463.

Williams, D. L., & Minshew, N. J. (2007). Understanding autism and related disorders: What has imaging taught us? *Neuroimaging Clinics of North America, 17*(4), 495–509. ix.

Wing, L. (1981). Asperger's syndrome: A clinical account. *Psychological Medicine, 11*(1), 115–129.

Wing, L., Leekam, S. R., Libby, S. J., Gould, J., & Larcombe, M. (2002). The diagnostic interview for social and communication disorders: Background, inter-rater reliability and clinical use. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 43*(3), 307–325.

Wing, L., & Shah, A. (2000). Catatonia in autistic spectrum disorders. *The British Journal of Psychiatry, 176*, 357–362.

Wolff, S. (2000). Schizoid personality in childhood and Asperger syndrome. In A. Klin & F. R. Volkmar (Eds.), *Asperger syndrome* (pp. 278–305). New York: Guilford Press.

Wood, J. J., Drahota, A., Sze, K., Har, K., Chiu, A., & Langer, D. A. (2009). Cognitive behavioral therapy for anxiety in children with autism spectrum disorders: A randomized, controlled trial. *Journal of Child Psychology and Psychiatry, 50*(3), 224–234.

Woodbury-Smith, M., Klin, A., & Volkmar, F. (2005). Asperger's syndrome: A comparison of clinical diagnoses and those made according to the ICD-10 and DSM-IV. *Journal of Autism and Developmental Disorders, 35*(2), 235–240.

Woodbury-Smith, M. R., & Volkmar, F. R. (2009). Asperger syndrome. *European Child and Adolescent Psychiatry, 18*(1), 2–11.

World Health Organization (WHO). (1992). *ICD-10 international statistical classification of diseases and related health problems* (10th ed.). Geneva: WHO.

Ylisaukko-oja, T., Wendt, T-v., Kempas, E., Sarenius, S., Varilo, T., von Wendt, L., et al. (2004). Genome-wide scan for loci of Asperger syndrome. *Molecular Psychiatry, 9*(2), 161–168.

Zwaigenbaum, L., Bryson, S., Lord, C., Rogers, S., Carter, A., Carver, L., et al. (2009). Clinical assessment and management of toddlers with suspected autism spectrum disorder: Insights from studies of high-risk infants. *Pediatrics, 123*(5), 1383–1391.

Assault

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Assault can be either a crime against a person (a criminal offense) or a tort (a civil offense). Popular discussions as well as legal actions relating to assault, however, typically refer to the criminal form. Although definitions can vary considerably, including the penalties associated with it, assault typically involves a "simple assault" (attempting to cause or purposely, knowingly, or recklessly causing bodily injury to another) or an aggravated assault (negligently causing bodily injury to another with a deadly weapon). Particularly when relating to adolescents, the category of sexual assault is of significance, as it can encompass forcible rape, forcible sodomy, sexual assault with an object, and forcible fondling.

In the United States, official crime reports reveal simple assault to be the most common of all crimes against persons and to be the most common crime against adolescents (see, e.g., Rand 2009). Simple assault constitutes 41% of all offenses against juveniles, and sexual assault is the crime with the highest percentage of juvenile victims (see Finkelhor and Ormod 2000). Importantly, nearly half of all assaults are committed by offenders having a domestic relationship with the victim (i.e., the victim and offender are connected by a family or romantic relationship) (Snyder and McCurley 2008). Although official reports have been criticized for having important limitations (e.g., they rely on reports to law enforcement), they do highlight the important point that available evidence supports the conclusion that juveniles are more likely to be victimized than any other age group and that much of juveniles' victimization involves a wide variety of assaults.

References

Finkelhor, D., & Ormod, R. (2000). *Characteristics of crimes against juveniles*. U.S. Department of Justice, Office of Justice programs, office of juvenile justice and delinquency prevention. U.S. Department of Justice, Washington, DC. Retrieved December 29, 2010, from http://www.ncjrs.gov/pdffiles1/ojjdp/179034.pdf

Rand, M. R. (2009). *Criminal victimization*, 2008. Bureau of Justice Statistics. Washington, DC, Bureau of Justice Statistics. Retrieved December 29, 2010, from http://bjs.ojp.usdoj.gov/content/pub/pdf/cv08.pdf

Snyder, H. N., & McCurley, C. (2008). *Domestic assaults by juvenile offenders*. U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention. U.S. Department of Justice, Washington, DC. Retrieved December 29, 2010, from http://www.ncvc.org/tvp/main.aspx?dbID=DB_Assault120#N_4

Assimilation

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Overview

Assimilation can be defined as the changes in values and behaviors that individuals make as they gradually adopt the cultural values of the dominant society. Assimilation theorists suggest that cultural change results from interactions between dominant and nondominant groups, and such change is commonly characterized by nondominant groups taking on the language, laws, religions, norms, and behaviors of the dominant group. The assimilation process has functioned throughout the history of the United States, influencing public policy, interpersonal relationships, and intergenerational interactions. Social science researchers have found that, as assimilation progresses from low assimilation levels to high assimilation levels, youth violence and alcohol use increases, especially binge drinking and alcohol use by females; psychiatric problems proliferate; and family cohesion decreases. Important mental health differences between foreign-born immigrants and US-born Latinos and Asians have been identified, suggesting that assimilation is a significant risk factor for health and mental health problems.

Background and Definitions

Assimilation can be defined as the changes in values and behaviors that individuals make as they gradually adopt the cultural values of the dominant society (Smith and Guerra 2006). These unidirectional assimilation trends suggest that cultural change results from interactions between dominant and nondominant groups, and such change is commonly characterized by nondominant groups taking on the language, laws, religions, norms, and behaviors of the dominant group (Berry 1998; Castro et al. 1996). The common notion of assimilation entails persons losing their culture-of-origin identity to identify with the dominant cultural group. That is, a movement from culture-of-origin involvement to assimilation, which a person completes by swapping the positive relationship with his or her culture-of-origin for a positive affiliation with the dominant culture. The assimilation model assumes that an individual sheds his or her culture-of-origin in an attempt to take on the values, beliefs, behaviors, and perceptions of the target culture (Chun et al. 2003). The individual perceives the dominant culture as more desirable whereas the culture-of-origin is seen as inferior. In this model, change is "directional, unilinear, nonreversible, and continuous" (Suarez-Orozco and Suarez-Orozco 2001, p. 8).

The central issue after different cultures come into close contact becomes who has power and control, and how will the dominant group use that power? Usually, the nondominant group is strongly influenced to take on norms, values, and behaviors espoused by the dominant group. The intensity and negativity associated with this process is largely contingent upon the receptivity of the dominant group in welcoming, respecting, or stigmatizing the nondominant group (Berry 1998). Further, the attitudes held by the dominant group influence the adoption of policies for relating to the nondominant group. For example, dominant group attitudes toward immigrants that influence policy are reflected in the debate in the United States regarding whether English should be declared the country's official language.

The experience of European immigrants appeared to fit the unidirectional assimilation framework that has been the dominant way of conceptualizing acculturation change (de Anda 1984; Feliciano 2001). In the earliest days of the United States, colonists saw the new republic as the beginning of a utopian society where

immigrants from different nationalities, cultures, and races blended into an idealized American "new man."

> . . .whence came all these people? They are a mixture of English, Scotch, Irish, French, Dutch, Germans, and Swedes. . . What, then, is the American, this new man? He is neither a European nor the descendant of a European; hence that strange mixture of blood, which you will find in no other country. I could point out to you a family whose grandfather was an Englishman, whose wife was Dutch, whose son married a French woman, and whose present four sons have now four wives of different nations. He is an American, who, leaving behind him all his ancient prejudices and manners, receives new ones from the new mode of life he has embraced, the new government he obeys, and the new rank he holds. . . . The Americans were once scattered all over Europe; here they are incorporated into one of the finest systems of population which has ever appeared. (St. John de Crevecoeur 1782).

The concept of the great American "melting pot" was popularized in the era spanning from 1890 to 1910, which was the height of a large wave of European immigrants that flooded into the United States. After the premiere of the play *The Melting Pot* by Israel Zangwill in 1908, the term "melting pot" came into general use. In the play, Zangwill's immigrant protagonist declared,

> Understand that America is God's Crucible, the great Melting-Pot where all the races of Europe are melting and reforming! A fig for your feuds and vendettas! Germans and Frenchmen, Irishmen and Englishmen, Jews and Russians—into the Crucible with you all! God is making the American.

The melting pot theory of ethnic relations focused on American identity created by the assimilation and intermarriage of White immigrant groups. In the play, the Jewish Russian protagonist falls in love with a Christian Russian woman. The couple is able to overcome their differences and celebrate assimilation to new identities within their adopted homeland. The play captured a drama common during this historical period. During the late nineteenth and early twentieth centuries, large numbers of non-Protestant, Southern, and Eastern European immigrants immigrated to the United States, causing concern over how these new groups of Irish, Polish, Italian, and Jewish settlers would mix with the Northern European, often Anglo-Saxon, Protestant majority who no longer thought of themselves as newcomers. These new White settlers were eligible for naturalization under the racially restrictive Naturalization Act of 1790 and had to be integrated in some way. Non-Protestant European immigrant groups such as the Catholic Irish, Italians, and Jews suffered from forms of discrimination but were gradually accepted as "White" American citizens, enjoyed political freedom, and eventually assimilated through intermarriage into the White majority.

There has always been unequal access to the great American melting pot for non-White ethnic and racial minorities. Non-White ethnic and racial minorities, both immigrants and natives, have been barred from full participation in US society as citizens, banned from immigrating, and subjected to oppressive assimilation policies and practices. Assimilation fervor has a long history, dating back to the earliest days of contact between the English settlers and the Native Americans. In 1651, John Eliot, a Puritan minister, started the first "praying town" in Natick, Massachusetts to convert American Indians (primarily the Wampanoag tribe) to Christianity. Those who agreed to forsake their native religion, beliefs, and traditional ways of being in the world to live by Puritan moral codes were promised both eternal life and physical safety.

By 1671, when Wampanoag Chief Massassoit's son Phillip began to fight back against English assimilation pressure; there were only a thousand members of the tribe remaining, and nearly half were dispersed across 14 different praying towns. However, assimilation adaptations and painful conversion experiences were often not enough to allow these cultural groups to peacefully coexist. During the subsequent Indian uprising led by Phillip, Native Americans who were living a Christian life in praying towns were banished, taken to Deer Island in Boston Harbor, and left in the middle of winter without blankets or food. Native Americans were enrolled in tribes and, because they did not have US citizenship until the Indian Citizenship Act of 1924, they were subjected to government policies of enforced cultural assimilation, also termed *Americanization*. Native American children were taken from their families and placed in boarding schools to teach them how to interact in civilized society. African-Americans were also excluded for not being White. Slave owners deliberately broke up families of African slaves so that

they would be easier to control. Even after the Emancipation Proclamation banished slavery and made granted citizenship to African-Americans, intermarriage between Whites and African-Americans was illegal in many US states under anti-miscegenation laws, which continued from 1883 until 1967. Asian immigrants such as Chinese, Japanese, Koreans, and Filipinos were ruled to be non-White and banned from marrying Whites in several states where existing anti-miscegenation laws were expanded to include them. After a number of conflicting rulings in American courts, Punjabis and others from British India were also deemed as non-White. In the late nineteenth and early twentieth centuries, laws such as the Chinese Exclusion Act severely limited or banned immigration of Asians. The Immigration Act of 1924 severely restricted immigration from areas outside Northern and Western Europe.

Assimilation fervor peaks during times of national distress. There was a backlash against German immigrants during World War I. Many Japanese American adults who were imprisoned during World War II tried to discard their ethnic identity and assimilate after the end of the war, attempting to avoid any association, shame, or embarrassment that came from being imprisoned. Attitudes toward non-White immigrants and natives gradually improved after World War II in the second half of the twentieth century. After the successes of the American Civil Rights Movement and the enactment of the Immigration and Nationality Act of 1965, which allowed for a large increase in immigration from Latin America and Asia, intermarriage between White and non-White Americans has been increasing. However, after the terrorist attacks on the World Trade Center on September 11, 2001, assimilationist rhetoric enjoyed a resurgence and remains central to the immigrants' drama of adjusting to life in the United States.

Assimilation theory has been applied in a range of policies and practice situations. For example, English as a Second Language (ESL) programs in which instructors speak only English and policy proposals that declare English to be a state's or country's "official" language have deep roots in assimilationist ideology. In 1998, California voters passed Proposition 227 by a wide margin (61% vs. 39%); now encoded as EC 300–340 of the California Education Code, it requires that all public school instruction be conducted in English. Similarly, Arizona's voters passed Proposition 203 in 2000, which mandates school instruction must be in English and severely limits opportunity for bilingual instruction. Both propositions are examples of the assimilationist Structured English Immersion approach to educating immigrants who are not proficient in English.

Assimilation and Adolescent Health

Over 5 decades of both qualitative and quantitative empirical research have demonstrated the association of assimilation with physical health and mental health status (Organista et al. 2003; Rogler et al. 1991). Many authors hypothesize a link between assimilation and social maladjustment, psychopathology, and substance use (e.g., see Al-Issa and Tousignant 1997; Delgado 1998; Gil et al. 1994; Szapocznik and Kurtines 1980). Examination of the research on adolescent assimilation and health has prompted researchers to conclude that as assimilation progresses from low to high levels, alcohol use increases, especially binge drinking and alcohol use by females; psychiatric problems proliferate; and familism (by definition, familism is an especially strong sense of family cohesion and the cultural emphasis on family life being at the center of a person's world) decreases. Researchers have found important mental health differences between foreign-born Latino immigrants and US-born Latinos. Each of these points is explained in more detail in the sections that follow.

Adolescent Substance Use

Research on the links between assimilation and substance use for Latino adolescents has provided inconsistent results. Some studies have reported that high levels of assimilation were predictive of substance use (Dinh et al. 2002) whereas other research has found the reverse (Carvajal et al. 1997; for reviews see, De La Rosa 2002; Gonzales et al. 2002). Findings of path analyses conducted using longitudinal data from 286 Latino adolescents living in either North Carolina or Arizona (65% foreign born) showed that acculturation stress negatively influenced relationships with family and friends, which in turn, affected adolescent mental health problems and substance use (Buchanan and Smokowski 2009). Acculturation stress was defined by Berry (2006, p. 43) as "a response by people to life events that are rooted in intercultural contact" that is the strain placed on people due to the challenges

inherent in the assimilation process. The key mediators in the pathway from acculturation stress to substance use were parent–adolescent conflict, internalizing, and externalizing problems.

Assimilation is commonly related to markers such as place of birth (termed *nativity*), length of time in the host country, and language facility and use. Research has found that US-born Latino adolescents display levels of alcohol and substance use that are consistently higher than foreign-born Latino adolescents (Gil and Vega 1996; Gil et al. 2000; Vega and Gil 1998). The longer foreign-born adolescents live in the United States, the higher their rates of alcohol or substance use (Gil et al. 2000). Consistent with this finding, other research has shown Latino adolescents who primarily speak Spanish are less likely to use alcohol and drugs than are English-speaking Latino adolescents (Welte and Barnes 1995; Zapata and Katims 1994).

Youth Violence

Most research on assimilation and adolescent health behavior has focused on youth violence and aggressive behavior. Violence is the "intentional use of physical force or power, threatened or actual, against oneself, against another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (Dahlberg and Krug 2002, p. 5). Adolescent *interpersonal violence* includes violence between unrelated youth who have a romantic or intimate relationship (i.e., dating violence) as well as violence between unrelated youth who may or may not know each other in other contexts and environments (i.e., youth violence). Similar to acculturation, adolescent interpersonal violence has been assessed in multiple ways across studies. Dating violence has also been assessed in a variety of ways including verbal, emotional, physical abuse, and sexual assault. Researchers investigating youth violence assess violence involvement using measures such as gang membership, bullying, physical fighting, carrying weapons, verbal threats, aggressive behavior, externalizing symptoms, and serious criminal activity, including homicide or assaults. *Self-directed violence* is a subcategory of violence that includes a person's tendency to intentionally inflict self-harm that may or may not shorten or end life. Measures of suicidal ideation, plans, attempts, and suicide-related deaths are regularly used in this area of inquiry.

In their literature review on acculturation and mental health in Latino youth, Gonzales et al. (2002) identified ten studies that examined the link between acculturation and youth violence. Of those studies, six showed that higher assimilation levels were associated with increased delinquency and stronger relationships with antisocial peers (Buriel et al. 1982; Fridrich and Flannery 1995; Samaniego and Gonzales 1999; Vega et al. 1993, 1995; Wall et al. 1993). This association between assimilation and aggressive behavior surfaced across studies even when simple proxy measures of acculturation (e.g., generational status, language use, or nativity) were used as markers for more complex acculturation processes (Gonzales et al. 2002). In contrast, two other studies did not find a link between assimilation and aggression problems (Dumka et al. 1997; Knight et al. 1994); however, these investigations examined the variables of parent assimilation and adolescent externalizing behavior, and found no significant relationship between those variables.

Recently, Smokowski et al. (2009a) conducted a comprehensive review of studies examining the relationship of Latino adolescent acculturation and youth violence. Among the studies reviewed, the association between acculturation and youth violence outcomes was examined in 16 studies, of which 13 examined the perpetration of violence as the outcome, and 3 examined fear of being a victim of violence as the outcome. The results favored a significant positive association between assimilation and youth violence. Nine of the 13 studies reported that higher adolescent assimilation (defined in different ways by time in the United States, generational status, language use, or with multidimensional measures) was associated with increased youth violence (Brook et al. 1998; Bui and Thongniramol 2005; Buriel et al. 1982; Dinh et al. 2002; Samaniego and Gonzales 1999; Schwartz et al. 2007; Sommers et al. 1993; Smokowski and Bacallao 2006; Vega et al. 1993, 1995).

Alongside studies on the deleterious effects of assimilation, research efforts have focused on stress precipitated by adapting to a new cultural system. Acculturation stress has been linked to several negative outcomes for Latino youth, including mental health difficulties (Gil et al. 1994), suicidal ideation (Hovey and King 1996), delinquent behavior (Samaniego and Gonzales 1999), and behavior problems (Vega et al. 1995). Researchers have consistently demonstrated

links among acculturation stressors such as language conflicts, perceived discrimination, parent–adolescent culture conflicts, parent–child acculturation gaps, and negative health behavior in youth.

Studying the link between acculturation and delinquent behavior in a sample of 1,843 Cuban boys and girls, Vega et al. (1993) found a significant positive correlation of .35 between acculturation conflicts and self-derogation. Correlations range from −1 to 1 with higher positive or negative numbers signaling a stronger relationship. In this study, there was a moderately strong tendency for children who experienced acculturation conflicts to also report self-derogation. These researchers showed that conflicts inherent in the acculturation process were associated with a child's increased negative feelings about himself or herself. Perceived discrimination displayed a statistically significant interaction with peer approval of drugs and with self-derogation. Language conflicts also had a significant interaction with teacher derogation and peer drug use. Moreover, this study found that acculturation factors, such as perceptions of discrimination and language conflicts, had a direct positive association with delinquent behavior. This association between acculturation factors and delinquent behavior was stronger than the impact family variables had on delinquent behavior.

In an investigation of acculturation stressors with a predominantly Cuban sample of 2,360 adolescents living in Miami, Vega et al. (1995) found that only language conflicts were associated with adolescents' total behavior problems as reported by the parents and teachers of immigrant adolescents. However, among the US-born Cuban youth, language conflicts, perceived discrimination, and perceptions of a closed society were associated with behavior problems reported by teachers. Further, Dinh et al. (2002), whose assessment of 330 Latino youth represents one of the few longitudinal studies in this area, found higher levels of assimilation predicted statistically significant higher levels of problem-behavior proneness (i.e., gang involvement, peer delinquency, conduct problems) in youth reports collected 1 year after baseline measures were established. Similarly, Ebin et al. (2001) reported that high assimilation levels had a positive association with problem behaviors and a negative association with health-promoting behaviors. Foreign-born Latino adolescents exhibited fewer problem behaviors than US-born Latino adolescents. Likewise, Coatsworth et al. (2005) studied the acculturation patterns of 315 Latino youth, and found that when compared to less-assimilated participants high-assimilated youth reported significantly greater numbers of problem behaviors and less parental monitoring.

Recently, the coauthors of this essay and their colleague Roderick Rose conducted one of the most exhaustive analyses of acculturation and Latino adolescent aggressive behavior (Smokowski et al. 2009b). In this study, reports of youths' aggressive behavior were obtained from both the adolescents and their parents. This multiple reporter approach provides more confidence in the study results because the results are more objective than relying on the accuracy of adolescents' reports alone. Further, the research project followed the sample of 256 adolescents for 2 years, collecting data every 6 months. This approach provided four data points to use in examining the longitudinal trajectory of aggressive behavior, improving upon the cross-sectional snapshot that many studies have considered in the past.

The overall trajectory of Latino adolescent aggression displayed a statistically significant negative trend best characterized by a quadratic curve. Over time, adolescent aggressive behavior decreased and leveled out near the end of the study period. These analyses delineated significant risk factors related to aggression levels, showing that gender, age, parent-reported acculturation conflicts, and adolescent-reported parent–adolescent conflicts were associated with higher levels of adolescent aggression. Latino adolescents whose parents reported high levels of acculturation conflict displayed higher levels of aggressive behavior at every time point, and although their aggression decreased over time, the levels did not decline as much as those of youth with low levels of acculturation conflict. Parent reports of acculturation conflicts were a significant risk factor associated with more aggressive behavior for foreign-born youth, but not for US-born youth.

Based on 286 foreign-born and US-born adolescents participating in the Latino Acculturation and Health Project (Smokowski et al. in press), perceived discrimination and acculturation conflicts were significantly related to aggressive behavior at baseline. This heightened aggressive behavior led to lower levels of adolescent self-esteem and familism, and higher

internalizing problems (e.g., anxiety and depression), parent–adolescent conflict, and more relationships with delinquent peers 6 months later. The baseline aggression associated with acculturation stressors was also directly connected to increased levels of aggressive behavior 1 year later. In addition to promoting baseline aggression, experiences of perceived discrimination and acculturation conflicts positively predicted parent–adolescent conflict and adolescent substance use 6 months later.

Four research reports were unable to find a significant direct association between assimilation variables and youth violence perpetration (Bird et al. 2006a, b; Carvajal et al. 2002; Gonzales et al. 2006; Schwartz et al. 2007). In a sample of 175 Mexican youth and their mothers living in the Southwestern United States, researchers found the direct relationship between family linguistic acculturation and adolescent conduct problems was not significant. However, the findings showed an indirect relationship was mediated through family conflict (Gonzales et al. 2006). Similarly, self-esteem was found to mediate the relationship between acculturative stress and externalizing symptoms in Latino youth from Michigan (Schwartz et al. 2007). Overall, 85% of existing studies, that is, 12 of 14 studies, on Latino adolescents have shown assimilation or acculturation stress to directly or indirectly predict aggressive behavior.

Nine articles have focused on acculturation and youth violence of Asian/Pacific Islander youth. Four studies included large multiethnic group investigations (Bui and Thongniramol 2005; Shrake and Rhee 2004; Willgerodt and Thompson 2006; Yu et al. 2003). The other five articles (Go and Le 2005; Le and Stockdale 2005, 2008; Le and Wallen 2007; Ngo and Le 2007) analyzed the same sample of 329 Chinese and Southeast Asian youth recruited from two public schools and five community-based organizations in Oakland, California. The majority of the youth in this sample were second-generation status (i.e., US-born), except for Vietnamese youth who were nearly equally divided between first and second generations. In acculturation research, first-generation immigrants are those who were born in a foreign country. Adolescents who were born in the United States and have foreign-born parents are considered second-generation immigrants. Much of what is known about Asian/Pacific Islander youth violence comes from one moderate-sized sample from one city in California. Although it remains important to synthesize this knowledge, caution is clearly warranted in generalizing these findings to the general Asian/Pacific Islander population.

Several themes in the Asian/Pacific Islander youth literature parallel those already described for Latino adolescents. Assimilation, individualism, acculturation stress, and experiencing perceived discrimination remain important risk factors for aggression and violence. Among Filipino youth, second-generation adolescents had significantly higher delinquency than first-generation youth (Willgerodt and Thompson 2006), but there were no differences relative to third-generation age peers. After examining data from 217 Korean American students in Los Angeles, Shrake and Rhee (2004) reported that Korean American adolescents' experience of perceived discrimination showed a strong positive effect on both internalizing (anxiety and depression) and externalizing aggressive problem behaviors. In the sample of 329 Southeast Asian youth from Oakland, Le and Stockdale (2005) found that individualism (used as a measure of assimilation) was positively related to self-reported delinquency, with partial mediation through peer delinquency. Similarly, Ngo and Le (2007) reported that increased levels of assimilation, intergenerational/intercultural conflict, and individualism placed youth at increased risk for serious violence (e.g., aggravated assault, robbery, rape, and gang fights). Assimilation, individualism, and intergenerational/intercultural conflict enhanced the impact of certain stressors (e.g., emotional hardship, physical abuse, and emotional abuse) to predict violent behavior. In a third study using the same sample, acculturative dissonance (a measure of the amount of conflicting cultural messages adolescents experience) was found as significantly predictive of serious violence, with full mediation through peer delinquency (Le and Stockdale 2008).

Why Would High Assimilation Be a Risk Factor?

Various hypotheses have been put forth to explain the relationship among high assimilation, substance use, youth violence, and health and mental health problems. Assimilation theorists interpret findings on these problems as evidence that immigrants are taking on behaviors that are tolerated in the host culture. A behavior adaptation hypothesis helps to explain this

dynamic, stating that assimilating individuals are taking on behaviors that are tolerated, or even supported, by the host society (Castro et al. 1996). For instance, immigrant youth initiate alcohol and substance use to fit into and identify with American peer groups. Women markedly increase their alcohol consumption as traditional Latina gender role constraints against such behavior are eroded (Caetano 1987; Markides et al. 1988; Rogler et al. 1991). Obesity tends to increase as immigrants adopt the dietary habits of the US population, eating fast foods with high saturated fat levels.

In addition, assimilating individuals may adopt "American" attitudes toward many behaviors such as alcohol, drugs, or fast food, and disregard their previously held culture-of-origin attitudes of these behaviors. Of course, Americans are not a homogenous group and have diverse attitudes concerning any of these topics. However, the central issue appears to be that assimilating individuals see what is and is not tolerated in the host society and change their behavioral repertoires accordingly, gradually replacing culture-of-origin behaviors, routines, beliefs, and norms with those from the host society.

This perspective of assimilation is supported by evidence in the research literature on acculturation and health. It appears that significant changes in health behaviors occur across generations that suggest US-born children of immigrant parents, and later generations, will report health behaviors similar to those of non-Latino White US citizens. Unfortunately, the evidence available also suggests that this cultural adaptation comes at a high personal price. Healthy behaviors characteristic of foreign-born immigrants are often lost in subsequent generations, signaling a strikingly negative aspect of assimilation. In the past, assimilation ideology was concerned with the integration of foreigners into the host society, mainly through education and intermarriage for White European immigrants. This historic context stressed the benefits of assimilation. In light of new evidence illuminating the immigrant paradox showing decreased health associated with assimilation, it is critical to consider the negative aspects of assimilation. Along with new educational and economic opportunities, melting pot assimilation may strip immigrants of the healthy behaviors they bring from their countries of origin while fostering poor health and mental health functioning that is characteristic of the host society.

Alternately, researchers suggest that negative health behaviors, such as alcohol and substance use, may be undertaken as a strategy for coping with assimilation stress (Gil et al. 2000). Maladaptive behavior is thought to derive from "increased perceptions of discrimination, internalization of minority status, and/or socialization into cultural attitudes and behaviors that have a disintegrative effect on family ties" (Gil et al. 1994, p. 45). This maladaptive behavior results in self-deprecation, ethnic self-hatred, and a weakened ego structure in the assimilated individual (Rogler et al. 1991). Further, maladaptive coping that includes substance use, aggressive behavior, hypertension, mental health problems, and obesity has been linked to generational differences between assimilating family members. A resilient first generation of immigrant parents tends to focus on perceived increases in their standard of living, leaving them thankful for new opportunities and protected by traditional values. In contrast, the perceptions of subsequent generations (e.g., assimilated US-born children of immigrant parents) tend to focus more on deprivation because of higher unrealized expectations and aspirations, which have the potential to lead these generations to turn to maladaptive coping strategies (Burnam et al. 1987; Rogler et al. 1991). At the same time, negative health behavior patterns increase perceived stress, adding to the difficulties inherent in the acculturation process. Ultimately, coping with assimilation stress with negative health behaviors becomes a self-propelling cycle, causing some US-born Latino and Asian adolescents and adults to become immersed in high-risk behaviors such as substance use, antisocial behavior, and to experience mental health problems.

It is unclear from extant research which of these theoretical explanations should take precedence. Further research is needed to fully explore and explain the assimilation process. At the same time, it is clear that legislators and social service workers may undermine healthy immigrant behaviors by over emphasizing assimilation. Indeed, if policymakers want to emphasize healthy behavior in this youthful minority population, they should provide support for US-born minority youth to reconnect to their cultural heritages. In doing so, some of the negative effects of assimilation may be avoided by reintegrating cultural assets that have been lost in the great American melting pot.

Cross-References

► Acculturation
► Bicultural Stress
► Immigration

References

Al-Issa, I., & Tousignant, M. (1997). *Ethnicity, immigration, and psychopathology*. New York: Plenum.

Berry, J. W. (1998). Acculturation stress. In P. B. Organista, K. M. Chun, & G. Marin (Eds.), *Readings in ethnic psychology* (pp. 117–122). New York: Routledge.

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity and adaptation. *Applied Psychology, 55*, 303–332. doi:10.1111/j.1464-0597.2006.00256.x.

Bird, H. R., Canino, G., Davies, M., Duarte, C. S., Febo, V., Ramirez, R., et al. (2006a). A study of disruptive behavior disorders in Puerto Rican youth: I. Background, design, and survey methods. *Journal of the American Academy of Child and Adolescent Psychiatry, 45*, 1032–1041. doi:10.1097/01.chi.0000227879.65651.cf.

Bird, H. R., Davies, M., Duarte, C. S., Shen, S., Loeber, R., & Canino, G. (2006b). A study of disruptive behavior disorders in Puerto Rican youth: II. Baseline prevalence, comorbidity, and correlates in two sites. *Journal of the American Academy of Child & Adolescent Psychiatry, 45*, 1042–1053. doi:10.1097/01.chi.0000227878.58027.3d.

Brook, J. S., Martin W., Balka, E. B., Win, Pe. T., & Gursen, M. D. (1998). African American and Puerto Rican drug use: A longitudinal study. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*(9), 1260–1268.

Buchanan, R. L., & Smokowski, P. R. (2009). Pathways from acculturation stress to substance use among Latino adolescents: Results from the Latino Acculturation and Health Project. *Substance Use and Misuse, 44*, 740–762. doi:10.1080/10826080802544216.

Bui, H. N., & Thongniramol, O. (2005). Immigration and self-reported delinquency: The interplay of immigration, generations, gender, race, and ethnicity. *Journal of Crime and Justice, 28*(2), 71–80.

Buriel, R., Calzada, S., & Vasquez, R. (1982). The relationship of traditional Mexican American culture to adjustment and delinquency among three generations of Mexican American male adolescents. *Hispanic Journal of Behavioral Sciences, 4*, 41–55. doi:10.1177/07399863820041003.

Burnam, M. A., Hough, R. L., Karno, M., Escobar, J. I., & Telles, C. A. (1987). Acculturation and lifetime prevalence of psychiatric disorders among Mexican Americans in Los Angeles. *Journal of Health and Social Behavior, 28*, 89–102. doi:10.2307/2137143.

Caetano, R. (1987). Acculturation and drinking patterns among U.S. Hispanics. *British Journal of Addiction, 82*, 789–799. doi:10.1111/j.1360-0443.1987.tb01546.x.

Carvajal, S. C., Photiades, J. R., Evans, R. I., & Nash, S. G. (1997). Relating a social influence model to the role of acculturation in substance use among Latino adolescents. *Journal of Applied Social Psychology, 27*, 1617–1628. doi:10.1111/j.1559-1816.1997.tb01616.x.

Carvajal, S. C., Hanson, C. E., Romero, A. J., & Coyle, K. K. (2002). Behavioural risk factors and protective factors in adolescents: A comparison of Latino and non-Latino Whites. *Ethnicity and Health, 7*, 181–193. doi:10.1080/1355785022000042015.

Castro, F. G., Coe, K., Gutierres, S., & Saenz, D. (1996). Designing health promotion programs for Latinos. In P. M. Kato & T. Mann (Eds.), *Handbook of diversity issues in health psychology* (pp. 319–346). New York: Plenum.

Chun, K. M., Organista, P. B., & Marin, G. (Eds.). (2003). *Acculturation: Advances in theory, measurement, and applied research*. Washington: American Psychological Association.

Coatsworth, J. D., Maldonido-Molina, M., Pantin, H., & Szapocznik, H. (2005). A person-centered and ecological investigation of acculturation strategies in Hispanic immigrant youth. *Journal of Community Psychology, 33*, 157–174. doi:10.1002/jcop. 20046.

Dahlberg, L. L., & Krug, E. G. (2002). Violence: A global public health problem. In E. G. Krug, L. L. Dahlberg, J. A. Mercy, A. B. Zwi, & R. Lozano (Eds.), *World report on violence and health* (pp. 1–21). Geneva: World Health Organization. Retrieved from http://whqlibdoc.who.int/publications/2002/9241545615_eng.pdf.

de Anda, D. (1984). Bicultural socialization: Factors affecting the minority experience. *Social Work, 29*, 101–107.

De La Rosa, M. (2002). Acculturation and Latino adolescents' substance use: A research agenda for the future. *Substance Use and Misuse, 37*, 429–456. doi:10.1081/JA-120002804.

Delgado, M. (1998). *Alcohol use/abuse among Latinos: Issues and examples of culturally competent service*. Binghampton: Haworth Press.

Dinh, K. T., Roosa, M. W., Tein, J. Y., & Lopez, V. A. (2002). The relationship between acculturation and problem behavior proneness in a Hispanic youth sample: A longitudinal mediation model. *Journal of Abnormal Child Psychology, 30*, 295–309. doi:10.1023/A:1015111014775.

Dumka, L. E., Roosa, M. W., & Jackson, K. M. (1997). Risk, conflict, mother's parenting, and children's adjustment in low-income, Mexican immigrant, and Mexican American families. *Journal of Marriage and the Family, 59*, 309–323. doi:10.2307/353472.

Ebin, V. J., Sneed, C. D., Morisky, D. E., Rotheram-Borus, M. J., Magnusson, A. M., & Malotte, C. K. (2001). Acculturation and interrelationships between problem and health-promoting behaviors among Latino adolescents. *Journal of Adolescent Health, 28*, 62–72. doi:10.1016/S1054-139X(00)00162-2.

Feliciano, C. (2001). The benefits of biculturalism: Exposure to immigrant culture and dropping out of school among Asian and Latino youths. *Social Science Quarterly, 82*, 865–879. doi:10.1111/0038-4941.00064.

Fridrich, A. H., & Flannery, D. J. (1995). The effects of ethnicity and acculturation on early adolescent delinquency. *Journal of Child and Family Studies, 4*, 69–87. doi:10.1007/BF02233955.

Gil, A. G., & Vega, W. A. (1996). Two different worlds: Acculturation stress and adaptation among Cuban and Nicaraguan families. *Journal of Social and Personal Relationships, 13*, 435–456. doi:10.1177/0265407596133008.

Gil, A. G., Vega, W. A., & Dimas, J. M. (1994). Acculturative stress and personal adjustment among Hispanic adolescent boys. *Journal of*

Community Psychology, 22, 43–54. doi:10.1002/1520-6629(199401)22:1 < 43::AID-JCOP2290220106 > 3.0.CO;2-T.

Gil, A. G., Wagner, E. F., & Vega, W. A. (2000). Acculturation, familism and alcohol use among Latino adolescent males: Longitudinal relations. *Journal of Community Psychology, 28*, 443–458. doi:10.1002/1520-6629(200007)28:4 < 443::AID-JCOP6 > 3.0.CO;2-A.

Go, C. G., & Le, T. N. (2005). Gender differences in Cambodian delinquency: The role of ethnic identity, parental discipline, and peer delinquency. *Crime and Delinquency, 51*, 220–237. doi:10.1177/0011128704273466.

Gonzales, N. A., Knight, G. P., Morgan-Lopez, A. A., Saenz, D., & Sirolli, A. (2002). Acculturation and the mental health of Latino youths: An integration and critique of the literature. In J. M. Contreras, K. A. Kerns, & A. M. Neal-Barnett (Eds.), *Latino children and families in the United States* (pp. 45–76). Westport: Greenwood.

Gonzales, N. A., Deardorff, J., Formoso, D., Barr, A., & Barrera, M., Jr. (2006). Family mediators of the relation between acculturation and adolescent mental health. *Family Relations, 55*, 318–330. doi:10.1111/j.1741-3729.2006.00405.x.

Hovey, J. D., & King, C. A. (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1183–1192. doi:10.1097/00004583-199609000-00016.

Knight, G. P., Virdin, L. M., & Roosa, M. (1994). Socialization and family correlates of mental health outcomes among Hispanic and Anglo-American families. *Child Development, 65*, 212–224. doi:10.1111/j.1467-8624.1994.tb00745.x.

Le, T. N., & Stockdale, G. D. (2005). Individualism, collectivism, and delinquency in Asian American adolescents. *Journal of Clinical Child and Adolescent Psychology, 34*, 681–691. doi:10.1207/s15374424jccp3404_10.

Le, T. N., & Stockdale, G. D. (2008). Acculturative dissonance, ethnic identity, and youth violence. *Cultural Diversity and Ethnic Minority Psychology, 14*, 1–9. doi:10.1037/1099-9809.14.1.1.

Le, T. N., & Wallen, J. (2007). Risks of non-familial violent physical and emotional victimization in four Asian ethnic groups. *Journal of Immigrant and Minority Health, 11*, 174–187. doi:10.1007/s10903-007-9100-8.

Markides, K., Krause, N., & Mendes De Leon, C. F. (1988). Acculturation and alcohol consumption among Mexican Americans: A three-generation study. *American Journal of Public Health, 78*, 1178–1181. doi:10.2105/AJPH.78.9.1178.

Ngo, H. M., & Le, T. N. (2007). Stressful life events, culture, and violence. *Journal of Immigrant Health, 9*, 75–84. doi:10.1007/s10903-006-9018-6.

Organista, P. B., Organista, K. C., & Kurasaki, K. (2003). The relationship between acculturation and ethnic minority mental health. In K. M. Chun, P. B. Organista, & G. Marin (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 139–162). Washington: American Psychological Association.

Rogler, L. H., Cortes, D. E., & Malgady, R. G. (1991). Acculturation and mental health status among Hispanics. *American Psychologist, 46*, 585–597. doi:10.1037/0003-066X.46.6.585.

Samaniego, R. Y., & Gonzales, N. A. (1999). Multiple mediators of the effects of acculturation status on delinquency for Mexican American adolescents. *American Journal of Community Psychology, 27*, 189–210. doi:10.1023/A:1022883601126.

Schwartz, S. J., Zamboanga, B. L., & Jarvis, L. H. (2007). Ethnic identity and acculturation in Hispanic early adolescents: Mediated relationships to academic grades, prosocial behaviors, and externalizing symptoms. *Cultural Diversity and Ethnic Minority Psychology, 13*, 364–373. doi:10.1037/1099-9809.13.4.364.

Shrake, E. K., & Rhee, S. (2004). Ethnic identity as a predictor of problem behaviors among Korean American adolescents. *Adolescence, 39*, 601–622. Retrieved from http://findarticles.com/p/articles/mi_m2248/is_155_39/ai_n9488744/.

Smith, E. P., & Guerra, N. G. (2006). Introduction. In N. G. Guerra & E. P. Smith (Eds.), *Preventing youth violence in a multicultural society* (pp. 3–14). Washington: American Psychological Association.

Smokowski, P. R., & Bacallao, M. L. (2006). Acculturation and aggression in Latino adolescents: A structural model focusing on cultural risk factors and assets. *Journal of Abnormal Child Psychology, 34*, 657–671. doi:10.1007/s10802-006-9049-4.

Smokowski, P. R., David-Ferdon, C., & Stroupe, N. (2009a). Acculturation, youth violence, and suicidal behavior in minority adolescents: A review of the empirical literature. *Journal of Primary Prevention, 30*(3/4), 215–264. doi:10.1007/s10935-009-0173-0.

Smokowski, P. R., Rose, R. A., & Bacallao, M. L. (2009b). Acculturation and aggression in Latino adolescents: Modeling longitudinal trajectories from the Latino Acculturation and Health Project. *Child Psychiatry and Human Development, 40*, 589–608. doi:10.1007/s10578-009-0146-9.

Smokowski, P. R., Buchanan, R. L., & Bacallao, M. L. (in press). Acculturation stress and aggressive behavior in Latino adolescents: Examining mediation pathways in the Latino Acculturation and Health Project. *International Journal of Child Health and Human Development.*

Sommers, I., Fagan, J., & Baskin, D. (1993). Sociocultural influences on the explanation of delinquency for Puerto Rican youths. *Hispanic Journal of Behavioral Sciences, 15*, 36–62. doi:10.1177/07399863930151002.

St. John de Crevecoeur, J. H. (1782). *Letters from an American farmer.* Retrieved from http://xroads.virginia.edu/~hyper/CREV/home.html.

Suarez-Orozco, C., & Suarez-Orozco, M. (2001). *Children of immigrants.* Cambridge, MA: Harvard University Press.

Szapocznik, J., & Kurtines, W. (1980). Acculturation, biculturalism and adjustment among Cuban Americans. In A. M. Padilla (Ed.), *Acculturation: Theory, models, and some new findings* (pp. 139–159). Boulder: Westview.

Vega, W. A., & Gil, A. G. (1998). *Drug use and ethnicity in early adolescence.* New York: Plenum.

Vega, W. A., Gil, A. G., Warheit, G. J., Zimmerman, R. S., & Apospori, E. (1993). Acculturation and delinquent behavior among Cuban American adolescents: Toward an empirical model. *American Journal of Community Psychology, 21*, 113–125. doi:10.1007/BF00938210.

Vega, W. A., Khoury, E. L., Zimmerman, R. R., Gil, A. G., & Warheit, G. J. (1995). Cultural conflicts and problem behaviors of Latino adolescents in home and school environments. *Journal of Community Psychology, 23*, 167–179. doi:10.1002/1520-6629(199504)23:2 < 167::AID-JCOP2290230207 > 3.0.CO;2-O.

Wall, J. A., Power, T. G., & Arbona, C. (1993). Susceptibility to antisocial peer pressure and its relation to acculturation in Mexican American adolescents. *Journal of Adolescent Research, 8*, 403–418. doi:10.1177/074355489384004.

Welte, J. W., & Barnes, G. M. (1995). Alcohol and other drug use among Hispanics in New York State. *Alcoholism: Clinical and Experimental Research, 19*, 1061–1066. doi:10.1111/j.1530-0277.1995.tb00989.x.

Willgerodt, M. A., & Thompson, E. A. (2006). Ethnic and generational influences on emotional distress and risk behaviors among Chinese and Filipino American adolescents. *Research in Nursing and Health, 29*, 311–324. doi:10.1002/nur.20146.

Yu, S. M., Huang, Z. J., Schwalberg, R. H., Overpeck, M., & Kogan, M. D. (2003). Acculturation and the health and well-being of U.S. immigrant adolescents. *Journal of Adolescent Health, 33*, 479–488. doi:10.1016/S1054-139X(03)00210-6.

Zapata, J. T., & Katims, D. S. (1994). Antecedents of substance abuse among Mexican-American school-age children. *Journal of Drug Education, 24*, 233–251.

Assimilative Psychodynamic Psychotherapy

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Introduction

Psychotherapy for adolescents with emotional and behavioral disorders is complicated. Adolescents in need of therapy are often not motivated to participate in therapy and frequently struggle with issues of dependence, authority, control, and trust. These and other complications impact the formation of a therapeutic alliance between the therapist and the adolescent, which is the best predictor of psychotherapy outcome. This essay identifies some of the challenges of providing effective psychotherapy for adolescents with psychological difficulties. It is proposed that adolescents benefit from an integrative psychotherapy that is flexible, effective, and attuned to the relationship. Assimilative psychodynamic psychotherapy, developed by Stricker and Gold (1996) and adapted for use with adolescents by Grehan and Freeman (2009), is put forward as well suited for work with this population.

Assimilative psychodynamic psychotherapy is an integrative approach comprised of a comprehensive psychodynamically oriented conceptual framework that freely incorporates ideas, techniques, and strategies from other models of psychotherapy. Given adolescents' greater dependence than adults on the world around them, an increased emphasis is placed on systems variables and the importance of "goodness of fit" with the environment. Therapists who employ assimilative psychodynamic psychotherapy (APP) benefit from the framework and richness of attending to relationship issues. The psychodynamic framework allows for a focus on the relationship and the interpersonal field between the therapist and the client as a major source of information as well as an instrument for treatment. In addition, active interventions are freely drawn from cognitive behavioral therapy (CBT) for their original purposes as well as psychodynamic purposes. A case example illustrating the application of this approach is presented. The strengths and limitations to this approach are discussed.

Adolescents and Psychopathology

As numerous essays in this encyclopedia make clear, adolescents are not simply "little adults." Rather, this is a developmental period marked by significant cognitive, social, and physical changes. In addition, many adolescents struggle with developmental issues such as dependence on adults and the formation of a clear identity. These issues all occur while they manage shifting family and peer dynamics as well as changing academic and work demands.

Although many adolescents in western cultures do not exhibit significant "storm and stress" (Arnett 1999), an estimated 20% of 9–17-year olds have a diagnosable emotional or behavioral disorder (U.S. Department of Health and Human Services 1999). These adolescents are more likely to exhibit mood disorders (6%), anxiety disorders (13%), disruptive disorders (10%), or substance abuse disorders (2%; U.S. Department of Health and Human Services 1999). Youth suffering from these disorders are more likely to experience impairments in social, academic, and occupational functioning as well as serious behavioral problems.

Detailed descriptions of developmental challenges faced by adolescents are available elsewhere in this volume; however, it is worthwhile to review specific examples to illustrate how developmental issues can interact with neurological or psychological difficulties to result in problematic behavior patterns. One such example is the development of introspection, which exhibits itself in a heightened sense of self-consciousness in adolescents. Often the adolescent believes that his or her behavior is the focus of everyone else's concern and attention (Elkind 1978). In addition, this egocentricity is displayed in the belief that their experiences are unique and would not be understood by others or that they are not as susceptible to risk as others (Steinberg 2008). These egocentric beliefs may serve to protect self-esteem, but can also inhibit communication with adults and increase the potential for high-risk behavior. This can be especially problematic among adolescents who have experienced trauma or who suffer from psychological disorders. Issues such as egocentric beliefs can compound difficulties with weak impulse control, poor emotional regulation, depressed mood, or psychosis. These combinations may increase high-risk behavior or withdrawal from their familial and school support networks.

Adolescents in Therapy

Therapy with adolescents poses unique challenges and is often considered a difficult endeavor (Oetzel and Scherer 2003). Many adolescents referred to therapy attribute their problems to others and are often especially sensitive to issues of dependence, authority, control, and trust. In addition, many adolescents, especially those exhibiting defiant behavior, do not to perceive themselves as needing therapy but are directed to do so by authority figures such as parents, school personnel, or the juvenile justice system (Oetzel and Scherer 2003; Politano 1993). Therefore, the adolescent's motivation to participate in therapy as well as the formation of a therapeutic alliance may be compromised. The therapeutic alliance refers to the quality of the helping relationship between the client and the therapist. Bordin (1979) described the therapeutic alliance as consisting of an agreement on the goals of therapy, an agreement on the tasks of therapy, and an emotional bond between the therapist and the client. The therapist joins with "the client by expressing concern about the client and family members and inquiring about personal problems" to trigger the development of alliance (Oetzel and Scherer 2003, p. 216). In turn, clients respond by engaging in the process of working toward the goals of therapy.

An alliance is difficult to form with adolescents who do not share the same goals or are resistant to participating in therapy (DiGiuseppe et al. 1996; Oetzel and Scherer 2003). This is problematic given that the therapeutic alliance has been identified as a critical element in psychotherapy effectiveness with adolescents (Shirk and Karver 2003). Kazdin et al. (2005) demonstrated that alliance was associated with greater therapeutic change, fewer perceived barriers, and treatment acceptability in this population.

In addition to the relationship with the adolescent, the therapist has to consider the alliance with the parents or guardians. The therapist can provide the adolescent with confidentiality; however, this confidentiality is often tested when there is a need to engage parents in the therapy. Forming alliances with both the parents and the adolescent can be challenging if there are differences in goals, opinions, and values. In addition, adolescents who act in provocative or potentially dangerous ways can make it especially challenging to maintain alliances with all parties involved. The therapist has to negotiate both sets of goals, as attending to one set of goals over the other can lead to resistance, conflict, or impasse.

Which Psychotherapy Approach?

Although evidence indicates that 70–80% of adolescents with mental health problems benefit from psychotherapy (Weisz et al. 1987, 1995), it is estimated that the majority of adolescents in need either lack access to or otherwise do not engage in psychotherapy (U.S. Department of Health and Human Services 1999). Furthermore, Kazdin et al. (1997) reported that 40–60% of families that engage in therapy terminate prematurely. Therefore, it is valuable to explore psychotherapy approaches that maximize adolescent engagement and treatment effectiveness.

Given the unique challenges of conducting psychotherapy with adolescents, it is not sufficient to conduct therapy in the same manner as with adults. For example, therapists need to differentiate between typical development and psychopathology. Oetzel and Scherer (2003) recommended that therapists assess developmental considerations and reflect upon their possible

effects on therapeutic engagement. It is also necessary to differentiate between minor developmental crises and psychopathology. In addition, a foundation in adolescent development can help recognize risk factors that increase susceptibility to difficulties such as depression, substance use, eating disorders, and family conflicts (Steinberg 2008). An understanding of development impacts clinical decision making as well as goal setting (Oetzel and Scherer 2003).

Therapists are challenged to establish an authentic and collaborative working relationship. Adolescents tend to be intolerant of insincerity and pretence (Rubenstein 1996). Therefore, therapists need to convey an authentic and respectful nonjudgmental acceptance that does not condone antisocial or self-destructive behavior. Given the importance of the alliance to outcome and the likelihood that clients will terminate therapy prematurely rather than raise concerns about problems with the alliance (Miller et al. 2005), it is recommended that therapists offer adolescents choices (Oetzel and Scherer 2003) and even elicit feedback about the therapy process (Miller et al. 2005). Several studies have demonstrated that eliciting client feedback is a significant predictor of treatment outcome (e.g., Bachelor and Horvath 1999).

It is proposed that adolescents benefit from psychotherapy that is flexible, effective, and attuned to the relationship. Grehan and Freeman (2009) proposed that an approach that combines the relationship-centered aspects of psychodynamic therapy and the problem-solving aspects of cognitive behavioral therapy (CBT) could successfully address these criteria. More specifically, assimilative psychodynamic psychotherapy allows for theoretically consistent integration of psychotherapeutic techniques from diverse approaches like CBT into a psychodynamic framework. This approach is described in greater detail followed by an examination of how it is relational, flexible, and effective.

Assimilative Psychodynamic Psychotherapy

Stricker and Gold (1996) developed assimilative psychodynamic psychotherapy (APP), to be an integrative approach comprised of a comprehensive psychodynamically oriented conceptual framework that freely incorporates ideas, techniques, and strategies from other models of psychotherapy. As with many contemporary psychodynamic models, this approach emphasizes the exploration of unconscious processes, motives, conflicts, anxieties, defenses, and the dynamic roots of behavior. In addition, active interventions are freely drawn from other psychotherapies for their original purposes as well as psychodynamic purposes. For example, an intervention such as recording events in a thought log may be selected to produce the change for which it was originally designed such as modifying thoughts and behavior as well as its hypothesized impact on important psychodynamic issues.

Assimilative psychodynamic psychotherapy employs a three-tier model of personality structure and change. The types of assessment and intervention modalities may differ at each tier. Tier 1 consists of behavior and interpersonal skills and can include the use of behavior contracts and social skills training. Tier 2 includes cognition, perception, and affect and can include CBT interventions such as Socratic dialogues. Finally, Tier 3 includes psychodynamic conflict, self-representations, and object representations. Examples of methods used in this tier include attention to the recurrence of interpersonal themes in the therapy relationship referred to in the psychodynamic literature as transference and countertransference. Psychological causation is conceptualized as multidirectional and the focus of attention moves among the interactions of unconscious motivation, conscious experience, action, and the impact of the behavior and attitudes of significant others. Stricker and Gold (2005) proposed that change begins and can take place within and among any of the tiers and can have reciprocal effects on the other tiers.

Assimilative psychodynamic psychotherapy is based upon a psychodynamic relational model in which an individual's sense of self develops in the context of significant past and present interpersonal relationships. The relational nature of this theory is also helpful in conceptualizing the role that others play in the development and maintenance of psychopathology. Indeed, it may be argued that individuals in the adolescent's life become unwitting participants in their repetitive patterns and play a role in the maintenance of that behavior. This may be especially true among adolescents whose identities are still being formed and whose interpersonal relationships seem more fluid than in adults.

Applying APP to Adolescents

Stricker and Gold (1996) originally developed assimilative psychodynamic psychotherapy for individual work with adults. In 2009, Grehan and Freeman proposed that when therapists using APP attended to system factors, this approach was well suited to adolescent psychotherapy. Specifically, they made a case for the importance of attending to and addressing the "goodness of fit" between the adolescent and the systems in their life. In other words, the adolescent's pathology is viewed as both an intrinsic difficulty and a product of the context within which the problem manifests itself. An adolescent's presenting problem is assumed to result from a unique interaction of family dynamics, faulty thinking, skills deficits, psychodynamics, as well as a mismatch between biological predisposition/temperament and environmental demands.

Attention to the Relationship in Therapy

Therapists who employ APP benefit from the framework and richness of attending to relationship issues. Psychodynamic therapists tend to focus on relationships, both inside and outside of the therapy office (Shedler 2010). In fact, relationally influenced psychodynamic therapists (e.g., object relations, self-psychological) treat the interpersonal field between the therapist and the client as a major source of information as well as an instrument for treatment (Aron 1996).

The advantage of focusing on the interpersonal field becomes evident when considering the multiple ways in which adolescents may experience and respond to a therapist. For example, a therapist who is directive and goal oriented may be perceived as an extension of authority figures in their lives with aims of changing the adolescent. On the other hand, a less active therapist who refrains from self-disclosure may be experienced as inauthentic or withholding. In addition, given that adolescents referred for therapy often experience conflicts around intimacy, it is not unusual that they experience intense reactions as well as elicit strong reactions in their therapist. In fact, there are numerous ways an adolescent may respond to a therapist or elicit responses from a therapist. Psychodynamic conceptualizations lend themselves well to understanding these dynamics.

Flexibility in Therapy

It is also proposed that adolescents benefit from an integrative therapy flexible enough to change with their needs. Therapists employing traditional therapies developed for adults may find themselves in a bind. Being flexible and adaptive to the adolescent's needs may challenge the conceptual framework of the therapeutic approach while remaining faithful to the approach may limit the therapist's freedom to respond flexibly to the adolescent. Garcia and Weisz (2002) reported that the most common reason for premature termination was related to therapists who were not flexible enough to adapt to client's needs.

The ability to freely draw active interventions are from other psychotherapies for their original purposes as well as psychodynamic purposes allows the therapist to choose interventions for their purported outcome, rather than because they fit a particular model. Combining psychodynamic and cognitive behavioral approaches is valuable given their unique and complementary strengths. Psychodynamic therapies are distinguished from other therapies by their focus on affect and the expression of emotion, exploration of attempts to avoid distressing thoughts and feelings, and the identification of recurring themes and patterns in thoughts, feelings, self-concept, relationship, and life experiences. In addition, they differ from other approaches in their discussion of past experience, focus on interpersonal relationship, an exploration of the therapy relationship, and exploration of fantasy life (Shedler 2010).

In contrast, CBT is a goal-oriented approach that lends itself well to immediate direct intervention. It is a time-efficient approach whose principles are generally easily understood and applied. Adolescents benefit from the fact that it teaches behavioral and emotional self-control as well as the wide array of available cognitive, emotional, and behavioral techniques. A therapist using APP could shift among various approaches such as a collaborative goal-directed approach, a supportive-introspective approach, a here-and-now approach and even an examination of current and past interpersonal dynamics and the patterns of interaction that impact their current difficulties.

Effectiveness of Therapy

Finally, the approach should be based on treatment approaches that have been shown to be effective. It is

a popular misconception that CBT is the only treatment of choice and that psychodynamic therapy has not been shown to be effective. CBT enjoys a great deal of popularity in academic circles and the vast majority of psychotherapy research employs this approach. Although psychodynamic therapies have fallen out of favor, the literature continues to be actively developed as evidenced by the emergence of relational psychodynamic approaches (e.g., Greenberg and Mitchell 1983). Although there is far less research on psychodynamic approaches than CBT, there is considerable empirical support for the efficacy and effectiveness of this approach among adults (Shedler 2010). In comparison to the adult literature, the psychotherapy literature on working with adolescents is sparse (Holmbeck et al. 2006) and research in psychotherapy effectiveness in children and adolescents lags behind that of adults. Nevertheless, there continues to be support for the efficacy of psychodynamic therapy with children and adolescents (e.g., Leichsenring et al. 2004; Trowell et al. 2007). Although specific data about the effectiveness of APP with adolescents are not available, evidence from psychotherapy effectiveness studies employing either CBT or dynamic approaches suggests that a combined approach would most likely be effective.

Case Example

What follows is a case that illustrates the application of APP to adolescents. Tom was a 17-year-old seen for individual therapy in a metropolitan suburb in the northeastern United States. This adolescent, whose identifying information has been disguised, started therapy with a "tough guy" attitude. During his first session, he casually stated that he did not need to see a therapist and that he was only doing so because his father was forcing him to do so. Once rapport was developed, he added that he "did not mind coming," just that he had "nothing to talk about."

Tom's father, Joe, initiated the referral. He was a sharply dressed businessman who presented with a serious and intense demeanor. Although Joe was raised in a tough blue-collar neighborhood, he had worked his way up to being an executive and flaunted his upper middle class wealth with visible luxury items including his home, cars, and suits. Joe stated that he sought out therapy for Tom because his son was "argumentative, oppositional and lazy." Joe reported that he believed that Tom's difficulties were related to his mother, whom Joe had divorced 12 years earlier. He reported she had difficulty setting limits with Tom and gave as an example his chronic issues with truancy when living with her. For example, Tom had skipped out of school over 50 school days in a single year. Joe sought custody and the court ordered Tom to live with his father. Tom continued to struggle with attendance and the school district transferred him to an alternative high school for students who were at risk for dropping out. Joe initiated therapy after Tom had been living with him for a year.

At home, Tom and Joe frequently engaged in power struggles. Arguments would lead to Joe yelling at and punishing Tom, who in turn would defy his father and alternate between provoking and avoiding him. Both father and son admitted to "losing control" with each other from time to time. On one occasion, Tom called 911 claiming that his father hit him. Tom would become enraged at his father's domineering and inflexible parenting. He also confronted other authority figures such as teachers and even police officers.

When therapy began, it was apparent that they avoided discussing certain topics with each other. For example, Joe knew of Tom's knife collection, but avoided discussing its significance given their volatile relationship. In session, Tom admitted to smoking pot several times a day. In fact, Tom often appeared stoned during sessions and reported being "high" much of the day. Joe seemed unaware of this even after having previously found marijuana while going through Tom's pockets. Joe believed Tom when he denied that it was his.

Tom visited his mother on alternate weekends and longed to live with her again. He reported that she was accepting of him and he "got away with whatever he wanted" with her. Nonetheless, he remained disappointed and did not feel she understood him. In contrast, Joe was a firm disciplinarian. He followed through on his word but had little interest in his son's experience. Both of Tom's parents had used him as collateral in their divorce and the conflict between them that followed. He reported that the only thing he cared about was "hanging out" with his friends and playing handball. He was withdrawn from his family, staying out as late as possible and minimizing contact with them.

In the first few sessions, Tom was responsive to inquiry but did not initiate conversation. His energy level was low and insight was poor, both of which were

likely worsened by his drug use. Early on, he related a story of how he had told a prior therapist about drug paraphernalia he had hidden in his room and how his father had mysteriously found it the following day. This was Tom's way of communicating the importance of trust in the current therapeutic relationship.

Tom's withdrawal and anger were conceptualized as ways of coping with his pain and loneliness of having been a narcissistic extension stuck between a controlling father and an ineffective mother who were at loggerheads with each other. Developmentally, he was struggling with issues of independence and identity. The goal of therapy was to help Tom work through his anger toward adults and himself. In order to do so, it was necessary to address the daily drug use, as it interfered with the development of insight and responsibility for his behavior.

Once it appeared that a working relationship had been established, Tom engaged in a discussion about his goals for therapy. His stated goal was to move back in with his mother. In discussing this goal, he was open to discussing his drug use that the therapist considered an important target for intervention. Since Tom spoke freely about his drug use, the therapist engaged him in Socratic dialogue, which is a cognitive (Tier 2) approach to explore his beliefs about pot use and its effects. The drug use was not judged on a moral basis, but instead explored in terms of its role in his life and its effects on his goal. Over the course of several sessions, Tom began to identify some negative effects of his pot smoking and of hanging out with his "druggie friends." This identification coincided with the development of a romantic relationship. Although his girlfriend was comfortable with his drug use, Tom sought to spend more time with her and began to recognize that the drug use and his friends interfered with their relationship. Although this was a cognitive intervention, it was also used for its dynamic goals. From a dynamic standpoint, he was dissociated from how he used drugs to manage his disappointment and anger with his parents. In addition, his drug use also functioned as a form of rebellion toward his father while also being self-destructive.

Due to issues of confidentiality, the therapist could not inform Joe about Tom's drug use. If Tom suspected that the therapist "snitched" on him, even indirectly, it would have been a breach of trust that would have ended his engagement in therapy. Although Tom's romantic relationship had reduced his drug use, it continued to play a major part in his life and the therapist believed that Tom would need more significant intervention in order to reduce its use to a level that did not negatively impact his functioning (a Tier 1 goal).

Shortly afterward, Tom returned home so clearly stoned that Joe became alarmed and had Tom take a store bought drug test. Needless to say, Tom failed the test. Given that Tom was in the process of getting a driver's permit and desperately wanted a car, Joe wanted to use this as leverage to stop the drug use. The therapist consulted with both of them in negotiating an agreement in which Tom would get continued use of a car in exchange for passing weekly drug tests. Surprisingly, Tom did not rebel, but instead agreed to these conditions and made a concerted effort to stop smoking pot. Although it is possible that he had expected a harsher reaction from his father, and believed this as an opportunity to maintain some freedom and the ability to see his girlfriend, is was also possible that in this situation he experienced his father as caring rather than punitive.

Over the course of several months, Tom made notable progress. His daily pot smoking was almost completely eliminated, he developed an interest in graduating from school, and the level of his conflict at home decreased significantly. He still avoided his family and felt anger toward his father, but it was being directed at getting out of his home and fueled his desire to graduate and get a job. Tom's relationship with the therapist allowed him to bridge the gap between him and his father.

At the start of therapy, the therapist's contact with the father was frequent, primarily because Joe drove his son to the appointments. Once Tom began to show improvement, he began to miss appointments after several months of consistent attendance. Tom would simply not show up for a session. The therapist's phone calls to Joe's mobile phone went straight to voice mail and Joe would not call back, even though his phone never left his side. Each time Tom would show up the following week and Joe would claim to have left a message on the therapist's voicemail. Joe would insist on paying for the missed session and was adamant that Tom should continue therapy. This lapse occurred several times and each time, Joe became resisted the therapist's efforts to discuss this further.

The therapist experienced the inconsistency in appointments as disruptive and believed that Tom continued to benefit from therapy. When asked, Tom expressed a desire to continue therapy. Joe's lack of responsibility and courtesy left the therapist feeling annoyed. A few months later, Tom started driving himself to his appointments and the therapist's contact with Joe stopped altogether. Joe would send an occasional check with Tom that paid most, but never all, of the balance of their bill. This was not likely a lack of finances and instead was experienced like the use of money as power. Joe did not respond to the therapist's attempts to contact him about his son's therapy. When the therapist inquired with Tom about the difficulty communicating with his father, Tom became protective of his father.

The therapist felt angry and in a bind. Although Joe's avoidance was not keeping him from working with Tom, he felt as if he was being dismissed and rendered powerless. He believed that Joe's disengagement from his son's therapy would undermine its effectiveness and he felt helpless to do anything about it. The therapist's only leverage was to threaten to stop therapy, which appeared to be too drastic a reaction. Becoming confrontational with Joe might have made the therapist feel more powerful, but the likely result would be Joe's termination of Tom's therapy.

With time, the therapist recognized this situation as what relational psychoanalysts refer to as an enactment (e.g., Hirsch 1996). An enactment refers to intense interpersonal reactions to current events in the therapy relationship that repeat patterns from the adolescent and therapist's individual histories. An enactment usually unfolds in the following manner. First, the adolescent repeats an interpersonal relational pattern in which he or she is replicating a way of relating that may be part of the current problem. The therapist has an inevitable interpersonal reaction based on his or her own history in the context of the therapeutic relationship. The key to an enactment is that the open and attentive therapist eventually recognizes the enactment in which he or she is participating, affording an opportunity to respond in a way that could lead to a different and healthier outcome than the patient has experienced in the past.

In this case, the therapist was the recipient of what Tom experienced with his father: feeling used and rendered powerless. The therapist understood in a deep and meaningful way the source of Tom's anger and withdrawal. He recognized that they were also replaying a family dynamic in Tom's life. Joe used subtle and coercive forms of power while maintaining the façade that he was acting in his son's interest. On the other hand, the therapist found himself in a role similar to the way Tom experienced his mother; being caring and supportive, but ineffective in protecting him from his father's coercion. They were reliving an important family dynamic.

This immersion in the enactment brought Tom and the therapist into the "here and now." This realization had a significant effect on the therapist's ability to work with Tom. He no longer felt constrained in his response and gained an understanding of Tom's subjective experience that allowed them to explore these issues in a way that was previously not possible. This recognition gave the therapist the freedom to explore Tom's experience and help him regain his voice when he was feeling coerced and powerless. This emotional insight along with Tom's efforts to change allowed him to make continued progress.

This case illustrates the advantage of combining active goal-directed approaches with the dynamic formulations of the recurrence of interpersonal themes in the therapy relationship. In this case, reducing the drug use was crucial to change and allowed the dynamics to take place and be addressed. In addition, the immersion in the interpersonal dynamics allowed for a greater understanding and sympathy for Tom's experience.

Discussion

As this case example illustrates, applying APP to adolescents offers a flexible yet theoretically consistent framework for approaching this population (Grehan and Freeman 2009). This framework takes behavior, cognition, object representations, and systems variables into account while maintaining a flexible therapeutic stance. Adolescents are attempting to develop their sense of self and benefit from support and flexibility in terms of determining their own needs. The ability to freely draw active interventions from other psychotherapies for their original purposes as well as psychodynamic purposes allows the therapist to choose interventions for their purported outcome, rather than because they fit a particular model. This view echoes Miller et al. (2005) outcome informed work,

which posits that the outcome of an intervention matters more than the nature of the intervention itself.

Applying APP to adolescents has significant face validity. It is reasonable to expect that adapting therapeutic approaches based on the needs of the adolescent leads to a higher likelihood of therapeutic success. However, this formulation is difficult to examine empirically and there are no controlled trials to date to support that this complex additive model results in improved outcomes.

APP is best suited for verbal and insightful adolescents for whom a long-term treatment is appropriate and whose families can be engaged in therapy. Although the flexibility of this approach suggests that it has the potential to be effective with a variety of populations, the relative complexity of this approach may not be well suited for adolescents who pose immediate danger to themselves or others (e.g., psychosis, severe behavioral difficulties) or require the structure and limits of a residential treatment facility. In addition, the requirement for verbal interaction limits the effectiveness of this approach with adolescents with developmental delays.

Although there are several advantages of applying APP to adolescents, there are challenges and questions that need to be addressed. Although a stated goal of APP with adolescents is to increase the "goodness of fit" between the adolescents and their environment, it is difficult and at times impractical for therapists to engage outside individuals to adapt to the adolescent. Consulting with parents may be possible, yet doing so with schools and other settings may be difficult given issues such as trust and confidentiality.

In addition, adding goal-directed interventions to a psychodynamic conceptualization can be challenging. For example, while some interventions are active and practitioner led, this may at times conflict with the collaborative and patient-driven nature of APP (e.g., Stricker and Gold 2005). Furthermore, evidence suggests that CBT and dynamic therapies with adolescents do not differ significantly in terms of effectiveness; it is unclear whether the flexibility provided by the model presented here outweighs the challenges created by the complexity in implementing this approach. Nonetheless, it offers a flexible and relationally attuned approach that may be particularly well suited to complex cases where other approaches have not been successful.

References

Arnett, J. J. (1999). Adolescent storm and stress, reconsidered. *American Psychologist, 54*(5), 317–326.

Aron, L. (1996). *A meeting of minds: Mutuality in psychoanalysis.* Hillsdale: The Analytic Press.

Bachelor, A., & Horvath, A. (1999). The therapeutic relationship. In M. A. Hubble, B. L. Duncan, & S. D. Miller (Eds.), *The heart and soul of change: What works in therapy* (pp. 133–178). Washington: American Psychological Association.

Bordin, E. S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research and Practice, 16*, 252–260.

DiGiuseppe, R., Linscott, J., & Jilton, R. (1996). Developing the therapeutic alliance in child-adolescent psychotherapy. *Applied & Perspective Psychology, 5*, 85–100.

Elkind, D. (1978). Understanding the young adolescent. *Adolescence, 13*, 127–134.

Garcia, J. A., & Weisz, J. R. (2002). When youth mental health care stops: Therapeutic relationship and other reasons for ending youth outpatient treatment. *Journal of Consulting & Clinical Psychology, 70*, 439–443.

Greenberg, J., & Mitchell, S. (1983). *Object relations in psychoanalytic theory.* Cambridge, MA: Harvard University Press.

Grehan, P., & Freeman, A. (2009). Neither child nor adult: Applying integrative therapy to adolescents. *Journal of psychotherapy Integration, 19*(3), 269–290.

Hirsch, I. (1996). Observing-participation, mutual enactment, and the new classical models. *Contemporary Psychoanalysis, 32*, 359–383.

Holmbeck, G. N., O'Mahar, K., Colder, C., & Updegrove, A. (2006). Cognitive-behavioral therapy with adolescents: Guides from developmental psychology. In P. Kendall (Ed.), *Child and adolescent therapy.* New York: Guilford.

Kazdin, A., Holland, L., & Crowley, M. (1997). Family experiences of barriers to treatment and premature termination from child therapy. *Journal of Consulting and Clinical Psychology, 65*, 453–463.

Kazdin, A. E., Marciano, P. L., & Whitley, M. K. (2005). The therapeutic alliance in cognitive-behavioral treatment of children referred for oppositional, aggressive, and antisocial behavior. *Journal of Consulting and Clinical Psychology, 73*(4), 726–730.

Leichsenring, F., Rabung, S., & Leibing, E. (2004). The efficacy of short-term psychodynamic psychotherapy in specific psychiatric disorders: A meta-analysis. *Archives of General Psychiatry, 61*(12), 1208–1216.

Miller, S. D., Duncan, B. L., & Hubble, M. A. (2005). Outcome-informed clinical work. In J. C. Norcross & M. R. Goldfried (Eds.), *Handbook of Psychotherapy Integration* (2nd ed.). New York: Oxford University Press.

Oetzel, K. B., & Scherer, D. G. (2003). Therapeutic engagement with adolescents in psychotherapy. *Psychotherapy: Theory, Research, Practice, Training, 40*(3), 215–225.

Politano, P. M. (1993). A conceptualization of psychotherapy with children and adolescents. In A. J. Finch, W. M. Nelson, & E. S. Ott (Eds.), *Cognitive-behavioral procedures with children and adolescents: A practical guide.* Boston: Allyn & Bacon.

Rubenstein, A. K. (1996). Interventions for a scattered generation: Treating adolescents in the nineties. *Psychotherapy: Theory, Research, Practice, Training, 33*, 353–360.

Shedler, J. (2010). The efficacy of psychodynamic psychotherapy. *American Psychologist, 65*(2), 98–109.

Shirk, S. R., & Karver, M. (2003). Prediction of treatment outcome from relationship variables in child and adolescent therapy: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 71*, 452–464.

Steinberg, L. (2008). *Adolescence* (8th ed.). New York: McGraw Hill.

Stricker, G., & Gold, J. (1996). Psychotherapy integration: An assimilative psychodynamic approach. *Clinical Psychology: Science and Practice, 3*(1), 47–58.

Stricker, G., & Gold, J. (2005). Assimilative psychodynamic psychotherapy. In J. C. Norcross & M. R. Goldfried (Eds.), *Handbook of psychotherapy integration* (2nd ed.). New York: Oxford University Press.

Trowell, J., Joffe, I., Campbell, J. C., Clemente, C., Almqvist, F., Soininen, M., et al. (2007). Childhood depression: A place for psychotherapy. An outcome study comparing individual psychodynamic psychotherapy and family therapy. *European Journal of Child and Adolescent Psychiatry, 16*, 157–167.

U.S. Department of Health and Human Services. (1999). *Mental health: A report of the surgeon general.* Rockville: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health. Retrieved April 9, 2010 from http://www.surgeongeneral.gov/library/mentalhealth/home.html

Weisz, J. R., Weiss, B., Alicke, M. D., & Klotz, M. L. (1987). Effectiveness of psychotherapy with children and adolescents: A meta-analysis for clinicians. *Journal of Consulting and Clinical Psychology, 55*(4), 542–549.

Weisz, J. R., Weiss, B., Han, S., Granger, D. A., & Morton, T. (1995). Effects of psychotherapy with children and adolescents revisited: A meta-analysis of treatment outcome studies. *Psychological Bulletin, 117*, 450–468.

Assortative Mating

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Assortative mating represents a tendency in individuals to mate with other people who share certain similarities, such as a particular trait or qualities like intelligence or hair color. The concept has been commonly accepted by evolutionary theorists and behavior geneticists who have studied mating by a variety of species. For example, in various studies that focus on comparisons made between identical twins (genetically identical) and fraternal twins (nongenetically identical), positive assortative mating for the trait of social attitudes have been quite strong, especially for identical twins (Abrahmson and Baker 2002). This finding suggests that this tendency could be impacted by genetic factors, especially in assortative mating practices based on social interactions. Numerous studies have found support for this process whereby individuals choose partners with desired attributes that often include behaviors and traits that are similar to their own (see Rhule-Louie and McMahon 2007).

This phenomenon could hold true especially for younger adults and adolescents because of the added influence of family and peer environments on their developing social attitudes and behaviors. In cases of adolescents who engage in problem behavior, for example, adolescents exhibit a tendency to select partners or mates with a similar disposition to participate in questionable activities (Rhule-Louis and McMahon 2007). Other important studies have found that, whereas assortative mating for many individual-difference variables (such as personality traits) is low, assortative mating for actual antisocial behaviors is substantial (Krueger et al. 1998). This research reveals that adolescents' predilection to select mates with this same preference pattern can exacerbate their rate of problem behaviors. In a study of individuals who exhibit characteristics of antisocial disorders, it was discovered that persons who display an assortative mating preference for other persons who also exhibit antisocial tendencies have a higher frequency of engaging in criminal behavior, perhaps in response to their partner's capacity to engage in undesirable actions as well (Simons et al. 2002). These types of studies are of increasing significance in that assortative mating has become a concept that has moved from a narrow focus on selecting for physical factors and personality dispositions to much more complex traits like behaviors.

References

Abrahamson, A. C., & Baker, L. A. (2002). Rebellious teens? Genetic and environmental influences on the social attitudes of adolescents. *Journal of Personality and Social Psychology, 83*, 1382–1408.

Krueger, R., Moffitt, T., Caspi, A., Bleske, A., & Silvas, P. (1998). Assortative mating for antisocial behavior: Developmental and methodological implications. *Behavior Genetics, 28*, 173–186.

Rhule-Louie, D. M., & McMahon, R. J. (2007). Problem behavior and romantic relationships: Assortative mating, behavior contagion, and desistance. *Clinical Child and Family Psychology Review, 10*, 53–100.

Simons, R. L., Stewart, E., Gordon, L., Conger, R. D., & Elder, G. H. (2002). A test of life-course explanations for stability and change in antisocial behavior from adolescence to young adulthood. *Criminology, 40*, 401–434.

Athletic Programs and Title IX

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"Title IX" is the common term used to refer to Title IX of the Education Amendments of 1972 (2010). Title IX is a United States federal law requiring that "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. . ." (Id.). In its broad prohibition against sex discrimination in the provision of educational programs, the statute applies to an entire institution or school as long as any part of it receives federal funding. Given the heavy reliance on federal funds to operate schools, the statute has a very broad and powerful reach. It even reaches school activities that receive little federal funding, like school sports. That reach has been quite controversial and even unexpected given that the statute originally was meant to address employment practices of federally financed institutions. Title IX expanded its reach when what used to be called the Department of Health, Education and Welfare, which was granted the power to create implementation regulations, chose to give the statute a very broad interpretation as it substantially expanded the law's coverage and its own enforcement power. Gradually, Title IX evolved to address discrimination in all aspects of education, ranging from admissions, housing, course offerings, recruitment, financial assistance, and counseling to student health and sexual harassment. The area that was not even envisioned when the statute was enacted, school athletics, has become the most frequent focus of claims and commentaries relating to Title IX.

The Office for Civil Rights in the US Department of Education (OCR) administers Title IX. The OCR promulgates regulations in furtherance of the mandate it receives from the legislation that created Title IX. Most notably, OCR regulations require all institutions receiving federal funds to conduct self-evaluations, with those evaluations examining how institutions comply with the statute's mandate of not discriminating in educational activities. The OCR then uses those statements to determine whether the institution complies with the federal mandates.

In terms of athletic programs, the OCR has set several factors that are considered when determining whether an institution or school has violated its mandates. For example, it examines whether the selection of sports and levels of competition effectively accommodate the interests and abilities of members of both sexes and the extent to which there is an appropriate provision of equipment and supplies, scheduling of games and practice time, travel and per diem allowance, assignment and compensation of coaches and tutors, the provision of locker rooms, practice and competitive facilities, the provision of medical and training facilities and services, the provision of housing and dining facilities and services, and publicity. Although some schools may not do as well on some factors as others, they still can avoid sanctions because the factors are considered as a whole. These factors, however, were further elaborated upon by a policy interpretation for Title IX that includes what became known as the "three-prong test" of an institution's compliance: (1) providing athletic participation opportunities that are substantially proportionate to the student enrollment, (2) demonstrating a continual expansion of athletic opportunities for the underrepresented sex, or (3) making a full and effective accommodation of the interest and ability of underrepresented sex (Office for Civil Rights 2005). By showing compliance with any of these three prongs, an institution could receive their federal funds.

The legislation and resulting regulations have been deemed extremely effective. Reviews note, for example, an 850% increase in participation in sports for high school girls 30 years after the mandates were started in

1972; they also note that girls have gone from being about 7% to being over 40% of school athletes (Eckes 2006). Given the important role that sports can play in fostering positive youth development (Anderson-Butcher et al. 2003), these certainly are striking findings.

Although the above would seem to be extremely positive developments, and at least seem fair to the extent that they seek to ensure equality, the regulations have been the subject of considerable criticism (for brief reviews, see Johnson 1998; Little 2008). Among the most frequent criticisms has been the costs that the enforcement of the regulations has had on male teams, arguing that they have been cut to replace them with female sports. Critics also have argued that there is a need for separation of the sexes for particular sports, females are at increased injury risk, and participating in sports is a privilege rather than a right. In addition, there are arguments that litigation costs draw much needed funds away from educational programs.

This area of law presents an important development in the rights of adolescents. Research continues to demonstrate the importance of athletic participation, and the benefits found in that research are complemented by the real benefits that can accrue to athletes during adulthood. Legal developments in this area show how school officials have increased obligations to ensure opportunities for more students than traditionally has been the case. There still is much developing in this area that serves as a good example of how gender disparities in educational opportunities are not only a consequence of problematic stereotypes but also a cause of those stereotypes.

References

Anderson-Butcher, D., Newsome, W. S., & Ferrari, T. M. (2003). Participation in boys and girls clubs and relationships to youth outcomes. *Journal of Community Psychology, 31*, 39–55.

Eckes, S. E. (2006). Title IX and high school opportunities: Issues of equity on and in the Court. *Wisconsin Women's Law Journal, 21*, 175–194.

Education Amendments of 1972. (2010). Title IX. 20 U.S.C. § 1681.

Johnson, T. J. (1998). Throwing like a girl: Constitutional implications of Title IX regarding gender discrimination in high school athletic programs. *Northern Illinois University Law Review, 18*, 575–600.

Little, J. (2008). Running against the wind: Sex discrimination in high school girl's cross country. *UMKC Law Review, 76*, 711–725.

Office for Civil Rights. (2005). Additional clarification of intercollegiate athletics policy: Three-part test – part three. United States Department of Education. http://www.ed.gov/about/offices/list/ocr/docs/title9guidanceadditional.pdf. Accessed 11 Jan 2010.

Attachment During Adolescence

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Overview

This essay considers a number of important issues concerning attachment during adolescence. It begins with a short historical description of attachment theory and its development, the importance of studying attachment during adolescence, and relevant measurement issues. Then, it examines the source of individual differences in quality of attachment, changes in quality of attachment during adolescence, and the connection between attachment and adolescent psychosocial (mal) adjustment.

Key Definitions

A general definition of attachment is an enduring affectional bond of substantial intensity (Ainsworth 1989). Two names that are almost synonymous with attachment theory are those of John Bowlby and Mary Ainsworth. Both have provided indispensable contributions to attachment theory as it still stands today. Bowlby represented the theoretical force behind attachment theory, and Ainsworth provided valuable empirical corroboration. Bowlby theorized that human infants have a natural disposition to form close affectional bonds to other human beings (attachment figures), and that these bonds, or attachments, serve the purpose of survival. The attachment system is a system of homeostasis, the desired outcome of which is proximity of the attachment figure (Bowlby 1982; Ainsworth 1989). It is activated in times of stress. When a child feels frightened, tired, sick, alone, or unsafe in any way, he or she will exhibit attachment behavior, such as crying or calling out or otherwise seeking contact with the attachment figure (depending on the child's developmental capabilities). This display of attachment behavior triggers caregiving behavior from the attachment figure, thus resulting in the attachment figure's proximity. This behavioral system is evolutionary reinforced, as closeness to a caring adult increases an infant's chances of survival. When the

child feels safe and secure, deactivation of the attachment system occurs, and attachment figures provide a safe base from which the child can explore the world. Security in times of stress and facilitation of exploration are two important, interrelated functions of the attachment system.

Over time, attachment experiences are integrated to form an internal working model of attachment, which can be secure or insecure. Insecure attachment is further differentiated into insecure avoidant, insecure resistant, and disorganized attachment. These different categories represent different strategies for interacting with parents (or other attachment figures). *Securely attached* children are confident in themselves and others. They are emotionally expressive: they feel secure enough to show their emotions, positive as well as negative. When upset, they are generally easily soothed by their parents, who are usually sensitive to their needs. Children with *insecure avoidant attachment* seem to minimize their attachment behavior: they outwardly show minimal signs of distress in stressful situations and barely use their parents for comfort. Children with *insecure resistant attachment* seem to maximize their attachment behavior: they are difficult to soothe by parents when they are upset, and may show anger toward them. Generally, they seem preoccupied with their parents. Children assigned to the last category, *disorganized attachment*, have in common that they lack a clear consistent behavioral strategy toward their parents. These children may act strange, scared, or stereotypical in stressful situations.

Attachment is not limited to infancy, but remains important during the entire life span. However, with increasing age, attachment relationships change in form and function. An infant needs his or her parents in order to survive, but as the infant reaches childhood and adolescence, he or she becomes progressively more independent. The dependability of the infant is less relevant in adolescence, whereas the attachment relationship itself is as relevant as ever. Therefore, the form and function of attachment behavior changes as the physical and cognitive competence of an individual changes.

According to theorists, attachment has two dimensions. In infancy and early childhood, working models of attachment are inferred from experiments such as the Strange Situation, which focus on the *behavioral dimension* of attachment (Hinde 1982). This behavioral dimension of attachment concerns the extent to which children use attachment figures as a safe base for exploration. The second dimension of attachment, the *affective/cognitive dimension*, contains the affectively toned cognitive expectancies that are part of a person's working model of attachment (Bretherton 1985). As children mature in adolescence, the affective/cognitive dimension of attachment can be directly tapped by self-report measures.

Why Study Attachment in Adolescence?

Most of the studies concerning attachment have focused on infancy and early childhood, and adult attachment has also received considerable attention. However, comparatively less is known about attachment *during* adolescence. The historical view of adolescence as a period of storm and stress might not be as universally true for all adolescents as once posited. However, adolescence is a transitional period, in which many social, cognitive, and physical changes take place. An important developmental task for adolescents is identity formation and acquiring more autonomy from parents while maintaining a healthy relationship with parents at the same time. So, during adolescence, children and parents need to renegotiate their relationship as well as their positions and roles within the family. For most adolescents, it is a time of increased conflicts with parents and feelings of insecurity. It is already indicated earlier in this essay that the attachment system is triggered by stress and feelings of insecurity. Since adolescence is a period of life in which children and their families are confronted with a great number of changes and challenges, quality of parent–adolescent attachment is important in increasing the odds of a positive outcome. Therefore, it is crucial to study attachment during adolescence.

Measures and Measurement Issues

Whether one studies attachment in infancy, childhood, or adolescence has its consequences for the way quality of attachment is measured. In infancy, observation of attachment behavior is most common, since one cannot ask an infant to describe his or her quality of attachment verbatim. As the child matures in adolescence, however, cognitive changes allow the adolescent to adequately put his or her feelings and thoughts into words. From this period onward, researchers can

simply ask participants of attachment studies to indicate how they feel about other persons and about themselves. There have been some observational studies concerning adult attachment, but because attachment behavior itself becomes less easily triggered and recognizable as such, and because questionnaires and interviews are a more time-efficient way of studying attachment, adolescent attachment research is dominated by self-report measures and interview methods.

When studying attachment relationships during adolescence, one should use an instrument that reliably measures the affectively based cognitive expectancies of felt security concerning specific attachment figures, and can be used with early to late adolescents. There are several instruments that measure attachment beyond infancy. A general distinction can be made between measures that asses attachment *style*, such as the Adult Attachment Interview (AAI; George et al. 1985), and measures that asses attachment *relationships*, for example, the Inventory of Parent and Peer Attachment (IPPA; Armsden and Greenberg 1987). The AAI is a frequently used, reliable, and valid retrospective semi-structured interview, in which older adolescents and adults reflect on past attachment experiences. In the last decade, researchers have also adjusted this measure for use with children (Child Attachment Interview) and adolescents (Attachment Interview for Childhood and Adolescence). Transcripts of the interviews are coded concerning descriptions of childhood attachment experiences, the language used in these descriptions, and whether the person is able to provide a coherent, integrated description of these experiences. All these instruments aim at capturing a generalized representation of attachment, as opposed to current attachment relationships. The IPPA (or questionnaires based on the IPPA, such as the IPPA-R and People in My Life questionnaire) is also an often-used questionnaire that assesses the affective/cognitive dimension of attachment. It has been constructed with the purpose of use with adolescents. As one of the few available instruments that measure current parent–adolescent attachment relationships, it provides an indication of felt security by measuring the adolescent's trust in the availability and sensitivity of the attachment figure, the quality of communication, which fosters comfort, and the extent of anger and alienation in the relationship with the attachment figure.

Both types of measures (attachment style and attachment relationship) show excellent psychometric and theoretical quality, as indicated by good validity and reliability, as well as a firm basis in traditional attachment theory. Which type of attachment measure to use is largely dependent on the type of research question one wishes to study.

Sources of Individual Differences

An important issue from both a theoretical as well as a practical, clinical point of view is the explanation for individual differences in attachment. Theoretically, a theory of development is incomplete if it does not offer hypotheses concerning which circumstances lead to particular outcomes. Clinically, it is important to understand the conditions that can lead to specific outcomes for the sake of intervention. Concerning adolescent attachment, one needs to know whether differences in quality of attachment are associated with characteristics of the adolescent, characteristics of the attachment figure, or of the specific relationships in order to effectively improve quality of attachment. If quality of attachment represents a characteristic of the adolescent, then interventions to enhance psychosocial adjustment and well-being by increasing this quality should focus primarily on the adolescent. A focus on working models of attachment favors such an approach. Experience with attachment figures over time leads an individual to shape a working model of these attachment relationships and create a general working model of attachment, which the person uses when engaging in new relationships (Bowlby 1982). Consequently, in this view, quality of attachment is conceptualized as a characteristic of an individual.

However, in infant attachment studies, sensitivity and responsivity of the attachment figure have shown to be of major influence regarding quality of attachment of the infant (van IJzendoorn et al. 1992). Research has also shown that interventions concerning parenting behavior are associated with changes in quality of infant attachment. For adolescents, parents are usually still the primary attachment figures, so these attachment relationships are still very influential concerning adolescent psychosocial adjustment. If characteristics of the attachment figure are essential for individual differences in quality of attachment, then intervention should focus primarily on the

attachment figure and caregiving behavior, instead of solely on the adolescent.

A third possibility is that differences in quality of attachment are characteristics of the relationship itself, the unique combination of both the adolescent and the attachment figure. Research has shown that quality of attachment may be relationship specific (Goossens and van IJzendoorn 1990). A person can be securely attached to mother and insecurely attached to father, and vice versa. If this hypothesis holds for adolescents, then focusing exclusively on either the adolescent or on both of the parents would not be a fruitful way of increasing quality of parent–adolescent attachment.

It might well be that all three sources are important, but that one is more influential than the other. Because until recently no adequate methodology was available to disentangle individual versus relationship effects, this issue remained a question of theoretical orientation. Nowadays, however, sophisticated methodology, such as the Social Relations Model (Kenny and LaVoie 1984), enables us to examine this question statistically. The Social Relations Model (SRM) is a statistical tool for disentangling individual, dyadic, and group sources of variance in dyadic data, which are named actor, partner, relationship, and group effects in the SRM. So, for example, it can help us determine whether differences between adolescents concerning adolescent–mother quality of attachment are best explained by characteristics of the adolescent (adolescent's actor effect), characteristics of the attachment figure (mother's partner effect), characteristics of the specific relationship (adolescent–mother relationship effect), and/or characteristics of the family as a whole (family effect). Application of the SRM to family attachment data (Buist et al. 2004) showed that differences between adolescents in quality of parental attachment were best explained by adolescents' internal working model (about 50% of the explained variance) and relationship-specific characteristics (about 25% of the explained variance). This is consistent with the idea that internal working models of attachment and attachment relationship are two related, but separate constructs (Allen 2008). However, although characteristics of the attachment figure and of the family as a whole were less important, they still accounted for 10% and 15% of the explained variance, respectively. So, sensitivity of the attachment figure contributes to differences in parental attachment in adolescence, and there are also family-level differences concerning the degree to which attachment relationship within families are secure. Further longitudinal research also showed that most (but not all) of these attachment processes are relatively stable (Buist et al. 2008). The contribution of internal working models, sensitivity of the attachment figure, and family characteristics does not change during adolescence, but that of the unique adjustment between adolescents and their parents increases.

Continuity Versus Change

Another important question concerning attachment is the degree to which it changes over time, or whether attachment is relatively stable. Research into continuity or change of attachment quality has provided contradicting results, some studies finding age-related changes, and others failing to find them. These differences in findings can be explained by different conceptualizations of the construct of attachment. A lot of research concerning adolescent attachment has focused on attachment style, internal working models of attachment. Since these internal working models of attachment are based on a large number of attachment experiences over a prolonged time period, attachment style is thought to be quite stable over time. Researchers who focus on this particular conceptualization and apply matching measurements (e.g., the AAI) generally find stability. For example, some researchers have been able to demonstrate that attachment security in infancy can successfully predict attachment security in late adolescence. Additionally, these studies generally use attachment categories (e.g., secure vs. insecure; secure vs. insecure avoidant, insecure resistant, insecure disorganized). Following that approach, stability is indicated by remaining in the same category at two different points in time, whereas change means that an individual shifts from one category to another (e.g., from secure to insecure avoidant).

On the other hand, studies that focused on quality of specific current attachment relationships instead of attachment style or internal working models of attachment have generally found age-related changes in quality of parent–adolescent attachment. Short-term longitudinal studies have shown that these specific attachment relationships tend to change during this

developmental period, indicating that quality of adolescent–parent attachment tends to decrease from early to middle adolescence, followed by a gradual increase until late adolescence. So, attachment style seems to be relatively stable, whereas specific attachment relationships change during adolescence.

Attachment and Adolescent Adjustment

Attachment has been consistently linked to positive as well as negative behavioral outcomes. Positive attachment experiences result in a child or adolescent with confidence in himself or herself and in the availability and sensitivity of important others. Consequently, attachment security is associated with better academic performance and increased emotional and social competence, as indicated by a greater sense of social acceptance as well as higher quality of peer relationships and friendships.

Insecure attachment, however, increases the risk of a wide array of behavioral problems. Negative attachment experiences in infancy and childhood result in an internal working model of attachment that includes a negative image of self and of the social world. An insecurely attached child views himself or herself as unworthy of love and views the (social) world as negative and untrustworthy. Reflecting the importance of quality of attachment for psychosocial (mal)adjustment, this connection has been the subject of considerable research efforts.

Concerning problem behavior, a distinction should be made between the different insecure attachment categories, as they are associated with different types of problem behaviors and psychopathologies (Allen 2008). Adolescent depression can be predicted by infant insecure resistant and avoidant attachment. These children have learned from early experiences that attachment figures are unavailable, creating a negative self-image and low self-esteem in combination with a decreased sense of control, which often manifests itself in depressive symptoms in adolescence. Anxiety disorders have been linked to insecure resistant attachment. Parents of insecure resistant children may be either rejecting or overprotective, resulting in less exploration and more fearfulness in their children.

Externalizing problems have also been linked to insecure attachment. Only a small proportion of severely aggressive and delinquent adolescents are securely attached. Similarly, both insecure avoidant and disorganized attachment significantly increase the risk of aggression, substance abuse, and delinquency in adolescence. The oppositional or antisocial behavior reflects a disregard for other people's feelings, which may result from the experience that attachment figures often disregard the child's feelings.

Most of these studies have taken place in Western societies. Whereas the evidence concerning the importance of parent–adolescent attachment for adjustment and problem behavior is compelling, more research in non-Western societies is needed to examine whether the links between attachment and adjustment are influenced by different cultural and social values.

References

Ainsworth, M. D. S. (1989). Attachment beyond infancy. *American Psychologist, 44*, 709–716.

Allen, J. P. (2008). The attachment system in adolescence. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 419–435). New York: Guilford.

Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16*(5), 427–453.

Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York: Basic Books.

Bretherton, I. (1985). Attachment theory: retrospect and prospect. *Monographs of the Society for Research in Child Development, 50* (1–2), 3–35.

Buist, K. L., Deković, M., Meeus, W., & van Aken, M. A. G. (2004). Attachment in adolescence: A Social Relations Model analysis. *Journal of Adolescent Research, 19*, 826–850.

Buist, K. L., Deković, M., & Reitz, E. (2008). Attachment in adolescence: A longitudinal application of the Social Relations Model. *Journal of Social and Personal Relationships, 25*, 429–444.

George, C., Kaplan, N., & Main, M. (1985). *The adult attachment interview.* Berkeley: University of California. Unpublished manuscript.

Goossens, F. A., & van IJzendoorn, M. H. (1990). Quality of infants' attachments to professional caregivers: Relation to infant-parent attachment and day-care characteristics. *Child Development, 61*, 832–837.

Hinde, R. A. (1982). Attachment: some conceptual and biological issues. In C. M. Parkes & J. Stevenson-Hinde (Eds.), *The place of attachment in human behavior.* London: Tavistock Publications.

Kenny, D. A., & LaVoie, L. (1984). The Social Relations Model. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 18, pp. 142–182). San Diego: Academic.

van IJzendoorn, M. H., Goldberg, S., Kroonenberg, P. M., & Frenkel, O. J. (1992). The relative effects of maternal and child problems on the quality of attachment: A meta-analysis of attachment in clinical samples. *Child Development, 63*, 840–858.

Attention Deficit Hyperactivity Disorder (ADHD)

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Overview

Attention-Deficit Hyperactivity Disorder (ADHD) is the single most common psychiatric diagnosis in childhood and adolescence. Estimates of prevalence vary widely, but consensus opinions suggest that between 3% and 7% of children have ADHD (American Psychiatric Association 2000). The disorder has the potential to disrupt or interfere with all aspects of functioning, including academic achievement, employment, social and familial relationships, and law-abiding behavior. As such, it also represents a significant cost to society each year. Furthermore, because the disorder is often initially present in early childhood and may continue into adulthood, it significantly impacts individuals and those around them across the lifespan. It also often presents with comorbid psychiatric diagnoses and is frequently accompanied by additional areas of difficulty, such as problems with interpersonal relationships. There is a significant body of empirical findings on ADHD, which support a biological etiology of the disorder, although the role environmental variables play should not be underestimated. Empirically supported treatment typically involves medication and/or psychosocial intervention. Despite the significant investment in research about ADHD, this disorder remains controversial in the media and in society in general.

Presentation of ADHD

If one surveys the general public, one might assume that ADHD has made a relatively recent appearance in diagnostic circles. This assumption is inaccurate. George Still initially described the childhood syndrome in 1902 as an "abnormal defect in moral control of children" (as cited in Spencer et al. 2007). The condition continued to appear in the clinical literature as "minimal brain dysfunction" for many years. With the publication of the second edition of the *Diagnostic and Statistical Manual* (*DSM*), the text that serves as a foundation for all psychiatric diagnoses in 1968, the new label for this disorder was "hyperkinetic reaction of childhood." The third edition of the *DSM* split the disorder into two separate diagnoses, attention-deficit disorder with and without hyperactivity. In the revision of the third edition of the *DSM* in 1987, the diagnosis was split in ADHD and attention-deficit disorder (ADD). With the fourth edition in 1994 and its text revision in 2000, the disorder was fully unified with four subtypes, which are more fully discussed below.

Symptoms. Symptoms of ADHD fall into two domains: Inattention and Hyperactivity. The diagnostic criteria, described more fully below, require symptoms to fall within either domain or in both domains for diagnosis. Symptoms are required to be present in childhood, must be developmentally inappropriate, occur in multiple contexts, and cause significant impairment.

The inattention features associated with ADHD are often described as difficulty maintaining attentional set or distractibility. When asked to describe the behavior of a particular individual with ADHD, parents, teachers, and coworkers often enumerate behaviors such as not being able to organize work toward a goal, not listening to instructions, missing careless mistakes when checking work, avoiding tasks that require sustained effort, being "flighty," and being easily distracted by other events in the environment. For individuals with ADHD, losing belongings, not following through with multistep procedures, and difficulty in finishing tasks in a timely fashion make school, work, and some relaxation activities unsuccessful. Additionally, there is a body of research to suggest that some individuals with inattention symptoms appear to have "slow cognitive tempo" characterized by a day-dreamy or sluggish state (Hartman et al. 2004).

Although the inattention symptoms that are often part of ADHD have significant cognitive consequences, it is the hyperactivity and the impulsivity that often have the most significant behavioral consequences. Individuals with hyperactivity-impulsivity are often described as having seemingly endless energy. Even when able to remain in a seat, they may fidget or squirm excessively. They may disturb others when engaged in supposedly quiet activities. This high level of activity may make sitting through a class, meeting, or a meal difficult to impossible. The impulsivity is often manifested as impatience or intrusive behavior. It may also lead individuals to engage in risky or

dangerous activities without considering consequences. Although the outward symptoms may remit somewhat over development, many adolescents and adults with ADHD report feeling restless and have difficulty with sedentary activities.

As a result of changes in behavior across the lifespan, many of the behaviors commonly associated with ADHD are highly prevalent in very young children, such as a high level of activity and difficulty ignoring competing stimuli in the immediate environment, yet are expected to fade as the individual becomes an older adolescent and adult. Thus, implicit in the list of symptoms is a focus on the developmental appropriateness of the behavior given the individual's age and other demographic characteristics. However frustrating the presenting behaviors, the symptoms must be considered in the context of the individual's development. For example, behavior involving running from activity to activity, being noisy while playing/working, and staying with a given task for just a couple minutes would be considered within normal limits for a young child but significantly aberrant in late adolescence. Furthermore, it may be that symptoms change in nature over time. Generalized distractibility in childhood may become procrastination or poor time management and work avoidance in adolescence. Likewise, running and climbing at inappropriate times in childhood may transform into avoidance of situations requiring prolonged sitting, becoming bored easily, and impatience with others as the child becomes an adolescent or young adult.

Prevalence. As previously mentioned, ADHD is the most common childhood psychiatric diagnosis, although specific incidence rates vary widely based on sampling techniques, population parameters, and other methodological issues. In a study that pooled prevalence rates across 102 child and adolescent samples, 5.23% of the population should meet criteria for diagnosis (Polanczyk et al. 2007). Data from a World Health Organization sample (Fayyad et al. 2007) suggest a somewhat lower prevalence rate, 3.4%, which may reflect subtle diagnostic differences between the *DSM* used in North America and the International Classification of Diseases (ICD-10) criteria used predominantly in Europe. In a large epidemiologic sample from the United States, 8.6% of participants met full diagnostic criteria for ADHD (Merikangas et al. 2010). Across all studies, the disorder is noticeably more common in males than in females, with the disorder occurring approximately twice or thrice as often in males (Centers for Disease Control and Prevention [CDC] 2005a). A review of cross-cultural studies suggests similar prevalence patterns North America and Europe, but there is extremely limited data from samples in developing countries (Faraone et al. 2003).

Cited prevalence rates in adolescence and into early adulthood are significantly more variable. A number of longitudinal studies have documented that this disorder is persistent in at least some individuals into adulthood (e.g., Halperin et al. 2008). One study suggested that 60–85% of individuals receiving a childhood diagnosis of ADHD continue to have significant symptoms *and* at least some impairment in adulthood (Barkley et al. 1990). Data from an epidemiologic study using a US sample suggest that approximately 4% of adults meet full diagnostic criteria for ADHD (Kessler et al. 2005). One significant methodological issue in many studies of the persistence of this disorder in adulthood is the fact that the *DSM* does not allow for changes in developmental norms for behavior. For example, an individual with four or five symptoms of hyperactivity in childhood may appear only minimally different from peers, yet these same behaviors in an older adolescent may represent significant behavioral dysfunction. Thus, there is poor consensus related to what might construe appropriate diagnostic criteria for an older adolescent or adult. Specifically, results from one study demonstrated that 1% of that sample had six symptoms of ADHD (i.e., met full diagnostic criteria), whereas 2.5% exhibited at least four symptoms (Kooij et al. 2005). Anecdotal and empirical evidence suggest that it is the hyperactive and impulsive symptoms that decline across development while symptoms of inattention persist (Biederman et al. 2000). Despite the lack of agreement about specific diagnostic standard for older adolescents and adults, there is clear data to suggest that a significant number of people persist in their presentation of symptoms.

Models of ADHD. Although ADHD has been frequently described as a disorder of executive functioning (Nigg and Casey 2005), there are multiple competing and sometimes complementary models to explain the myriad of behavioral and cognitive symptoms. Regardless of the model applied, the neuropsychological deficits associated with ADHD, such as response time variability, poor set shifting, and response errors

(e.g., Halperin et al. 2008) have been extensively documented in the literature.

The predominant model of ADHD involves an impairment of executive functions (Barkley 1997) and is typically linked to prefrontal cortex functioning. Barkley posited that ADHD is the result of impairment in four specific executive functioning areas: working memory, self-regulation, internalization of speech, and behavioral analysis and synthesis. These impairments were hypothesized to cause secondary impairments in cognitive control as well as motor control. Building on Barkley's model, it may be that ADHD is not the result of single unifying deficit in executive functioning, but a series of possible deficits in one of more areas of executive functioning (Nigg et al. 2005). Inhibitory control, a component of executive functioning is also often posited as a central feature of ADHD (e.g., Nigg 2001) and is necessary for self-control, emotional regulation, and cognitive flexibility.

In contrast with the focus on executive functioning and inhibitory control, a delay aversion model of ADHD has also been proposed (Sonuga-Barke et al. 1996). With this model, the neurobiological system associated with connecting present behaviors and future contingencies is hypothesized to be dysfunctional. This line of reasoning explains why individuals with ADHD often have difficulty in working for extended periods of time, especially if the reward structure is nebulous or the rewards vary in magnitude and timing of reward.

The cognitive-energetic model of ADHD (Sergeant 2005) offers a third explanation for the typical symptoms and behaviors associated with ADHD. In the cognitive-energetic model, the primary dysregulation is at the level of activation and effort necessary to optimize cognitive functioning. In this model, the arousal centers in the brain fail to upregulate for more challenging cognitive and behavioral tasks. This model offers an alternate explanation for the increased reaction time variability that has been shown across many studies of individuals with ADHD.

Common comorbidities. ADHD frequently appears with other conditions (i.e., comorbidity). The most common comorbidity occurs with Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD). Specifically, 30–50% of children with ADHD also have either ODD or CD (Biederman et al. 1991). ODD is characterized by a pattern of negativistic, hostile, and defiant behavior, whereas as CD is characterized by habitual rule breaking with a pattern of aggression, destruction, lying, stealing, and/or truancy. In many cases, ODD appears relatively early in the developmental progression with criteria for CD being met later in development (American Psychiatric Association 2000). When diagnostic criteria for both disorders are met, only CD is diagnosed and is generally considered to be more concerning than ODD. Adolescents with comorbid ADHD and CD are at significantly increased risk for more negative life-course outcomes (Biederman et al. 2008a).

Learning disabilities, particularly reading disabilities or dyslexia, are also commonly comorbid with ADHD. Between 20% and 35% of children with ADHD also have learning disabilities (Spencer et al. 2007). Although some studies have suggested that either ADHD causes learning disabilities or vice versa, it is more likely that there are common underlying genetic or neurobiological risk factors for these disorders (Couto et al. 2009). The presence of learning disabilities with ADHD suggests a need for additional treatment and intervention (Hechtman 1999).

Because of the high prevalence rate of ADHD in the general population, it is not surprising there is a high comorbidity rate with other disorders, such as depression (up to 33%; Pliszka 2000), anxiety disorders (up to 50%; MTA Cooperative Group 1999a, b), and tic disorders (Spencer et al. 1999). There is some controversy about the comorbidity rates with ADHD and bipolar disorder, which was previously known as manic-depression. One longitudinal sample documented relatively high comorbidity rates (e.g., up to 16%; Biederman et al. 1992) whereas other studies have suggested significantly lower comorbidity rates (e.g., less than 2%; McGough et al. 2008).

As development proceeds, comorbidity patterns change somewhat over time. Three particular patterns have been repeatedly cited in the literature. First, adolescents and adults with ADHD are at significant risk for developing a substance use disorder (Elkins et al. 2007). Individuals with this comorbidity are also at further risk for some of the more negative outcomes associated with ADHD, which will be described in more detail below. It appears that ADHD may, likewise, increase the risk for a transition from less significant substance experimentation to more severe substance dependence in a shorter period of time than typically

developing peers (Wilens et al. 2005b). Second, comorbidity rates with depression also increase over development (Daviss 2008). Lastly, individuals with persistent ADHD are also at significantly increased risk for a comorbid personality disorder diagnosis. Specifically, risk is increased for Borderline, Antisocial, Narcissistic, Avoidant, and Paranoid Personality Disorders (Miller et al. 2008), all of which portend significant risk for poor outcomes. Although it is not clear how the etiological factors involved in ADHD may relate to comorbidity patterns in each case, the severity of these patterns suggests a potential for significant lifelong dysfunction in some individuals with ADHD.

Additional issues with ADHD. Related to the symptoms of ADHD and possibly the high rate of comorbidity with learning disabilities, many individuals with ADHD have significant difficulty in school. Despite intelligence test scores generally within the average range, many individuals with ADHD have lower than expected reading and math achievement (Biederman et al. 1996). A number of studies suggest that these academic problems are persistent (Barkley et al. 1990), resulting in lower class rankings, taking longer to complete high school, and reduced rates of attending and completing college/university. Additionally, a diagnosis also increases risk for repeated grades, special education placement, and a need for remedial instruction (Biederman et al. 1996). Furthermore, students with ADHD are suspended or expelled more often than their typically developing peers (LeFever et al. 2002).

Research with adolescents and adults suggests that individuals with ADHD are also at risk for having difficulty getting and maintaining employment (Halmoy et al. 2009). Perhaps partially related to academic difficulties leading to lower levels of education described above, individuals with ADHD are also at risk for underemployment and/or chronic unemployment (Biederman et al. 2008b). Employers often describe these individuals as performing more poorly and statistical evidence supports the assumption that they are more likely to either quit or be fired from their jobs (Murphy and Barkley 1996).

A number of studies suggest that individuals with ADHD have social difficulties with more than half being rejected by peers (Hoza et al. 2005). Difficulties with inattention also make it more difficult for individuals with ADHD to learn social skills by observing others (Cunningham et al. 1991) and to attend to social cues (Landau and Milich 1988). Additionally, those with hyperactive and impulsive features may also exhibit intrusive social behaviors that are off-putting to peers (Whalen and Henker 1991). There is data to suggest that both males and females with ADHD are at risk for social difficulties (Hoza et al. 2005). Individuals with ADHD are more likely to socialize with deviant peers (Berndt and Keefe 1995) and may even prefer those who are also experiencing social rejection (Nangle et al. 1996). There is also evidence that individuals with ADHD begin sexual activity earlier, are less likely to use contraception, have more total partners, and more likely to experience a teen pregnancy (Barkley et al. 2006). Thus, when one considers the full range of social difficulties, it is not surprising that by adolescence and adulthood, individuals with ADHD report high rates of failed relationships and social dysfunction (Eakin et al. 2004).

Numerous studies document the increased risk for law breaking and involvement in the justice system by those with ADHD. One longitudinal study suggested that within 3 years of diagnosis, preadolescents with ADHD exhibit significantly higher rates of delinquency (Molina et al. 2007). A longer-term longitudinal study has demonstrated that these individuals as adults are more likely to have been arrested, convicted, and incarcerated than individuals without ADHD (Mannuzza et al. 2008). This same study suggested that individuals with ADHD are also more like to commit felonies and aggressive offenses. Many incarcerated individuals, particularly those with psychopathy, have histories of an ADHD diagnosis during childhood or adolescence (Johansson et al. 2005).

Poor control of impulses and difficulty managing multiple simultaneous stimuli also predicts poor functioning as a driver. Adolescents and adults with ADHD are two to four times more likely to be involved in an automobile accident (Barkley and Cox 2007). Risky traffic behaviors, including more rear-end collisions, tickets for reckless driving, driving without a license, and driving with a suspended license, are also more common in these individuals (Fischer et al. 2007). This pattern of driving difficulties has significant economic and safety implications at the individual level and for society in general.

Factors predicting persistence and poor outcomes. As described in the preceding paragraphs, the outcomes associated with ADHD, particularly when it persists

into adolescence, can be bleak. In short, all areas of life, from education and employment to relationships and personal safety can be compromised with this diagnosis. Yet, the diagnosis of ADHD is not deterministic for poor outcomes. Indeed, for individuals who either have remission of symptoms during adolescence or who find niches where success is more likely optimal functioning is common. Within the individual, high levels of symptoms or significant impairment in childhood predict poorer outcomes in the long term (Molina et al. 2009). Longitudinal studies of ADHD suggest that there are several factors that predict poor outcomes, including maternal psychopathology, larger family size, psychiatric comorbidity, and persistently impulsive behaviors (Biederman et al. 1998). The effects of treatment on outcome are equivocal with some authors suggesting treatment lowers risk for poor outcomes (Hechtman 1999), whereas others have suggested type and intensity of treatment has little effect on long-term prognosis (Molina et al. 2009).

Cost of ADHD to society. As the most common psychiatric diagnosis during the developmental period, ADHD represents a significant cost to society. The most common time for diagnosis is during the school-age period (Leslie and Wolraich 2007), but, as previously described, symptoms are often present early in childhood and continue into adulthood for many. A fairly recent study on the economic impact of ADHD suggests that the total annual cost of ADHD to society is in excess of $42 billion (Pelham et al. 2007). These authors estimated that each individual with ADHD, on average, needs $14,576 (2005 US dollars) in care across educational, medical, and legal contexts each year. As such, this disorder represents a significant cost to society, and not treating represents a potential for even greater cost.

Diagnostic Criteria for ADHD

The current diagnostic criteria for ADHD are from the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association 2000), although a revision leading to the fifth edition is in progress and is expected in May 2013. The current criteria require the following:

1. Six developmentally inappropriate and maladaptive symptoms of inattention *and/or* six developmentally inappropriate and maladaptive symptoms of hyperactivity-impulsivity for at least 6 months. The *DSM-IV* manual provides specific descriptions of nine symptoms in each domain.
2. Some of the symptoms must be present before 7 years.
3. Some of the symptoms must be present in at least two settings.
4. The symptoms must cause clinical impairment in a major life area.
5. Symptoms are not better explained by a different disorder.

In *DSM-IV*, there are four subtypes of ADHD. The Combined type, which is the most common with 50–75% of diagnoses (Spencer et al. 2007; Wolraich et al. 1996), requires at least six symptoms in both the inattentive and hyperactive-impulsive domains. The Predominantly Inattentive subtype requires only six symptoms of inattention, although there may be subclinical features of hyperactivity-impulsivity present. The Predominantly Inattentive subtype accounts for 20–30% of diagnoses (Spencer et al. 2007; Wolraich et al. 1996). The Predominantly Hyperactive-Impulsive subtype requires only six symptoms of hyperactivity-impulsivity, although there may be subclinical features of inattention present, and accounts for less than 15% of diagnoses (Spencer et al. 2007; Wolraich et al. 1996). The final subtype, ADHD: Not Otherwise Specified, is used only when there are prominent symptoms of inattention and hyperactivity-impulsivity, but the criteria are not clearly met. The fourth edition of the *DSM* also specifically notes that for individuals who no longer meet full diagnostic criteria, particularly adolescents and adults, but did in the past, "In partial remission" should be specified.

At the time of publication, the changes proposed for *DSM-V* (Until the fifth edition of the DSM is published, ongoing updates about proposed changes in the diagnostic criteria for ADHD and other disorders are available on the American Psychiatric Association's Web site: http://www.dsm5.org) have not been solidified but there are a number of criticisms of the current diagnostic criteria. These criticisms are summarized on the Web site for the *DSM* working group on ADHD and include issues with the age of onset criteria, particularly for children with Predominantly Inattentive Type ADHD, threshold artifacts due to the organization of subtypes, and the failure of the criteria to

account for developmental changes in symptoms over time. As previously described, the last of these is particularly important for adolescents with ADHD. Multiple studies have documented that many adolescents (and adults) with ongoing and significant impairment due to ADHD symptoms may not meet full diagnostic criteria for the disorder because of a diminution in hyperactivity-impulsivity symptoms over time. Specifically, although the individual may become better able to control impulsive behavior or limit physical activity in certain settings, there are cognitive costs for this level of control and inattention symptoms are likely to linger. Thus, the adolescent with ADHD may have some remission of symptoms but significant dysfunction in school, work, or social interactions may remain.

Etiology

The most widely accepted conceptualization of ADHD is as a disorder characterized by deficits in executive functioning, with particular deficits in response inhibition, vigilance, working memory, and planning (Willcutt et al. 2005). These deficits are thought to be largely genetic, although the role of environmental factors, particularly those that interact with genetic factors, cannot be underestimated. These genetic and environmental factors are believed to influence prenatal neuroanatomical development and subsequent neurophysiological functioning.

Genetic factors. Multiple studies support the notion that ADHD is the most heritable of all psychiatric disorders with a heritability rate greater than 75% (e.g., Faraone et al. 2005). Data from these studies were derived from twin samples, families of individuals with ADHD, adoption samples, and molecular genetics surveys. Siblings of individuals with ADHD have three to five times greater risk for ADHD (Faraone et al. 1993), but the familial clustering is not specific for ADHD subtype (Smalley et al. 2001). Although the studies strongly support an underlying genetic risk for ADHD, it is clear that not all individuals with ADHD carry each genetic risk factor and many individuals carrying one or more of the genetic risk factors do not exhibit ADHD symptoms (Pliszka 2000). And, each gene of risk accounts for approximately 1% of the variance in ADHD symptoms suggesting that polymorphisms or other factors likely play a role in the expression of ADHD symptoms (Kuntsi et al. 2006).

Across multiple studies, several genes-of-risk have been highlighted for their role in ADHD. Multiple dopamine-related genes are implicated, including DRD4, DRD5, DAT1, and dopamine β−hydroxylase (Pliszka and AACAP Work Group on Quality Issues 2007). Additionally, several serotonin genes, such as 5-HTT, HTRIB, and SNAP-25 are implicated (Faraone et al. 2005). A recent meta-analysis of ADHD genetics studies suggests the strongest evidence for the involvement of DRD4, with more equivocal findings for DAT1 (Faraone et al. 2005). As described below, it is likely that these genes-of-risk interact with environmental factors in most cases of individuals with ADHD symptoms.

Neuroanatomical factors. The effects of the genes associated with risk for ADHD likely have their effects in neuroanatomical development and neurochemistry. As a caveat to the following research on neuroanatomical differences associated with ADHD, there is not a "neuroanatomical profile" that is consistent across those who have been diagnosed with ADHD. Thus, structural and functional imaging techniques are not a valid diagnostic tool at this point.

Across numerous studies, there is evidence of neuroanatomical differences in the brains of individuals with ADHD compared to individuals without ADHD (Krain and Castellanos 2006). Several studies have demonstrated reduced volume and cortical thickness in the prefrontal cortex in individuals with ADHD (Castellanos et al. 2002). Beyond the prefrontal cortex, some studies have also cited structural abnormalities in the parietal areas and the temporal lobes (Shaw et al. 2006). Additionally, growth trajectories for cortical maturation are also delayed in some individuals with ADHD (Shaw et al. 2006).

In addition to the cortical differences noted in ADHD, there is also evidence for subcortical abnormalities. Some studies have documented reduced volume in the striatum, specifically the caudate nucleus and the pallidum (Castellanos et al. 2002). Reduced gray matter has also been reported in the right putamen and the globus pallidus (Ellison-Wright et al. 2008). One study reported corresponding increases in hippocampal volume, which may be a compensatory mechanism for coping with aberrant functioning in other areas of the brain (Plessen et al. 2006). The cerebellum, traditionally thought to be involved only in motor coordination, has also been implicated in ADHD.

Reduced cerebellar volume, particularly in the posterior inferior cerebellar vermis, has been noted in those with ADHD (Castellanos et al. 2002). These differences have been shown to be independent of medication effects (Valera et al. 2007).

As one might expect with structural differences within the brain, there are corresponding differences in activation patterns during tasks related to executive functioning, a primary deficit in ADHD. For example, the dorsolateral prefrontal cortex is less active in individuals with ADHD (Dickstein et al. 2006). This lower level of activity has been implicated in the slower and more variable reaction times seen in individuals with ADHD (Weissman et al. 2006), as well as other problems with various executive functioning tasks. Activation is also reduced in the anterior cingulate cortex (Zametkin et al. 1990) and the striatum (Zametkin et al. 1993). The functional differences found in the anterior cingulate cortex has been associated with the failure to adjust cognitive strategies to meet changing demands or an increase in error rates during executive functioning tasks (Pliszka et al. 2006). There are also changes in frontostriatal functioning, especially in tasks where inhibiting a highly over-learned or prepotent response is required (Durston et al. 2007). Cerebellar activity may also be reduced during executive functioning tasks, suggesting a deficit in predicting future events (Durston et al. 2007). Other studies have documented reduced activation patterns in the temporal lobe (Schweitzer et al. 2000), including the related subcortical structures such as the basal ganglia (Rubia et al. 2007). A meta-analysis of 16 functional imaging studies reported that ADHD is generally characterized by significant hypoactivity in the prefrontal cortex and anterior cingulate cortex (Dickstein et al. 2006).

Environment (including gene x environment interactions). A few environmental factors have been implicated in ADHD in a small number of individuals. The risk for ADHD is increased by 2.5 times when alcohol is consumed during pregnancy (Mick et al. 2002a). Furthermore, those who consume alcohol during pregnancy are also more likely to smoke cigarettes while pregnant (Knopik et al. 2005), another risk factor for ADHD (Mick et al. 2002b). The same study reported that perinatal stress and low birth weight were also correlated with ADHD. Likewise, pregnancy complications have been implicated (Pineda et al. 2007). Other environmental risk factors for a small subsample of those with ADHD include traumatic brain injury (Max et al. 1998), severe early deprivation, such as that might occur in orphanages in developing countries (Kreppner et al. 2001), and exposure to lead, often through paint in older, lower-income homes (Biederman and Faraone 2005). Psychosocial risk factors, such as high levels of family conflict, low family cohesion, and parental psychopathology, have also been linked with ADHD (Biederman et al. 1995).

The inconsistencies in genetic studies of ADHD are likely the result of interplay between genetic and environmental factors (Wermter et al. 2010). Thus, it may be that ADHD is the result of an individual carrying one or more genes-of-risk and then experiencing an environment that increases the likelihood ADHD will occur (Caspi et al. 2002). The high rate of heritability for ADHD (Faraone et al. 2005) provides an example of this scenario: a parent with ADHD may pass along their genes-of-risk to their offspring as well as providing an environment that potentiates the genetic risk. The environmental characteristics may be biological, such as prenatal exposure to alcohol or tobacco, or psychosocial stressors.

The nature of these gene–environment interactions has been documented in several studies. For example, DAT1 polymorphisms may only increase risk for ADHD in the presence of intrauterine exposure to alcohol (Brookes et al. 2006) or tobacco (Kahn et al. 2003). Similar results have been reported for DRD4 (Neuman et al. 2007) and CHRNA4 (Todd and Neuman 2007). The interaction of DAT1 with psychological adversity has also been documented (Laucht et al. 2007).

Assessment of ADHD

The Practice Parameters for ADHD posted on the American Academy of Child and Adolescent Psychiatry (AACAP) web site (Pliszka and AACAP Work Group on Quality Issues 2007) provide an excellent model for the assessment process that is most appropriate for ADHD. This model is highly similar to assessment methods recommended by nonmedical clinicians (Kamphaus and Campbell 2006). Neither laboratory tests nor imaging procedures provide definitive evidence for an ADHD diagnosis. For the clinician, whether physician or psychologist, the diagnostic process is focused on gathering information from multiple sources, such as the patient, his or her parent/s, and

teachers. Information should be gathered from detailed interviews as well as standardized behavior rating scales. The interviews may be conducted with the patient and his or her parent/s together, although it may lead to underreporting by an adolescent patient, particularly with behaviors of which the parent is unlikely to approve, such as substance experimentation or risky sexual behaviors. Parents may also become hesitant to provide full information if the adolescent is likely to become angry or upset by the information the parent provides. Parents may also be uncomfortable reporting about their own history in front of an adolescent patient. For these reasons, it may be more effective to separately interview each individual. Interviews should focus on all of the symptoms associated with ADHD, including duration, frequency, and severity of symptoms, where impairment occurs, and symptoms associated with comorbid conditions. Parents should also be queried about the patient's developmental and medical history, as well as family history of psychopathology and current family functioning. The patient interview should focus on behaviors that are unlikely to be observed by parents or teachers. Additionally, standardized behavior rating scales should be completed by the parent and the teacher. In some cases, clinicians may also ask the adolescent patient to complete self-report behavior rating scales. This entire assessment can be completed by a physician or a psychologist.

A common concern in the diagnostic process is what other assessment is appropriate. According the previously described practice parameters from AACAP, no other assessment is necessary unless warranted. For example, if there are current difficulties with academic work or school performance suggesting low cognitive ability or a learning disability, then neuropsychological or psychoeducational assessment may be indicated. This type of assessment typically involves testing intellectual functioning, specialized cognitive functioning such as memory or receptive language, and academic achievement. If the information from the clinical interviews indicates a medical history that is within normal limits, then additional laboratory testing or neurological testing is unlikely to reveal problems and is not warranted. As previously described, imaging procedures have not yet advanced to the point of being diagnostic for ADHD and are therefore not warranted.

Treatment

Medication. Medication is the typical treatment of choice for most individuals with ADHD. Stimulant medications, such as Ritalin or methylphenidate, are the most frequent prescription for all children in the United States with 4% of females and 9% of males receiving prescriptions at any one time (Centers for Disease Control and Prevention [CDC] 2005b). The most common developmental window for stimulant treatment is during the school-age period (Leslie and Wolraich 2007). The rates of stimulant treatment are quite variable with factors such as geographic location, demographic characteristics of the patient (e.g., race/ethnicity, age, sex), and socioeconomic status (SES) of the family playing a role in who receives medication and who does not (Leslie and Wolraich 2007).

One reason for the high prevalence of stimulant treatment is the long history of efficacy data on these medications. This class of medications has been used in children and adolescents for more than 70 years, with ongoing improvements in longer duration dosing and reduction of side effects. Studies of these medications have been rigorous across multiple large-scale clinical trials, which typically involve double-blind, placebo-controlled, multicenter studies (Pliszka and AACAP Work Group on Quality Issues 2007). Approximately 70% of individuals taking stimulant medications experience at least some diminution of symptoms (Biederman and Spencer 2008), with males and females similar in their response to medication (Hinshaw 2007). Greater severity of ADHD symptoms correlates with a lower rate of response to medication (Hinshaw 2007). In addition to reducing the primary symptoms of ADHD, stimulant medication may improve secondary areas of difficulty, such as driving performance (Barkley and Cox 2007). Typically, the short-term effects for these medications is positive (Hechtman and Greenfield 2003), but there are notable methodological confounds in longer-term studies. One recent study suggested that the positive effects for these medications are maximized in the first 3 years of treatment and treatment beyond that point provides limited improvement (Faraone and Glatt 2009). It is presumed that these medications are effective because they block the reuptake of dopamine and norepinephrine at the synaptic cleft (Volkow and Swanson 2003).

Despite significant evidence for the efficacy of stimulant medications, there are some drawbacks in

treating children with stimulant medication. Although side effects, such as insomnia and abdominal pain, are generally mild (Wolraich et al. 2007) and the medications are typically well tolerated (Wilens et al. 2005a), about half of individuals treated with stimulant medications report at least one side effect over the duration of treatment (Charach et al. 2004). The most common side effect is appetite loss (Charach et al. 2004). Although uncommon, there have also been reports of cardiovascular concerns in some children receiving stimulant medications (Samuels et al. 2006), but these concerns are not typically clinically significant (Wilens et al. 2005a). Effects on growth are fairly common (Spencer et al. 2006). These effects are greatest during the initial treatment period (Swanson et al. 2007). Another concern that is frequently raised by parents and the media is the possibility of early treatment with stimulants increases the risk for later substance abuse/dependence. Data from multiple longitudinal studies suggest that these concerns are unwarranted with treatment having either no effect on later substance problems (Volkow and Swanson 2008) or a protective effect against substance problems (Wilens et al. 2003). Research from multiple studies also suggests that while medication reduces symptoms of ADHD, it does not necessarily improve all areas of functioning (Rapport et al. 1994).

There are also non-stimulant medications available for the treatment of ADHD, although they are generally less effective (Rapport et al. 1994) than stimulant medications. The most common of these medications is a selective norepinephrine reuptake inhibitor called Strattera (generic: atomoxetine). It is an improvement over stimulant medications for some individuals because is not a controlled substance, there are fewer side effects associated with it, and it may be safer for individuals with active substance use disorders (Michelson et al. 2001). It appears to be most effective for individuals who have comorbid ADHD and anxiety disorders (Pliszka and AACAP Work Group on Quality Issues 2007). In addition to atomoxetine, several medications have not been approved by the Food and Drug Administration for the treatment of ADHD, but have been effective for selected populations. These medications include certain antidepressants and hypotensives (blood pressure medications).

Psychosocial treatments. Because not all individuals experience a positive response to medication treatments, as described above, and parents may prefer to avoid giving medications for a behavioral disorder (Krain et al. 2005), psychosocial treatments for ADHD have been developed. Effective models for these treatments include parent behavioral training and teacher consultation with classroom modification (Knight et al. 2008). The NIMH Collaborative Multisite Multimodal Treatment Study (MTA), a longitudinal project following treatment outcomes of children diagnosed with ADHD more than a decade ago, developed what is considered to be the "Cadillac model" of psychosocial treatment. This program combined an intensive academic intervention including a paraprofessional to work specifically on behaviors, intensive behavioral shaping with regular self-, peer-, and teacher-assessments, parent training, and social skills instruction (It should be noted that this extremely high level of intervention, outside of a funded treatment study, is rarely available and is generally unaffordable for many families who have children or adolescents with ADHD); (Wells et al. 2000). Results from this study suggested that there were some benefits to this high level of intervention, although they were not significantly greater than medication for most participants (Swanson et al. 2008). Although behavioral treatments, typically focused on teaching significant adults, such as parents and teachers, to use contingent applications of rewards and punishments in response to specific behaviors, may be effective for some individuals (Pelham and Fabiano 2008), there is no empirical evidence for their efficacy when used with adolescents (Raggi and Chronis 2006). Furthermore, it is not clear that behavioral treatments improve core ADHD symptoms (Hechtman et al. 2004). Likewise, teacher-training programs may have some limited positive effects on classroom behavior in individuals with ADHD (DuPaul and Eckert 1997). Individuals with comorbid ADHD and anxiety disorders experienced a better response to behavioral treatment than treatment involving medication in one study (Hinshaw 2007).

Treatments combining medication and psychosocial approaches. The efficacy of combining medication and psychosocial treatments has been validated in a number of studies, although it is not entirely clear that the benefit of combined treatment is significantly greater than medication alone (Hechtman et al. 2004). Results from the previously described MTA study suggested

that for most of their participants combined treatment did not provide significant improvement in benefits over medication alone for core ADHD symptoms (Swanson et al. 2008). In contrast, other areas of functioning, such as internalizing symptoms, parent–child relationships, and reading achievement were all positive affected by combined treatment (MTA Cooperative Group 1999a,b). From that study, there was also evidence suggesting that combined treatments may result in lower medication doses when titration is tightly controlled (Vitiello et al. 2001). There may be added benefit of combined treatment for children and adolescents from minority backgrounds (Arnold et al. 2003). Children from homes with fewer financial resources may also experience greater improvements in their social skills when they receive combined treatments (Hinshaw 2007). In total, although combined treatments have intuitive appeal and may be appropriate for specific populations, the high cost of such intervention may make this approach unavailable to many families.

Non-empirically supported treatments. A number of additional treatments are routinely offered by a range of practitioners as solutions for ADHD. The treatments described here have little or no empirical support for their use in this population. Although there is significant support for the use of cognitive-behavioral therapy (CBT) for many psychiatric populations, this therapy modality has not been shown to be effective in treating childhood ADHD (Bloomquist et al. 1991). In contrast, CBT may be effective as part of a therapeutic regime in adolescents and adults with ADHD (Solanto et al. 2010). In contrast to the mixed results of CBT, there is no evidence to suggest that changes in diet, including reducing/eliminated sugar, result in changes in ADHD behaviors. The so-called Feingold diet has been repeatedly shown to be ineffective in the treatment of ADHD (e.g., Kavale and Forness 1983). Likewise, although there are numerous claims of efficacy with nutritional supplements having positive effects on ADHD symptoms, these claims lack empirical support (Chalon 2009). Although several different types of biofeedback are popular in the treatment of ADHD, empirical support for biofeedback does not exist (Monastra 2008). Sensory integration therapies, often provided by occupational therapists either in schools or privately, have also been proposed as a treatment for reducing ADHD symptoms but the claims have not been supported by scientific data (Vargas and Camilli 1999). Social skills instruction has received significant attention in the research literature, but numerous studies have shown the newly learned behaviors typically do not generalize to other settings and individuals with ADHD continue to be non-preferred peers, even when transitioning to a new environment (Antshel and Remer 2003). These therapies, when used in combination or alone, may represent a significant outlay of resources for the family of the individual with ADHD but do not generally result in the desired behavioral or functional changes.

Conclusion

ADHD is generally a lifelong disorder that may be associated with poor functional outcomes for some individuals. When symptoms partially or completely remit in adolescence of adulthood, some level of inattention and associated impairment often remains. This prevalent disorder is known to heritable, although there is a clear role for environmental factors in symptoms and in severity of ADHD. Symptoms of inattention and hyperactivity-impulsivity have the potential to impact upon all areas of functioning, including academic achievement, employment, social relationships, and personal safety. Treatment typically involves prescription medication although there is some empirical support for psychosocial treatment. Future research in ADHD is likely to focus upon further elucidating factors in the epigenetic landscape that portend risk for ADHD and developing innovative early interventions that reduce the risk for poor outcomes.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders*. Washington, DC: American Psychiatric Association.

Antshel, K. M., & Remer, R. (2003). Social skills training in children with attention deficit hyperactivity disorder: A randomized-controlled clinical trial. *Journal of Clinical Child and Adolescent Psychology: The Official Journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53, 32*(1), 153–165.

Arnold, L. E., Elliot, M., Sachs, L., Bird, H., Kraemer, H. C., Wells, K. C., et al. (2003). Effects of ethnicity on treatment attendance, stimulant response/dose, and 14-month outcome in ADHD. *Journal of Consulting and Clinical Psychology, 71*(4), 713–727.

Barkley, R. A. (1997). Behavioral inhibition, sustained attention, and executive functions: Constructing a unifying theory of ADHD. *Psychological Bulletin, 121*(1), 65–94.

Barkley, R. A., & Cox, D. (2007). A review of driving risks and impairments associated with attention-deficit/hyperactivity disorder and the effects of stimulant medication on driving performance. *Journal of Safety Research, 38*(1), 113–128. doi:10.1016/j.jsr.2006.09.004.

Barkley, R. A., Fischer, M., Edelbrock, C. S., & Smallish, L. (1990). The adolescent outcome of hyperactive children diagnosed by research criteria: I. an 8-year prospective follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 546–557.

Barkley, R. A., Fischer, M., Smallish, L., & Fletcher, K. (2006). Young adult outcome of hyperactive children: Adaptive functioning in major life activities. *Journal of the American Academy of Child and Adolescent Psychiatry, 45*(2), 192–202. doi:10.1097/01.chi.0000189134.97436.e2.

Berndt, T. J., & Keefe, K. (1995). Friends' influence of adolescents' adjustment to school. *Child Development, 66*(5), 1312–1329.

Biederman, J., & Faraone, S. V. (2005). Attention-deficit hyperactivity disorder. *Lancet, 366*(9481), 237–248. doi:10.1016/S0140-6736(05)66915-2.

Biederman, J., & Spencer, T. J. (2008). Psychopharmacological interventions. *Child and Adolescent Psychiatric Clinics of North America, 17*(2), 439–458, xi. doi: 10.1016/j.chc.2007.12.001

Biederman, J., Newcorn, J., & Sprich, S. (1991). Comorbidity of attention deficit hyperactivity disorder with conduct, depressive, anxiety, and other disorders. *The American Journal of Psychiatry, 148*(5), 564–577.

Biederman, J., Faraone, S. V., Keenan, K., Benjamin, J., Krifcher, B., Moore, C., et al. (1992). Further evidence for family-genetic risk factors in attention deficit hyperactivity disorder. Patterns of comorbidity in probands and relatives psychiatrically and pediatrically referred samples. *Archives of General Psychiatry, 49*(9), 728–738.

Biederman, J., Milberger, S., Faraone, S. V., Kiely, K., Guite, J., Mick, E., et al. (1995). Family-environment risk factors for attention-deficit hyperactivity disorder. A test of rutter's indicators of adversity. *Archives of General Psychiatry, 52*(6), 464–470.

Biederman, J., Faraone, S., Milberger, S., Guite, J., Mick, E., Chen, L., et al. (1996). A prospective 4-year follow-up student of attention-deficit hyperactivity and related disorders. *Archives of General Psychiatry, 53*, 437–446.

Biederman, J., Mick, E., & Faraone, S. V. (1998). Normalized functioning in youths with persistent attention-deficit/hyperactivity disorder. *The Journal of Pediatrics, 133*(4), 544–551.

Biederman, J., Mick, E., & Faraone, S. V. (2000). Age-dependent decline of symptoms of attention deficit hyperactivity disorder: Impact of remission definition and symptom type. *The American Journal of Psychiatry, 157*(5), 816–818.

Biederman, J., Petty, C. R., Dolan, C., Hughes, S., Mick, E., Monuteaux, M. C., et al. (2008a). The long-term longitudinal course of oppositional defiant disorder and conduct disorder in ADHD boys: Findings from a controlled 10-year prospective longitudinal follow-up study. *Psychological Medicine, 1*, 1–10.

Biederman, J., Petty, C. R., Fried, R., Kaiser, R., Dolan, C. R., Schoenfeld, S., et al. (2008b). Educational and occupational underattainment in adults with attention-deficit/hyperactivity disorder: A controlled study. *The Journal of Clinical Psychiatry, 69*(8), 1217–1222.

Bloomquist, M. L., August, G. J., & Ostrander, R. (1991). Effects of a school-based cognitive-behavioral intervention for ADHD children. *Journal of Abnormal Child Psychology, 19*(5), 591–605.

Brookes, K. J., Mill, J., Guindalini, C., Curran, S., Xu, X., Knight, J., et al. (2006). A common haplotype of the dopamine transporter gene associated with attention-deficit/hyperactivity disorder and interacting with maternal use of alcohol during pregnancy. *Archives of General Psychiatry, 63*(1), 74–81. doi:10.1001/archpsyc.63.1.74.

Caspi, A., McClay, J., Moffitt, T. E., Mill, J., Martin, J., Craig, I. W., et al. (2002). Role of genotype in the cycle of violence in maltreated children. *Science (New York, N.Y.), 297*(5582), 851–854. doi:10.1126/science.1072290.

Castellanos, F. X., Lee, P. P., Sharp, W. S., Jeffries, N. O., Greenstein, D. K., Clasen, L. S., et al. (2002). Developmental trajectories of brain volume abnormalities in children and adolescents with attention-deficit/hyperactivity disroder. *Journal of the American Medical Association, 288*, 1740–1748.

Centers for Disease Control and Prevention (CDC). (2005). Mental health in the united states. prevalence of diagnosis and medication treatment for attention-deficit/hyperactivity disorder–united states, 2003. *MMWR: Morbidity and Mortality Weekly Report, 54*(34), 842–847.

Chalon, S. (2009). The role of fatty acids in the treatment of ADHD. *Neuropharmacology, 57*(7–8), 636–639. doi:10.1016/j.neuropharm.2009.08.012.

Charach, A., Ickowicz, A., & Schachar, R. (2004). Stimulant treatment over five years: Adherence, effectiveness, and adverse effects. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*(5), 559–567. doi:10.1097/00004583-200405000-00009.

Couto, J. M., Gomez, L., Wigg, K., Ickowicz, A., Pathare, T., Malone, M., et al. (2009). Association of attention-deficit/hyperactivity disorder with a candidate region for reading disabilities on chromosome 6p. *Biological Psychiatry, 66*(4), 368–375. doi:10.1016/j.biopsych.2009.02.016.

Cunningham, C. E., Siegel, L. S., & Offord, D. R. (1991). A dose-response analysis of the effects of methylphenidate on the peer interactions and simulated classroom performance of ADD children with and without conduct problems. *Journal of Child Psychology and Psychiatry, and Allied Disciplines, 32*(3), 439–452.

Daviss, W. B. (2008). A review of co-morbid depression in pediatric ADHD: Etiology, phenomenology, and treatment. *Journal of Child and Adolescent Psychopharmacology, 18*(6), 565–571. doi:10.1089/cap.2008.032.

Dickstein, S. G., Bannon, K., Castellanos, F. X., & Milham, M. P. (2006). The neural correlates of attention deficit hyperactivity disorder: An ALE meta-analysis. *Journal of Child Psychology and Psychiatry, and Allied Disciplines, 47*(10), 1051–1062. doi:10.1111/j.1469-7610.2006.01671.x.

DuPaul, G. J., & Eckert, T. L. (1997). The effects of school-based interventions for attention deficit hyperactivity disorder: A meta-analysis. *School Psychology Review, 26*(1), 5–27. Retrieved from PsycINFO database.

Durston, S., Davidson, M. C., Mulder, M. J., Spicer, J. A., Galvan, A., Tottenham, N., et al. (2007). Neural and behavioral correlates of expectancy violations in attention-deficit hyperactivity disorder. *Journal of Child Psychology and Psychiatry, and Allied Disciplines, 48*(9), 881–889. doi:10.1111/j.1469-7610.2007.01754.x.

Eakin, L., Minde, K., Hechtman, L., Ochs, E., Krane, E., Bouffard, R., et al. (2004). The marital and family functioning of adults with ADHD and their spouses. *Journal of Attention Disorders, 8*(1), 1–10.

Elkins, I. J., McGue, M., & Iacono, W. G. (2007). Prospective effects of attention-deficit/hyperactivity disorder, conduct disorder, and sex on adolescent substance use and abuse. *Archives of General Psychiatry, 64*(10), 1145–1152. doi:10.1001/archpsyc.64.10.1145.

Ellison-Wright, I., Ellison-Wright, Z., & Bullmore, E. (2008). Structural brain change in attention deficit hyperactivity disorder identified by meta-analysis. *BMC Psychiatry, 8*, 51. doi:10.1186/1471-244X-8-51.

Faraone, S. V., & Glatt, S. J. (2009). A comparison of the efficacy of medications for adult attention-deficit/hyperactivity disorder using meta-analysis of effect sizes. *The Journal of Clinical Psychiatry.* doi:10.4088/JCP.08m04902pur.

Faraone, S. V., Biederman, J., Lehman, B. K., Keenan, K., Norman, D., Seidman, L. J., et al. (1993). Evidence for the independent familial transmission of attention deficit hyperactivity disorder and learning disabilities: Results from a family genetic study. *The American Journal of Psychiatry, 150*(6), 891–895.

Faraone, S. V., Sergeant, J., Gillberg, C., & Biederman, J. (2003). The worldwide prevalence of ADHD: Is it an american condition? *World Psychiatry: Official Journal of the World Psychiatric Association (WPA), 2*(2), 104–113.

Faraone, S. V., Perlis, R. H., Doyle, A. E., Smoller, J. W., Goralnick, J. J., Holmgren, M. A., et al. (2005). Molecular genetics of attention-deficit/hyperactivity disorder. *Biological Psychiatry, 57*, 1313–1323.

Fayyad, J., De Graaf, R., Kessler, R., Alonso, J., Angermeyer, M., Demyttenaere, K., et al. (2007). Cross-national prevalence and correlates of adult attention-deficit hyperactivity disorder. *The British Journal of Psychiatry: The Journal of Mental Science, 190*, 402–409. doi:10.1192/bjp.bp.106.034389.

Fischer, M., Barkley, R. A., Smallish, L., & Fletcher, K. (2007). Hyperactive children as young adults: Driving abilities, safe driving behavior, and adverse driving outcomes. *Accident Analysis and Prevention, 39*(1), 94–105. doi:10.1016/j.aap.2006.06.008.

Halmoy, A., Fasmer, O. B., Gillberg, C., & Haavik, J. (2009). Occupational outcome in adult ADHD: Impact of symptom profile, comorbid psychiatric problems, and treatment: A cross-sectional study of 414 clinically diagnosed adult ADHD patients. *Journal of Attention Disorders, 13*(2), 175–187. doi:10.1177/1087054708329777.

Halperin, J. M., Trampush, J. W., Miller, C. J., Marks, D. J., & Newcorn, J. H. (2008). Neuropsychological outcome in adolescents/young adults with childhood ADHD: Profiles of persisters, remitters and controls. *Journal of Child Psychology and Psychiatry, and Allied Disciplines, 49*(9), 958–966. doi:10.1111/j.1469-7610.2008.01926.x.

Hartman, C. A., Willcutt, E. G., Rhee, S. H., & Pennington, B. F. (2004). The relation between sluggish cognitive tempo and DSM-IV ADHD. *Journal of Abnormal Child Psychology, 32*(5), 491–503.

Hechtman, L. (1999). Predictors of long-term outcome in children with attention-deficit/hyperactivity disorder. *Pediatric Clinics of North America, 46*(5), 1039–1052.

Hechtman, L., & Greenfield, B. (2003). Long-term use of stimulants in children with attention deficit hyperactivity disorder: Safety, efficacy, and long-term outcome. *Paediatric Drugs, 5*(12), 787–794.

Hechtman, L., Abikoff, H., Klein, R. G., Greenfield, B., Etcovitch, J., Cousins, L., et al. (2004). Children with ADHD treated with long-term methylphenidate and multimodal psychosocial treatment: Impact on parental practices. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*(7), 830–838. doi:10.1097/01.chi.0000128785.52698.19.

Hinshaw, S. P. (2007). Moderators and mediators of treatment outcome for youth with ADHD: Understanding for whom and how interventions work. *Journal of Pediatric Psychology, 32*(6), 664–675. doi:10.1093/jpepsy/jsl055.

Hoza, B., Mrug, S., Gerdes, A. C., Hinshaw, S. P., Bukowski, W. M., Gold, J. A., et al. (2005). What aspects of peer relationship are impaired in children with attention-deficit/hyperactivity disorder? *Journal of Clinical and Consulting Psychology, 73*, 411–423.

Johansson, P., Kerr, M., & Andershed, H. (2005). Linking adult psychopathy with childhood hyperactivity-impulsivity-attention problems and conduct problems through retrospective self-reports. *Journal of Personality Disorders, 19*(1), 94–101. doi:10.1521/pedi.19.1.94.62183.

Kahn, R. S., Khoury, J., Nichols, W. C., & Lanphear, B. P. (2003). Role of dopamine transporter genotype and maternal prenatal smoking in childhood hyperactive-impulsive, inattentive, and oppositional behaviors. *The Journal of Pediatrics, 143*(1), 104–110. doi:10.1016/S0022-3476(03)00208-7.

Kamphaus, R. W., & Campbell, J. M. (Eds.). (2006). *Psychodiagnostic assessment of children: Dimensional and categorical approaches.* Hoboken: Wiley. Retrieved from PsycINFO.

Kavale, K. A., & Forness, S. R. (1983). Hyperactivity and diet treatment: A meta-analysis of the feingold hypothesis. *Journal of Learning Disabilities, 16*(6), 324–330. Retrieved from PsycINFO database.

Kessler, R. C., Adler, L. A., Barkley, J., Conners, K. C., Faraone, S. V., Greenhill, L. L., et al. (2005). Patterns and predictors of attention-deficit/hyperactivity disorder persistence into adulthood: Results from the national comorbidity survey replication. *Biological Psychiatry, 57*, 1442–1451.

Knight, L. A., Rooney, M., & Chronis-Tuscano, A. (2008). Psychosocial treatments for attention-deficit/hyperactivity disorder. *Current Psychiatry Reports, 10*(5), 412–418.

Knopik, V. S., Sparrow, E. P., Madden, P. A., Bucholz, K. K., Hudziak, J. J., Reich, W., et al. (2005). Contributions of parental alcoholism, prenatal substance exposure, and genetic transmission to child ADHD risk: A female twin study. *Psychological Medicine, 35*(5), 625–635.

Kooij, J. J., Buitelaar, J. K., van den Oord, E. J., Furer, J. W., Rijnders, C. A., & Hodiamont, P. P. (2005). Internal and external validity of attention-deficit hyperactivity disorder in a population-based sample of adults. *Psychological Medicine, 35*(6), 817–827.

Krain, A. L., & Castellanos, F. X. (2006). Brain development and ADHD. *Clinical Psychology Review, 2*, 433–444.

Krain, A. L., Kendall, P. C., & Power, T. J. (2005). The role of treatment acceptability in the initiation of treatment for ADHD. *Journal of Attention Disorders, 9*(2), 425–434. doi:10.1177/1087054705279996.

Kreppner, J. M., O'Connor, T. G., Rutter, M., & English and Romanian Adoptees Study Team. (2001). Can inattention/overactivity be an institutional deprivation syndrome? *Journal of Abnormal Child Psychology, 29*(6), 513–528.

Kuntsi, J., Neale, B. M., Chen, W., Faraone, S. V., & Asherson, P. (2006). The IMAGE project: Methodological issues for the molecular genetic analysis of ADHD. *Behavioral and Brain Functions: BBF, 2*, 27. doi:10.1186/1744-9081-2-27.

Landau, S., & Milich, R. (1988). Social communication patterns of attention-deficit-disordered boys. *Journal of Abnormal Child Psychology, 16*(1), 69–81.

Laucht, M., Skowronek, M. H., Becker, K., Schmidt, M. H., Esser, G., Schulze, T. G., et al. (2007). Interacting effects of the dopamine transporter gene and psychosocial adversity on attention-deficit/hyperactivity disorder symptoms among 15-year-olds from a high-risk community sample. *Archives of General Psychiatry, 64*(5), 585–590. doi:10.1001/archpsyc.64.5.585.

LeFever, G. B., Villers, M. S., Morrow, A. L., & Vaughn, E. S. (2002). Parental perceptions of adverse educational outcomes among children diagnosed and treated for ADHD: A call for improved school/provider collaboration. *Psychology in the Schools, 39*(1), 63–71. doi:10.1002/pits.10000.

Leslie, L. K., & Wolraich, M. L. (2007). ADHD service use patterns in youth. *Journal of Pediatric Psychology, 32*(6), 695–710. doi:10.1093/jpepsy/jsm023.

Mannuzza, S., Klein, R. G., & Moulton, J. L., 3rd. (2008). Lifetime criminality among boys with attention deficit hyperactivity disorder: A prospective follow-up study into adulthood using official arrest records. *Psychiatry Research, 160*(3), 237–246. doi:10.1016/j.psychres.2007.11.003.

Max, J. E., Arndt, S., Castillo, C. S., Bokura, H., Robin, D. A., Lindgren, S. D., et al. (1998). Attention-deficit hyperactivity symptomatology after traumatic brain injury: A prospective study. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*(8), 841–847. doi:10.1097/00004583-199808000-00014.

McGough, J. J., Loo, S. K., McCracken, J. T., Dang, J., Clark, S., Nelson, S. F., et al. (2008). CBCL pediatric bipolar disorder profile and ADHD: Comorbidity and quantitative trait loci analysis. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*(10), 1151–1157. doi:10.1097/CHI.0b013e3181825a68.

Merikangas, K. R., He, J. P., Brody, D., Fisher, P. W., Bourdon, K., & Koretz, D. S. (2010). Prevalence and treatment of mental disorders among US children in the 2001–2004 NHANES. *Pediatrics, 125*(1), 75–81. doi:10.1542/peds.2008-2598.

Michelson, D., Faries, D., Wernicke, J., Kelsey, D., Kendrick, K., Sallee, F. R., et al. (2001). Atomoxetine in the treatment of children and adolescents with attention-deficit/hyperactivity disorder: A randomized, placebo-controlled, dose-response study. *Pediatrics, 108*(5), E83.

Mick, E., Biederman, J., Faraone, S. V., Sayer, J., & Kleinman, S. (2002a). Case-control study of attention-deficit hyperactivity disorder and maternal smoking, alcohol use, and drug use during pregnancy. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*(4), 378–385. doi:10.1097/00004583-200204000-00009.

Mick, E., Biederman, J., Prince, J., Fischer, M. J., & Faraone, S. V. (2002b). Impact of low birth weight on attention-deficit hyperactivity disorder. *Journal of Developmental and Behavioral Pediatrics: JDBP, 23*(1), 16–22.

Miller, C. J., Flory, J. D., Miller, S. R., Harty, S. C., Newcorn, J. H., & Halperin, J. M. (2008). Childhood attention-deficit/hyperactivity disorder and the emergence of personality disorders in adolescence: A prospective follow-up study. *The Journal of Clinical Psychiatry, 69*(9), 1477–1484.

Molina, B. S., Flory, K., Hinshaw, S. P., Greiner, A. R., Arnold, L. E., Swanson, J. M., et al. (2007). Delinquent behavior and emerging substance use in the MTA at 36 months: Prevalence, course, and treatment effects. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*(8), 1028–1040. doi:10.1097/chi.0b013e3180686d96.

Molina, B. S., Hinshaw, S. P., Swanson, J. M., Arnold, L. E., Vitiello, B., Jensen, P. S., et al. (2009). The MTA at 8 years: Prospective follow-up of children treated for combined-type ADHD in a multisite study. *Journal of the American Academy of Child and Adolescent Psychiatry, 48*(5), 484–500. doi:10.1097/CHI.0b013e31819c23d0.

Monastra, V. J. (2008). Quantitative electroencephalography and attention-deficit/hyperactivity disorder: Implications for clinical practice. *Current Psychiatry Reports, 10*(5), 432–438.

MTA Cooperative Group. (1999a). Moderators and mediators of treatment response for children with attention-deficit/hyperactivity disorder: The multimodal treatment study of children with attention-deficit/hyperactivity disorder. *Archives of General Psychiatry, 56*(12), 1088–1096.

MTA Cooperative Group. (1999b). A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder. *Archives of General Psychiatry, 56*(12), 1073–1086.

Murphy, K., & Barkley, R. A. (1996). Attention deficit hyperactivity disorder adults: Comorbidities and adaptive impairments. *Comprehensive Psychiatry, 37*(6), 393–401.

Nangle, D. W., Erdley, C. A., & Gold, J. A. (1996). A reflection on the popularity construct: The importance of who likes or dislikes a child. *Behavior Therapy, 27*(3), 337–352. doi:10.1016/S0005-7894(96)80021-9.

Neuman, R. J., Lobos, E., Reich, W., Henderson, C. A., Sun, L. W., & Todd, R. D. (2007). Prenatal smoking exposure and dopaminergic genotypes interact to cause a severe ADHD subtype. *Biological Psychiatry, 61*(12), 1320–1328. doi:10.1016/j.biopsych.2006.08.049.

Nigg, J. T. (2001). Is ADHD a disinhibitory disorder? *Psychological Bulletin, 127*(5), 571–598.

Nigg, J. T., & Casey, B. J. (2005). An integrative theory of attention-deficit/hyperactivity disorder based on the cognitive and affective neurosciences. *Developmental Psychopathology, 17*, 785–806.

Nigg, J. T., Willcutt, E. G., Doyle, A. E., & Sonuga-Barke, E. J. (2005). Causal heterogeneity in attention-deficit/hyperactivity disorder: Do we need neuropsychologically impaired subtypes? *Biological Psychiatry, 57*(11), 1224–1230. doi:10.1016/j.biopsych.2004.08.025.

Pelham, W. E., Jr., & Fabiano, G. A. (2008). Evidence-based psychosocial treatments for attention-deficit/hyperactivity disorder. *Journal of Clinical Child and Adolescent Psychology: The Official Journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53, 37*(1), 184–214. doi:10.1080/15374410701818681.

Pelham, W. E., Foster, E. M., & Robb, J. A. (2007). The economic impact of attention-deficit/hyperactivity disorder in children and adolescents. *Journal of Pediatric Psychology, 32*(6), 711–727. doi:10.1093/jpepsy/jsm022.

Pineda, D. A., Palacio, L. G., Puerta, I. C., Merchan, V., Arango, C. P., Galvis, A. Y., et al. (2007). Environmental influences that affect attention deficit/hyperactivity disorder: Study of a genetic isolate. *European Child & Adolescent Psychiatry, 16*(5), 337–346. doi:10.1007/s00787-007-0605-4.

Plessen, K. J., Bansal, R., Zhu, H., Whiteman, R., Amat, J., Quackenbush, G. A., et al. (2006). Hippocampus and amygdala morphology in attention-deficit/hyperactivity disorder. *Archives of General Psychiatry, 63*(7), 795–807. doi:10.1001/archpsyc.63.7.795.

Pliszka, S. R. (2000). Patterns of psychiatric comorbidity with attention-deficit/hyperactivity disorder. *Child and Adolescent Psychiatric Clinics of North America, 9*(3), 525–540, vii.

Pliszka, S., & AACAP Work Group on Quality Issues. (2007). Practice parameter for the assessment and treatment of children and adolescents with attention-deficit/hyperactivity disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*(7), 894–921. doi:10.1097/chi.0b013e318054e724.

Pliszka, S. R., Glahn, D. C., Semrud-Clikeman, M., Franklin, C., Perez, R., III, Xiong, J., et al. (2006). Neuroimaging of inhibitory control areas in children with attention deficit hyperactivity disorder who were treatment naive or in long-term treatment. *The American Journal of Psychiatry, 163*(6), 1052–1060. doi:10.1176/appi.ajp.163.6.1052.

Polanczyk, G., de Lima, M. S., Horta, B. L., Biederman, J., & Rohde, L. A. (2007). The worldwide prevalence of ADHD: A systematic review and metaregression analysis. *The American Journal of Psychiatry, 164*(6), 942–948. doi:10.1176/appi.ajp.164.6.942.

Raggi, V. L., & Chronis, A. M. (2006). Interventions to address the academic impairment of children and adolescents with ADHD. *Clinical Child and Family Psychology Review, 9*(2), 85–111. doi:10.1007/s10567-006-0006-0.

Rapport, M. D., Denney, C., DuPaul, G. J., & Gardner, M. J. (1994). Attention deficit disorder and methylphenidate: Normalization rates, clinical effectiveness, and response prediction in 76 children. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*(6), 882–893. doi:10.1097/00004583-199407000-00015.

Rubia, K., Smith, A. B., Brammer, M. J., & Taylor, E. (2007). Temporal lobe dysfunction in medication-naive boys with attention-deficit/hyperactivity disorder during attention allocation and its relation to response variability. *Biological Psychiatry, 62*(9), 999–1006. doi:10.1016/j.biopsych.2007.02.024.

Samuels, J. A., Franco, K., Wan, F., & Sorof, J. M. (2006). Effect of stimulants on 24-h ambulatory blood pressure in children with ADHD: A double-blind, randomized, cross-over trial. *Pediatric Nephrology (Berlin, Germany), 21*(1), 92–95. doi:10.1007/s00467-005-2051-1.

Schweitzer, J. B., Faber, T. L., Grafton, S. T., Tune, L. E., Hoffman, J. M., & Kilts, C. D. (2000). Alterations in the functional anatomy of working memory in adult attention deficit hyperactivity disorder. *The American Journal of Psychiatry, 157*(2), 278–280.

Sergeant, J. A. (2005). Modeling attention-deficit/hyperactivity disorder: A critical appraisal of the cognitive-energetic model. *Biological Psychiatry, 57*(11), 1248–1255. doi:10.1016/j.biopsych.2004.09.010.

Shaw, P., Lerch, J., Greenstein, D., Sharp, W., Clasen, L., Evans, A., et al. (2006). Longitudinal mapping of cortical thickness and clinical outcome in children and adolescents with attention-deficit/hyperactivity disorder. *Archives of General Psychiatry, 63*(5), 540–549. doi:10.1001/archpsyc.63.5.540.

Smalley, S. L., McCracken, J., & McGough, J. (2001). Refining the ADHD phenotype using affected sibling pair families. *American Journal of Medical Genetics, 105*(1), 31–33.

Solanto, M. V., Marks, D. J., Wasserstein, J., Mitchell, K., Abikoff, H., Alvir, J. M., et al. (2010). Efficacy of meta-cognitive therapy for adult ADHD. *The American Journal of Psychiatry.* doi:10.1176/appi.ajp.2009.09081123.

Sonuga-Barke, E. J., Williams, E., Hall, M., & Saxton, T. (1996). Hyperactivity and delay aversion. III: The effect on cognitive style of imposing delay after errors. *Journal of Child Psychology and Psychiatry, and Allied Disciplines, 37*(2), 189–194.

Spencer, T., Biederman, M., Coffey, B., Geller, D., Wilens, T., & Faraone, S. (1999). The 4-year course of tic disorders in boys with attention-deficit/hyperactivity disorder. *Archives of General Psychiatry, 56*(9), 842–847.

Spencer, T. J., Faraone, S. V., Biederman, J., Lerner, M., Cooper, K. M., Zimmerman, B., et al. (2006). Does prolonged therapy with a long-acting stimulant suppress growth in children with ADHD? *Journal of the American Academy of Child and Adolescent Psychiatry, 45*(5), 527–537. doi:10.1097/01.chi.0000205710.01690.d4.

Spencer, T. J., Biederman, J., & Mick, E. (2007). Attention-deficit/hyperactivity disorder: Diagnosis, lifespan, comorbidities, and neurobiology. *Journal of Pediatric Psychology, 32*(6), 631–642. doi:10.1093/jpepsy/jsm005.

Swanson, J. M., Elliott, G. R., Greenhill, L. L., Wigal, T., Arnold, L. E., Vitiello, B., et al. (2007). Effects of stimulant medication on growth rates across 3 years in the MTA follow-up. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*(8), 1015–1027. doi:10.1097/chi.0b013e3180686d7e.

Swanson, J., Arnold, L. E., Kraemer, H., Hechtman, L., Molina, B., Hinshaw, S., et al. (2008). Evidence, interpretation, and qualification from multiple reports of long-term outcomes in the

multimodal treatment study of children with ADHD (MTA): Part II: Supporting details. *Journal of Attention Disorders, 12*(1), 15–43. doi:10.1177/1087054708319525.

Todd, R. D., & Neuman, R. J. (2007). Gene-environment interactions in the development of combined type ADHD: Evidence for a synapse-based model. *American Journal of Medical Genetics. Part B, Neuropsychiatric Genetics: The Official Publication of the International Society of Psychiatric Genetics, 144B*(8), 971–975. doi:doi:10.1002/ajmg.b.30640.

Valera, E. M., Faraone, S. V., Murray, K. E., & Seidman, L. J. (2007). Meta-analysis of structural imaging findings in attention-deficit/hyperactivity disorder. *Biological Psychiatry, 61*(12), 1361–1369. doi:10.1016/j.biopsych.2006.06.011.

Vargas, S., & Camilli, G. (1999). A meta-analysis of research on sensory integration treatment. *The American Journal of Occupational Therapy: Official Publication of the American Occupational Therapy Association, 53*(2), 189–198.

Vitiello, B., Severe, J. B., Greenhill, L. L., Arnold, L. E., Abikoff, H. B., Bukstein, O. G., et al. (2001). Methylphenidate dosage for children with ADHD over time under controlled conditions: Lessons from the MTA. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(2), 188–196. doi:10.1097/00004583-200102000-00013.

Volkow, N. D., & Swanson, J. M. (2003). Variables that affect the clinical use and abuse of methylphenidate in the treatment of ADHD. *The American Journal of Psychiatry, 160*(11), 1909–1918.

Volkow, N. D., & Swanson, J. M. (2008). Does childhood treatment of ADHD with stimulant medication affect substance abuse in adulthood? *The American Journal of Psychiatry, 165*(5), 553–555. doi:10.1176/appi.ajp.2008.08020237.

Weissman, D. H., Roberts, K. C., Visscher, K. M., & Woldorff, M. G. (2006). The neural bases of momentary lapses in attention. *Nature Neuroscience, 9*(7), 971–978. doi:10.1038/nn1727.

Wells, K. C., Pelham, W. E., Kotkin, R. A., Hoza, B., Abikoff, H. B., Abramowitz, A., et al. (2000). Psychosocial treatment strategies in the MTA study: Rationale, methods, and critical issues in design and implementation. *Journal of Abnormal Child Psychology, 28*(6), 483–505.

Wermter, A. K., Laucht, M., Schimmelmann, B. G., Banaschweski, T., Sonuga-Barke, E. J., Rietschel, M., et al. (2010). From nature versus nurture, via nature and nurture, to gene x environment interaction in mental disorders. *European Child & Adolescent Psychiatry, 19*(3), 199–210. doi:10.1007/s00787-009-0082-z.

Whalen, C. K., & Henker, B. (1991). Social impact of stimulant treatment for hyperactive children. *Journal of Learning Disabilities, 24*(4), 231–241.

Wilens, T. E., Faraone, S. V., Biederman, J., & Gunawardene, S. (2003). Does stimulant therapy of attention-deficit/hyperactivity disorder beget later substance abuse? A meta-analytic review of the literature. *Pediatrics, 111*(1), 179–185.

Wilens, T., McBurnett, K., Stein, M., Lerner, M., Spencer, T., & Wolraich, M. (2005a). ADHD treatment with once-daily OROS methylphenidate: Final results from a long-term open-label study. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*(10), 1015–1023. doi:10.1097/01.chi.0000173291.28688.e7.

Wilens, T. E., Kwon, A., Tanguay, S., Chase, R., Moore, H., Faraone, S. V., et al. (2005b). Characteristics of adults with attention deficit hyperactivity disorder plus substance use disorder: The role of psychiatric comorbidity. *The American Journal on Addictions/American Academy of Psychiatrists in Alcoholism and Addictions, 14*(4), 319–327. doi:10.1080/10550490591003639.

Willcutt, E. G., Doyle, A. E., Nigg, J. T., Faraone, S. V., & Pennington, B. F. (2005). Validity of the executive function theory of attention-deficit/hyperactivity disorder: A meta-analytic review. *Biological Psychiatry, 57*(11), 1336–1346. doi:10.1016/j.biopsych.2005.02.006.

Wolraich, M. L., Hannah, J. N., Pinnock, T. Y., Baumgaertel, A., & Brown, J. (1996). Comparison of diagnostic criteria for attention-deficit hyperactivity disorder in a county-wide sample. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*(3), 319–324. doi:10.1097/00004583-199603000-00013.

Wolraich, M. L., McGuinn, L., & Doffing, M. (2007). Treatment of attention deficit hyperactivity disorder in children and adolescents: Safety considerations. *Drug Safety: An International Journal of Medical Toxicology and Drug Experience, 30*(1), 17–26.

Zametkin, A. J., Nordahl, T. E., Gross, M., King, A. C., Semple, W. E., Rumsey, J., et al. (1990). Cerebral glucose metabolism in adults with hyperactivity of childhood onset. *The New England Journal of Medicine, 323*(20), 1361–1366.

Zametkin, A. J., Liebenauer, L. L., Fitzgerald, G. A., King, A. C., Minkunas, D. V., Herscovitch, P., et al. (1993). Brain metabolism in teenagers with attention-deficit hyperactivity disorder. *Archives of General Psychiatry, 50*(5), 333–340.

Authenticity in Relationships

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Overview

This essay begins with a definition of authenticity in adolescence. Next, theory related to authenticity in relationships is discussed. Recent empirical findings related to predictors and outcomes of authenticity in relationships are then discussed. Finally, directions for future research in the area of authenticity in relationships are reviewed.

Introduction

The concept of authenticity in relationships is defined as the extent to which one can be open and authentic in relationships. Recently, quantitative researchers have

empirically examined the theoretical concept of authenticity in relationships (Harter et al. 1998; Smolak and Munstertieger 2002; Theran 2009, 2010; Tolman et al. 2006). Authenticity in relationships has also been termed "low level of voice" (Gilligan et al. 1990), "silencing of the self," (Jack 1991), "false self" (Harter 1997) or "inauthentic relationships" (Impett et al. 2008).

Theory on Authenticity in Relationships

Theorists have suggested that girls and boys are socialized differently in that girls are taught to value relationships and connectedness more than are boys (Jack 1991; Jordan et al. 1991). Chodorow (1987) suggested that another reason for gender differences in relational experiences is that girls unconsciously identify with their mothers, while boys identify as being separate from their mothers. Psychologists who study women from a developmental perspective, a clinical orientation, or a psychoanalytic point of view all agree that women's orientation to relationships is the central component of female identity and emotional activity (Jack 1991). According to the relational view, the self is embedded in relationships, and women define themselves within the context of relationships, rather than within the context of external accomplishments. The self-in-relation model suggests that aspects of the self (e.g., creativity, autonomy) develop from within the context of relationships, and that separation is not necessary to enhance and create the self (Jordan et al. 1991). Relational theory explains the importance of relationships for females, yet girls may struggle with maintaining them during adolescence (Miller 1991).

Gilligan and others have argued that girls hit a relational impasse at adolescence (Brown and Gilligan 1992; Taylor et al. 1995). Girls have been socialized all their lives to emphasize the importance of intimacy and relationships, and to be a "good woman." When they reach adolescence, it is assumed that they will continue to nurture and value relationships; however, society does not value the emphasis on relationships, and does not reward them for their relational approach. Instead, society values individualism, assertiveness, and independence. As a result, girls are taught to both devalue relationships and achieve independence and autonomy.

Thus, according to these theorists, girls lose either way, in that they either lose their connection with their inner self to preserve relationships, or they sacrifice relationships with others in order to become independent (Taylor et al. 1995). The subsequent friction and conflict result in girls' ambivalence and low levels of authenticity in relationships. This theory suggests that girls, as the result of both a relational impasse in early adolescence and identification with their mothers, may compromise their true selves for the sake of preserving relationships, and inauthentic relationships result (Gilligan et al. 1990).

Rather than construing authenticity in relationships as a universal construct, Harter's research indicates that authenticity in relationships is context dependent (Harter et al. 1997c, 1998). Harter et al. (1997a) found that adolescents reported the highest levels of self-reported false self-behavior with their fathers (30–40% of attributes), lower levels of false self-behavior (20–25%) with classmates, teachers, and their mothers, and the least false self-behavior with close friends (10–15%). Another study by Harter et al. (1998) found that girls, compared to boys, had higher levels of authenticity in relationships with female classmates and close friends; for boys and girls, levels of authenticity in relationships with close friends were higher than other relationships. When asked why they engaged in false self-behavior, adolescents reported three main reasons. First, they noted that they wanted to please others, impress others, and/or gain acceptance from others. Second, they described an alienation process from their true self, due to lack of validation from others. Finally, they reported that they were experimenting with different versions of themselves, akin to trying on different styles of clothing, and were trying to figure out which self was the best fit (Harter et al. 1996). More recent research has attempted to unravel possible developmental predictors of lower levels of authenticity in relationships, and to examine relational contributions to authenticity in relationships across different contexts.

Predictors of Authenticity in Relationships

Recently, researchers have examined gender role socialization and attachment as predictors of authenticity in relationships. Brown and Gilligan (1992) argued that female adolescents experience a crisis of identity when they are pressured by society to accept the "good woman" stereotype, which emphasizes caring

and relatedness even if that requires self-sacrifice. However, adolescent girls vary in terms of their gender role socialization, and not all girls accept the "good woman" stereotype. Specifically, Rose and Montemayor (1994) found that only a third of their adolescent girl participants could be classified as feminine; they defined feminine as having masculine scores below the median and feminine scores above the median.

Researchers have examined how gender role socialization may be related to authenticity in relationships. Researchers using the Bem Sex Role Inventory (BSRI) found that, for eighth grade girls, the femininity scale of the BSRI was positively correlated with authenticity in relationships, although it was only a trend (Tolman and Porche 2000). Another study found that both the femininity scale and the masculinity scale from the BSRI were correlated with aspects authenticity in relationships for adolescents, and specifically, that higher femininity scores were correlated with lower scores on feeling divided between one's true self and one's false self (Hart and Thompson 1996).

More recently, Theran (2009) used a current scale of gender role socialization and found, in a diverse sample of 14-year-old girls, that gender role socialization predicted higher levels of authenticity in relationships. Specifically, higher levels of masculinity and femininity predicted higher levels of authenticity with authority figures (i.e., parents, teachers), and higher levels of masculinity predicted higher levels of authenticity with peers (i.e., peers, classmates, best friends). Theran's results demonstrate that masculinity and androgyny may lead to higher levels of authenticity in relationships, and the internalization of femininity is not related to negative outcomes. Thus, more current quantitative research does not support Gilligan et al.'s theory that if girls have internalized the societal ideal of the "good woman," they may be more likely to have lower levels of authenticity during adolescence, and feel that their relationships cannot be both close and honest (Brown 1998; Brown and Gilligan 1992).

Theran (2009) also examined the role of attachment as a predictor of authenticity in relationships, following Harter et al.'s (1997c) suggestion that the origins of later authentic relationships may be based in the early parent–child relationship. In addition, Theran (2009) argued that given that authenticity in relationships is inherently a relational construct, relational contributors to authenticity in relationships should be examined. Theran (2009) found that, in a sample of adolescent girls, dismissive parental attachment was negatively related to authenticity in relationships with authority figures, suggesting that adolescents may have lower levels of authenticity in relationships as a result of having the attachment system deactivated. That is, adolescents' disconnection from attachment figures might lead to disconnection from their own interpersonal/emotional needs. The underlying anxiety from a dismissive parental attachment may result in the failure of authentic connections with such figures.

Outcomes of Authenticity in Relationships

Quantitative research has demonstrated that low levels of authenticity in relationships have serious negative repercussions. The majority of the research on outcomes of authenticity in relationships has focused on individual-level outcomes, such as well-being. Theory suggests that feeling that one's close relationships are mutual and that one can be authentic with intimate partners would generate more positive feelings about the self and fewer depressive symptoms (Jack 1991).

In general, research supports theory that higher levels of authenticity are predictive of higher levels of self-esteem. Specifically, Tolman et al. found that adolescent girls' low levels of authenticity in relationships with peers were predictive of lower levels of self-esteem (Tolman et al. 2006; Tolman and Porche 2000). In the first longitudinal study of authenticity in relationships across adolescence, Impett et al. (2008) found that as authenticity in relationships increased throughout adolescence, so did levels of self-esteem; in addition, authenticity in relationships was the only salient predictor of self-esteem. Finally, Harter et al. (1996) found that when the motive for false self-behavior was devaluation of the self, false self-behavior was negatively related to positive psychosocial adjustment.

Authenticity in relationships is also related to depressive symptomatology. Tolman and Porche (2000) found that low levels of authenticity in relationships with peers were correlated with high levels of depressive symptomatology. Similarly, Theran (2010) found that authenticity in relationships with authority figures and peers predicted psychological well-being (self-esteem and depression). Thus, all of the results linking authenticity in relationships and well-being

suggest that being authentic in relationships is crucial for good mental health.

Smolak and Munstertieger (2002) investigated the relation between eating behaviors and authenticity in relationships in a sample of college students. They found that eating behaviors such as eating restraint, eating when angry, eating when depressed, and binging were consistently correlated with levels of authenticity with parents, professors, and male students for women only. Interestingly, authenticity in relationships with females was not significantly correlated with eating behaviors, and none of these factors were significantly correlated for male college students.

Additional research has examined authenticity in relationships as a predictor of relational outcomes, such as quality of friendship and social support. Theran (2010) found that higher levels authenticity in relationships predicted higher levels of intimacy in relationships in a sample of adolescent girls; this is in contrast to theory that remaining authentic in adolescence threatens the intimacy and security of friendships (Brown and Gilligan 1992). Interestingly, conflict in relationships was positively correlated with friendship intimacy, suggesting that some conflict is inherent in close and intimate relationships (Theran 2010).

Social support, another relational construct, has also been shown to be related to authenticity in relationships. For example, being authentic in relationships has been found to be significantly correlated to feeling validated, a form of support, within the relationship (Harter et al. 1997b). Theran (2010) found that emotional and approval support moderated the relation between lower levels of authenticity and well-being (i.e., depressive symptomatology and self-esteem). Specifically, at lower levels of authenticity in relationships, girls with higher levels of social support had significantly fewer depressive symptoms than did girls with lower levels of support, but at higher levels of authenticity in relationships, there was no difference in depressive symptoms for higher versus lower approval and emotional social support. That is, the negative effects of lower levels of authenticity with authority figures on well-being were buffered by strong emotional and approval support from parents. This finding suggests that approval and emotional support from authority figures can play a powerful role in protecting against the negative implications of inauthentic relationships; for girls with lower levels of authenticity with authority figures, having good support from parents buffered them against depressive symptoms, and their depressive symptoms are approximately the same as those girls with higher levels of authenticity.

Need for Future Research

Although some researchers have begun to investigate the origins of lower levels of authenticity in relationships (e.g., Theran 2009), there remains a need for more longitudinal work that continues to test theories of authenticity in relationships, and examines which aspects of early childhood might cause lower levels of authenticity in relationships in early adolescence. Such longitudinal work would help determine *when* authenticity in relationships begins to decrease, and which factors may predict this decrease. One possible factor that may impact authenticity in relationships is early childhood trauma. Harter (1997) suggested that the experience of early childhood trauma puts a child at risk for suppressing his/her true self. Specifically, the psychological aspects of abuse, such as not having experiences validated and lack of an empathic connection, lead one to suppress the true self, and inauthentic relationships may result. In addition, in order to maintain the relationship with the parent, the child may attempt to please the parent, and be a "good" child; as part of this process, the inauthentic self, and the inauthentic relationship, may become more available than the true self (Harter 1997).

In addition, future research should examine the role of gender in authenticity in relationships. The majority of the qualitative and quantitative research has examined authenticity in relationships with adolescent girl participants (e.g., Impett et al. 2008; Theran 2009). Further research should be conducted with adolescent boys in order to determine if the overall structure of authenticity in relationships applies to boys; this is especially salient given recent findings that authenticity may be just as salient for boys as for girls (Liang et al. 2008).

References

Brown, L. M. (1998). *Raising their voices: The politics of girls' anger.* Cambridge: Harvard University Press.

Brown, L. M., & Gilligan, C. (1992). *Meeting at the crossroads: Women's psychology and girls' development.* Cambridge: Harvard University Press.

Chodorow, N. (1987). Feminism and difference: Gender, relation, and difference in psychoanalytic perspective. In M. R. Walsh

(Ed.), *The psychology of women: Ongoing debates* (pp. 246–264). New Haven: Yale University Press.

Gilligan, C., Lyons, N. P., & Hammer, T. J. (1990). *Making connections: The relational worlds of adolescent girls at Emma Willard School.* Cambridge: Harvard University Press.

Hart, B. I., & Thompson, J. M. (1996). Gender role characteristics and depressive symptomatology among adolescents. *Journal of Early Adolescence, 16*, 407–426.

Harter, S. (1997). The personal self in social context: Barriers to authenticity. In R. D. Ashmore & L. J. Jussim (Eds.), *Self and identity: Fundamental issues* (Vol. 1, pp. 81–105). New York: Oxford University Press.

Harter, S., Marold, D. B., Whitesell, N. R., & Cobbs, G. (1996). A model of the effects of perceived parent and peer support on adolescent false self behavior. *Child Development, 67*, 360–374.

Harter, S., Bresnick, S., Bouchey, H. A., & Whitesell, N. R. (1997a). The development of multiple role-related selves during adolescence. *Development and Psychopathology, 9*, 835–853.

Harter, S., Waters, P. L., Pettitt, L. M., Whitesell, N., Kofkin, J., & Jordan, J. (1997b). Autonomy and connectedness as dimensions of relationship styles in men and women. *Journal of Social and Personal Relationships, 14*, 147–164.

Harter, S., Waters, P. L., & Whitesell, N. R. (1997c). Lack of voice as a manifestation of false self-behavior among adolescents: The school setting as a stage upon which the drama of authenticity is enacted. *Educational Psychologist, 32*, 153–173.

Harter, S., Waters, P. L., Whitesell, N. R., & Kastelic, D. (1998). Level of voice among female and male high school students: Relational context, support, and gender orientation. *Developmental Psychology, 34*, 892–901.

Impett, E. A., Sorsoli, L., Schooler, D., Henson, J. M., & Tolman, D. L. (2008). Girls' relationship authenticity and self-esteem across adolescence. *Developmental Psychology, 44*, 722–733.

Jack, D. C. (1991). *Silencing the self: Women and depression.* Cambridge, MA: Harvard University Press.

Jordan, J. V., Kaplan, A. G., Miller, J. B., Stiver, I. P., & Surrey, J. L. (Eds.). (1991). *Women's growth in connection: Writings from the Stone Center.* New York: Guilford Press.

Liang, B., Tracy, A., Kenny, M., & Brogan, D. (2008). Gender differences in the relational health of youth participating in a social competency program. *Journal of Community Psychology, 36*, 499–514.

Miller, J. B. (1991). The development of women's sense of self. In J. V. Jordan, A. G. Kaplan, J. B. Miller, I. P. Stiver, & J. L. Surrey (Eds.), *Women's growth in connection: Writings from the Stone Center* (pp. 11–26). New York: Guilford Press.

Rose, A. J., & Montemayor, R. (1994). The relationship between gender role orientation and perceived self-competency in male and female adolescents. *Sex Roles, 31*, 579–595.

Smolak, L., & Munstertieger, B. F. (2002). The relationship of gender and voice to depression and eating disorders. *Psychology of Women Quarterly, 26*, 234–241.

Taylor, J. M., Gilligan, G., & Sullivan, A. M. (1995). *Between voice and silence: Women and girls, race and relationships.* Cambridge, MA: Harvard University Press.

Theran, S. A. (2009). Predictors of level of voice in adolescent girls: Ethnicity, attachment, and gender role socialization. *Journal of Youth and Adolescence, 38*, 1027–1037.

Theran, S. A. (2010). The impact of authenticity with authority figures and peers on girls' friendships, self-esteem, and depressive symptomatology. *Journal of Social and Personal Relationships, 27*, 519–534.

Tolman, D. L., & Porche, M. V. (2000). The adolescent femininity ideology scale: Development and validation of a new measure for girls. *Psychology of Women Quarterly, 24*, 365–376.

Tolman, D. L., Impett, E. A., Tracy, A. J., & Michael, A. (2006). Looking good, sounding good: Femininity ideology and adolescent girls' mental health. *Psychology of Women Quarterly, 30*, 85–95.

Autism

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Autism is a type of pervasive developmental disorder that is characterized by severe deficits in social interaction and communication as well as by deficits in fine and gross motor skills; it is also characterized by a limited range of activities and interests and often by repetitive and stereotyped behaviors (see, e.g., Folstein 2006). Importantly, autism also is a spectrum disorder, which means that it covers a wide set of differences and abilities. Asperger Syndrome is at one end, with this syndrome characterized as high functioning autism. Classic or Kanner's autism is at the other end of the spectrum and is characterized by profound developmental delays and challenges. Other pervasive developmental disorders include Rett Syndrome, Fragile X Syndrome, and pervasive developmental disorder not otherwise specified (PDD-NOS). The prevalence of autism remains highly disputed, with the high end of prevalence estimates of the entire autism spectrum being reported to reach as high as 1% or even higher (Posserud et al. 2010). Equally contentious is the claim that autism rates have increased, with the emerging conclusion being that rates may have increased, but that the increase may be more apparent than real due to, for example, definitional changes (see Waterhouse 2008).

Cross-References

► Asperger Syndrome
► Autism Spectrum Disorders

References

Folstein, S. (2006). The clinical spectrum of autism. *Clinical Neuroscience Research, 6*, 113–117.

Posserud, M., Lundervold, A. J., Lie, S. A., & Gillberg, C. (2010). The prevalence of autism spectrum disorders: Impact of diagnostic instrument and non-response bias. *Social Psychiatry and Psychiatric Epidemiology, 45*, 319–327.

Waterhouse, L. (2008). Autism overflows: Increasing prevalence and proliferating theories. *Neuropsychology Review, 18*, 273–286.

Autism Spectrum Disorders

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Overview

Autism Spectrum Disorders (ASD) are biologically based, neurodevelopmental disorders of childhood onset characterized by significant impairment in social interactions and communication as well as restricted or stereotyped patterns of behavior and interests (American Psychiatric Association 2000). As many as 1 in 110 children are affected (Center for Disease Control and Prevention 2009). Typically recognized during early childhood, the vast majority of research and interventions has focused on preadolescent children. Since adolescence is a period of immense social, cognitive, and behavioral change, youth affected by Autism Spectrum Disorders face unique challenges to achieving adult status defined by typical societal norms. Following a brief review of the changing definitions of ASD diagnoses as they relate to adolescents and young adults, this essay will provide a discussion of current evidence and insights regarding the development of personal identity, social relationships, roles within social institutions, and behavioral health issues in the context of adolescents with ASD.

Autism Spectrum Disorders

Within the *Diagnostic and Statistical Manual of Mental Disorder: Fourth Edition, Text Revision* (American Psychiatric Association 2000), ASDs are classified in the group of diagnoses of pervasive developmental disorders and include (1) Autistic Disorder, (2) Asperger's Disorder, and (3) Pervasive Developmental Disorder, Not Otherwise Specified (PDD, NOS). Also assumed under this class are two rare diagnoses that include (1) Rett's Disorder and (2) Childhood Disintegrative Disorder (CDD). For the purposes of this essay, Autistic Disorder, Asperger's Disorder, and PDD, NOS will be referred to as ASDs as this terminology is commonly accepted now. Within the proposed revisions for the DSM-V to be published in 2012, the overlap of these diagnostic categories and criteria will be more streamlined.

In 1943, Leo Kanner, MD coined the term "infantile autism" in describing a group of 11 children who had a lack of social interest, communication deficits, and a resistance to change (Kanner 1943). Since then, the diagnostic label for Autistic Disorder has been preserved as the "classic" description of autism. By definition, these children display symptoms in all three categories with a total of at least six symptoms specified across the three categories of impairment: (1) impairment in social interactions; (2) impairment in communication; and (3) restricted repetitive and stereotyped patterns of behavior, interest, and activities.

Soon after, an Austrian pediatrician, Hans Asperger, described a small group of children who had strong cognitive and language skills, but who nonetheless had social deficits, keen and unusual interests and some motor "clumsiness" (Asperger 1944). Also noted was a family history of such behavioral differences. Currently, the DSM-IV diagnostic criteria for Asperger's Disorder include a qualitative impairment in social interactions and restricted, repetitive and stereotyped patterns of behaviors, interests, and activities. However, by definition, there is no evidence of cognitive or language delay. Over the last 2 decades, studies examining the validity of the diagnosis of Asperger's Disorder versus high-functioning autism have resulted in further characterization of each. However, controversy remains over whether Asperger's Disorder represents a separate category or is a milder presentation of high-functioning autism. Some differences between the two groups have been shown in their cognitive profiles. It is generally held that individuals with Asperger's

Disorder have stronger verbal skills than nonverbal skills, but this has not been a consistent finding.

The diagnosis of PDD, NOS is applicable for those individuals who display many of the characteristics of Autistic Disorder or Asperger's Disorder, but have milder and fewer symptoms. In fact, it is often described as "mild autism." It is generally believed that the prognosis is better (Gillberg 1991). This diagnosis may also be used when sufficient information is not gathered during the diagnostic process to determine a more specific ASD diagnosis.

Rett's Disorder is a relatively rare disorder, believed to affect one in every 10,000–15,000 live female births. Rett's Disorder was first described by a physician in the 1960s and is characterized by apparent typical development followed by a period of loss of tone, upper extremity motor function, and speech. While the age of regression varies during the preschool years, the loss of abilities can be quite sudden and dramatic. The loss of purposeful hand use is usually associated with the observation of repetitive hand wringing at midline. Other early symptoms include difficulty in crawling or walking and low levels of eye contact. Given some of the overlapping behavioral characteristics such as limited eye contact and repetitive behaviors, Rett's Disorder may be mistaken for autism or PDD, NOS. Most girls with Rett's Disorder have intellectual disabilities. Rett's Disorder is now known to be a genetic disorder with two genes implicated. Given the rarity of Rett's Disorder much less is known about the long-term prognosis.

Even rarer than Rett's Disorder is Childhood Disintegrative Disorder (CDD). Children with CDD display behaviors consistent with autism but after a longer period of typical development (3–5 years of age). A regression in skills is followed by minimal recovery of these skills. Hence, there is a difference in onset and it is also believed the course and prognosis is different (Volkmar et al. 2005). These children may develop typical language, display social interests, accomplish toilet training, and other self-care skills. With the onset of CDD, loss of these skills is evidenced along with a general loss of interest in their environment. It is estimated that less than 2 children per 100,000 who are diagnosed with an ASD have CDD. These children are often evaluated for other neurological diseases and disorders because of the pronounced loss of skills. The prognosis for CDD is much more guarded than for Autistic Disorder, Asperger's Disorder, and PDD, NOS.

While these disorders share the common characteristics of impairment in communication and social abilities along with restricted, repetitive, and stereotyped behaviors, there is considerable variability with respect to extent and severity of the impairment. Furthermore, additional variability is introduced as ASDs very often co-occur with global developmental delays and intellectual disability. Between 30% and 51% of children with ASDs also meet criteria for intellectual disability (Center for Disease Control 2009). Individuals with ASDs may be functioning in the severe range of intellectual disability, but may also be in the superior or gifted range of cognitive functioning. Regardless of the child's intellectual functioning or social-communication deficits, the presence of behaviors that present difficulties in continued development and learning significantly interfere with functioning. Throughout this essay, such behaviors will be referred to as *interfering behaviors*, due to the way in which they literally "interfere with functioning."

Under development at the time of chapter preparation, several changes to the definitions described above have been proposed for the DSM-V. A full review of up-to-date considerations can be found at www.dsm5.org. One consideration is a redefinition of ASD subtypes based on present core symptom domains: social deficits only, social and communication deficits, and social, communication, and repetitive behaviors combined. Further discussion regarding the interrelationship of repetitive and stereotyped behavior with each other and with obsessive–compulsive behaviors may result in separation of similar behaviors based on age of onset. For example, childhood onset of repetitive, rigid, or ritualistic behaviors may be considered to be associated with ASD, while similar behaviors that develop in adults may be indicative of Obsessive–Compulsive or other Anxiety Disorders. Causing some controversy, there is a proposal in DSM-V to collapse high-functioning autism and Asperger's Disorder. The evolving understanding of the neurobiologic underpinnings and cultural factors that can impact the interpretation of ASD core symptom domains will also likely impact the changing definitions.

Adolescent Development

Given that much of the social and cultural expectations about the behavior of adolescents is derived by what commonly occurs in this developmental stage, it is

important to explore potential significant differences from the norm for children with ASD. The developmental trajectory for all individuals, regardless of ASD diagnosis, includes the progressive separation from parents toward the establishment of an individual identity. Inherent to this gradual separation includes developing the capacity for autonomous function, engaging in meaningful social relationships, adapting to societal proscriptions of gender and vocational roles, and self-determination. How the features of ASD affect each of these developmental tasks is highly variable based on individual factors, family and community support and acceptance, and access to effective interventions. Therefore, it is impossible, and likely counterproductive, to refer to the most average range of symptoms or profile that adolescents affected by ASD show at different stages of their development. Rather, in this discussion, the ways that features of ASD can affect a typical developmental trajectory will be presented. This perspective assists in appropriately highlighting the areas of concern throughout development and to select areas of focus for specific interventions for adolescents with ASD.

Children are expected to enter adolescence with abilities to function in social and academic settings. Between the ages of 11 and 17, children progress through middle and high school and take on increasingly greater burdens of responsibility and expectations for independence. Middle school is often a time when children are asked to take more responsibility for their own independent work at school and parents often begin to trust their child to engage in more activities without their direct supervision (e.g., group social activities, staying over friends' homes, and extended field trips). Adolescence in Western society also often implies that children are increasingly entrusted to make appropriate decisions, including risk taking, as they become more curious about adulthood and are given more opportunities for independence. This course of social expectations usually coincides with physiological growth rendering adolescents with an increasingly pronounced need to exhibit self-control.

While this is the framework for children who are developing typically, the road map for individuals with ASDs becomes blurry when attempting to establish appropriate expectations for decision-making and healthy behavior during this age. Parents and caregivers of adolescents with ASD may struggle with challenging decisions. Parents may be conflicted during this stage of their child's development as they may have a desire to see their children take on more independent social lives, but have real concerns that poor decisions with adverse consequences in social situations will be made with the lessened support. This issue is particularly challenging when a child presents with some requisite skills and motivation to *want* to engage with peers socially, but clearly still has difficulty in increasingly complex social settings. This scenario is commonly observed in adolescents with Asperger's Disorder or high-functioning autism. It is highly recommended that ongoing social development training continue during this time in a child's life because adolescents with and without disabilities are faced with increasingly complex stressors. This stress stems from their own changing physiology and wavering self-control, peer groups who may demonstrate varying levels of sensitivity about the adolescent's differences and social competence, and from diminished support from school personnel who tend to focus more on academic instruction in the middle and high school years and less on social development for individual students. Within this context, current research on varying aspects of identity development is discussed here.

Gender and Sexual Development

Adolescents with ASDs present the same course of reproductive development as individuals without an ASD. However, the issues facing adolescents with ASDs is that the physiological changes are often complicated by a lack of understanding or awareness of how these changes may be perceived by the outside world. The common issue during adolescent sexual development is that their bodies mature, but social deficits still present significant impairment in determining appropriate interactions and behaviors. The literature exploring the concept of sexuality in individuals with ASDs is very commonly simplified to only include the explanation of specific sexual behaviors, and often excludes the psychological and emotional intimacy that otherwise accompanies the broader notion of sexuality (Realmuto and Ruble 1999). The notions of self-image, emotions, values, attitudes, beliefs, and relationships are also included in the concept of sexuality; as one's concept of sexuality is a dynamic process, which is modified by responses to interactions, experiences, and formal and informal education, regardless of ASD diagnosis (Koller 2000).

Gender identity is defined as one's sense of self as it relates to socially proscribed norms for males and females. Gender identity is separate, and often unrelated, to sexual orientation or physical traits. Gender Identity Dysphoria (GID) results when emotional distress results from a mismatch between physical traits, social expectations, and one's sense of gender. There is increasing evidence that GID and ASD may co-occur at increased rates. De Vries et al. (2010) conducted a systematic sampling of children and adolescents with the diagnosis of GID found that there was a ten-time increase in the co-occurrence of ASD symptoms than in the general population. Several theories have been posited as to why there may be a relationship between these diagnoses, including gender dysphoria as a feature of ASD, as well as that the co-occurrence may represent a separate diagnosis such as OCD.

What is provided in the literature regarding sexuality likely reflects more about what little is known about the particular perspective of individuals with ASDs on sexuality than it does about the actual extent to which individuals with ASDs experience and express their own sexuality (Realmuto and Ruble 1999). Unfortunately, communication and social deficits in children with ASDs may present significant risk for harm to the individual during sexual development if appropriate sexual education is not provided. An estimated 20–25% of adolescents without disabilities are sexually abused. Arguably, the figure for children with ASDs may be higher due to the core deficits impeding reportage (Koller 2000).

Due to these differences and the continued hope of addressing the concerns of safety and independence of children with ASDs, an individualized and comprehensive sexual education training program is essential for every adolescent with an ASD. Koller (2000) reviewed several sexual education programs, which all sought to address teaching about body parts, reproduction, birth control, sexual health and life cycle, male and female social/sexual behavior, dating, marriage, parenting, establishing relationships, abuse awareness, boundary issues, self-esteem, and assertiveness skills training. These issues were recommended in the curriculum as a series of topics that would be instructed with parents or caregivers of the child as the primary educators, though a team approach has also been consistently recommended. The focus of this curriculum was to emphasize the unique needs of the child in order to encourage expression of sexuality in a way that ensures that the child and other participants are safe and fully aware of the implications of their behavior. Thus, it is clear that the level of abstract reasoning and cognitive ability of the child be taken into account when designing and implementing this type of program.

What is known through the research of sexual behaviors in individuals with ASDs is that a great many will exhibit what are deemed to be publicly inappropriate sexual behaviors. Both masturbatory behavior and sexual behavior targeted toward others are often highlighted as inappropriate. Masturbation is a natural sexual behavior and may, for many individuals with ASDs, be the sole means of sexual release. The likelihood of individuals with autism to engage in self-pleasuring behaviors is often thought to be higher due to the propensity for this population to engage in self-stimulatory behaviors (Dalldorf 1985). It is imperative that sexual education programs address ways of teaching appropriate and safe manners in which to express this need; this may include explicitly determining locations and times in which engaging in such behaviors would be appropriate. The literature in this area supports addressing all of these behaviors in a direct and matter-of-fact manner. These efforts should also be supported with reinforcement of appropriate behaviors and the provision of clear, visual signals of the time when breaks for self-pleasuring will be permitted (Fouse and Wheeler 1997).

Sexual behaviors directed toward others is an area of considerable concern for those caring for children with ASDs. A common practice in research of sexual behavior is to assert that sexual expression is the right of all individuals. However, this practice must include the caveat that the sexual expression occur to the degree to which their desires and needs align with what they may emotionally and physically manage, and that this be exhibited without harm to themselves or others. Individuals with ASDs also have the right to seek and receive guidance and support to learn specific social and sexual behaviors that align with the views of the individual's place of residence. Finally, great care should be taken when providing guidance to an individual with an ASD who is seeking to direct their sexual interest to another person. While it is important to support individuals in the appropriate expression of these behaviors, sexuality includes showing tenderness, care, and empathy to the degree to which ideally, a level

of mutual emotional intimacy is developed between two people. Given the well-documented deficits that individuals with ASDs present in this area of social development, support of sexual interactions with others may require careful consideration of risks and benefits.

Interpersonal Relationships

Verbal and nonverbal forms of communication are at the crux of social relationships for adults. As a child progresses through adolescence, immense qualitative and quantitative change typically occurs in most, if not all, social relationships. As the nature of relationships change, the meaning of words is in constant flux, as context, nonverbal cues, intimacy, and myriad other factors increasingly affect how they are interpreted. This poses unique challenges for individuals affected by ASD, as differences in speech and language development are the hallmark of the spectrum of disorders. Repetitive and/or idiosyncratic use of language through echolalic speech (repeating what they have heard) and scripting (rote repetition of phrases in response to verbal cues) can significantly impede the individual's ability to communicate effectively and form appropriate intimate relationships. Additionally, for adolescents who do develop functional language, generalization of skills may not occur naturally and might remain context-dependent until such skills are specifically taught across communicative partners, settings, and stimuli.

For example, individuals with Asperger's Disorder and high-functioning autism often exhibit hyperlexia (early, precocious reading and verbal abilities). However, these individuals may be quite literal in their interpretation of language, tend to be experts on obscure topics, and usually conform to a rigid self-imposed moral code. This results in language development that includes pedantic speech styles, insistence on particular topics of conversation, and deficits in the ability to be pragmatic about the use of language. Although their language may be quite complex compared to that demonstrated by individuals with ASD on the whole, individuals with Asperger's Disorder and high-functioning autism often cannot read the interests of their communicative partners or maintain flexibility in topic. This communication deficit has the potential to present major obstacles for adolescents as they attempt to navigate peer interactions and social environments independently. It often becomes a major impediment to forming intimate interpersonal relationships that in turn contribute to social function and achievement, including family relationships, workplace and postsecondary education settings, and with friends and other social support networks.

Inability, or limited ability, to employ and respond to nonverbal cues and modes of communication often further contributes to formation of atypical social skills repertoire. Impairments in the use of eye contact and hand gesture are often considered hallmarks of autism. However, other nonverbal social behaviors such as the use of joint attention and facial expressions are also pervasive. This contributes to limited social reciprocity, or the lack of understanding of the reciprocal back and forth nature of social interaction, as the adolescent with ASD does not develop the ability to respond to the needs and interests of others. This can lead to frustration and even anger on the part of communication partners as repeated verbal and nonverbal cues do not result in the desired response. For individuals severely affected by ASD, these nonreciprocal social interactions may go unnoticed or cause any internal distress. However, individuals with Asperger's Disorder may show more interest in social interactions and relationships. The lack of awareness and understanding of social cues coupled with the dearth in ability to use pragmatic language often results in failures to build upon simple social interactions and to develop and maintain meaningful relationships. This shortcoming can contribute to an unpleasant emotional response. Further deepening the problem, affected individuals may have difficulty modulating emotions in that they may either be over reactive or under reactive to a situation. As peers and other individuals may come to avoid or manipulate social interactions, individuals with Asperger's Disorder or high-functioning autism may become socially isolated, targets of ridicule or violence, or identified as juvenile delinquents as they respond to the inappropriate actions and words of others.

In contrast to the dire picture painted when communication and social interaction differences are not appropriately recognized, there are many examples of adolescents and young adults with ASD who form appropriate and deep social bonds with family and peers. This can result when the differences in communication style and skills are accepted, and individuals are included in opportunities to build social

relationships in a full variety of settings. Teachers, peers, and affected individuals can be educated on how to appropriately interpret and respond to differences in verbal and nonverbal cues. When the unique skills and interests of individuals with Asperger's Disorder or high-functioning autism are celebrated and supported, the individuals have the potential to become highly successful adults who are able to enjoy the benefits of social relationships as independent adults.

Social Institutions and Societal Roles

The federal mandate to include children with disabilities in public educational settings (IDEA 2004) has been instrumental in changing the way schools and professionals respond to the needs of children and teens with ASD. While the long-term vision of inclusion in public education is to contribute to the facilitation of social and academic growth throughout adolescence and adulthood, the stigmatization of children with ASDs (or, arguably, any disability or developmental difference) in middle and high school remains quite striking (Jackson and Attwood 2002). One measure of how schools respond to the learning and social needs of children and adolescents with ASD is through the National Survey of Children with Special Health Care Needs. This periodic telephone survey last completed in 2005–2006 employs parent report of satisfaction with school and community services for those with a child with a special health care need, including ASD. Montes et al. (2009) stated parents of children and adolescents with ASD reported a significantly higher degree of dissatisfaction with, and access to, school and community services when compared to parents of other children with special health care needs. In spite of significant legislative and institutional change brought about primarily by parent and professional advocates, schools and communities still must strive to adequately provide accessible, appropriate services for adolescents with ASD.

As discussed in the previous section on social relationships, troubling behaviors and potentially criminal acts may occur during this age as individuals with Asperger's Disorder or high-functioning autism attempt to fit in with social groups. Violence, fire-setting, and aggression have all been documented as behaviors that emerge in this time period. While, it has been postulated that these behaviors may occur due to the child's circumscribed interests and/or lack of social understanding, adolescents with ASD exhibiting such behaviors are at risk for being placed in alternative placements such as group homes and juvenile detention centers (Barnhill et al. 2000).

Given the chronic nature of ASD, the impact of social and/or communication deficits as well as interfering behaviors is likely to be felt by individuals and families as the affected individual transitions to adulthood. The need for continued support from parents and siblings may cause adverse strain on family relationships, which can be significantly exacerbated by persistent behavioral problems. Identifying community supports that can assist with transitioning to semi-independent or independent living, workplaces, and civic engagement pose an additional burden for families. This process includes identifying and accessing services typically across a number of service systems, including postsecondary educational, mental health, vocational habilitation, advocacy, and medical subspecialists to name a few. Providing appropriate treatment for the growing number of children, adolescents, and young adults identified with ASDs has become a challenge to state and local systems (Croen et al. 2002). The need for comprehensive, coordinated, and universally accessible services for young adults with ASD is evidenced by the increased proportion of affected adults who are unemployed and dependent on family and government systems (National Research Council 2001).

Behavioral Health Concerns

Children and adolescents with ASDs commonly exhibit serious behavior problems such as tantrums, aggression, self-injury, hyperactivity, and noncompliance. An estimated 50–70% of children with ASDs have co-occurring behavioral or emotional problems (Gadow et al. 2004). Often an additional challenge during adolescence is a child's physical growth that may exacerbate the challenge of addressing behaviors, which impede functioning and treatment, especially for children who are lower functioning. During the early stages of a child's life, aggression, tantrums, and other challenging behaviors present significant concern; however, as a child demonstrates greater size and strength through puberty, the possibility of imposing danger on themselves and others increases significantly during behavioral episodes (Koller 2000).

While the goal of early intervention is that many of these behaviors will be addressed by training the child not to engage in them earlier in the child's life (while they are still physically small and behaviors may be more easily contained), the chronic nature of ASDs often implies that new patterns of behavior will arise. For this reason, adolescence presents new challenges for families and treatment teams. Educational, mental health, and other treatment teams addressing or dealing with aggressive or destructive behaviors may consider staff and child safety more intensely (e.g., ensuring that staff are trained appropriately in prevention of behaviors and are physically capable of protecting the child and themselves from injury).

Currently, the few approaches used in the treatment of ASDs and its associated symptoms with an empirical base, include specific interventions based on applied behavior analysis (ABA) (Smith et al. 2006), comprehensive educational intervention (National Research Council 2001), and pharmacotherapy (Scahill and Martin 2005). Intervention may focus on the core symptoms of ASDs and overall development. Alternatively, treatment of specific behavioral symptoms such as stereotypic behaviors, hyperactivity, aggression, self-injury, or specific skill development such as daily living skills, communication, or joint attention.

Contributions of Applied Behavior Analysis

The applied behavior analysis treatment literature is replete with studies demonstrating the effectiveness of these procedures for individuals with ASDs (Matson et al. 1996; Schreibman 2000). This model, based on operant learning theory, presumes that antecedent stimuli and consequences influence both the acquisition and maintenance of behaviors. Investigations embracing this approach have demonstrated attenuation of interfering behaviors (e.g., aggression, self-injury, tantrums, noncompliance, ritualistic behaviors) as well as the acquisition of skills (National Research Council 2001). Recently, there has been a shift in the ABA field toward prevention and antecedent management strategies (Luiselli 2006) and away from reliance on consequence-based strategies. These approaches include use of visual strategies, modifications in daily schedule, and rearranging of the physical setting. Visual schedules have been used to improve on-task behavior as well as independence in following the classroom schedule. Environmental adaptations include modification in lighting and sound and physical arrangement of the space.

Comprehensive programs target not only specific interfering behaviors (e.g., aggression, self-injury, tantrums, noncompliance, ritualistic behaviors) but also skill acquisition across broad domains such as communication and social skills over a relatively long period (e.g., 2 years). Although the conceptual framework and interventions differ across such programs, there are many common features. Specifically, all programs emphasize the importance of early intervention, the use of specially trained staff, a low staff to student ratio, a focus on the child's social development and communication skills, a high value on individualized treatment, and active involvement of the family. Differences include the degree of structure and level of intensity of the various program models. Several comprehensive educational programs have published outcome data showing developmental gains in language functioning or IQ (National Research Council 2001).

Psychopharmacology treatment in ASDs has been a long-standing practice, most commonly employed as an adjunct to educational, behavioral, and other treatment approaches. Medications do not primarily treat the core behavioral symptoms of autism but rather target particular behavioral or psychiatric symptoms. These include disruptive and aggressive behaviors, attention and hyperactivity symptoms, and affective symptoms such as anxiety and depression. Despite the wide use of psychotropic medications, efficacy studies of medications specifically in individuals with ASDs have been limited. Classes of medications prescribed for individuals with ASDs include primarily stimulants, antipsychotics, antidepressants, and mood stabilizers.

As with other treatments for ASDs, pharmacological treatment is not curative but rather alleviates behavioral symptoms or clusters of symptoms. For example, methylphenidate is believed to increase norepinephrine, which results in improved attention. Fluoxetine, a serotonin reuptake inhibitor, increases availability of serotonin, which is implicated in the regulation of mood. While these effects inferred from use in other populations, the mechanism for children with ASDs may vary, or in fact be side effects of the medication. For example, risperidone affects both the dopamine and serotonin systems but can be quite sedating, allowing for a short-term decrease in disruptive behaviors.

Special Considerations for Individuals with High-Functioning Autism/ Asperger Disorder

For adolescents, clinicians must consider using different treatment modalities (than those used typically with children with autism and intellectual disabilities), which lend themselves to the distinctive profiles of children with higher functioning abilities (Sofronoff et al. 2005). Anderson and Morris (2006) indicated that there was a substantially higher than expected rate of clinically significant anxiety and depression diagnoses, as well as other comorbid disorders (i.e., eating disorders, substance abuse, obsessive–compulsive disorder, bipolar affective disorder) in individuals diagnosed with Asperger's Disorder or high-functioning autism. Interventions containing elements that address the areas of comorbid disorders, social training, and relationship formation would be helpful for this group of adolescents (White et al. 2010).

Cognitive Behavioral Therapy (CBT) is an approach that originated in the field of psychotherapy. This framework involves altering and challenging an individual's cognitions around events and situations in order to modify future behavior (White et al. 2010; Anderson and Morris 2006). CBT focuses on the identification and modification of cognitive schemas that are dysfunctional for individuals. While CBT presents a promising framework for continued work with children with high-functioning ASDs, more research is required in order to determine its effectiveness for adolescents in this population.

Cross-References

► Asperger Syndrome
► Autism

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., Text Rev.). Washington: American Psychiatric Association.

Anderson, S., & Morris, J. (2006). Cognitive behaviour therapy for people with Asperger's syndrome. *Behavioural and Cognitive Psychotherapy, 34*, 293–303.

Asperger, H. (1944). Die "Autistichen psychopathen" im kindesalter. *Archiv fur Psuchiatrie und Nervenkrankheiten, 117*, 76–136.

Barnhill, G. P., Hagiwara, T., Myles, B. S., Simpson, R. L., Brick, M. L., & Griswold, D. E. (2000). Parent, teacher and self-report of problem and adaptive behaviors in children and adolescents with Asperger syndrome. *Diagnostique, 25*, 147–167.

Center for Disease Control and Prevention. (2009). Prevalence of autism spectrum disorders: Autism and developmental disabilities monitoring network, United States, 2006. *Surveillance Summaries, 58*, 1–20.

Croen, L., Grether, J., Hoogstrate, J., & Selvin, S. (2002). The changing prevalence of autism in California. *Journal of Autism and Developmental Disorders, 32*, 207–215.

Dalldorf, J. S. (1985). Medical needs of the autistic adolescent. In E. Schopler & G. E. Mesibov (Eds.), *Autism in adolescents and adults* (pp. 149–168). New York: Plenum.

de Vries, A. L. C., Noens, I. L. J., Cohen-Kettenis, P. T., van Berckelaer-Onnes, I. A., & Doreleijers, T. A. (2010). Autism spectrum disorders in gender dysphoric children and adolescents. *Journal of Autism Developmental Disorders*, open access at www.Springerlink.com, 1007/s10803-010-0935-9.

Fousse, B., & Wheeler, M. (1997). *A treasure chest of behavioral strategies for individuals with autism*. Arlington: Future Horizons.

Gadow, K. D., DeVincent, C. J., Pomeroy, J., & Azizian, A. (2004). Psychiatric symptoms in preschool children with PDD and clinic and comparison samples. *Journal of Autism and Developmental Disorders, 34*, 379–393.

Gillberg, C. (1991). Clinical and neurobiological aspects of asperger syndrome in six family studies. In U. Frith (Ed.), *Autism and Asperger syndrome* (pp. 122–146). Cambridge: Cambridge University Press.

Individuals with Disabilities Education Act, 20 U.S.C. § 1400 et seq. (2004).

Jackson, L., & Attwood, T. (2002). *Freaks, geeks and Asperger syndrome: A user's guide to adolescence*. London: Jessica Kingsley Publishers.

Kanner, L. (1943). Autistic disturbances of affective contact. *Nervous Child, 2*, 217–250.

Koller, R. (2000). Sexuality and adolescents with autism. *Sexuality and Disability, 18*, 125–135.

Luiselli, J. K. (2006). *Antecedent assessment & intervention: Supporting children & adults with developmental disabilities in community settings*. Baltimore: Paul H. Brookes.

Matson, J. L., Benavidez, D. A., Compton, L. S., Paclawskyj, T., et al. (1996). Behavioral treatment of autistic persons: A review of research from 1980 to the present. *Research in Developmental Disabilities, 17*, 433–465.

Montes, G., Halterman, J. S., & Magyar, C. I. (2009). Access to and satisfaction with school and community health services for US children with ASD. *Pediatrics, 124*, S407–S413.

National Research Council. (2001). *Educating children with autism*. Washington: National Academy Press.

Realmuto, G. M., & Ruble, L. A. (1999). Sexual behaviors in autism: Problems of definition and management. *Journal of Autism and Developmental Disorders, 29*, 121–127.

Scahill, L., & Martin, A. (2005). Psychopharmacology. In F. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (3rd ed., pp. 1102–1117). Hoboken: Wiley.

Schreibman, L. (2000). Intensive behavioral/psychoeducational treatments for autism: Research needs and future directions. *Journal of Autism and Developmental Disorders, 30*, 373–378.

Smith, T., Scahill, L., Dawson, G., Guthrie, D., Lord, C., Rogers, S., et al. (2006). Designing research studies on psychosocial interventions in autism. *Journal of Autism and Developmental Disorders, 105*, 269–285.

Sofronoff, K., Attwood, T., & Hinton, S. (2005). A randomized controlled trial of a CBT intervention for anxiety in children with Asperger syndrome. *Journal of Child Psychology and Psychiatry, 46*, 1152–1160.

Volkmar, F. R., Koenig, K., & State, M. (2005). Childhood disintegrative disorder. In F. R. Volkmar, R. Paul, A. Klin, & D. Cohen (Eds.), *Handbook of autism and pervasive developmental disorders* (3rd ed., pp. 70–87). Hoboken: Wiley.

White, S. W., Albano, A. M., Johnson, C. R., Kasari, C., Klin, A., Oswald, D., et al. (2010). Development of a cognitive-behavioral intervention program to treat anxiety and social deficits in teens with high-functioning autism. *Clinical Child and Family Psychology Review, 13*, 77–90.

Auto Theft

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Overview

Auto theft is a common property crime that is often committed by young offenders. Research on youth auto theft has involved analysis of official statistics or criminal justice agency records, and surveys of young offenders or school-based youth. Studies have examined the characteristics, experiences, and motivations of auto thieves, as well as explored the potential deterrence and prevention or intervention strategies. Auto theft is primarily committed by males. The term "joyrider" describes those youth who commit auto theft primarily for recreation. Situational crime prevention strategies, tougher sentencing policies, and negative personal experiences do little to deter youth auto thieves.

The Problem of Youth Auto Theft

Auto theft is the theft or attempted theft of a motor vehicle such as car, truck, bus, and motorcycle. Auto thieves are often divided into older professionals stealing primarily for profit and younger amateurs stealing largely for recreation. Auto theft is a common property crime. It is also a common crime committed by young offenders. The penalties for auto theft vary across jurisdictions but often include fines, community sentences (probation), and imprisonment.

Aims and Methods of Past Research on Youth Auto Theft

Research on auto theft has examined the characteristics, experiences, and motivations of auto thieves, as well as explored the potential deterrence and prevention or intervention strategies. Many studies have focused on youth auto thieves, and involved secondary analysis of official statistics or criminal justice agency records, or qualitative and quantitative surveys of small samples of young offenders (e.g., Dawes 2002; Light et al. 1993; McMurran and Whitman 1997). For instance, Dawes (2002) conducted semi-structured interviews with 30, 15–22-year-old, indigenous Australian youth who were in detention and correction centers for auto theft. Light et al. (1993) conducted semi-structured interviews with 100 English auto thieves aged from 14 to 35, some of whom had been in motor projects. Finally, McMurran and Whitman (1997) interviewed 110 male, 15–21-year-olds with a previous history of stealing cars, who were in a young offenders' institution.

Focusing on young offenders can skew our understanding of the youth auto theft phenomenon, as many youth are unlikely to be caught. Thus, it is unclear how those who are not caught differ from those who are caught, and it makes it difficult to assess who should be the target of crime reduction strategies. Furthermore, analyses of official figures and records on youth auto theft are limited by the policies and procedures that may exist for recording crimes across different agencies and over time, and by the fact that not all pertinent information is necessarily documented (or legible). Official statistics typically reflect only a small proportion of crime, and these may be unrepresentative since they are those that victims were motivated to report and those that could be successfully prosecuted. Finally, self-report data is subject to social desirability response bias, which may lead to underreporting of the offenses that youth were involved in.

Fortunately, there is a small body of research that also focuses on auto theft in the general population of youth (e.g., Dhami 2008; Fleming 1999; Fleming et al. 1994; Spencer 1992). In a study of 86 boys from a British school, Spencer (1992) found that a small

proportion had engaged in auto theft to some degree (i.e., from being present when a car was stolen, through stealing property from a car, to stealing a car). Similarly, in a study involving 1,254 grade 8 and 11 youth in eight schools across B.C., Canada, Fleming et al. (1994) found that 5% reported having stolen a vehicle and 12% said they had been a passenger in a stolen car. Finally, in a study of 779 grade 9–12 youth in 13 schools across B.C., Canada, Dhami (2008) found that 14% reported having ridden in a stolen car, 17% said they had thought about stealing a car, 10% said they had tried to steal a car, 8% claimed to have stolen a car, and 6% reported they had been caught in a stolen car.

Studying auto theft in the general population of youth can yield a broader understanding of the phenomenon, and reveal a "hidden" sample of school-attending youth who engage in auto theft. However, studies of school-based youth typically exclude those who are not at school on the day of data collection because they skipped classes, or were suspended or excluded from school. These youth may be at greater risk of engaging in auto theft.

Characteristics, Experiences, and Motivations of Youth Auto Thieves

The youth auto theft literature has made progress in describing the characteristics of young auto thieves. It has been revealed that youth auto thieves tend to be teenage males, from lower socioeconomic groups. A majority are white. Most live with their family members, and expect to do household chores. Sometimes, discipline and parental supervision is lacking. Youth auto thieves are generally uninterested or not engaged in school, and are typically unemployed. They do not tend to engage in formal extracurricular activities or active leisure pursuits, and instead tend to "hang out." Youth auto thieves may have criminal friends as well as family members who engage in criminal behavior. They may use alcohol and drugs, and engage in other delinquent or criminal activities, as well as be gang members.

There are, however, some similarities between youth who engage in auto theft and those who do not. Dhami (2008) found no significant difference between youth in the general population who reported various levels of engagement in auto theft and those who did not in terms of the average age of the two groups, the average number of other youth at home, and the average weekly hours spent on chores and paid work.

Studies have also recorded youths' experiences of auto theft. It is suggested that youths are often passengers in stolen cars before they begin stealing them. Youth auto thieves often have been found to be repeat offenders, and most offenses are not planned in advance. They often commit auto theft in groups, and after school. Although youth auto thieves may use alcohol, drugs, or solvents, auto theft does not necessarily coincide with the use of such substances. Similarly, although some youth auto thieves may engage in other criminal activities, a significant proportion of youth describe themselves as specializing in auto theft. The families of youth auto thieves may know of their engagement in the offense, but are often powerless to prevent their offending behavior.

Some researchers have developed and applied typologies when describing the experiences of youth auto thieves and explaining their motivations. Auto theft may be for recreation (e.g., entertainment, fun, power, status, recognition, masculinity, sex, and a challenge), transport (e.g., utilitarian, short-term personal use, long-term personal use, and for commission of another crime), and profit (e.g., car stripping, sale of parts, resale, and fraudulent insurance claims). The term "joyrider" is commonly used to describe those youth who commit auto theft primarily for recreation. It is important to recognize that youth auto thieves may have multiple motivations and that these may change over time. Thus, the categories of motivations are not mutually exclusive, and youths' motivations may shift from one type to another.

Studies have also explored the factors that motivate youth to initiate, sustain, and desist in auto theft. Here, the peer group emerges as a key factor influencing youth to engage in auto theft. For instance, it has been found that many youth auto thieves say they started to steal cars because their friends were already involved in the activity, while other reasons included wanting to drive (including learning how to). Beyond these, other reasons for initial involvement in auto theft include avoiding boredom, need for excitement/fun, need for money, to steal, to impress friends, and a desire to wreck vehicles.

In terms of continuing to steal cars, the reasons sometimes given by youth are for fun, going fast, convenience, freedom, excitement, feeling of power,

avoiding boredom, trying different models of cars, a challenge, status, and to sell the vehicle. As their involvement in auto theft continues, youth may report becoming more skilled in terms of technique and speed. Peers who were teachers can become co-offenders, and offenders may increase their rate of theft from cars or theft for profit, as well as use of cars for commission of other crimes such as "ramraiding" (i.e., using the vehicle to break through the windows or doors of a closed shop to allow theft). Indeed, the motivations for persisting in auto theft change to focus more on obtaining money than either feeling a "buzz" or avoiding boredom. In fact, there are some researchers who consider auto theft an addictive behavior.

Some evidence suggests that as youth become young adults they desist from auto theft. The reasons sometimes provided for ceasing auto theft included taking up other activities, finding other modes of transport, wanting to avoid the adverse consequences of offending, deciding to obey the law, no longer feeling tempted, and changing friends or peer group. In addition, desistance may be associated with the threat of prison, "growing out of it," and (males) acquiring a girlfriend.

Deterring and Preventing Youth Auto Theft

Studies reveal that youth auto thieves do not consider auto theft to be a serious problem or view joyriding as a serious crime compared to other crimes. Furthermore, some do not believe it is wrong to steal a car or steal from it. Against this backdrop, there has been some discussion about the most effective strategies for deterring and preventing youth auto theft.

Situational crime prevention strategies such as target hardening via locks, alarms immobilizers, and wheel protectors, have not been very successful in reducing auto theft. Indeed, some youth say that they are not deterred by car alarms. Similarly, strategies that make it more likely for youth to get caught such as informant hotlines, curfews, tracking devices, and public awareness campaigns have also had limited effectiveness.

Deterrence may be achieved via sentencing policy, and some researchers have promoted the use of increased punishment. The most common penalties for auto theft are fines and community sentences or probation. However, only a small proportion of youth actually come to police attention. Youth tend to believe that the chances of being caught are small, and they think that they would evade harsh punishment. Even when youth auto thieves do overestimate the chances of receiving a custodial sentence, this does not appear to deter them. Similarly, youth do not appear to be deterred by their experiences of being caught or sentenced, even to custodial sentences.

Youth may be deterred from auto theft via their own negative experiences. However, studies have found that youths' experiences of accidents do little to deter them. Nevertheless, it has been found that while youth may not be deterred by the personal risks involved in joyriding, many youth who know victims of joyriding say that knowledge contributed to their decision to stop.

Youth auto theft may be dealt with by changing offenders' attitudes to auto theft, reducing their motivations to offend, and channeling their interest in cars in a legal way. Providing youth with relatively cheap recreational facilities may prevent them from being bored, and "hanging out" and eventually becoming involved in auto theft. It has been found that offenders recommend educational programs highlighting the dangers of auto theft and joyriding. By contrast, some youth recommend that provision of activities for young people would help prevent auto theft.

Strategies designed to reduce youth auto theft often target young offenders who have been caught. They participate in programs via outreach or referral, sometimes after being cautioned or sentenced to probation. Some programs engage youth in activities at times when they are most likely to offend. Programs may make them think about their offending behavior, and redirect their attention to more prosocial pursuits with long-term personal development such as car mechanics courses, sports, voluntary work, and creative programs, and provide them with access to driving, as well as education on safe driving.

Dhami (2008) found that compared to youth in the general population who reported various levels of engagement in auto theft, those who said they had not engaged in auto theft were significantly more likely to view it as something that could ruin their image or life or have negative consequences for other people. In addition, the auto thieves in this sample considered the problem of youth auto theft as significantly less important to themselves and their peers, than youth who had not engaged in auto theft. Both groups, however,

equally recognized that the problem of youth auto theft was important to the police and judges as well as their parents. Finally, compared to youth who had not engaged in auto theft, auto thieves believed that more adult support and greater intervention by the criminal justice system would both prove to be a significantly less-effective deterrence, but that a greater provision of other activities would be significantly more effective in preventing auto theft.

Future Directions for Preventing and Understanding Youth Auto Theft

Strategies designed to reduce youth auto theft often target young offenders who have been caught. It may be worth considering the effectiveness of such projects for "at risk" school-attending youth who think about auto theft but have not begun stealing cars and youth who engage in auto theft but have not yet been caught. These could be operated as part of a school organized general studies class, for example, and could include an element of peer intervention. Alternatively, a view of auto theft as an addictive behavior implies that interventions such as behavioral self-control training and relapse prevention may be useful, along with interventions that provide rewarding replacement activities.

Although much of the past research on youth auto theft has been atheoretical, the findings do bear upon the potential value of control theory, social disorganization theory, routine activity theory, and rational choice theory. There has also been some discussion on the usefulness of an addiction-based model of youth auto theft. Future research ought to test various theories of crime in explaining the phenomenon of youth auto theft.

There are many aspects of youth auto theft that need to be further researched. For instance, there is a need to better understand how youths' perceptions of young auto thieves affect their likelihood of being involved in auto theft. It would be interesting to further explore the types of cost-benefit calculations that may be (sub)consciously done by groups of youth (i.e., youth who report engagement in auto theft and those who do not) in order to determine how well they are calibrated to the objective probabilities of obtaining specific potential benefits of auto theft as well as incurring specific potential costs, and then to determine how specific benefits and costs are balanced to act as a motivation or deterrence for auto theft.

Cross-References

► Delinquency

References

Dawes, G. (2002). Figure eights, spin outs and power slides: Aboriginal and Torres Straight Islander youth and the culture of joyriding. *Journal of Youth Studies, 5*, 195–208.

Dhami, M. K. (2008). Youth auto theft: A survey of a general population of Canadian youth. *Canadian Journal of Criminology and Criminal Justice, 50*, 187–209.

Fleming, Z., Brantingham, P., & Brantingham, B. (1994). Exploring auto theft in British Columbia. In R. V. Clarke (Ed.), *Crime prevention studies* (Vol. 3, pp. 47–90). Monsey: Criminal Justice Press.

Fleming, Z. T. (1999). The thrill of it all: Youthful offenders and auto theft. In P. Cromwell (Ed.), *In their own words: Criminals on crime* (pp. 71–79). Los Angeles: Roxbury Publishing.

Light, R., Nee, C., & Ingham, H. (1993). *Car theft: The offender's perspective (Home Office Research Study No. 130)*. London: Home Office.

McMurran, M., & Whitman, J. (1997). The development of a brief intervention for car theft. In J. E. Hodge, M. McMurran, & C. R. Hollin (Eds.), *Addicted to crime?* (pp. 191–201). Chichester: Wiley.

Spencer, E. (1992). *Car crime and young people on a Sunderland housing estate (Police Research Group Crime Prevention Unit Series Paper No. 40)*. London: Home Office.

Autonomy and Its Assessment

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Overview

Originally considered as a developmental task of toddlerhood, autonomy has gained in importance as a pivotal part of adolecence as well. Many conceptual definitions exist in the literature but only a few researchers have attempted to measure the construct empirically. Initial attempts at measuring dependency, an antonym of autonomy, were strengthened by subsequent measures of a global construct. However, more progress has been made by the measurement of specific domains of behavior, emotion, and cognition.

Adolescent autonomy is manifest in a young person's ability to act, feel, and think independently. Erikson (1963) originally characterized autonomy as

a task tied to toddlerhood. Today, however, scholars give it considerable attention as a central part of adolescent development. Recently, it has received enough attention in the field of adolescent development that in some circles it rivals identity development as the most important task of adolescence. Zimmer-Gembeck and Collins' (2003) seminal chapter on autonomy development during adolescence provides a good historical overview of the topic. The increased consideration of the importance of autonomy at this stage of development has lead to an increased focus on its measurement in adolescence. We are closer to understanding adolescent autonomy because of the measurement tools available.

Scholars conceptually define autonomy in different ways based on theoretical and philosophical allegiance. Anna Freud's (1958) psychoanalytic view represents a detachment from parents; she saw autonomy as adolescent rebellion against parental control. This detachment model has lead to rich data, specifically as it relates to previous attachment patterns in childhood. Another familiar conceptualization of autonomy follows a Durkheim (1957) view, which represents a quest for independence and individuality. This view parallels Erikson's (1963) or Mahler's (Mahler et al. 1975) view of adolescent autonomy as self-regulation.

Researchers also use varied approaches to measure adolescent autonomy. Some have attempted to measure the construct as a whole. However, an overarching categorization, into three main areas, provides a more manageable approach to understanding adolescent autonomy and most likely explains how the construct has emerged as one of the foremost development milestones of these formative teenage years. The most fruitful attempts to measure adolescent autonomy operationalize it in terms of behavior, emotion, or cognition.

Comprehensive Measures of Autonomy

Early attempts to measure autonomy did so by addressing the entire construct. Rather than measuring it directly, however, these early researchers focused attention on the measurement of dependency, an antonym of autonomy. In 1961, Zuckerman, Levitt, and Lubin used concepts from the literature of various descriptions of personality traits that parallel dependency (Zuckerman et al. 1961). They shaped an instrument to measure three distinct yet related traits of a dependent or compliant personality. These traits included succorance, or a marked need for approval and affection from others; deference, or a tendency to subordinate to others while inhibiting assertiveness; and abasement, or a tendency toward guilt and self-blame. Hirschfeld and colleagues developed a 48-item self-report inventory designed to assess interpersonal dependency with clinical and nonclinical populations (Hirschfeld et al. 1977). The use of the instrument with nonclinical, or participants who are not diagnosed with a disorder that associates with dependency is important to note. Prior to this time, developmentalists did not emphasize the importance of autonomy in adolescence as an important developmental transition. Hirschfeld and colleagues demonstrated statistically that the newly created inventory consisted of three components. These components included emotional reliance on another person, a lack of social self-confidence, and assertion of autonomy. Later, Austrian researchers Rossmann and Bloschl (1982), also researching clinical and nonclinical populations, developed another self-report dependency questionnaire, *The Grazer Dependence Scale*. Rossman and Bloschl designed this scale to measure emotional dependency, achievement-related dependency, and instrumental dependency. In each of these developed instruments, the reliance on measuring dependency limited the utility of using them to study autonomy directly.

Bekker (1993) recognized the one-sided reliance on dependency of the previously described questionnaires. She also identified, in the early dependency measurement tools, a lack of a feministic perspective that might account for some potentially important gender differences in adolescent autonomy. Maintaining an attempt toward a global measure of autonomy, she created the *Autonomy Scale* (Bekker). The original scale consisted of 50 items. Following an initial factor analysis, she reduced the scale to the 42 most salient items. Response options for the items were on a seven-point Likert scale ranging from "completely fits me" to "absolutely does not fit me." Hypothesized to encompass five scales, the final version of the instrument reduced to three factors including self-awareness, sensitivity to others, and capacity for managing new situations. Bekker and van Assen (2006) maintained the original three factors in a revised and shortened 30-item instrument known as the *Autonomy-Connectedness Scale* (*ACS-30*).

Attempts to measure adolescent autonomy as a whole, either from a dependency perspective or from a global perspective, remain too broad to offer detailed insight into the developmental patterns and trajectories in adolescence. Dependency, although acknowledged as an ample antonym of autonomy, cannot adequately assess autonomy any better than studying marital discord can inform us about marriage satisfaction. Likewise, Bekker's work, while serving an essential role in informing the design of more defined measurement tools, measured autonomy too broadly to render any clear direction about how to benefit healthy trajectories in adolescent development in specific domains. Subsequent measures separated adolescent autonomy into specific areas of behavior, emotion, and cognition.

Measurement of Behavioral Autonomy

Behavioral autonomy entails an ability to act for one's self. Most developmentalists recognize that humans seek and receive independence throughout the lifespan. However, there appear to be noticeable spikes in the importance of autonomy for toddlers and adolescents. In toddlerhood, children learn to walk. They also learn to regulate their bodily functions and use the toilet without assistance, feed themselves, and put on their own clothes. All these events create a sense of independence for the young child. Similarly, adolescents begin to experience new freedoms as activities with friends, away from parents, increase and young people begin to act like adults. Behavioral choices in adolescence range from choosing hairstyle and manner of dress to deciding about risk-taking behaviors like using drugs and alcohol or being sexually active.

Historically, behavioral autonomy was the first specific area to be measured. This is most likely due to two factors. First, it is less complicated, from a measurement perspective, to observe evidence of behavioral autonomy directly. It is easier to measure the actions of a participant than it is to measure their emotions or their thoughts. Second, there is a direct connection between behavioral autonomy and Erikson's second stage of lifespan development, "autonomy versus shame or doubt." Autonomy in toddlerhood is about behavioral independence. It was a logical first step in developing measures of assessment to examine independent behavior in adolescence.

Many researchers have described behavioral autonomy conceptually. They use terms such as self-reliance (Greenberger 1984), functional independence (Hoffman 1984), self-regulation (Markus and Wurf 1987), competence (Deci and Ryan 2000), personal control (Flammer 1991), nonconformity (Ryan 1993), and reflective autonomy (Koestner and Losier 1996) to describe the process of acting independently. However, reliable and valid instruments to measure the construct accompanied none of these conceptualizations. The main researchers in this field of inquiry who have created instruments to measure behavioral autonomy include Felman and Quatman (1988), Rosenthal and Bornholt (1988), Felman and Rosenthal (1990), and Daddis and Smetana (2005).

Over 2 decades ago, Feldman devised a measurement of adolescent behavioral autonomy. Together with her colleague Quatman, Feldman created a 21-item questionnaire called the *Teen Timetable* (Felman and Quatman 1988). These items included a variety of everyday life management domains that they conceptually grouped as autonomy, oppositional autonomy, social interaction, and leisure. Response options included a five-point scale of age ranges for when the adolescents thought their parents should allow them to do the task. The response options ranged from 1 = before age 12, 2 = 12–14 years of age, 3 = 15–17 years of age, 4 = 18 years of age and older, and 5 = not at all. Parents completed an equivalent questionnaire with slight verbiage change to accommodate the adult responder. There was no indication of any factor analysis for the *Teen Timetable* by either Feldman and Quartman or other researchers.

At the same time as Feldman's *Teen Timetable*, Rosenthal and Bornholt (1988) were also designing an assessment of behavioral autonomy. Their instrument, the *Developmental Timetable Questionnaire*, consisted of 65 items comprising eight domains. These domains included interpersonal sensitivity, initiative or independence, personal maturity, responsibility, unsupervised activities, social behavior with friends, self-control, and respect or politeness. Rosenthal's scales demonstrated adequate internal reliability on the initially reported scores.

Two years later, Felman and Rosenthal (1990) joined forces to create the *Revised Teen Timetable* that reports to be a 19-item inventory combination of the Feldman *Teen Timetable* and the Rosenthal

Developmental Timetable. Overall, there is significant overlap in the two earlier versions of the questionnaires. However, upon close examination, the *Revised Teen Timetable* is more akin to the Felman and Quatman (1988) *Teen Timetable*, with over 63% of the items coming directly from that original instrument.

More recently, Daddis and Smetana (2005) again revised the *Teen Timetable* to create the 24-item *Teen Timetable* measure. Daddis adapted the original Felman and Quatman (1988) measure by dropping three items (doing homework, taking a part-time job, and going to a rock concert with friends) and adding five items dealing with responsibilities. These items included deciding how to talk to parents, how to keep their bedroom, whether to use slang or curse words, their ability to prepare their own dinner, and how to do chores. Many of these additions are similar in content to items on the Rosenthal and Bornholt (1988) 65-item inventory. Daddis used a similar scale as the previous versions of the *Teen Timetable* but he varied the age options slightly (1 = before age 14, 2 = 14–15, 3 = 16–17, 4 = 18 or older, 5 = never). Daddis' change of age options is interesting. As society continues to push adult behavior choices toward younger children, it would seem logical to move the age of first option younger rather than older to maximize variability.

Each of these measurements attempts to highlight areas of behavioral change in the transition from childhood to adult status. Several researchers feel that behavioral autonomy should remain primarily a task of toddlerhood because the observable tasks of toddlers are more salient and because the rationale for behavioral choices in adolescence has a stronger emotional and cognitive basis. Instead of focusing on what parents allow adolescents to do independently, some scholars focus on how adolescents begin to develop their own affective domain by untying themselves from their emotional dependence on their parents or primary caregivers.

Measurement in Emotional Autonomy

Since the late 1980s, researchers have emphasized the role of emotions in an adolescent's quest for independence. Anna Freud's theoretical conceptualization of adolescence provides a foundation for this line of assessment. According to Freud (1958), adolescence is a time when children rebel against their primary caregivers toward an independence of emotional connection. The rebellion then results in an opposition to their caregiver attachment experienced in infancy. Conceptual interpretations of emotional autonomy include emotional and social independence (Flammer 1991; Hoffman 1984); mutuality and permeability (Grotevant and Cooper 1985); relatedness (Deci and Ryan 2000); connectedness, separateness, and detachment (Beyers et al. 2003; Frank et al. 1988); and reactive autonomy (Koestner and Losier 1996). Once again, reliable and valid instruments to measure the conceptualizations accompanied none of these. A few researchers have attempted the empirical measurement of emotional autonomy. Steinberg and Silverberg (1986), Noom et al. (2001), and Allen et al. (1994) have each developed different ways to assess emotional autonomy.

Steinberg and Silverberg (1986) constructed the *Emotional Autonomy Scale* (*EAS*). The *EAS* consists of a 20-item instrument that used Likert type scales to create four subscales of emotional autonomy. The subscales include (a) parents as people, (b) parental deidealization, (c) non-parental dependency, and (d) individuation. Steinberg and Silverberg constructed these subscales according to Blos's (1979) theoretical perspective of adolescent individualization (Schmitz and Baer 2001). While researchers have used the *EAS* often over the past 2 decades, controversy still surrounds its connection to Anna Freud's (1958) negative view of adolescent development that involves detachment from parents rather than a more healthy approach of adolescent autonomy being in harmony with parental preferences (Ryan and Lynch 1989). Critics have also questioned the apparent lack of convergent validity (Hill and Holmbeck 1986). Questions remain as to whether *EAS* actually measures emotional autonomy or whether it measures something more related to detachment.

Noom et al. (2001) included emotional autonomy as one of three dimensions of their conceptualization and measurement of autonomy. Using the earlier work of Bekker (1991), Noom and colleagues constructed a 15-item questionnaire purporting to assess attitudinal, emotional, and functional autonomy. Despite the fact that their instrument attempts to measure a more inclusive scope of autonomy, by including attitudinal and functional dimensions of autonomy, the emphasis

remains on the distancing of the adolescent from parental influences.

Recently, Allen and his colleagues (Allen et al. 2002) have been the most active in exploring new ways to conceptualize and measure emotional autonomy. Allen et al. employed a qualitative approach to code mother–adolescent interactions for behaviors exhibiting autonomy. They devised their own coding system that they refer to as the *Autonomy and Relatedness Coding System*. Their scale includes ten different groups of speech patterns anchored by concrete observable behaviors. Allen and his research team use their assessment to examine adolescent development of emotional autonomy across domains.

Each of these approaches attempts to assess areas of emotional change, as children become adults. Controversy remains about the utility of such measures. A shift of emotional dependence on parents to emotional dependence on others does not necessarily constitute autonomy. Scholarly work on attachment through the lifespan brings question to the detachment model of emotional autonomy. Instead of focusing on this affective shift, it might be more beneficial to focus on how adolescents begin to develop their own cognitive domain. Humans who think independently will most likely recognize the proper nature of their emotional connections to caregivers and will most likely display behavioral independence. Adolescence is a time when young people begin to think independently, without undue influence from outside sources, including parents.

Measurement in Cognitive Autonomy

Many of the researchers in this field have included a conceptual component that encompassed cognitive autonomy. Indeed, Allen et al. (2002) describe their measure as an assessment of both emotional and cognitive autonomy. However, none of the measures attempts to validate the conceptualization of the construct. Only recently have scholars begun to examine the significance of assessing young people's impressions of their own independent thought (Casey and de Haan 2002; Stefanou et al. 2004). Conceptualizing independent thought and cognitive autonomy in a decision-making model has received noted consideration (see Jacobs and Klaczynski 2005). However, restricting it to a simple decision-making model falls short of a full appreciation of the construct. Unquestionably, decision making is a significant component of adolescent independent thought, but it represents only one aspect of cognitive autonomy. A more comprehensive approach, beyond decision making, seems warranted. Initial steps toward the conceptual and practical development of one method of assessing adolescent cognitive autonomy are underway.

Beckert and colleagues (Beckert 2007; Lee et al. 2009) have developed a measurement tool, the *Cognitive Autonomy and Self-Evaluation* (*CASE*) inventory, toward the measurement of cognitive autonomy in adolescence. This instrument endeavors to quantify five areas of independent thought. A review of relevant literature in psychology, sociology, and human development highlights many areas of independent thought that deserve consideration. Additionally, the authors of the *CASE* inventory used a grounded theory approach to identify salient areas of independent thought for consideration. Once categorical coding of the open-ended data reached saturation, support for the emergent categories was sought from the literature. The use of this type of grounded theory approach with supporting literature is consistent with the construction of instruments in social science areas that encompass multiple operational definitions of specific constructs (Charmaz 2003).

The *CASE* inventory operationally defines cognitive autonomy in five domains. These domains entail a capacity to evaluate thought and make logical deductions (Miller and Drotar 2007; Zimmerman 2000), to voice opinion (Reed and Spicer 2003), to make decisions or generate alternatives (Galotti 2002), to capitalize on comparative validations (Bednar and Fisher 2003; Finken 2005), and to self-assess or self-reflect (Demetrious 2003; Dunning et al. 2004; Peetsma et al. 2005). Beckert's inventory is a 27-item instrument using a six-point Likert scale with response options ranging from strongly disagree to strongly agree. Initial investigations of instrument validity, using factor analysis, revealed a goodness of fit for five related, but statistically unique areas. The reliability and validity of scores from diverse populations support the subscale distinction (Beckert 2007).

The *CASE* inventory assesses implications toward evaluative thinking that include thinking about the consequences of decisions, looking at situations from other's perspectives, weighing possible risks, evaluating daily actions, considering alternative decisions,

thinking about effect of actions, weighing the long-term effect of decisions, and evaluating thoughts. A young person's inclination to voice opinions is measured on the inventory by the adolescent's willingness to speak up in class discussions, to share views when disagreements arise, to stand up for what the adolescent thinks is right, valuing their own opinion, and speaking out in other school situations. Decision making, as measured on the inventory, entails a recognition that there are consequences to decisions, that their way of thinking and decision making have improved with age, that they think more about the future than previously, and that they are better at decision making than their friends. The measurement on the inventory of self-assessing includes an ability to identify self-strengths, abilities, and talents. Finally, comparative validation, on the inventory includes needs to have family members and friends approve decisions, to have views match those of parents, friends, and others.

Conclusion

We are closer to understanding adolescent autonomy because of the efforts to measure the construct. Research in this field has conceptualized the construct in many ways. The inability to envision the construct uniformly has lead to diverse interpretations of what autonomy really entails. Consequently, relatively few scholars have attempted to develop measurements of autonomy. Some researchers have tried to measure the whole construct, while others focused on behavioral, emotional, or cognitive domains within the area of adolescent autonomy. Scholars continue to attempt to tap the full richness that exists in the implications of the development of adolescent autonomy. Nonetheless, strength exists in the attempts. As we learn more about how an adolescent becomes an adult in behavioral, emotional, and cognitive realms, we will be better able to assess the transition.

References

Allen, J. P., Hauser, S. T., Bell, K. L., & O'Connor, T. G. (1994). Longitudinal assessment of autonomy and relatedness in adolescent-family interactions as predictors of adolescent ego development and self-esteem. *Child Development, 65*, 179–194.

Allen, J., Marsh, P., McFarland, C., McElhaney, K., Land, D., Jodl, K., et al. (2002). Attachment and autonomy as predictors of the development of social skills and delinquency during midadolescence. *Journal of Consulting and Clinical Psychology, 70*(1), 56–66.

Beckert, T. (2007). Cognitive autonomy and self evaluation in adolescence: A conceptual investigation and instrument development. *North American Journal of Psychology, 9*(3), 579–594.

Bednar, D. E., & Fisher, T. D. (2003). Peer referencing in adolescent decision making as a function of perceived parenting style. *Adolescence, 38*, 607–621.

Bekker, M. (1991). The movable boundaries of the female ego. Eburon: Delft.

Bekker, M. (1993). The development of an autonomy scale based on recent insights into gender identity. *European Journal of Personality, 7*, 177–194.

Bekker, M., & van Assen, M. (2006). A short form of the autonomy scale: Properties of the autonomy-connectedness scale. *Journal of Personality Assessment, 86*(1), 51–60.

Beyers, W., Goossens, L., Vansant, I., & Moors, E. (2003). A structural model of autonomy in middle and late adolescence: Connectedness, separation, detachment, and agency. *Journal of Youth and Adolescence, 32*(5), 351–365.

Blos, P. (1979). *The adolescent passage.* New York: International Universities Press.

Casey, B. J., & de Haan, M. (2002). Introduction: new methods in developmental science. *Developmental Science, 5*(3), 265–267.

Charmaz, K. (2003). Grounded theory. In M. Lewis-Beck, A. E. Bryman, & T. F. Liao (Eds.), *The Sage encyclopedia of social science research methods* (pp. 440–444). Thousand Oaks: Sage.

Daddis, C., & Smetana, J. (2005). Middle-class African American families' expectations for adolescents' behavioral autonomy. *International Journal of Behavioral Development, 29*(5), 371–381.

Deci, E., & Ryan, R. (2000). The support of autonomy and the control of behavior. In T. Higgins & A. Kruglanski (Eds.), *Motivational science: Social and personality perspectives* (pp. 128–145). New York: Psychology Press.

Demetrious, A. (2003). Mind, self, and personality: Dynamic interactions from late childhood to early adulthood. *Journal of Adult Development, 10*(3), 151–171.

Dunning, D., Heath, C., & Suls, J. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest, 5*(3), 69–106.

Durkheim, E. (1957). *Professional ethics and civic morals.* London: Routledge.

Erikson, E. (1963). *Children in Society.* New York: Norton.

Felman, S. S., & Quatman, T. (1988). Factors influencing age expectations for adolescent autonomy: A study of early adolescents and parents. *Journal of Early Adolescence, 8*(4), 325–343.

Felman, S. S., & Rosenthal, D. A. (1990). The acculturation of autonomy expectations in Chinese high schoolers residing in two western nations. *International Journal of Psychology, 25*, 259–281.

Finken, L. L. (2005). The role of consultants in adolescents' decision making: A focus on abortion decisions. In J. J. Jacobs & P. A. Klaczynski (Eds.), *The development of judgment and decision making in children and adolescents* (pp. 255–278). Mahwah: Erlbaum.

Flammer, A. (1991). Self-regulation. In R. M. Lerner, A. C. Petersen, & J. Brooks-Gunn (Eds.), *Encyclopedia of adolescence* (Vol. 2, pp. 1001–1003). New York: Garland.

Frank, S., Avery, C., & Laman, M. (1988). Young adults' perceptions of their relationships with their parents: Individual differences in

connectedness, competence, and emotional autonomy. *Developmental Psychology, 24*, 729–737.

Freud, A. (1958). *Adolescence: Research at the Hampstead child-therapy clinic and other papers 1956–1965.* London: International Universities.

Galotti, K. M. (2002). *Making decisions that matter: How people face important life choices.* Mahwah: Erlbaum.

Greenberger, E. (1984). Defining psychosocial maturity in adolescence. In P. Karoly & J. J. Steffen (Eds.), *Adolescent behavior disorders: Foundations and contemporary concerns* (Vol. 3, pp. 3–37). Lexington: Lexington Books, D.C. Health.

Grotevant, H., & Cooper, C. (1985). Patterns of interaction in family relationships and development of identity exploration in adolescence. *Child Development, 56*, 415–428.

Hill, J., & Holmbeck, G. (1986). Attachmetn and autonomy during adolescence. In G. Whitehurst (Ed.), *Annals of child development* (Vol. 3, pp. 145–189). Greenwich: JAI.

Hirschfeld, R., Klerman, G., Gough, H., Barrett, J., Korchin, S., & Chodoff, P. (1977). A measure of interpersonal dependency. *Journal of Personality Assessment, 41*, 610–618.

Hoffman, J. (1984). Psychological separation of late adolescents from their parents. *Journal of Counseling Psychology, 31*, 77–91.

Jacobs, J. E., & Klaczynski, P. A. (Eds.). (2005). *The development of judgment and decision making in children and adolescents.* Mahwah: Erlbaum.

Koestner, R., & Losier, G. (1996). Distinguishing reactive versus reflective autonomy. *Journal of Personality, 64*(2), 465–494.

Lee, C., Beckert, T., & Goodrich, T. (2009). The relationship between individualistic, collectivistic, and transitional cultural value orientations and adolescents' autonomy and identity status. *Journal of Youth and Adolescence*, 0.1007/s10964-009-9430-z.

Mahler, M., Pine, F., & Bergman, A. (1975). *The psychological birth of the human infant: Symbiosis and individuation.* London: Karnac.

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology, 38*, 299–337.

Miller, V., & Drotar, D. (2007). Decision-making competence and adherence to treatment in adolescents with diabetes. *Journal of Pediatric Psychology, 32*, 178–188.

Noom, M., Dekovic, M., & Meeus, W. (2001). Conceptual analysis and measurement of adolescent autonomy. *Journal of Youth and Adolescence, 30*(5), 577–595.

Peetsma, T., Hascher, T., Van Der Veen, I., & Roede, E. (2005). Relations between adolescents' self-evaluations, time perspectives, motivation for school and their achievement in different countries and at different ages. *European Journal of Psychology of Education, 20*, 209–225.

Reed, V., & Spicer, L. (2003). The relative importance of selected communication skills for adolescents' interactions with their teachers: High school teachers' opinions. *Language, Speech, and Hearing Services in Schools, 34*, 343–357.

Rosenthal, D., & Bornholt, L. (1988). Expectaitons about development in Greek- and Anglo-Australian families. *Journal of Cross-Cultural Psychology, 19*(1), 19–34.

Rossmann, P., & Bloschl, L. (1982). Psychosocial dependency and depression: An empirical analysis. *Journal of Differential and Diagnostic Psychology, 3*(1), 35–46.

Ryan, R. (1993). Agency and organization: Intrinsic motivation, autonomy, and the self in psychological development. In R. Dienstbier & J. Jacobs (Eds.), *Nebraska symposium on motivation: Developmental perspectives on motivation* (Vol. 40, pp. 1–56). Lincoln: University Press.

Ryan, R., & Lynch, J. (1989). Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. *Child Development, 60*, 340–356.

Schmitz, M., & Baer, J. (2001). The vicissitudes of measurement: A confirmatory factor analysis of the emotional autonomy scale. *Child Development, 72*(1), 207–219.

Stefanou, C. R., Perencevich, K. C., DiCintio, M., & Turner, J. C. (2004). Supporting autonomy in the classroom: Ways teachers encourage student decision making and ownership. *Educational Psychologist, 39*(2), 97–110.

Steinberg, L., & Silverberg, S. (1986). The vicissitudes of autonomy in early adolescence. *Child Development, 57*, 841–851.

Zimmer-Gembeck, M. J., & Collins, W. A. (2003). Autonomy development during adolescence. In G. R. Adams & M. Berzonsky (Eds.), *Blackwell handbook of adolescence* (pp. 175–204). Oxford: Blackwell.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts & P. R. Pintrich (Eds.), *Handbook of self-regulation* (pp. 13–39). San Diego: Academic.

Zuckerman, M., Levitt, E., & Lubin, B. (1961). Concurrent and construct validity of direct and indirect measures of dependency. *Journal of Consulting Psychology, 25*(4), 316–323.