

The Influence of Parent-Child Attachment Relationships and Self-Esteem
on Adolescents' Engagement in Risky Behaviors

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Robin E. Young

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ABSTRACT

The Influence of Parent-Child Attachment Relationships and Self-Esteem on Adolescents' Engagement in Risky Behaviors

A thesis presented to the Department of Psychology

Graduate School of Arts and Sciences
Brandeis University
Waltham, Massachusetts

by Robin E. Young

Risky behaviors are disproportionately responsible for mortality and morbidity among adolescents. This review synthesizes existing research on the influence of parent-child attachment relationships on adolescents' engagement in hazardous activities in order to elucidate factors that may be influential in preventing harmful behaviors throughout this stage of development. The review also proposes that self-esteem, presumed to be largely formed within the context of the attachment relationship and transmitted into later stages of life via internal working models, may be a mechanism through which parent-child relationships influence participation in risky behaviors during adolescence. Attachment theory is the primary lens through which these associations are explained, but multiple other theories that have endeavored to explain the relation between parent-child relationships, the self-concept, and risk-taking behaviors are also discussed. A great deal of support was found for the proposition that secure attachment relationships and high self-esteem are strong protective factors against involvement in risky behaviors during adolescence, while the opposite is true for insecure attachments and low self-esteem. The finding emerged that adolescents with an avoidant attachment style may be particularly at risk of involvement in externalizing behaviors. In closing, it proposes that examining self-esteem as a moderator between attachment and risky behaviors may be a useful area of investigation in future research on this subject.

PREFACE

“An individual who has been fortunate in having grown up in an ordinary good home with ordinarily affectionate parents has always known people from whom he can seek support, comfort, and protection. [...] So deeply established are his expectations and so repeatedly have they been confirmed that, as an adult, he finds it difficult to imagine any other kind of world. [...] For many more the likelihood that a caretaking figure would respond in a supportive and protective way has been at best hazardous and at worst nil. [...] Through their eyes the world is seen as comfortless and unpredictable; and they respond either by shrinking from it or by doing battle with it.” (Bowlby, 1973, pp. 208-209)

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Introduction

Adolescence is understood as a time of increased autonomy and experimentation; a time when peer relationships become increasingly important, and when the risk of engagement in potentially harmful behaviors becomes a salient area of concern (Brown & Rinelli, 2010; Veselska, Geckova, Orosova, Gajdosova, van Dijk, & Reijneveld, 2009; Kostecky, 2005; Laible, Carlo, & Roesch, 2004; Shrier, Harris, Sternberg, & Beardslee, 2001; Neumark-Sztainer, Story, French, & Resnick, 1997; Resnick, Bearman, Blum, Bauman, Harris, Jones, Tabor, Beuhring, Sieving, Shew, Ireland, Bearinger, & Udry, 1997). Throughout this period of development, parent-child relationships change in many important ways. From the outside, it can seem as though adolescents and their parents become less close during this time. However, from the perspective of attachment theory, relationships with attachment figures remain one of the most influential factors in nearly every aspect of a person's life into adolescence and beyond (Laible, Carlo, & Roesch, 2004; Parker & Benson, 2004; Simons, Paternite, & Shore, 2001). During adolescence, the primary task of separation-individuation occurs, mirroring the differentiation of the individual self-concept during the first year of life, and the success of which heavily depends upon the security of the attachment relationship up until the adolescent years (Pace & Zappulla, 2011; Branstetter, Furman, & Cottrell, 2009; Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Parker & Benson, 2004; Jacobs, Bleeker, & Constantino, 2003; Muris, Meesters, & van den Berg, 2003). This process has implications for the adolescent's self-esteem (Higgins, Jennings, & Mahoney, 2010; Gomez & McLaren,

2007; Laible, Carlo, & Roesch, 2004; Parker & Benson, 2004; Burk & Burkhart, 2003; Jacobs, Bleeker, & Constantino, 2003; Muris, Meesters, & van den Berg, 2003; Simons, Paternite, & Shore, 2001; O’Koon, 1997) and successful passage into adulthood and avoidance of negative outcomes, including engagement in risky behaviors (Pace & Zappulla, 2011; Brown & Rinelli, 2010; Higgins, Jennings, & Mahoney, 2010; Boutelle, Eisenberg, Gregory, & Neumark-Sztainer, 2009; Ackard, Neumark-Sztainer, Story, & Perry, 2006; Kostelecky, 2005; Parker & Benson, 2004; Elgar, Knight, Worrall, & Sherman, 2003; Simons, Paternite, & Shore, 2001; Rosenstein & Horowitz, 1996; Brook, Whiteman, & Finch, 1993; Barnes & Farrell, 1992; Hawkins, Catalano, & Miller, 1992).

The purpose of this review is to summarize and integrate existing research on the likely associations between attachment, self-esteem, and risky behaviors. A great deal of research, particularly within the area of attachment theory, has provided evidence for the proposition that individuals’ relationships with their caregivers have a profound influence on the course of their development, of which involvement with or avoidance of risky behaviors during adolescence is one facet of particular urgency. Likewise, the idea of self-esteem as a protective factor against a number of adverse outcomes has been heavily researched. However, multiple theories, including attachment theory, have proposed that self-esteem may largely be shaped within the context of the parent-child relationship. Therefore, it may be that self-esteem plays the role of a moderator between these relationships and individuals’ developmental trajectories.

In order to investigate these important questions, I will first review the existing literature on risky behaviors, including their estimated prevalence, the associations between particular behaviors, and hypotheses regarding why these behaviors are

especially problematic during adolescence. I will then review attachment theory, which I believe has spurred some of the most comprehensive and promising research on the relation between parent-child relationships, self-esteem, and particular developmental trajectories. Lastly, I will describe the existing research on high self-esteem and the secure attachment style as protective factors, as well as low self-esteem and insecure attachment styles as risk factors, for engagement in risky behaviors. I hope to elucidate the links between these converging lines of research in order to foster a better understanding of the mechanisms by which parent-child relationships may impact adolescent outcomes.

Risky Behaviors

Some of the most common risky behaviors for adolescents include substance use (cigarettes, alcohol, drugs); sexual behaviors (early sexual debut, sex with multiple partners, unprotected sex, teen pregnancy, sexually transmitted diseases); delinquency; aggression and violence; and risky driving. This cluster of behaviors is a critical factor to examine throughout adolescence because of the enormous effect that these behaviors have on mortality and morbidity during this period of life (Giedd et al., 2012; O'Brien, Albert, Chein, & Steinberg, 2011). Studies have shown that three-quarters of all deaths during adolescence are due to accidental injury, suicide, and homicide (Neumark-Sztainer et al., 1997; Resnick et al., 1997). Between middle childhood and adolescence, some studies estimate, mortality rates may increase by as much as 200% (Pharo, Sim, Graham, Gross, & Hayne, 2011). This occurs despite the vast increases in cognitive and physical maturity that occur during adolescence (Pharo et al., 2011). Clearly, the fact that the majority of adolescent deaths are due to preventable causes is reason for serious concern.

First, I will review several of the risky behaviors known to be problematic during adolescence in order to create a clear picture of their prevalence and will also specify some of the issues associated with each.

Substance Use

Adolescence has been established as the part of the lifespan during which

individuals are most likely to begin using substances and are also most at risk for developing serious substance abuse issues that may persist into adulthood (Brown & Rinelli, 2010; Mason, Hitch, Kosterman, McCarty, Herrenkohl, & Hawkins, 2010; Kostelecky, 2005).

Alcohol. Binge drinking has its onset during adolescence for many individuals, and tends to increase and reach its peak between late adolescence and young adulthood (Mason et al., 2010; Stevens-Watkins & Rostosky, 2010). One study reported that approximately 68% of high school seniors had experimented with alcohol (Johnston, O'Malley, Bachman, & Schulenberg, 2006; referenced in Gancy & van Dulmen, 2010). A second study by Shrier, Harris, Sternberg, & Beardslee (2001) found that 40% of male adolescents and 31% of females reported moderate or heavy use of alcohol in the past year. Resnick et al. (1997) reported that 7% of seventh- and eighth-graders in their sample had consumed alcohol two or more days out of the past month, as compared with 23% of high school students. The Centers for Disease Control and Prevention and the Office of Juvenile Justice and Delinquency Prevention recently reported that adolescent males are twice as likely to engage in binge drinking as females and that 90% of the alcohol consumed by individuals under the legal drinking age is in the context of binge drinking (Stevens-Watkins & Rostosky, 2010).

Alcohol myopia theory suggests that alcohol intoxication may result in the narrowing of a person's attentional capacity and may also cause limitations in cognitive processing. Both of these changes have the propensity to affect the allocation of attentional resources, as well as perceptions of and reactions to environmental cues (Giancola, Duke, & Ritz, 2011; MacDonald & Martineau, 2002). Risk-taking behaviors

such as aggression (Giancola, Duke, & Ritz, 2011) and unprotected sex (MacDonald & Martineau, 2002) may be a consequence of this effect of alcohol use. Similarly, the disinhibiting effects of alcohol may also be partially to blame for risky sex behaviors (Mason et al., 2010). The Centers for Disease Control and Prevention found that in 2003, substances (including alcohol) were involved in 25% of high school students' most recent sexual encounters (Henrich et al., 2006).

Cigarettes. The U.S. Department of Health and Human Services reported in 1994 that 80% of people who currently identified as smokers began using cigarettes by the age of eighteen (Collins & Ellickson, 2004; Lloyd-Richardson, Papandonatos, Kazura, Stanton, & Niaura, 2002). Additionally, smoking status tends to be relatively stable between adolescence and adulthood, with individuals who started smoking at a younger age at an increased likelihood of continuing to smoke regularly in adulthood (Lloyd-Richardson et al., 2002). Collins & Erickson (2004) found that approximately 35% of high school students currently smoke, with 17% using cigarettes frequently. Scal, Ireland, & Borowsky (2003) reported that by the twelfth grade, nearly two-thirds of adolescents had tried cigarettes, with one-third of those individuals becoming regular smokers. Resnick et al. (1997) found that 3% of seventh- and eighth-graders and 13% of high schoolers in their sample smoked six or more cigarettes per day.

Drugs. Marijuana is frequently the first drug that adolescents experiment with (Veselska et al., 2009); in a study by Shrier et al. (2001), 27-31% of teens had used marijuana in the past month, and 2-4% had used cocaine. In Resnick et al. (1997)'s sample, 7% of seventh- and eighth-graders had used marijuana in the past month, as well as 16% of high school students.

Sexual Behaviors

Sexual debut. Resnick et al. (1997) found that 17% of their sample had had sex by seventh or eighth grade, as compared with 49% of high school students. Overall, sexual activity seems to peak during young adulthood due to the fact that individuals are generally free from parental supervision and have not yet entered into marital relationships, allowing for sexual experimentation during these years (Mason et al., 2010; Arnett, 2004).

Condom use. In a study by Shrier et al. (2001), 36% of male adolescents and 50% of females had not used a condom the last time that they had sex. In addition, the younger that participants were the first time that they had sex, the less likely they were to have used a condom, which was particularly true for females. As condom use is more directly controlled by male sexual partners, females may struggle more with condom use and condom use negotiation self-efficacy. These terms encompass the degree to which a person feels comfortable and confident in his or her ability to use a condom, is able to overcome any insecurities regarding the stigmas of condom use (e.g. suggesting that he or she might have an STD, or that his or her partner may have one), possesses the ability to regulate sexual and emotional arousal in the heat of the moment in order to procure a condom, can move beyond the embarrassment or potential inconvenience of purchasing a condom, feels confident in his or her ability to negotiate and take control of condom use, and believes that he or she can use a condom without detracting from the sexual experience (Baele, Dusseldorp, & Maes, 2001). Because of the gender differences involved in condom use, condom use negotiation, and individuals' self-efficacy regarding these matters, the chances of protected sex are lower for women than for men (Shrier et

al., 2001).

Sexually transmitted diseases. Adolescents have been found to be at the greatest risk for sexually transmitted diseases of any age group, particularly those who engage in unprotected sex, interact with risky partners, or have multiple partners (Shrier et al., 2001). They are also more likely to experience other sexual risks, including not using contraception, having relations with multiple people, and having older partners (especially for females) (Salazar et al., 2004). Shrier et al. (2001) reported that 4% of male adolescents in their sample and 9% of females had a sexually transmitted disease currently or in the past. The likelihood of having had an STD was twice as high in women who had had sex for the first time before the age of 15 years. The Centers for Disease Control and Prevention reported that in 1999, more than half of all new cases of HIV were diagnosed in individuals under age 25, over half of which had been transmitted through sexual intercourse (Henrich, Brookmeyer, Shrier, & Shahar, 2006).

Pregnancy. In seventh- and eighth-graders, Resnick et al. (1997) reported 12% as having been pregnant at any point, while 19% of high schoolers in their sample reported a pregnancy.

Delinquency

Sampson & Laub (1992) state that “crime is committed disproportionately by adolescents,” with property and violent crimes reaching their pinnacle between ages sixteen and eighteen (Sampson & Laub, 1992, p. 64). Overall, delinquency appears to peak in mid-adolescence and decline for the remainder of the lifespan in the majority of the population; however, delinquent behavior in adolescence increases the likelihood of

criminal behavior in adulthood (Mason et al., 2010). Additionally, delinquency seems to be a reliable predictor of alcohol consumption in adolescence, more so than the reverse (Mason et al., 2010).

The Co-Occurrence of Risky Behaviors

Multiple studies have observed that clusters of risky behaviors often occur concurrently within individuals, indicating that these behaviors likely do not occur at random and are not independent of one another (Brown & Rinelli, 2010; Racz, McMahon, & Luthar, 2010; Collins & Ellickson, 2004; Lloyd-Richardson et al., 2002; Neumark-Sztainer et al., 1997). Problem Behavior Theory (Jessor & Jessor, 1977) was formulated to address this trend, which suggests that a syndrome of deviant behaviors may exist, with each behavior (and the degree to which an individual participates in this behavior) serving as a predictor of other problem behaviors throughout adolescence and young adulthood (Collins & Ellickson, 2004). It has been suggested that this ‘syndrome’ of risky behaviors may be explained by an unconventional attitude toward deviant behavior, which creates a vulnerability to risk-taking behaviors in certain individuals (Racz, McMahon, & Luthar, 2010; Shrier et al., 2001). For example, many researchers have found that experimental alcohol use in adolescence is correlated with increased rates of delinquency and injury (Gancy & van Dulmen, 2010); and risky sex in adolescence is associated with delinquency, substance use, and additional risky sex behavior throughout the lifespan (Moilanen, Crockett, Raffaelli, & Jones, 2010). One study reported that 3% of their sample was engaged in high levels of all problem behaviors that they examined (Fergusson, Horwood, & Lynskey, 1994; referenced in Racz, McMahon, & Luthar, 2010). However, several other studies have questioned the idea that a constellation of co-

occurring risky behaviors can be explained by a single cause (Racz, McMahon, & Luthar, 2011; Mason et al., 2010).

Psychobiological Changes During Adolescence as an Antecedent of Risky Behaviors

There are several significant biological changes taking place during adolescence that must be addressed when examining risky behaviors during this developmental stage. Researchers now believe that the brain continues to develop well into the third decade of life, with the frontal lobe not reaching maturity until young adulthood (Pharo et al., 2011). Of particular note is the prefrontal cortex, which is widely believed to be involved in processes such as self-control, decision-making, and judgment (Giedd et al., 2012; Pharo et al., 2011). One consequence of the protracted maturation of this area of the brain seems to be the tendency for adolescents to favor immediate rewards over future outcomes, a trend known as temporal discounting (Giedd et al., 2012; O'Brien et al., 2011). Indeed, risky behaviors, such as those described above (e.g. teen pregnancy, smoking, and risky driving) seem to directly correspond with adolescents' difficulty in imagining the long-term repercussions of their actions (Giedd et al., 2012; Pharo et al., 2011).

Recent studies have found that different aspects of maturation may occur at different times based on gender, with some regions of the brain—including the frontal lobe—developing later in men; this finding may partially explain the trend of increased risk-taking in adolescent males (Giedd et al., 2012). The disparities between male and female brain development may also be due to hormone levels rather than age, as females tend to go through puberty at an earlier age than males (Giedd et al., 2012). Several studies have found a relationship between the onset of puberty and an increase in risk-

taking behaviors (Pharo et al., 2011). This association is likely also impacted by the psychosocial consequences of entering puberty earlier or later than one's peers. Adolescents who begin puberty earlier than the majority of their peer group may associate with older peers, increasing the likelihood that they will become involved with risky behaviors before their prepubescent counterparts. Meanwhile, risk-taking may be a way of increasing self-esteem and social approval in adolescents who enter puberty later than their peers (Williams & Dunlop, 1999; referenced in Pharo et al., 2011). Therefore, it is unclear whether it is the influx of hormones in puberty, the psychosocial repercussions of pubertal timing, a combination of these factors, or another variable entirely that most influences risk-taking in adolescence.

At least one study has indicated that the relationship between immature executive functioning and increased risk-taking may be mediated by a sensation-seeking personality (Romer, 2010; referenced in Pharo et al., 2011). Other personality factors tied to risk-taking include impulsivity, aggression, and sociability (Pharo et al., 2011). In addition, multiple studies have documented the relation between impulsivity and substance use in adolescence (Pharo et al., 2011). One study tied indifferent family environments to impulsivity, which was then associated with an increased likelihood of delinquency, substance use, and risky sex (Fuligni & Eccles, 1993; referenced in Jacobs, Bleeker, & Constantino, 2003).

An additional aspect of the brain that is salient in terms of adolescent risk-taking is the limbic system. In the absence of a fully developed prefrontal cortex, the limbic system, believed to be responsible for many aspects of emotion, may dominate cognitive processes. This may result in increased levels of affective arousal that adolescents may

not yet be able to effectively regulate, which for some individuals may lead to a reliance on behaviors such as substance use in order to manage strong emotions (Giedd et al., 2012; Pharo et al., 2011). In one study, the volume of the amygdala was observed to increase significantly during adolescence in males, while the hippocampus increased in females; this may be related to the observation that in primates, the amygdala contains greater numbers of androgen receptors, while the hippocampus contains more estrogen receptors (Giedd et al., 2012). This could be another reason why risky behaviors increase during adolescence and decrease by adulthood, after the frontal lobe becomes fully developed, the timing of which seems to differ between males and females.

Family and Individual Variables

If all adolescents undergo these changes in the development of the brain, what else could account for the fact that only some individuals seem to be at an increased risk of involvement in risky behaviors? A long line of research exists on the effects of the family environment on children's developmental outcomes. For example, in 1997, the National Longitudinal Study on Adolescent Health released its first set of results. One of the first articles included responses from 12,118 seventh- through twelfth-graders. Within this sample, family variables (including connectedness, family suicide history, family activities, parental presence, school expectations, and household access to substances) accounted for 6-8% of the variability of cigarette use and 6-9% of the variability of alcohol use and marijuana use. Family connectedness—a concept derived from attachment theory—refers to bidirectional feelings of closeness and caring between parents and children (Boutelle et al., 2009); this variable emerged as the most important family-related factor in preventing adolescent substance abuse. Family factors were the

second-most influential category overall in terms of inhibiting risky behaviors, second to individual characteristics such as self-esteem (Resnick et al., 1997).

In countless psychological and sociological studies, family and individual factors have been upheld as having some of the most profound influences on adolescent outcomes, including the propensity to avoid or engage in risky behaviors. But what are the mechanisms involved in these relations? Attachment theory has resulted in a particularly fruitful line of research in terms of differentiating the aspects of the parent-child relationship that ultimately seem to affect individual outcomes.

Attachment Theory

Attachment theory largely arose from the work of John Bowlby and Mary Ainsworth in the second half of the twentieth century. Bowlby noticed consistent patterns in the reactions of young children to separation from their primary caregivers (Follan & Minnis, 2010; Hazan & Shaver, 1987). He proposed that the attachment system may have evolved because infants who remain in close vicinity to their parents, resist being separated from them, and look to them for protection when distressed or threatened have a better chance of survival and are therefore able to pass on this trait to subsequent generations (Hazan & Shaver, 1987). Ainsworth, associated primarily with the Strange Situation paradigm, proposed that a parent's responses during his or her infant's first year of life to behaviors such as signals of distress, attempts to connect, and early displays of autonomy affect the child's development and subsequent behavior (Hazan & Shaver, 1987). She also noticed the fact that young children seem to view their caregiver as "a secure base from which to explore" the surrounding environment and to socialize with others (Ainsworth, quoted in Cassidy, 2001, p. 132).

Both Bowlby and Ainsworth agreed that relationships between young children and their primary caregivers result in the formation of expectations regarding attachment figures, and this is the basis of attachment theory. According to this perspective, young children develop perceptions of how reliable an attachment figure generally is, and how likely the child is to inspire their attachment figure to respond. The combination of the

child's experiences in these two areas results in the formation of an idea of how much they can depend on their caregiver to respond to them in times of need. Based on the reliability of their respective attachment figure over the course of the first years of life, children develop either a secure or an insecure attachment style toward them, which is activated during times of stress. Throughout their life, an individual's attachment style has implications for their fundamental beliefs regarding how trustworthy other people are, as well as how worthy of love they are (Cassidy, 2001; Hazan & Shaver, 1987).

Secure Attachment

Based on her Strange Situation studies, Ainsworth developed three major classifications of attachment, one secure and two insecure (with an additional type proposed later by a different author). In general, the majority of the population—between 55-65%, by most estimates—is securely attached (Cassidy, 2001; Hazan & Shaver, 1987). These are the children of parents who are consistently responsive and sensitive to their infant's cues, especially when the child is distressed or upset. As a result, these infants readily explore and interact with their surroundings when their caregiver is present, because they have learned that they can rely on their caregiver (the “secure base”) for protection and comfort if need be. This sense of security allows them to focus on independent activity and exploration, which this type of caregiver supports, resulting in greater autonomy at a younger age. Beginning in childhood, these individuals are often more prosocial and empathetic, as well as less aggressive and hostile, reflecting Bowlby's belief that those who receive adequate care are better able to bestow it upon others, as well as the likelihood that securely attached individuals see other people in a more positive light (Cassidy, 2001; Simons, Paternite, & Shore, 2001). Through their

interactions with their parents, they gain skills in negotiation, communication, compromise, and assertiveness, which they utilize within their social relationships throughout their lives (Cassidy, 2001; Simons, Paternite, & Shore, 2001). As they age, they continue to believe that others can be trusted and relied upon, and that people generally have good intentions. They see themselves as likeable and deserving of loving treatment from others. Within their relationships, they are more supportive, accepting, and sensitive partners with higher rates of reciprocal caring, trust, and healthy levels of intimacy and dependency (Gomez & McLaren, 2007; Cassidy, 2001; Simons, Paternite, & Shore, 2001; McCarthy & Taylor, 1999; Hazan & Shaver, 1987).

Insecure Attachment

On the other side of the coin are the insecure attachment styles, which have historically been divided into two categories. The first is the anxious attachment style. Parents of these children are not as consistent in their responses, bestowing affection and attention upon them on their own schedules, not necessarily in response to the infant's cues. The infant, learning that he or she can't be certain that the caregiver will respond when signaled, takes a larger portion of the responsibility in sustaining the parent-child connection by staying close at all times. As a consequence of this dynamic, the child develops a view of his or her attachment figure as unreliable, and a view of him- or herself as only able to receive attention and care in response to displays of extreme distress, urgency, and helplessness. In Ainsworth's Strange Situation experiment, children with an anxious attachment to their mothers were extremely upset upon separation and were difficult to calm once she returned. It is posited that this reaction may have evolved in order to ensure their parent's continued attention (Cassidy, 2001;

Rosenstein & Horowitz, 1996). As they age, those with anxious attachment styles often doubt themselves and struggle with feeling misunderstood, underappreciated, and worthless. They have low levels of independence and self-sufficiency. They tend to have pessimistic views of others' intentions and potential to give reliable care (Hazan & Shaver, 1987). These individuals carry their tendency toward extreme emotional distress into adulthood, often engaging in "emotion-focused coping and a hyperactivating strategy that exaggerates emotions and help-seeking behaviors" (Riggs, Cusimano, & Benson, 2011, p. 127). Their often unstable relationships are driven by their heightened fears of rejection, unreciprocated love, and abandonment, resulting in such issues as dependency, jealousy, and obsession. This attachment style is sometimes referred to as "ambivalent" because these people strongly desire highly intimate relationships but also fear the consequences that they have come to associate with closeness due to their history of feeling rejected and abandoned by loved ones (Cassidy, 2001; McCarthy & Taylor, 1999; Rosenstein & Horowitz, 1996; Hazan & Shaver, 1987).

The second type of insecure attachment is known as the avoidant (also known as "dismissive") style. These infants' caregivers often rejected their efforts to seek comfort and intimate contact. These repeated rejections seem to lead to a desire within the infant to stifle their attachment-seeking system in order to avoid further emotional pain, which creates an aversion to the idea of soliciting care from others. In Bowlby's study, these were the children who didn't interact with or seek comfort from their mothers upon reunion. Similarly, in Ainsworth's study, these children only engaged with their mothers when they were feeling well, didn't seek care from them, and made efforts to disguise distress and sadness in front of all adults. It's likely that the attachment

systems of these children are still activated, but they have learned to turn toward minimizing and distancing strategies, such as ignoring their mothers or focusing on independent play, in order to avoid rejection (Cassidy, 2001). As they age, individuals with avoidant attachment styles place a great deal of value on independence and self-sufficiency. They developed the ability to self-soothe in infancy, and they continue to draw upon this skill throughout their lives; when troubled, they engage in “instrumental coping and a deactivating strategy that minimizes the importance of emotions and close relationships” (Riggs, Cusimano, & Benson, 2011, p. 127). They carry these tendencies into their relationships as well, cultivating a pervasive fear of closeness and emotional intimacy, and struggling with issues regarding acceptance of and trust in close others. They learned in childhood that other people can’t be depended upon in times of trouble; as a result, they have difficulty seeking and accepting support from others and are likely to withdraw during difficult or stressful periods within their relationships (Riggs, Cusimano, & Benson, 2011; Muris, Meesters, & van den Berg, 2003; Solomon, 2003; Cassidy, 2001; Rosenstein & Horowitz, 1996; Hazan & Shaver, 1987).

A third insecure attachment style, known as the disorganized type, was later proposed by Mary Main, a student and colleague of Ainsworth. Because of its relative recency, there has been less research conducted on this type than on the other three attachment styles. However, it has been found to occur in situations where treatment by the caregiver was extremely unpredictable or induced great fear in the child (such as in cases involving prolonged abuse), so much so that the children could develop no consistent strategy for responding. This disorganization of the child’s attachment system comes about due to the fact that the caregiver is both the fearful stimulus as well as the

supposed source of comfort and protection; this volatility leads to a great deal of internal conflict for the child. They develop a mental representation of their parent as completely unpredictable, terrifying, and capable of causing harm. People with this attachment style tend to have the most difficulty seeking and accepting care from others, and as adults, they often fall into highly unstable, dysfunctional relationships, reflecting the confusion that surrounds their feelings toward their original attachment figure (Solomon, 2003; Cassidy, 2001; Hesse & Main, 2000; Rosenstein & Horowitz, 1996).

Of course, not every person who has a particular attachment style will possess all of the aforementioned characteristics or will necessarily have the same difficulties in connecting with others within his or her later relationships. Furthermore, there are children who are extremely resilient in the face of adverse circumstances in the course of their development; and by the same token, not every child who is raised by caring, involved parents will be insulated from all negative outcomes. However, the basic theory is this: Through relationships with their primary attachment figures, children generally develop the skills that they will need to draw upon for the remainder of their lives, such as trust, empathy, emotion regulation, reciprocal caring and support, autonomy, conflict negotiation, and a sense of the self as deserving of love. For children who have harmful or deficient relationships with their caregivers, a warped sense of how to relate to others and to themselves can result. They may come to perceive other people as rejecting, unreliable, untrustworthy, or hurtful; and they may see themselves as broken, shameful, or undeserving of love, care, or respect. When parents' interactions with their children are inconsistent, insensitive, controlling, unsupportive, lacking in warmth and affection, or otherwise negative and insufficient, it is likely that an insecure attachment style will

develop (Riggs, Cusimano, & Benson, 2011; Burk & Burkhart, 2003; Pietromonaco & Feldman Barrett, 2000; Rosenstein & Horowitz, 1996).

Internal Working Models

One commonly accepted way through which childhood attachment experiences are thought to be projected into later life is through the formation of internal working models (also referred to as mental representations) of others.¹ These are “dynamic representations that enable individuals to predict and interpret a partner’s behavior and to plan their own response” (Riggs, Cusimano, & Benson, 2011, p. 127). Working models can be understood as schemata that are somewhat “more motivated, dynamic, [and] affectively charged” than those first introduced by Piaget (Pietromonaco & Feldman Barrett, 2000, p. 163). As previously stated, it is thought that children form mental representations of what is to be expected from other people based on their attachment experiences early in life. An infant’s first attachment forms with his or her mother during the first year of life, with strong preferences for the attachment figure generally becoming noticeable at around eight months of age. Through the observation of patterns of repeated behavior across interactions with various people, the child learns how to interact with and relate to others, and develops an idea of how they can expect to be treated by other people. If the child’s working model of attachment was formed from experiences within relatively secure relationships, the child is likely to see people in general, as well as within specific relationships, as dependable and worthy of their trust. Meanwhile, for children growing up in the context of an insecure attachment relationship, they may view

¹ See Pietromonaco & Feldman Barrett (2000) for a comprehensive review.

other people as unreliable, untrustworthy, and unlikely to care for them, often resulting in excessive fears of abandonment, negative appraisals of the self, and internalizing symptoms (in the case of anxious attachment); or an aversion to intimacy, negative appraisals of others' behavior, and externalizing symptoms (which characterize avoidant attachment).

These mental representations of others, which are often quite stable over time due to their enduring influence on individuals' perceptions, cognitions, and behavior within social relationships, have important implications for social and emotional functioning across the lifespan. They may guide individuals to seek relationships that are consistent with their expectations of how other people will behave toward them, and may also “direct attention to representation-consistent information and [...] produce interpretations of interpersonal events that are consistent with those representations” (Pietromonaco & Feldman Barrett, 2000, p. 162). These tendencies serve to reinforce existing working models and decrease the likelihood that a person will encounter evidence that might have the potential to counter their prevailing beliefs. In this way, our early attachment experiences in large part form the basis for our capacity to relate to others and to ourselves into adolescence and beyond (Pace & Zappulla, 2011; Higgins, Jennings, & Mahoney, 2010; Golder, Gillmore, Spieker, & Morrison, 2005; Laible, Carlo, & Roesch, 2004; Rohner, 2004; Burk & Burkhart, 2003; Muris, Meesters, & van den Berg, 2003; Neborsky & Solomon, 2001; Simons, Paternite, & Shore, 2001; Pietromonaco and Feldman Barrett, 2000; McCarthy & Taylor, 1999; Allen, Hauser, & Borman-Spurrell, 1996).

Attachment and Self-Esteem

As has been alluded to above, it seems that children also form working models of the self within the context of their attachment relationships. These working models, at their core, are based on perceptions of the self as being deserving of love (or not, in the case of insecure attachment relationships). If, during the early years of life, a child's attachment figure responds consistently to their signals of distress and attempts to connect in a loving, supportive manner, in addition to the development of a secure parent-child attachment, a working model of the self as worthy of love and caring treatment will likely result (Gomez & McLaren, 2007; Laible, Carlo, & Roesch, 2004; Parker & Benson, 2004; Muris, Mesters, & van den Berg, 2003; Cassidy, 2001; Pietromonaco & Feldman Barrett, 2000). Studies have found that individuals with anxious and disorganized attachment styles tend to have lower self-esteem than those with secure attachments, while people with an avoidant attachment style more closely resemble those with secure attachments, at least outwardly. The ability of avoidant individuals to actively suppress physiological arousal associated with the attachment seeking system suggests that they may simply be more skilled in subduing negative self-referent information (Pietromonaco & Feldman Barrett, 2000). A sense of self-efficacy also develops in the first year of a child's life within the context of a secure attachment relationship, seemingly because the child learns that they have the power to influence aspects of their environment and to obtain the attention of their caregivers (Jacobs, Bleeker, & Constantino, 2003), in contrast

to the strategies of self-soothing or displays of extreme emotion that insecurely attached children feel that they must resort to in times of need (Cassidy, 2001). This initial working model of the self as part of the parent-child dyad later forms the basis for the child's individuated sense of self, which develops throughout the first year of life. In this way, parental responsiveness and caring treatment has the power to directly influence fundamental aspects of a child's sense of self. As a result, children who are rejected, over-controlled, or inconsistently responded to may not develop the same positive, secure, coherent working model of the self. This difference is posited to have a strong impact on a person's self-concept, as relationships (particularly those with primary attachment figures) are critical to self-esteem, psychological well-being, and the development and integration of identity (Pace & Zappulla, 2011; Gomez & McLaren, 2007; Laible, Carlo, & Roesch, 2004; Parker & Benson, 2004; Rohner, 2004; Burk & Burkhart, 2003; Jacobs, Bleeker, & Constantino, 2003; Muris, Meesters, & van den Berg, 2003; Cassidy, 2001; McCarthy & Taylor, 1999; O'Koon, 1997).

Theories outside of attachment theory have likewise examined why our relationships with other people have the potential to shape our views of ourselves. Object relations theory, which informed the work of Bowlby, first proposed that mental representations of the self and other begin to be developed in the context of early parent-child relationships; are highly linked with one another; and are dynamic throughout the life span, but have a tendency to be self-fulfilling due to the enduring influence of a child's earliest experiences (Hadley, Holloway, & Mallinckrodt, 1993). Symbolic interactionism suggests that the link between close relationships and the self-concept exists because individuals glean information about themselves from the way that they are

seen by other people. The opinions of close others, the theory specifies, are particularly important to the construction of a person's identity (Parker & Benson, 2004; Rohner, 2004; Leary, Tambor, Terdal, & Downs, 1995; Rosenberg, Schooler, & Schoenbach, 1989). Clearly, this aspect of symbolic interactionism has a great deal in common with central tenets of attachment theory, which proposes that children who do not receive adequate care from the most important people in their lives come to see themselves as not deserving of that attention and affection, which represents their assumption that that is how they are seen by their caregiver. Sociometer theory similarly posits that self-esteem may serve as "a relatively fast and automatic assessment of others' reactions vis-à-vis inclusion and exclusion [that] would enhance the individual's likelihood of establishing and maintaining supportive social relationships" (Leary et al., 1995, p. 528). As in attachment theory, the perception of the self is seen as having developed in response to one's relationships with others, because it is these important connections that are considered paramount. When a person faces rejection or acceptance, according to sociometer theory, these interpersonal transactions are reflected in the individual's self-concept. Self-consistency theory suggests that the self-concept may remain consistent over time because people have a natural preference for stability and certainty. This may drive them toward situations that confirm their existing views of themselves so as to avoid the distress associated with having an incoherent or discordant self-concept (Rosenberg, Schooler, & Schoenbach, 1989; Elliott, 1986), which relates to the idea that people seek out relationships that are consistent with their working models of others and themselves (Pietromonaco & Feldman Barrett, 2000).

Therefore, the sense of self that a child begins to develop early on within the

context of their attachment relationship matures into a sense of oneself as separate from one's caregiver, while still maintaining a strong emotional connection to their attachment figure. The separation-individuation process occurs most effectively within the context of a secure attachment relationship because these children are best prepared to separate from their parents and establish their own identity, while maintaining a strong attachment relationship with them. The reason for this association is that securely attached children are able to trust that they can rely on their caregiver to provide support and protection when needed (Parker & Benson, 2004; McCarthy & Taylor, 1999), and also because parents of securely attached children are more likely to have supported their child's bids for autonomy from an early age (Cassidy, 2001). The separation-individuation process that takes place during infancy mirrors the process that occurs during adolescence: the child, now a teenager, begins to develop a sense of him- or herself as an autonomous agent, while remaining emotionally connected with his or her attachment figures, trusting in their continued reliability and availability². Indeed, studies have found that "parents who allow for the development of autonomy, while still emphasizing connectedness, are most likely to have children who develop positive feelings of self" (Deci and Ryan, 1995; quoted in Jacobs, Bleeker, & Constantino, 2003, p. 48). Bowlby strongly agreed with this idea as well, writing that "the family experience of those who grow up to become relatively stable and self-reliant is characterized by unfailing parental support" (Bowlby, 1973; quoted in Parker & Benson, 2004, p. 520). Therefore, although peer relationships and other aspects of life outside of the family become increasingly salient during adolescence, the caregiver continues to play the role of a secure base from which

² This is particularly true of individualist cultures, such as the United States, and may be less relevant within more collectivist/interdependent cultures, in which the process of separation-individuation is viewed somewhat differently and may not be considered a primary task of development.

adolescents develop their identity and form extra-familial relationships (Boutelle et al., 2009; Allen et al., 2007; Laible, Carlo, & Roesch, 2004; Barnes & Farrell, 1992).

Self-Esteem as a Protective Factor

Self-esteem is a primary constituent of the working model of the self and is believed to be formed largely within the context of the attachment relationship (Gomez & McLaren, 2007; Laible, Carlo, & Roesch, 2004; Burk & Burkhart, 2003; Jacobs, Bleeker, & Constantino, 2003; Muris, Meesters, & van den Berg, 2003; Simons, Paternite, & Shore, 2001; O’Koon, 1997). Throughout this paper, the term “self-esteem” refers to a person’s global sense of self, which includes perceptions of competence, self-worth, self-image, self-efficacy, and other aspects of the self-concept. There is wide support for the idea that self-esteem, as a crucial component of mental health, is a protective factor against a wide variety of adverse outcomes (Veselska et al., 2009). High self-esteem seems to increase an individual’s ability to cope with stress and serves as a buffer against anxiety and its ill effects on health (Leary et al., 1995). Lower self-esteem has been consistently tied to risky behaviors like tobacco, drug, and other substance use; sexual risk behavior (including unprotected sex, multiple sex partners, and teen pregnancy); increased negative affect and internalizing issues like depression and anxiety (especially in girls); and externalizing behaviors, including aggression and delinquency (more often in boys) (Higgins, Jennings, & Mahoney, 2010; Veselska et al., 2009; Ethier et al., 2006; Rohner, 2004; Salazar et al., 2004; MacDonald & Martineau, 2001; Shrier et al., 2001; Leary et al., 1995; Rosenberg, Schooler, & Schoenbach, 1989). Veselska et al. (2009) found low self-esteem to be significantly associated with regular cigarette and marijuana

use in a sample of 3,725 Slovakian adolescents. Shrier et al. (2001) saw that low self-esteem had a significant association with unprotected sex in a sample of 6,583 American teenagers as a part of the National Longitudinal Study of Adolescent Health. Ethier et al. (2006), within a sample of sexually active female adolescents, observed that early sexual debut and association with risky sexual partners was associated with lower self-esteem, which predicted higher rates of unprotected sex six months later.

There are multiple theories as to why the association between low self-esteem and risky behaviors exists. For example, Brockner (1984) reported that low self-esteem may result in greater behavioral plasticity (i.e. behavior that varies depending on situational cues) due to increased sensitivity to social rejection (referenced in MacDonald & Martineau, 2001). MacDonald & Martineau (2001) found support for this idea, and also observed that people with lower self-esteem may be less likely to focus on the health risks of a particular behavior, perhaps because their desire to obtain social acceptance takes precedence. There is also a relationship between low self-esteem and decreased self-efficacy, which is similarly tied to engagement in risky behaviors (Shrier et al., 2001). Low self-esteem may have a bidirectional relation with particular risky behaviors as well, due to their inconsistency with societal norms and expectations (Ethier et al., 2006; Shrier et al., 2001). Self-esteem theory agrees with this proposition, suggesting that “youngsters with low self-esteem have frequently undergone unsatisfactory experiences in the conventional society—experiences that have created painful feelings of doubt about their self-worth. Seeking to alleviate these feelings, many turn to the delinquent reference group to enhance their self-esteem” (Rosenberg, Schooler, & Schoenbach, 1989, p. 1006).

Secure Attachment as a Protective Factor

The connections between attachment and self-esteem, and self-esteem and engagement in risky behaviors, seem evident. In terms of a direct relation between attachment and risky behaviors, there has been a great deal of speculation. What is the evidence that a secure attachment style is correlated with lower rates of engagement in risky behaviors, the opposite being true for insecure attachment styles? Studies have found lower rates of delinquency, substance use, early sex, aggression, difficulties and misconduct in school, and internalizing disorders (including depression, suicide, and eating disorders) in adolescents with supportive and securely attached parent-child relationships (Pace & Zappulla, 2011; Kostelecky, 2005; Parker & Benson, 2004; Simons, Paternite, & Shore, 2001; Resnick et al., 1997; Brook, Whiteman, & Finch, 1993; Greenberg et al., 1993). In addition, many studies have shown the impact that different aspects of positive and negative parent-child relationships can have on adolescents' engagement in or avoidance of risky behaviors. The authoritative parenting style, characterized by a balance between discipline, parental monitoring, warmth, and support, has been observed to predict lower rates of risky behaviors (Cleveland, Feinberg, & Greenberg, 2010). A study by Shedler & Block (1990) showed that interactions between mothers and their five-year-old children that contained low levels of warmth, responsiveness, protectiveness, and encouragement were predictive of marijuana use at age 18 (referenced in Hawkins, Catalano, & Miller, 1992). In addition, low levels of

maternal involvement, parental warmth and trust, and closeness between parents and children were associated with adolescent drug use (Hawkins, Catalano, & Miller, 1992). In terms of the effect of fathers on adolescent drug use, a study by Norem-Hebeisen, Johnson, Anderson, & Johnson (1984) found that hostility, rejection, and conflict were strong predictors (referenced in Hawkins, Catalano, & Miller, 1992). Parent-child activities and communication are associated with decreased rates of substance abuse, as are parental warmth and support (Cleveland, Feinberg, & Greenberg, 2010). Parent-child closeness and connectedness, as well as parental supervision and monitoring, have consistently been tied to lower rates of teen pregnancy, fewer sexual partners, more consistent use of contraception, and later sexual debut (Henrich et al., 2006; Miller, 2002). Multiple studies have documented the relation between greater parental support, moderate amounts of parental control, and a decreased likelihood of smoking and drinking in adolescence (Brown & Rinelli, 2010).

The exact mechanisms that place adolescents with insecure attachments to their caregivers at a higher risk of becoming involved with risky behaviors are difficult to ascertain, and may differ between individuals based on a multitude of factors. In one noteworthy study, Bowlby (1944) examined a group of juvenile thieves who had been separated from their parents in early childhood; he noticed that the root of this delinquency seemed to be a lack of compassion or empathy for other people, which he observed in many cases of children raised without a stable attachment figure (referenced in Wampler & Downs, 2009). An insecure attachment style implies that an individual has a view of other people as fundamentally unpredictable and untrustworthy, thus increasing the chance that they will rebel against their environment (particularly for those with an

avoidant attachment style) or that they will internalize the rejection that they have faced (especially in those with an anxious attachment style) (Higgins, Jennings, & Mahoney, 2010). It has been posited that a child with an avoidant attachment style is more likely than a child with an anxious attachment style to display externalizing behaviors due to their tendency to stifle their attachment-seeking system, become hostile and defensive, and deny their need for other people after experiencing rejection and a lack of warmth from their attachment figure (Muris, Meesters, & van den Berg, 2003; Rosenstein & Horowitz, 1996). A possible mechanism between the avoidant attachment style and hostile or aggressive behavior may be the attributional process that an individual uses in social situations. Avoidant individuals are more likely to have a negative bias in their perception of others' intentions due to their working models of other people as untrustworthy (Simons, Paternite, & Shore, 2001). Overall, insecure attachments can lead to poor self-regulation and social skills, a preponderance of negative affect, negative attributions of others' intent, and an incoherent self-concept, all of which may serve as a diathesis for externalizing behaviors (Higgins, Jennings, & Mahoney, 2010; Burk & Burkhart, 2003; Simons, Paternite, & Shore, 2001).

Individuals from insecure attachment relationships may not have developed effective strategies for regulating their own emotions, as this is often developed largely in the context of the parent-child relationship. This deficit may result in engagement in externalizing behaviors in the face of overwhelming emotions (Golder, Gillmore, Spieker, & Morrison, 2005; Burk & Burkhart, 2003). Multiple studies have suggested that experimental substance use is unrelated to attachment security, but heavy substance use as a coping mechanism may be more common in insecurely attached individuals, and

particularly men with avoidant attachment styles (Schindler, Thomasius, Sack, Gemeinhardt, Küstner, & Eckert, 2005). It seems that anxious individuals may turn to substance use to decrease negative affect, while individuals with an avoidant attachment style may seek “to reduce tension and avoid emotional dependency” (Schindler et al., 2005, p. 209). Substance abuse is a strategy of deactivating and distancing that is highly in line with the avoidant attachment style, and as such, it seems to be significantly more common in these individuals (Schindler et al., 2005). It seems that unsupportive family environments also lead to a greater reliance on peers and increased importance placed on peer approval, leading to greater susceptibility to peer pressure, which Parker & Benson (2004), as well as other studies (e.g. Miller, 2002; Barnes & Farrell, 1992), have found to be related to substance use and other externalizing behaviors. Secure attachment relationships may also be more conducive to successful parental monitoring of adolescent behaviors, which a securely attached teen is more likely to see as “a part of a reciprocal, trusting exchange [rather than] a violation of autonomy” (Branstetter, Furman, & Cottrell, 2009, p. 1457). At least one study has found support for parental monitoring as a mediator between secure attachment and decreased substance use by adolescents (Branstetter, Furman, & Cottrell, 2009).

Social Control Theory

In addition to attachment theory, social control theory offers an explanation as to the direct relation between attachment (and other types of social bonds) and crime and other externalizing behaviors. Social control theory is based on the assumption that people are rational beings and therefore seek to minimize pain and maximize pleasure. Rather than examining the influences that lead individuals to go down deviant paths,

therefore, Hirschi sought to elucidate the forces that prevent people from becoming criminals. He argued that a person does not need a particular motivation in order to commit a crime; rather, individuals commit antisocial acts due to a lack of social bonds and commitments to conventional society deterring them from doing so (Pace & Zappulla, 2011; Higgins, Jennings, & Mahoney, 2010; Collins & Ellickson, 2004; DeFronzo & Pawlak, 2001; Hoppe, Wells, Haggerty, Simpson, Gainey, & Catalano, 1998; Hawkins, Catalano, & Miller, 1992). Hirschi also spoke of attachments in his theory, which he believed a child could develop toward his or her parents, peers, and school; he proposed that it is through these relationships that children develop and internalize a sense of social norms and morality (Higgins, Jennings, & Mahoney, 2010; Branstetter, Furman, & Cottrell, 2009; Hoppe, Wells, Haggerty, Simpson, Gainey, & Catalano, 1998; Hawkins, Catalano, & Miller, 1992). Indeed, studies of attachment have found that secure attachment relationships increase the likelihood that positive values will be transmitted from parent to child through modeling and reinforcement of conventional behavior (Wampler & Downs, 2009; Brook, Whiteman, & Finch, 1993; Hawkins, Catalano, & Miller, 1992). Over time, according to social control theory, individuals also develop a commitment to and involvement in society, as well as a belief in the validity of society's formal and informal regulations. Because criminal acts threaten these relationships with conventional society and important others, therefore, an individual for whom these ties and commitments are salient will be motivated to avoid such behaviors (Higgins, Jennings, & Mahoney, 2010; Hoppe, Wells, Haggerty, Simpson, Gainey, & Catalano, 1998). Granted, however, this protective effect of social bonds may only hold if an individual is connected with social groups that are a part of conventional society. In the

case of children socialized within deviant families or peer groups, therefore, they may not have a vested interest in maintaining ties to conventional society, or may ultimately benefit from having weaker bonds to attachment figures in order to decrease their influence upon their development (Higgins, Jennings, & Mahoney, 2010; Hoppe, Wells, Haggerty, Simpson, Gainey, & Catalano, 1998).

Conclusion

There is strong evidence that a secure attachment relationship may be one of the most fundamental protective factors that an individual can possess. Beginning in the very early stages of life, attachment theory proposes, a steady sense of security and love gives a child the critical ability to establish an autonomous self. A positive, individuated sense of self depends on the caring treatment of the attachment figure, which communicates to the child that they are worthy of this type of treatment. As the child proceeds into adolescence, they experiment with increased amounts of freedom, learning to navigate risks while continuing to develop an individuated sense of self in the context of relationships with peers. Adolescence is fraught with opportunities to become involved with risky behaviors that threaten adolescents' health and potential for a successful future. During this time of increased risk-taking, the pursuit of a coherent sense of identity and satisfaction in peer relationships may occupy the forefront of the adolescent mind; yet it is the foundation that is formed in the context of the attachment relationship that continues to drive many of the processes that determine whether the adolescent sinks or swims.

Although individuals with insecure attachment styles can certainly still achieve satisfying and successful outcomes, they are at an increased likelihood of more difficult trajectories. It seems that adolescents with an avoidant attachment style are the most likely to become involved with risky behaviors because of their propensity to externalize

negative emotions, distancing themselves from emotionally arousing situations with hostility, denial of their own feelings, and mistrust of other people. Meanwhile, individuals with an anxious attachment style are more likely to struggle with internalizing disorders, blaming issues that they encounter on their own perceived defects.

Self-esteem seems to be a pivotal mechanism relating early attachment to adolescent risk-taking and resilience. High self-esteem has long been associated with more positive outcomes, including the avoidance of risky behaviors. Because of the strong association between attachment relationships and self-esteem, a strong model for predicting risky behaviors may include self-esteem as a moderator. A secure attachment style may lead to higher self-esteem, which, in turn, will plausibly lead to decreased involvement with risky behaviors. Additionally, it is likely that high self-esteem could help adolescents with insecure attachment relationships to overcome these difficulties. I see this as a promising possibility for future research in the domain of risky behaviors and their relation to parent-child relationships and the adolescent self-concept.

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