

# 6

## Attachment Styles and Adolescent Sexuality

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For many adolescents, the teen years are a time of intense challenge and change, even though theorists continue to argue about the applicability of the German phrase *sturm und drang* ("storm and stress"; Hall, 1904) to adolescence (e.g., Arnett, 1999; Offer & Schonert-Reichl, 1992). According to Arnett (1999), adolescence is the developmental period during which individuals are most likely to face the triple strain of conflict with parents, severe mood swings, and a propensity toward risk-taking. For many adolescents, romantic relationships are an important source of extreme feelings, both positive and negative (Larson & Asmussen, 1991). The typical adolescent is moving away from parents as primary attachment figures, relying more on the opinions and support of peers, and—whether consciously or not—moving toward a time when his or her primary attachment figure will be a lover or spouse rather than a parent (Hazan & Zeifman, 1994, 1999). Adolescents typically experience emotional turmoil in connection with romantic relationships—those they have, those that go awry, and those they fantasize (Larson, Clore, & Wood, 1999).

Across adolescence, the time spent with peers in general and opposite-sex peers in particular increases substantially, and the time spent with family members decreases proportionally—by 60% from fifth to twelfth grade (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996; Sharabany, Gershoni, & Hofman, 1981). In addition, teens begin to use each other as sources of support and intimacy as well as amusement and entertainment (Furman & Wehner, 1994; Hazan & Zeifman, 1994). This change is part of the gradual, documented shift of primary attachment from parents to peers (Fraleigh & Davis, 1997; Trinke & Bartholomew, 1997).

Adolescence is also an important period for self-definition and identity formation (Block & Robins, 1993; Dusek & Flaherty, 1981; Erikson, 1968; Harter, 1998). When older adults look back over their lives, adolescence and young adulthood are the periods most densely packed with self-defining memories, many of which were emotionally charged when acquired and still evoke strong emotions when recalled (McAdams, 1988; Rubin, Rahhal, & Poon, 1998; Thorne, 2000). Early romantic and sexual experiences are likely to be among those memories, because they are novel, personally and socially significant, dangerous in real and imagined ways, and the foundation for later sexual and mating experiences. They can contribute to an adolescent's developing identity and growing sense of competence, or inflict painful feelings of humiliation that damage self-esteem. They can provide what Bowlby (1969/1982) called a safe haven and a secure base—the major provisions of a secure attachment relationship—or make a teenager feel that safety and security are precarious and perhaps unattainable. When a romantic relationship works, it can help partners figure out who they are and whom they wish to be, heighten positive emotion and boost self-esteem, and provide training in intimacy and mutual affirmation that contribute favorably to subsequent relationships (Larson et al., 1999).

Clearly, not everyone experiences adolescence or adolescent relationships in the same way. There are differences related to gender, personality, and social history. One potentially important variable is attachment style, an individual-difference construct that includes conscious and unconscious beliefs and feelings about the self and close relationship partners. These beliefs and feelings are theorized to stem from previous experiences in close relationships with parents, caregivers, siblings, and peers. In studies of adults (mostly college students), individual differences in attachment style have been associated with a host of relationship behaviors and outcomes (see reviews by Feeney, 1999; Shaver & Clark, 1994; Shaver & Hazan, 1993). Until recently, however, similar studies had not been conducted with adolescents, whose self-concepts are less likely than those of adults to possess tightly interwoven attachment and sexual components, and who are less likely to be autonomous from parents.

In the present chapter we use data from a large, representative study of adolescents in one American city to explore the possibility that differences in attachment style are related to sexual behavior that occurs in the context of fledgling romantic relationships. We begin by providing a brief overview of research on intrapsychic and interpersonal processes associated with attachment style in college-age and older samples. We then use these previous studies as a source of hypotheses about ways in which attachment style in adolescence might be related to sexual behaviors and experiences. Next, we test the hypotheses and discuss implications of the results for research on adolescent

sexuality and romantic relationships, and for possible interventions to help insecure adolescents navigate the difficult passage from childhood to adulthood relationships.

### THEORY AND RESEARCH ON ADULT ATTACHMENT

Attachment theory was proposed by Bowlby (1973, 1980, 1969/1982) in a series of volumes entitled *Attachment and Loss*, and operationalized in a series of studies by Ainsworth and her colleagues (Ainsworth, Blehar, Waters, & Wall, 1978). At the heart of the theory is an innate set of psychological processes that Bowlby and Ainsworth called the *attachment behavioral system*. Especially during infancy, this neurobehavioral system, which humans share with other primates, is—especially under conditions of real or imagined threat—vigilant concerning the availability and sensitivity of a protective other whom the theory calls an attachment figure. If a young child's attachment figure proves to be generally available, sensitive, and responsive to the child's signals of distress (i.e., proves to be a safe haven in times of distress and a secure base from which to explore one's capacities and environment when distress is absent), the child develops secure "working models" of self and attachment figures and generally enjoys a psychological state called *felt security* (Sroufe & Waters, 1977). In contrast, if a child's attachment figure is either inconsistently available or consistently unavailable psychologically, the child develops nonoptimal, insecure working models of self and/or attachment figures that adversely affect subsequent close relationships.

Ainsworth et al. (1978) identified three major patterns of infant-caregiver attachment, which they called *secure*, *anxious* (or insecure/ambivalent or insecure/resistant), and *avoidant* (or insecure/avoidant). Classification of infants at ages 12 to 18 months proved to be predictive of a wide range of social and emotional developments months and years later (see, e.g., Weinfield, Sroufe, Egeland, & Carlson, 1999, for a review). In 1987, Hazan and Shaver proposed that attachment theory be extended to the realm of adolescent and adult romantic/sexual relationships. These authors created a simple self-report measure of attachment style that asked adolescent and adult respondents which of three descriptions of feelings and behavior in romantic relationships was most similar to their own. The three descriptions, labeled *secure*, *anxious*, and *avoidant*, were extrapolated from Ainsworth et al.'s (1978) descriptions of the three major patterns of infant-caregiver attachment. This measure proved to be related in theoretically predictable ways to cognitive models of self and relationship partners, feelings of confidence versus insecurity in romantic relation-

ships, relational behavior (e.g., intimacy, provision of support, constructive communication and handling of conflict), relationship stability, and reactions to breakups.

Specifically, avoidant adults tend to be relatively uninterested in romantic relationships (Shaver & Brennan, 1992), have a higher breakup rate than secure adults (Hazan & Shaver, 1987; Kirkpatrick & Davis, 1994; Shaver & Brennan, 1992), and grieve less following a breakup (Simpson, 1990). Conversely, anxious adults tend to be obsessed with romantic partners and suffer from extreme jealousy (Carnelley, Pietromonaco, & Jaffe, 1996; Collins, 1996; Hazan & Shaver, 1987), which in the case of anxious men can lead to abusive behavior (Dutton, Saunders, Starzomski, & Bartholomew, 1994). Like avoidance, anxious attachment is also related to a high breakup rate. Secure adults tend to be highly invested in relationships and to have long, stable ones characterized by trust, friendship, and frequent positive emotions (Collins & Read, 1990; Hazan & Shaver, 1987; Kirkpatrick & Davis, 1994; Simpson, 1990).

Overall, it appears that Bowlby's characterization of the attachment behavioral system applies well to adults. Fraley and Shaver (1998) unobtrusively observed adult couples in waiting areas at airports and coded their contact-seeking behavior before learning whether both partners were boarding a plane together or were about to separate. Contact seeking was much more intense in couples who subsequently separated. Moreover, avoidant individuals (identified with a brief questionnaire) expressed less distress than nonavoidant individuals, and more anxious individuals felt more upset about separation. Mikulincer, Gillath, and Shaver (2002) found in a series of experiments involving college student participants that subliminal presentation of threat words, such as "failure" and "separation," automatically caused the names of participants' attachment figures to become mentally accessible. In other words, mental representations of attachment figures were automatically activated under threatening conditions. Interestingly, more anxious individuals exhibited chronic activation of mental representations of attachment figures even under relatively nonthreatening conditions, and more avoidant individuals exhibited *inhibition* of attachment figures' names when the subliminal threat word was attachment-related ("separation"), but not when the word was "failure." Such studies show that simple self-report measures of attachment style are associated with theoretically predictable differences in social behavior and unconscious mental processes.

There have been relatively few studies of attachment style and sexual behavior, but in an early study of adults, Hazan, Zeifman, and Middleton (1994) found that attachment security was related to enjoyment of a variety of sexual activities, including mutual initiation of sexual activity and enjoyment of physical contact, usually in the context of a long-term relationship. Attachment

anxiety was related to anxiety about sexual attractiveness and acceptability—an extension of anxious individuals' general concern with rejection and abandonment—and was also related to greater liking for the affectionate and intimate aspects of sexuality than for the genital aspects. Attachment avoidance was related to dislike of much of sexuality, especially the affectionate and intimate aspects. Fraley, Davis, and Shaver (1998) obtained similar results in studies aimed primarily at understanding avoidant attachment. Avoidance was related negatively to holding hands, mutual gazing, cuddling, feeling comfortable when held, and verbally expressing love for one's partner during sex. Avoidance has also been found, however, to be positively associated in adulthood with more accepting attitudes toward casual sex (Feeney, Noller, & Patty, 1993) and more frequent "one-night stands" (Brennan & Shaver, 1995; Hazan et al., 1994).

We can summarize these preliminary investigations by saying that reactions to sexual intimacy are part and parcel of attachment patterns. Attachment security is conducive to intimacy; sharing; considerate communication; and openness to sexual exploration. Attachment anxiety includes deep, general concerns about rejection and abandonment which are easily imported into sexual situations. Similarly, attachment avoidance interferes with intimate, relaxed sexuality because sex inherently calls for physical closeness and psychological intimacy, a major source of discomfort for avoidant individuals.

### HYPOTHESES CONCERNING ATTACHMENT STYLES, RELATIONSHIPS, AND SEX IN ADOLESCENCE

Based on the extensive literature concerning attachment styles and close relationships, and on the still scanty literature on attachment styles and sexuality in adulthood, we proposed three broad hypotheses for the research summarized in this chapter.

#### Hypothesis 1

Anxious adolescents' sexual and dating behaviors in romantic relationships should reflect their prevalent concerns about rejection and abandonment. Anxious teens are likely to allow themselves to become quickly involved in sexual encounters in order to feel close to their partners and (especially in the case of anxious girls, who may believe that sex is important to their male partners) to avoid being abandoned. Anxious adolescents can be expected to fall in love easily (as happens with anxious adults; Hazan & Shaver, 1987) and view

sex as a means of expressing love. Unfortunately, they are unlikely to experience positive emotions during their sexual experiences because of the nagging concern that their partners will find them deficient and reject or abandon them. Thus, despite having passionate feelings for their partners, anxious adolescents may find sexual encounters more troubling than pleasurable. Furthermore, they may look to alcohol and drugs to reduce anxiety about sexual encounters.

### Hypothesis 2

Avoidant adolescents' sexual and dating behaviors should reflect their discomfort with intimacy and unwillingness or inability to form close bonds with others. Their sexual discomfort may be manifested psychologically as erotophobia and behaviorally as reluctance to enter romantic/sexual relationships. When they do choose to have sex, perhaps mostly for extrinsic reasons (e.g., to comply with peer pressure to lose their virginity), avoidant adolescents will likely experience intrapsychic tensions that make intimacy and positive emotions other than sexual arousal difficult to obtain. Their discomfort may be so great that they experience negative rather than positive emotions during sex, and they may use alcohol and drugs to help themselves relax. Their avoidant tendencies may have benefits as well as liabilities, making it easy for them to downplay the importance of romantic/sexual relationships and experiences and thereby avoid becoming overly invested in relationships that are unlikely to last.

### Hypothesis 3

Secure adolescents' sexual and dating behaviors in romantic relationships will reflect their underlying positive views of self and other and their resultant capacity to feel comfortable with intimacy. They may experience some anxiety in these situations, as is natural for any teenager participating in new, psychologically significant activities, but their fears are likely to be realistic rather than neurotic. Secure adolescents should also be able to acknowledge their sexual drives; they should be less erotophobic and less likely to display aggression or to become the victims of aggression in sexual relationships. Their comfort with intimacy and their ability to engage in intimate, considerate communication with partners may allow them to have sexual intercourse within the context of semi-committed, relatively long relationships. Secure adolescents should experience positive emotions in their sexual encounters and obtain a sense of increased competence and esteem from them. They should feel connected to their partners and be motivated to have sex at least partially by a desire to express feelings of love.

## BACKGROUND AND METHODS OF THE STUDY

### Sample and Procedure

The analyses reported in this chapter were based on a subset of 2,011 adolescents aged 13 to 19 residing in Buffalo, New York, in 1989–1990 who participated in a larger study of psychosocial factors affecting health risk behavior (see Cooper, Peirce, & Huselid, 1994; Cooper, Shaver, & Collins, 1998, for details). Adolescents in this subsample (all but 41 of the original sample) completed the attachment style measure (described later). Random-digit-dial techniques were used to identify study participants, and telephone exchanges concentrated in primarily Black neighborhoods were over-sampled to yield a final sample that was 48% White, 44% Black, and 8% other racial groups (mostly Hispanic- and Asian-American). Boys and girls were represented in roughly equal numbers, and respondents were fairly evenly distributed across the 13 to 19 age range, with a mean of 16.7 years.

Face-to-face interviews were conducted by 30 professionally trained interviewers using a structured interview schedule. Interviewers and respondents were always matched on sex and, when possible, race (about 75% of the cases). Average interview length was 2 hours, and respondents were paid \$25 for participating. The interview contained both interviewer-administered and self-administered portions. Sexual behavior and attitudes were assessed using interviewer-administration of less threatening questions and private, self-administration of more sensitive questions. Respondents were provided with simply worded definitions of sexual behavior to ensure a common understanding of key terms.

### Measures

*Attachment Style.* Attachment style was measured in two ways using a slightly modified version of Hazan and Shaver's (1987, 1990) questionnaire, the only self-report measure available when the study was designed. Each respondent was first asked whether he or she had ever been involved in a serious romantic relationship. If the answer was yes (75% of the sample), the respondent was asked to answer the attachment questions with respect to experiences during those relationships. If the answer was no, the respondent was asked to imagine what his or her experiences *would* be like in such relationships. Respondents read each of three attachment-style descriptions and rated how self-characteristic each style was on a 7-point Likert-type scale

(which produced three quantitative ratings). They were then asked to choose which of the three styles was most self-descriptive (a categorical measure). The three answer alternatives were worded as follows:

- *Avoidant*. I am somewhat uncomfortable being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel comfortable being.
- *Anxious-Ambivalent*. I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to get very close to my partner, and this sometimes scares people away.
- *Secure*. I find it relatively easy to get close to others and am comfortable depending on them. I don't often worry about being abandoned or about someone getting too close to me.

The construct validity of both the categorical and quantitative measures has been established in scores of studies published since 1987 (see Feeney, 1999, and Shaver & Clark, 1994, for reviews). In the present study, a procedure used by Mikulincer and others (e.g., Mikulincer, Florian, & Tolmacz, 1990) was used to distinguish consistent from inconsistent responders. Inconsistent respondents (20% of the sample) were excluded from further analyses because their highest Likert rating failed to correspond to the attachment style chosen as most self-characteristic (see Cooper et al., 1998, for a detailed comparison of consistent and inconsistent respondents).

*Dating and Relationship Experiences.* Four aspects of dating and relationship experience were assessed. Respondents were asked whether they currently had a boy- or girlfriend, or were dating someone seriously.<sup>1</sup> Answers were scored 0 = No; 1 = Yes. They were also asked to indicate the number of times they had ever been involved in a serious romantic relationship (defined as a

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<sup>1</sup>The respondents were also asked about sexual orientation, using a 5-point continuous scale where 1 = completely heterosexual and 5 = completely homosexual. Only 5% of the sample labeled themselves anything other than completely heterosexual (4% mostly heterosexual, 0.8% equally attracted to males and females; less than 0.5% either mostly or completely homosexual). Nevertheless, sexual orientation was significantly related to attachment style. Insecure adolescents were slightly more likely than secure adolescents to describe themselves as homosexual (means were 1.09 for avoidants, 1.08 for anxious, and 1.03 for secure respondents; eta squared = .01). In no case, however, did controlling for sexual orientation change the substantive conclusions of our analyses. Moreover, in several cases the results became stronger after controlling for sexual orientation, suggesting that in these instances sexual orientation slightly suppressed the relationship between attachment style and sexual variables. For the purposes of the present chapter, we decided not to present detailed analyses involving sexual orientation.



"relationship in which you had very strong feelings for the other person and saw only this person or mainly this person"), and the number of times they had been "in love." Finally, those who had ever been on a date (85%) were asked how often they had been on a date in the past 6 months. Answers were scored on a 0 (not at all) to 4 (3 or more times/week) scale. Number of dating partners in the past 6 months was also assessed, but did not differ significantly across attachment groups.

*General Sexual Experience.* Respondents were asked whether they had ever had sexual intercourse. Virgins (36%) were asked to complete a series of questions about any sexual experiences they may have had, ranging from kissing to petting above the waist and below the waist and oral sex. These data were used to create an ordinal scale that ranged from 0 = no contact whatsoever to 4 = oral sex. This rank-ordering of behaviors can be justified in terms of its relation to a well-known development sequence of sexual experiences leading up to intercourse (see Miller, Christopherson, & King, 1993). Non-virgins were asked to indicate how often they had had intercourse in the past 6 months on a 1 (not at all) to 5 (3 or more times/week) scale. Finally, male respondents were asked whether they had ever used verbal or physical force to make a woman or a girl do something sexual or have intercourse when she didn't want to, and female respondents were asked parallel questions about their male partners' use of verbal or physical force against them. From these questions, the following ordinal scale was formed: 0 = no verbal or physical force ever used; 1 = use of threats or verbal coercion only; 2 = use of physical force (with or without verbal coercion) to engage in some sexual behavior *other than intercourse*; 3 = use of physical force (with or without verbal coercion) to engage in intercourse. (See Cooper et al., 1998, for analyses of attachment styles in relation to other aspects of sexual experience.)

*Experiences on Specific Occasions of Intercourse.* Sexually experienced respondents were asked a series of questions regarding three discrete occasions of intercourse: (a) their first intercourse experience; (b) their last intercourse experience; and (c) their first sexual experience with their most recent partner, if they had intercourse more than once with that partner. Depending on each individual's idiosyncratic sexual history, he or she might have experienced one, two, or all three of these sexual events. Thus, valid *ns* vary across occasions. For each kind of occasion respondents had experienced, they were asked about their reasons for having sex, the emotions they recall experiencing, and their substance use on that occasion.

*Motives* for having sex were assessed by five items asking respondents to rate on a 1 (not at all) to 5 (extremely) scale how important each of the follow-

ing reasons was on that specific occasion: (a) expressing love for your partner; (b) having a good time; (c) proving that you were attractive or desirable; (d) being carried away by the excitement of it all; and (e) fear that your partner would leave you or not like you anymore. For first intercourse, respondents also rated the extent to which a desire to lose their virginity motivated intercourse. However, because attachment style differences were not consistently observed for the second, third, and fourth reasons, only data for expressing love, fear of partner rejection, and losing virginity are discussed in the present chapter.

*Emotions* experienced during sex were assessed by an adjective checklist. A count of the number of negative (including *nervous, scared, worried, frustrated, angry, disgusted, guilty, sad, jealous, rejected, bored, uneasy, vulnerable, confused, lonely, disappointed, insecure, and self-conscious*) and positive (including *excited, powerful, affectionate, happy, aroused, contented, mature, proud, passionate, confident, calm, hopeful, interested, and caring*) emotion words were analyzed separately. A subset of positive words assessing feelings of passion, love, and arousal were also examined. Alphas for the negative and positive emotion words, respectively, ranged from .72 to .76, and from .34 to .63, across the three occasions. Coefficient alphas for the more homogeneous subset of passion words ranged from .53 to .59 across the three occasions.

*Substance use* was measured by two items asking whether the respondent had consumed any alcohol prior to or during intercourse, or smoked marijuana or used any other drugs prior to or during intercourse. These data were used to create a dichotomy in which 0 = no alcohol, marijuana, or other drugs and 1 = any substance consumed. Use of alcohol or drugs by the respondent's partner was also assessed using a single item scored in the same manner (0 = none, 1 = any). Finally, respondents were asked to rate the degree of intoxication they felt on that occasion on a 1 (not at all high) to 4 (extremely high) scale. In addition, respondents who had sex in the past 6 months were asked to report how often they were drunk or very, very high when they had intercourse. Responses ranged from 1 (none of the time) to 5 (every time/nearly every time), and comprised a scale representing frequency of intoxication during sex.

Two kinds of *situation perceptions* were assessed about each occasion or situation. Respondents answered two questions about how important that particular sexual situation was to them and how much they cared about how it turned out. The two items formed a reliable composite across all three situations (alphas ranged from .63 to .71). Respondents also answered three questions about their confidence in their ability to handle the situation, including the amount of perceived control in the situation, how much they doubted their ability to handle the situation (reverse scored), and overall how confident they felt in that situation. These items also formed a reliable composite scale across the three situations (alphas ranged from .68 to .72).

*Psychological Attitudes Toward Sex.* Three measures of psychological attitudes toward sex were included. The Erotophobia subscale by Fisher, Byrne, and White (1983) assesses attitudes and feelings about sexual topics ( $\alpha = .73$ ). Need for sex was measured with five items developed for the present study to assess the importance of being and feeling sexual. Items were rated on a 5-point scale ranging from 1 = not at all to 5 = extremely (e.g., "In general, how important is sex to you?";  $\alpha = .84$ ). Sexual competence was assessed with six items developed for the present study in which respondents rated the degree of confidence (on a 6-point scale) they felt in their ability to be a responsive and caring lover and to get their sexual needs met ( $\alpha = .77$ ).

## TESTS OF THE HYPOTHESES

The hypotheses were tested by a series of covariance analyses in which attachment style was treated as a three-category independent variable, with gender and age controlled. The tables included in the present chapter contain covariate-adjusted means for each variable broken down by attachment style, statistical significance levels, and amount of variance accounted for (eta squared). Interactions of attachment style with both age (coded as a three-level variable [13 to 14; 15 to 17; 18 to 19]) and gender were tested in an additional series of analyses where attachment style, gender, and age group were all treated as factors. Although we chose not to show interactions in the tables, we will mention interactions involving gender and age when they arise.

The upper half of Table 6.1 displays results concerning dating and romantic relationships. Avoidant adolescents were least likely ever to have had a date or to be currently involved in a romantic relationship; they had participated in the fewest serious relationships and had been in love the fewest number of times. Anxious adolescents had been in love the most times. Among adolescents who had ever been on a date, secures reported the most frequent dating during the previous six months, which was partly, but not completely, a consequence of their being more likely to be in a long-term relationship. Thus, as expected, the secure attachment style was associated with frequent dating and participation in romantic relationships. Furthermore, anxious adolescents reported almost equally high rates of dating and higher rates of being in love, supporting previous findings that adolescents high in anxiety are more likely than others to experience what they interpret as passionate love, possibly beginning as early as age 12 (Hatfield, Brinton, & Cornelius, 1989).

The lower half of Table 6.1 summarizes results for various sexual experience variables: ever having intercourse, amount of sexual experience for those who had not had intercourse, frequency of intercourse during the 6 months prior to

TABLE 6.1  
Experience with Dating, Relationships, and Sex

<i>Dating and Relationship Variables</i>	<i>Attachment Style</i>			<i>Eta Squared</i>
	<i>Secure</i>	<i>Anxious</i>	<i>Avoidant</i>	
Ever had a date	.87 <sub>a</sub> (.34)	.87 <sub>a</sub> (.33)	.79 <sub>b</sub> (.42)	.010**
Currently in relationship	.62 <sub>a</sub> (.49)	.60 <sub>a</sub> (.49)	.46 <sub>b</sub> (.50)	.017***
Number times in serious relationship	1.39 <sub>a</sub> (1.18)	1.48 <sub>a</sub> (1.14)	1.23 <sub>b</sub> (1.18)	.006*
Number times in love	1.02 <sub>a</sub> (1.01)	1.15 <sub>b</sub> (1.04)	.90 <sub>c</sub> (1.12)	.006**
Of those who have ever been on date				
Frequency of dating, past 6 months	2.61 <sub>a</sub> (1.08)	2.36 <sub>b</sub> (1.15)	2.33 <sub>b</sub> (1.15)	.014***
<i>Sexual Experience Variables</i>	<i>Secure</i>	<i>Anxious</i>	<i>Avoidant</i>	<i>Eta Squared</i>
Ever had intercourse	66% <sub>a</sub> (.47)	69% <sub>a</sub> (.46)	52% <sub>b</sub> (.50)	.022**
Sexual experience; virgins only	.88 <sub>a</sub> (1.40)	.83 <sub>a</sub> (1.44)	.57 <sub>b</sub> (1.21)	.011*
Frequency of intercourse, past 6 months	2.06 <sub>a</sub> (1.06)	1.94 <sub>a</sub> (1.08)	1.81 <sub>b</sub> (1.04)	.007*
Sexual aggression	.32 <sub>a</sub> (.76)	.43 <sub>b</sub> (.90)	.44 <sub>b</sub> (.96)	.005*

*Note.* Values in parentheses are standard deviations. Means and percentages with a common letter subscript are not significantly different at the  $p$  level specified.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

assessment, and (in the case of girls) experiencing or (for boys) perpetrating sexual aggression. As previously reported (Cooper et al., 1998), avoidant adolescents were the least likely ever to have had sexual intercourse (52% vs. 66% and 69% for secure and anxious adolescents) and, among virgins, they reported the least sexual experience. Among girls in particular, anxiously attached adolescents had the most sexual experience, whereas among boys, securely attached adolescents had the most experience. In the younger age groups, anxiously attached individuals had more sexual experience, but among older adolescents, secure individuals did. Secure and anxious adolescents, as compared with avoidant adolescents, also reported greater frequency of intercourse during the 6 months prior to assessment, but there were no significant differences in the number of partners reported among the three groups during this period. Finally, secure adolescents (of both genders) were less likely than insecure adolescents to report perpetration of or victimization by sexual aggression. (This latter finding is compatible with the research on older samples by Dutton et al., 1994, showing that men's attachment insecurity is associated with abusive

behavior.) Thus, as predicted, avoidant adolescents had the least sexual experience and secure adolescents were least likely to have been involved in sexual aggression.

The upper half of Table 6.2 presents results concerning motives for having sex on three different occasions of intercourse (the first time ever, the first time with the most recent partner, and the most recent time with the most recent partner). Attachment style was related to motives for having sex at all three

TABLE 6.2  
Motives For and Emotions During Sex

<i>Motives for Having Sex</i>	<i>Attachment Style</i>			<i>Eta Squared</i>
	<i>Secure</i>	<i>Anxious</i>	<i>Avoidant</i>	
First time				
Fear partner leaving	1.59 <sub>a</sub> (.98)	1.94 <sub>b</sub> (1.28)	1.69 <sub>a</sub> (1.08)	.019***
To express love	3.09 (1.33)	3.15 (1.36)	3.04 (1.31)	.001
To lose virginity	2.72 <sub>a</sub> (1.45)	2.88 <sub>ab</sub> (1.55)	3.05 <sub>b</sub> (1.60)	.007*
First time with most recent partner				
Fear partner leaving	1.40 <sub>a</sub> (.84)	1.60 <sub>b</sub> (1.09)	1.45 <sub>a</sub> (.93)	.008*
To express love	3.26 <sub>a</sub> (1.25)	3.24 <sub>a</sub> (1.37)	2.86 <sub>b</sub> (1.38)	.013**
Most recent sex				
Fear partner leaving	1.21 <sub>a</sub> (.65)	1.43 <sub>b</sub> (.93)	1.27 <sub>a</sub> (.79)	.014**
To express love	3.91 <sub>a</sub> (1.06)	3.91 <sub>a</sub> (1.17)	3.60 <sub>b</sub> (1.26)	.011*
<i>Emotions experienced during sex</i>	<i>Secure</i>	<i>Anxious</i>	<i>Avoidant</i>	<i>Eta Squared</i>
First Time				
Negative	.31 <sub>a</sub> (.19)	.36 <sub>b</sub> (.21)	.35 <sub>b</sub> (.20)	.020***
Positive overall	.48 (.27)	.46 (.26)	.46 (.29)	.001
Passionate	.64 (.52)	.58 (.50)	.62 (.53)	.003
First time with most recent partner				
Negative	.17 <sub>a</sub> (.16)	.23 <sub>b</sub> (.19)	.24 <sub>b</sub> (.21)	.034***
Positive overall	.59 <sub>a</sub> (.24)	.54 <sub>ab</sub> (.30)	.53 <sub>b</sub> (.29)	.009*
Passionate	.75 <sub>a</sub> (.54)	.65 <sub>b</sub> (.56)	.66 <sub>ab</sub> (.53)	.008*
Most recent sex				
Negative	.06 <sub>a</sub> (.10)	.11 <sub>b</sub> (.18)	.13 <sub>b</sub> (.18)	.043***
Positive overall	.68 <sub>a</sub> (.22)	.65 <sub>ab</sub> (.26)	.62 <sub>b</sub> (.27)	.009*
Passionate	1.03 <sub>a</sub> (.58)	.89 <sub>b</sub> (.59)	.92 <sub>ab</sub> (.59)	.012*

*Note.* Values in parentheses are standard deviations. Means and percentages with a common letter subscript are not significantly different at the  $p$  level specified.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

time points. On the first occasion of sexual intercourse, especially for girls, anxious attachment was associated with having sex because of fear of losing one's partner. Especially in the middle age group (15- to 17-year-olds), avoidant attachment was related to having sex in order to lose one's virginity. The association between anxious attachment and having sex to hold onto one's partner, especially among girls, recurred the first and last times respondents had sex with their most recent partner. At those two time points, a new motive also became relevant: Both anxious and secure adolescents, more than their avoidant peers, had sex to express love for their partner. Thus, as expected, anxious attachment was associated with having sex to avoid abandonment, especially among girls; secure and anxious attachment were associated with having sex to express love; and avoidant attachment was related, at first intercourse, to having sex to lose one's virginity.

The lower half of Table 6.2 presents results concerning emotions experienced during sex on each of the three occasions. At each time point, secure adolescents experienced fewer negative emotions than did anxious and avoidant adolescents. There was no relation between attachment style and positive or passionate emotions at the time of first intercourse, but at both the first and the most recent times with the most recent partner, secure adolescents experienced more positive and passionate emotions than anxious or avoidant adolescents. Somewhat surprisingly, given their propensity for falling in passionate love, anxious adolescents experienced the fewest passionate emotions during sex on both of these occasions, whereas avoidant adolescents experienced the fewest positive emotions at these times. The findings tended to hold across gender, although regardless of attachment style, girls experienced more negative and fewer positive emotions than boys at all three time points. In addition, negative emotions decreased and positive emotions increased across the three points, suggesting that adolescents in this study became more comfortable emotionally as they accumulated sexual experience.

Overall, as expected, attachment style was related to emotions experienced during sexual episodes, with secure adolescents seeming to enjoy sex significantly more than their anxious and avoidant peers. Furthermore, anxious adolescents were unable to experience passionate emotions during sex, possibly because of their fear and fear-related motives for having sex. Avoidant adolescents were particularly unable to experience positive emotions other than passion (by which they may have meant sexual arousal) during sex, perhaps because they were uncomfortable with intimacy or their partners' wish that they express intimacy. These findings are particularly interesting in light of attachment-style differences in motives for having sex: Anxious adolescents have sex to feel or express love for their partner, yet their fears about closeness prevent them from actually experiencing passion-related emotions during sex-

ual encounters. Avoidant adolescents have sex to lose their virginity without much desire for interpersonal intimacy.

Table 6.3 presents results concerning substance use prior to sex the first time and the first time with the most recent partner. (There were no significant differences for last sex, most likely owing to the low base rates of substance use reported across all attachment groups.) It is important to examine these findings while statistically controlling for more general drug and alcohol use, so that the effect of attachment style on substance use during sexual experiences can be distinguished from the significant effect of attachment style on overall substance use (Cooper et al., 1998). With this control in place, avoidant adolescents were most likely to have consumed alcohol and been intoxicated at both times, and secure adolescents were the least likely to drink at either time. This distinction between avoidant and secure adolescents (with anxious adolescents falling in between the two groups on both occasions) also applied to partners' substance use. (In many cases, both members of a couple used drugs or alcohol; the correlation between self's and partner's substance use was .81 at first intercourse, .78 on the first occasion with the most recent partner, and .70 on the last occasion.) In general, as expected, insecure attachment was related

TABLE 6.3  
Substance Use During Sex Controlling for Overall Use

Substance Use Variables	Attachment Style			Eta Squared
	Secure	Anxious	Avoidant	
First time				
Substance use	9% <sub>a</sub> (.30)	13% <sub>ab</sub> (.34)	17% <sub>b</sub> (.37)	.009*
Intoxicated	10% <sub>a</sub> (.38)	16% <sub>ab</sub> (.47)	19% <sub>b</sub> (.49)	.008*
Partner substance use	11% <sub>a</sub> (.32)	13% <sub>ab</sub> (.34)	20% <sub>b</sub> (.40)	.009*
First time with most recent partner				
Substance use	15% <sub>a</sub> (.37)	23% <sub>b</sub> (.43)	30% <sub>b</sub> (.46)	.022***
Intoxicated	20% <sub>a</sub> (.52)	26% <sub>ab</sub> (.58)	36% <sub>b</sub> (.62)	.011*
Partner substance use	17% <sub>a</sub> (.37)	22% <sub>ab</sub> (.42)	28% <sub>b</sub> (.45)	.011*
Last six months				
Frequency of intoxication during sex	.22 <sub>a</sub> (.50)	.33 <sub>b</sub> (.71)	.35 <sub>b</sub> (.69)	.011*

Note. Values in parentheses are standard deviations. In addition to the usual demographic covariates, all variables concerning substance use in sexual situations were controlled for more general alcohol use. Means and percentages with a common letter subscript are not significantly different at the  $p$  level specified.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

to alcohol, drug, and overall substance use prior to first-time sex with a particular partner, suggesting a lack of self-confidence or the presence of worries about closeness or rejection. We tested this interpretation by re-estimating the relationship between attachment style and substance use prior to sex, controlling for efficacy in sexual situations. We found that sexual efficacy mediated the effect of attachment style on substance use at first sex, but not at the first sex with the most recent partner.

Table 6.4 displays results concerning how adolescents viewed themselves in each of the situations in which they had intercourse and the importance with which they imbued those situations. On all three occasions, secure adolescents felt more efficacious (more confident of their ability to "control and handle the situation") than either anxious or avoidant adolescents. Avoidant adolescents felt less efficacious and also rated the situation as less important than did secure and anxious adolescents. (The difference in reported importance of the situation occurred only for first intercourse with the most recent partner.)

Table 6.5 shows the results concerning more general sex-related psychological variables: erotophobia, sex drive, and perceived sexual competence (overall, not just in one situation). Insecurely attached adolescents, especially the anxious ones, were likely to be erotophobic. This effect was qualified, however, by both sexual experience and age. Among nonvirgins, anxiously attached adolescents were the most erotophobic, but among virgins, avoidant adolescents were the most erotophobic. This difference suggests that, for younger adoles-

TABLE 6.4  
Situation Assessment During Sex

Situation Variables	Attachment Style			Eta Squared
	Secure	Anxious	Avoidant	
First time				
Sexual efficacy	3.19 <sub>a</sub> (.61)	3.02 <sub>b</sub> (.60)	3.00 <sub>b</sub> (.64)	.022***
Importance	3.33 (.72)	3.35 (.78)	3.36 (.73)	.000
First time with most recent partner				
Sexual efficacy	3.56 <sub>a</sub> (.48)	3.44 <sub>b</sub> (.49)	3.33 <sub>b</sub> (.64)	.028***
Importance	3.37 <sub>a</sub> (.67)	3.42 <sub>a</sub> (.63)	3.20 <sub>b</sub> (.86)	.011*
Most recent sex				
Sexual efficacy	3.75 <sub>a</sub> (.38)	3.58 <sub>b</sub> (.50)	3.63 <sub>b</sub> (.47)	.030***
Importance	3.46 (.61)	3.44 (.67)	3.36 (.73)	.003

*Note.* Values in parentheses are standard deviations. Means and percentages with a common letter subscript are not significantly different at the  $p$  level specified.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



TABLE 6.5  
Sex-Related Psychological Variables

<i>Psychological Variables</i>	<i>Attachment Style</i>			<i>Eta Squared</i>
	<i>Secure</i>	<i>Anxious</i>	<i>Avoidant</i>	
Erotophobia	2.32 <sub>a</sub> (.99)	3.50 <sub>b</sub> (1.02)	3.50 <sub>b</sub> (1.04)	.012***
Sex drive	2.92 <sub>a</sub> (.94)	2.95 <sub>a</sub> (.97)	2.76 <sub>b</sub> (.94)	.006**
Sexual competence	5.09 <sub>a</sub> (.73)	4.95 <sub>b</sub> (.79)	4.78 <sub>c</sub> (.87)	.025***
Non-virgins only				
Erotophobia	3.12 <sub>a</sub> (.92)	3.34 <sub>b</sub> (1.04)	3.23 <sub>ab</sub> (.99)	.011**
Virgins only				
Erotophobia	3.61 <sub>a</sub> (1.03)	3.70 <sub>a</sub> (.94)	3.97 <sub>b</sub> (.98)	.026**

*Note.* Values in parentheses are standard deviations. Means and percentages with a common letter subscript are not significantly different at the  $p$  level specified.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

cents at least, avoidant individuals' sexual fears may be linked to lack of experience (i.e., to being virgins), whereas anxious adolescents' fears may be linked to over-investment and fear of rejection in sexual relationships once they start having them. In the oldest age group (18 to 19 years), secure adolescents were the most erotophobic of those who had not yet had intercourse, suggesting that although they possessed generally positive models of self and others, they were fearful specifically about sex and this fear had kept them from engaging in it.

Turning to the other sex-related psychological variables, avoidant adolescents reported a lower sex drive than the other two groups and felt the least sexually competent. Secure adolescents reported the highest levels of sexual drive and competence. In summary, as expected, the secure attachment style was associated with a more positive psychological profile regarding sexuality and sexual experiences than those displayed by adolescents with insecure attachment styles.

### IMPLICATIONS, LIMITATIONS, AND FUTURE DIRECTIONS

Overall, the results corroborated predictions based on attachment theory and research. As predicted, anxious adolescents' dating and sexual experiences were strongly colored by fears of rejection and abandonment. They fell in love often, perhaps in response to a partner merely showing positive interest in them, and

had sex more frequently at a young age, but were prevented from enjoying it by the fear of rejection or abandonment. This predicted pattern was especially evident among girls. Furthermore, anxious individuals were prone to use alcohol and drugs to reduce anxiety about sexual interactions.

The findings regarding the anxious attachment style help to illuminate the results of a recent study by Joyner and Udry (2000), which showed that teenagers in love, especially younger teens and girls, were at higher risk than their peers for depression and alcohol problems. The authors made what may have been a mistake in attributing these adolescent difficulties to the detrimental effects of adolescents' involvement in romantic relationships rather than to individual differences in the kinds of relationships teenagers get into. Our results suggest that an anxious attachment style contributes to early adolescent girls' desire for a romantic relationship, and that their feelings and behaviors within their ill-fated relationships contribute to depression and alcohol use.

Also as predicted, avoidant adolescents' sexual and dating profiles reflected their discomfort with intimacy and unwillingness or inability to form close bonds with others. These adolescents were relatively erotophobic, motivated to have intercourse by a desire to lose their virginity rather than to get closely involved emotionally with another person, relatively low in perceived sex drive, less sexually active than their anxious and secure peers, and less confident of their sexual competence. They were the most likely of the three groups to use alcohol and drugs to quell their sexual fears. It is interesting to note that attachment-related avoidance, which begins in early adolescence with sexual fear and relatively low sexual drive and low frequency of intercourse, can later in life become associated with non-intimate and uncommitted but not necessarily infrequent sexual encounters (Fraley et al., 1998).

As expected, secure adolescents' sexual and dating experiences coincided with their positive views of self (including sexual competence), positive views of partners, and comfort with interpersonal intimacy. These adolescents were less erotophobic, more love-oriented, more likely to be involved in a relationship, less likely to display sexual aggression or become the victims of sexual aggression, less likely to use drugs or alcohol in sexual situations, and likely to experience more positive and fewer negative emotions during sex.

The results suggest that it is misleading to draw general conclusions about romantic relationships and sexual involvement during adolescence. Adolescents with a secure attachment style, most of whom probably had a good relationship with one or both parents or other attachment figures, are likely to be involved in what, for their age, are relatively serious and supportive relationships. They tend to have enjoyable sexual experiences and, presumably, are learning something valuable about intimacy, communication, compromise, and reliance on a peer as a potential attachment figure. Avoidant and anxious

Adolescents who engage in sexual intercourse may do so in less favorable contexts. Our conclusion is similar to the one reached a number of years ago by Shedler and Block (1990), who found that adolescents who experimented with marijuana without becoming dependent on it were better adjusted psychologically than either those who abstained completely or those who became heavy drug users. Exploration of sexuality is a normative feature of adolescence which need not end in heartbreak or addiction.

If we were to create interventions or educational programs for *secure* adolescents, these programs might not need to do much more than provide information about safe sex, good relationship skills, and the availability and advisability of counseling for the confusion and hurt feelings that can arise in any romantic or sexual relationship. In contrast, interventions for *insecure* adolescents would need to be tailored to the nature of different individuals' underlying difficulties. Avoidant teenagers need both relational skills training, focused on the nature and importance of communication and intimacy, and drug and alcohol counseling. Their problems are likely to go unnoticed in early adolescence, because avoidant teens may seem not to have trouble with sexuality (in early adolescence, they may not be engaging in sex). Their problems may become more serious later on, however, and may affect not only themselves but also their relationship partners, who may be hurt by their lack of caring and intimacy. Anxious teenagers, especially girls, might benefit from counseling that deals with the healthy and unhealthy goals of relationships, and the important differences between love, sex, and security. Attachment-anxious adolescents may also need the kinds of clinical help that foster more general self-esteem and good judgment.

Although our preliminary findings could prove useful in designing interventions related to adolescent romance and sexuality, several limitations should be noted. First, the measure of attachment used in our study has been revised both theoretically and psychometrically in recent years. Shortly after our data were collected, Bartholomew and Horowitz (1991) proposed that Hazan and Shaver's (1987) three-category typology of attachment styles be elaborated to include a distinction between two kinds of avoidance: fearful and dismissing. They also suggested that the resulting four attachment styles be viewed as quadrants in a two-dimensional space defined by the positivity or negativity of internal working models of self and relationship partners. Their suggestions led to a proliferation of self-report measures, reviewed and factor-analyzed by Brennan, Clark, and Shaver (1998), which can be efficiently summarized in terms of two dimensions: anxiety and avoidance. Brennan et al. (1998) created 10 highly reliable multi-item scales to measure the two dimensions, and Fraley, Waller, and Brennan (2000) showed how the two scales could be improved based on item-response-theory statistics. Future studies of attachment and

adolescent sexuality should make use of these more precise measures, which will almost certainly yield stronger associations among theoretically related variables.

Several conceptual issues regarding attachment in adolescence need clarification. We still do not know the extent to which attachment style, in adolescence and as measured here or with the Brennan et al. (1998) scales, is a stable feature of an individual's personality or a changeable feature of the person anchored in a set of current close relationships. Furthermore, we do not know how much a person's security influences the course of his or her romantic/sexual relationships compared with how much such relationships influence the person. Studies with adults suggest bi-directional causality (Kirkpatrick & Hazan, 1994; Shaver & Brennan, 1992.)

We also do not know the extent to which adolescent romantic relationships are actually *attachment* relationships rather than, say, forms of friendship (for a discussion of some of the distinctions, see Furman & Wehner, 1997, and Mikulincer & Selinger, 2001). Research to date (e.g., Fraley & Davis, 1997; Furman & Wehner, 1997; Hazan & Zeifman, 1999; Trinke & Bartholomew, 1997) suggests that romantic partners *are* primary attachment figures for some adolescents but not for all, and that the occurrence of genuine attachment to romantic partners increases with age and with a person's degree of attachment security. Regardless of how this important theoretical issue is ultimately resolved by empirical research, our results clearly indicate that attachment styles as we measured them are associated in adolescence with theoretically predictable patterns of relationship-related sexual motives, feelings, and behaviors. We hope our preliminary findings will pave the way for further research and effective interventions informed by attachment theory.

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