

IDENTIFYING MEDIATING MECHANISMS IN THE RELATIONSHIP BETWEEN
ATTACHMENT STYLE AND RISKY SEXUAL BEHAVIORS

by

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(Under the Direction of Leslie Gordon Simons)

ABSTRACT

Previous research indicates that participation in or abstinence from certain sexual behaviors can be associated with attachment style. Furthermore, attachment style can be related to communication and communication can be related to participation in or abstinence from certain sexual behaviors. Based on the existing research addressing the development and stability of attachment styles, I develop a model to explain the possible relationship between these variables. Results show that there are few consistent patterns in the relationship between attachment style and sexual behavior. There is some consistency with regard to number of partners and vulnerability to sexual coercion. Results also indicate that condom use during penile/vaginal intercourse is the same across groups regardless of control factors. These findings have implications for education, prevention, and intervention and increase the demand for future research in this area to better understand the views and behaviors of adolescents and young adults today.

INDEX WORDS: Attachment; Sexual Behavior; Communication; Condom Use

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CHAPTER 1

INTRODUCTION

According to a recent survey, only 39% of people polled always ask if their partner is infected with HIV or other STIs (Weaver, 2005). Of those with less than a high school education, nearly 50% never discuss STIs with a new partner. This lack of communication is said to occur even when individuals have knowledge about STIs and measures to prevent them. When it comes to adolescents, the Youth Risk Behavior Surveillance System (YRBSS) shows that although nearly 90% of students are taught about HIV and AIDS in school, more than 35% reported having sex without a condom (CDC, 2003). Ten percent fewer females than males reported using condoms during sex. Furthermore, of females who had been sexually active, 80% had not used birth control pills before sexual activity. Although the percentage of teenagers who have had sex has decreased from 54% in 1991 to 47% in 2003, there are still hundreds of thousands of adolescents who are putting themselves at risk for unwanted pregnancy and STI infection through their disregard for methods of contraception and protection. While the majority claims to have received education on these methods, the question to be addressed is why they subsequently choose to engage in risky sexual behavior, such as unprotected intercourse. Some suggest that communicating with one's partner about using contraception is a necessary first step the actual use of it (Kelly & Kalichman, 1995). However, studies have found that some individuals may have a more difficult time achieving this than others (Catania, Coates, & Kegels, 1994; Edgar, Freimuth, Hammond, McDonald, & Fink, 1992; Kelly & Kalichman, 1995). Edgar et al. (1992) found that those who used a condom during sex were likely to have verbally discussed the issue with their partner. On the other hand, of those who did not use a

condom during sex, one third had wanted to but did not discuss it with their partner for “fear of ‘ruining the moment’” (pg. 94). Research in this area has not adequately addressed the questions regarding who is less likely to talk about safe sex practices with partners and why that is the case.

Some past studies have focused on general communication patterns in romantic relationships. It appears that insight on this topic of communication about safe sex practices may lie within research on more general communication and attachment styles and in romantic relationships (Collins & Read, 1990; Feeney, Noller, & Patty, 1993; Feeney, Peterson, Gallois, & Terry, 2000; Gentzler & Kerns, 2002; Mikulincer & Nachshon, 1991; Pistole, 1989). When it comes to communication, Mikulincer and Nachshon (1991) found that secure and ambivalent participants were more likely to reveal information to others than were avoidant individuals. Collins and Read (1990) found that attachment style was predictably related to reports of disclosure and overall communication with others. Finally, Pistole (1989) found that anxious-ambivalent individuals were more likely than avoidant individuals to oblige their partner’s wishes. This type of behavior seems to be related to the findings of Edgar et al. (1992) that said some individuals fear “ruining the moment.” However, no studies have looked at the link between attachment, this type of communication, and sexual behavior. Most of the studies regarding attachment and sexual behavior have only examined the correlations between attachment style and risky sexual behavior.

Feeney, Noller, and Patty (1993) found that avoidant males have more casual sex than secure and anxious ambivalent males. Gentzler and Kerns (2002) found that both avoidant and anxious-ambivalent males and females experienced unwanted but consensual sex (again, evidence of fear of ruining the moment). Feeney, Peterson, Gallois, and Terry (2000) showed

that those who experienced anxiety about relationships were less likely to discuss contraception, less likely to have conversations about HIV/AIDS, and less likely to regularly use condoms or participate in other methods of safe sex. These studies examined the relationship between attachment style and sexual behavior and found that individuals of some insecure typologies are at increased risk of participating in risky sexual activities, including non-use of contraception. Although they did find that some individuals are less likely to talk about safe sex, no one study has looked at how attachment affects communication and how, subsequently, communication affects sexual behavior.

The present study will go beyond what has already been researched in the area of attachment styles and risky sex by identifying mediators in the relationship between those two variables. Edgar et al. (1992) showed that communication affects decisions about safe sex. Collins and Read (1990), Pistole (1989), and Mikulincer and Nachshon (1991) have found patterns of poor communication by attachment style. Feeney and her colleagues have found patterns in sexual behavior by attachment style. These links need to be joined and an analysis of the relationship between attachment and risky sexual behavior that includes communication as a mediator needs to be examined. In order to provide an appropriate backdrop for such a study, a history of the research on attachment theory is needed. Research on this theory has been conducted in all of stages of development, beginning with infancy and continuing through adulthood. In order to fully understand the implications of attachment in adulthood, the following review of attachment theory will address the development of the approach and its implications in infancy as well as adulthood.

CHAPTER 2

LITERATURE REVIEW

Attachment in Infancy

According to John Bowlby (1969), attachment behaviors are not inherent. Only early behaviors that promote proximity, such as crying, seem to be present at birth. These behaviors help infants keep primary caregivers nearby thus increasing an infant's chances of survival but are not necessarily attachment behaviors themselves. Research has found that a primary caregiver's responsiveness to these signals during the first year of a child's life is what affects the development of attachment styles (Ainsworth, Blehar, Waters, & Wall, 1978; Bell & Ainsworth, 1972). Infants exhibit these early proximity-seeking behaviors and learn how their primary caregivers respond to them. Certain patterns in responsiveness lead to children's learning of that responsiveness which is then manifested as one of three theorized attachment style: secure, avoidant, and anxious-ambivalent.

Although the theory of attachment was originally introduced by John Bowlby (1969), it was further developed and empirically tested by Mary Ainsworth and her colleagues (1978). Attachment behavior in human beings is any form of behavior that enables a person to gain or retain closeness to another person who is usually believed to be stronger and wiser (Bowlby, 1969). When initially describing his theory, Bowlby (1969) claimed that attachment behaviors are manifested in relationships between infants and primary caregivers (Bowlby, 1969). According to Ainsworth (1989) infants initially exhibit behavior that promotes closeness to their primary caregiver. Infants do not have the capacity to address their own needs and are reliant upon primary caregivers for food, safety, and comfort. Ainsworth (1989) believed that

children's behaviors and primary caregivers' responses would shed some light on how this relationship influences children's development.

In their groundbreaking "Strange Situation" study, Ainsworth and Bell (1978) arranged a scenario that illustrated attachment behaviors in one-year-olds. These infants were able to comfortably explore things in the presence of their mothers and were observed responding differently to their mothers' comforting based on their attachment style. In this study, infants were left alone with their mothers and were given something interesting to explore. While the child explored and the mother remained in the room, a stranger was brought into the room. Shortly after the introduction of the stranger to the room, the mother left the room. After a period of time, mothers returned to the room and both their and their children's behaviors were observed.

Ainsworth found that not all children responded to this situation in the same way. Furthermore, it was not as easy as rating infants in order of strength of their attachments to their primary caregivers. Rather, it was found more informative to classify the infants as one of three styles of attachment based on level of security: secure, anxious avoidant, and anxious ambivalent. When Bowlby (1982) first described his theory of attachment, he used the term "anxious resistant," rather than "anxious ambivalent." For future reference, the two typologies are synonymous but the term "anxious ambivalent" will be used throughout this review.

Secure. Those infants who were classified as "securely attached" were ones who freely explored in the room while keeping an eye on their mothers both with and without the stranger present. These children were distressed when their mothers left, required contact with primary caregivers upon their return, and were easily comforted by such contact. The majority of participants in the study fit into this secure typology. Roughly 60% were secure while 25% and

10% were avoidant and anxious ambivalent, respectively. Interestingly enough, this pattern is about the same when measured in adults (Hazan and Shaver, 1987).

Anxious Avoidant. The behavior that characterized the remaining two typologies was indicative of an insecure attachment. Infants who were classified as anxious avoidant exhibited behavior similar to secure infants (although they were somewhat less distressed by their mothers' departure) until their primary caregiver returned to the room. Unlike their secure counterparts, anxious avoidant infants did not seek out their primary caregivers for comfort.

Anxious Ambivalent. The second insecure attachment typology has been called anxious ambivalent. Again, infants of this typology behaved similarly to secure infants until the return of their primary caregivers. At that time, these infants displayed mixed behavior in which they switched from trying to be in contact with their primary caregiver to trying to escape contact with the individual. Research suggests that the presence of attachment styles is not limited to infancy and early childhood (Ainsworth, 1989; Morris, 1982; Weiss, 1982).

Working Models of Attachment

Bowlby (1982) uses the concept of *inner working models of relationships* to explain attachment styles. Working models are developed through a person's early attachment experiences and subsequently affect that person throughout life. Previous studies on infant attachment have shown that children learn how primary caregivers respond to their needs and ultimately develop expectations of others' behavior as well as models of their worthiness of these responses (Ainsworth, Blehar, Waters, & Wall, 1978; Bell & Ainsworth, 1972). Children then develop either positive or negative models of self and others. These models will guide their behavior and their expectations of others' behavior in close relationships.

As people move into adulthood, working models become more complex. This is due to the fact that adult relationships are more complex than the infant-caregiver relationship. A two-part survey study was conducted to determine the relationship between adult attachment typologies in romantic relationships and childhood attachment to primary caregivers (Hazan and Shaver, 1987). Seven hundred twenty-eight participants were given questionnaires about their parent-child and adult relationships and three paragraphs that represented the major characteristics of attachment typologies. Participants were asked to identify which paragraph best described their thoughts about romantic relationships. The three paragraphs represented the typologies originally formed from infant attachment theory: secure, avoidant, and anxious ambivalent. The results of the study showed that people's attachment typology differed predictably by reports of childhood and adult relationships. Specifically, secure individuals reported comfort with intimacy, happiness and trust in romantic relationships, and similar, warm relationships with primary caregivers. Those who identified as avoidant reported discomfort with intimacy, lack of trust in romantic partners, and cold relationships with mothers. Anxious-ambivalent individuals reported a desire for intimacy coupled with a fear of losing it, emotional instability with partners, and controlling relationships with primary caregivers.

According to Bowlby's (1969) theory, attachment styles are fairly stable over time. Some individuals may experience a change in attachment behavior. Crowell, Treboux, and Waters (2002) found that, for most, security is stable ($r = .66, p < .01$). If there is change, it is in the direction of greater attachment security, which is the most stable of attachment styles. In relationships where one individual is secure and the other is insecure, positive experiences can help shift the insecure individual's attachment style in the direction of security (Crowell,

Treboux, and Waters, 2002). Evidence supports this claim (Ainsworth, 1989; Hazan and Shaver, 1987; Shaver and Hazan, 1988).

Working models in adult relationships have been studied by social and clinical psychologists (Collins & Read, 1990; Hazan & Shaver, 1987; Kobak & Hazan 1991). For example, Hazan and Shaver (1987) examined the relationship between attachment styles and working models of self and relationships. Six hundred twenty respondents completed a questionnaire that included measures of beliefs about love and attachment styles. Participants were asked to rate 56 beliefs about love on a continuum from strongly disagree to strongly agree. They then read three paragraphs describing various approaches to close relationships and were asked to indicate which one of the three best described their feelings about themselves and others.

Results indicated that individuals of different attachment styles reported different beliefs about love. These beliefs represent their working models of relationships. Secure individuals reported that, while feelings of romance can come and go in a relationship, sometimes their feelings return to the intensity they experienced at the beginning of the relationship. Avoidant individuals had a more pessimistic model of love and claimed that relationships depicted in movies and books do not exist and it is almost impossible to find a romantic partner. Anxious/ambivalent individuals fell in between these two typologies. They reported falling in love frequently and easily but claimed to find it difficult to experience “real love” (p. 515). These results indicate a difference in the working models of relationship between people of different attachment typologies.

Collins & Read (1990) collected data from a sample of 118 undergraduates from the University of Southern California and found results similar to those reported by Hazan and

Shaver (1987). A questionnaire was completed that assessed attachment styles using the Adult Attachment Scale developed previously. They then assessed respondents' self-esteem using the Rosenberg Self Esteem Scale (RSE; Rosenberg, 1965) and need for self assurance using the Texas Social Behavior Inventory (TSBI; Helmreich & Stapp, 1974). The Personal Attributes Questionnaire (PAQ; Spence & Helmreich, 1978) was used to assess self-assertiveness and expressiveness (defined as being "kind and aware of others" p. 651). Finally, the Rotter Trust Scale (RTS; Rotter, 1967) and Wrightsman's Philosophies of Human Nature Scale (PHN; Wrightsman, 1964) measured trust in others including beliefs about altruism, independence, people's control over their own lives, and human adaptability to change.

Based on responses, participants were classified as secure, avoidant, or anxious in terms of attachment typology. Correlations between the Adult Attachment Scale dimensions of Close, Depend, and Anxiety and the measures describe above were then determined. Respondents who identified as secure by reporting high scores on Close and Depend and low scores on Anxiety had a more positive view of themselves and others than those who identified as avoidant or anxious. These findings are consistent with Bowlby's (1982) concept of working models.

Collins and Read (1990) also assessed the correlation between attachment styles and histories to determine the extension of working models from childhood to adulthood. By asking individuals to report perceptions of parents' caregiving styles, they found that those who reported warm, not rejecting relationships with parents had better views of themselves and others. They felt they could depend on others and did not fear being abandoned by those they trusted. On the other hand, those who reported experiences with an ambivalent mother were more dependent on others and, at the same time, were fearful of being abandoned by them. This is consistent with Bowlby's (1982) concept of poor working model of self and poor working model of others,

which are developed through childhood experiences with primary caregivers. Finally, Collins and Read (1990) found that respondents whose parents were cold and rejecting viewed others as untrustworthy. These avoidant individuals have positive working models of self that help them care for themselves and negative models of others that keep them from depending on others.

In order to incorporate working models of relationships into assessment of attachment style, it was necessary to develop new measurement instrument. Hazan and Shaver's three-category typology was expanded to a four-category typology of attachment based on a person's view of the self and the person's view of others. This instrument was developed from a multi-method study of 77 predominantly white undergraduate students ranging in age from 18 to 23 (Bartholomew & Horowitz, 1991). Information on participants' perceived importance of close relationships, comfort with such relationships, and perception of others' views of them was gathered through interviews, self-reports, and friend-reports. Several measures were used during and independent from the interviews to assess self-esteem, sociability, and self-acceptance. The study found evidence for a four-category typology of attachment, the elements of which will be described below and reflected in Table 1.

Secure. Characteristics of individuals who identified as secure were not unlike those in historical measures of attachment at various stages of development. Overall, these individuals reported high levels of warmth, involvement in romantic relationships, controlled balance in friendships, and self-confidence. The definition of secure attachment in adulthood has much in common with the characteristics seen in secure attachment among infants and children.

Dismissing. Bartholomew and Horowitz (1991) found that individuals who were classified as dismissing rated very high on self-confidence. This, however, was the only characteristic on which they were highly rated. These individuals scored low on measures of

warmth, self-disclosure, intimacy, and involvement in romantic relationships. They were also found to be more controlling in their friendships and reported an inability to trust others. Individuals who identify with this typology are similar to those who identified as avoidant in previous measures. They would have positive working models of self but negative working models of others.

Preoccupied. Although also considered to be representative of insecure attachment, these individuals were the polar opposite of dismissing individuals. These individuals are similar to those classified as anxious-ambivalent in previous studies. They rated high on self-disclosure, emotionality (including warmth and frequency of crying), and involvement in romantic relationships. An indication that these romantic relationships may not be healthy is these individuals' high ratings on dependence on others. While they confide in and depend on others, they also have a poor balance of control in their friendships. This typology is similar to the pull-in, push-away nature of the anxious-ambivalent individual who has a negative working model of self but a positive working model of others.

Fearful. This typology was found to be somewhat similar to the dismissing style of attachment in that it is like the avoidant typology. Individuals who are considered fearful score low on measures of self-disclosure, intimacy, balance of control in friendships, and involvement in romantic relationships. However, unlike the dismissing type who may score low on these measures but are comfortable with this because of their high self-confidence, fearful individuals have low self confidence. Although not all studies of relationship outcomes and attachment styles use this measurement, the few studies conducted on attachment and sexual behavior that do utilize it and have found interesting nuances in their results that should not be ignored (Feeney, Kelly, Gallois, Peterson, & Terry, 1999; Feeney, Peterson, Gallois, & Terry, 2000).

Table 1 - Attachment Style by View of Self and View of Others

		View of Self	
		positive	negative
View of Others	positive	SECURE	PREOCCUPIED
	negative	DISMISSING	FEARFUL

Impact of Attachment on Communication in Romantic Relationships

In addition to exploring the link between infant and adulthood attachment, it has been said that the development of romantic love is an attachment process (Hazan & Shaver, 1987; Shaver, Hazan, & Bradshaw, 1988). Hazan and Shaver (1987) found that participants' experiences in romantic relationships could be predictably grouped by attachment style. In their survey of 728 college-aged participants, they found that secure individuals were comfortable with intimacy whereas avoidant individuals were not. Anxious-ambivalent individuals yearned for intimacy but feared losing it once it was obtained.

Shaver et al. (1988) explain that romantic love, while having similarities to infant attachment, is the integration of three behavioral systems: attachment, caregiving, and sexuality. In infancy, the issue of caregiving is one-sided. A primary caregiver tends to the needs of the infant. The infant does not reciprocate. This, Shaver et al. (1988) argue, is not the case in romantic relationships. Caregiving in these bonds is more symmetrical. In addition, they argue that romantic relationships often include sexual thoughts, feelings, and/or behaviors. This is not the case in parent-child relationships.

Hazan and Shaver's (1987) early finding that attachment is related to relationship quality has been replicated in studies of early dating, long-term dating, and marital relationships (Collins

& Read, 1990; Feeney, 1994; Kirkpatrick & Davis, 1994; Kobak & Hazan, 1991; Senchak & Leonard, 1992; Simpson, 1990). The assessment of relationship quality involves a variety of concepts such as overall happiness, liking for one's partner, perceived conflict and communication. In general, secure individuals are more likely to self-disclose and are more likely to do so about personal issues with romantic partners than are insecure individuals (Mikulincer & Nachshon, 1991). Furthermore, evidence supports the theory that when in conflict, individuals' method of resolution can be compromising, obliging, or integrating based on their attachment style (Pistole, 1989). Neither of these negative communication styles is conducive to conversations about sex and safe sex behavior but have been consistently observed in romantic relationships.

A three-part survey study of 352 undergraduates provided information about attachment styles and patterns of self disclosure (Mikulincer & Nachshon, 1991). The first study, a survey of 127 self-identified heterosexual undergraduate men (49) and women (78) ages 21-34, used self-report measures of attachment and self disclosure based on social situation and the person to whom the participants disclose. Patterns of self-disclosure were predictably related to attachment styles. Secure and ambivalent participants claimed to reveal more information to lovers than avoidant individuals but secure individuals claimed to reveal even more so than ambivalent individuals. Furthermore, secure individuals were more likely to disclose information at different social times than avoidant or anxious individuals. This information provides insight that guides the current study in an effort to extend this information to patterns in self disclosure about sexual history and condom use.

In the second part of the study, Mikulincer and Nachshon (1991) used questionnaires to gather additional information about participants' disclosure as well as participants' liking of

someone based on that person's level of self disclosure. Members of the study team contacted participants and asked them how they would disclose, how much they would like a person based on how much that person was willing to share, and how much that person was interested in talking about him/herself. Ambivalent individuals reported a high-disclosing individual would produce more self-disclosure in them than a low-disclosing individual would. This information is of concern as it indicates some individuals are willing to disclose less information about themselves if their partner does the same. This is a problem for those who wish to disclose more but feel they cannot. If they extend this withholding policy to matters of sexuality, they may take more risks with their health than they would like. Determining whether or not there is a link between limited disclosure and risky sexual behavior is a goal of the current study.

The results of Mikulincer's and Nachshon's (1991) study shed some light on the subject of attachment style and communication but do so in the context of new social relationships rather than in more intimate relationships. Collins and Read (1990) investigated the relationship between attachment style and relationship quality (including communication) in the third of their three-part study. They discovered that attachment style was predictably related to reports of disclosure, partner responsiveness, trust, and overall communication. Attachment style was determined using the Adult Attachment Scale developed in the first part of the study as explained earlier. Overall, those who identified as "close" were more likely to report good communication and more self disclosure with partners. Remember that those who scored high on measures of closeness also identified as secure. "Depend" individuals were those who adjusted their behaviors to fit their partner's expectation rather than to address their own needs. These individuals were likely to identify as anxious. Those in the anxiety category had fears of being abandoned and reported less communication and less self disclosure. Individuals who scored

high on measures of anxiety were likely to identify as anxious ambivalent or avoidant, depending on their “depend” score. Perhaps it is this fear of abandonment that keeps individuals from disclosing intimate information to partners they feel will not be responsive to it. Collins and Read’s (1990) study provides groundwork that suggests that disclosure in intimate relationships is tied to attachment style.

Pistole (1989) conducted a study that offers additional insight regarding attachment and communication patterns. She distributed a survey to 137 primarily white college students (65 males, 82 females). Attachment was measured by Hazan and Shaver’s (1987) three-typology scale. A little more than half of the participants identified as secure while the remaining half was split between the avoidant and anxious-ambivalent types. Method of conflict resolution was measured using the Rahim Organizational Conflict Inventory (ROCI) which has been constructed around two dimensions: concern for self and concern for others. This measure of behavior is interesting given what we know about attachment and its components of views of the self and of others. It taps into working models of self and others and can provide information on how this concept works in adult relationships. Among other issues related to conflict resolution, Pistole (1989) found that anxious-ambivalent individuals were more likely than avoidant individuals to oblige their partner’s wishes. This method of conflict resolution is an example of how anxious-ambivalent individuals compromise their wants and needs to keep a partner in the relationship and it may have something to do with why some individuals disclose more information to partners than others. It would be important to know if this is true of information that deals with sexual behavior.

The observation of a relationship between attachment style and communication is not limited to dating relationships. Kobak and Hazan (1991) surveyed and observed 40

predominantly white, married couples. They assessed attachment style using Hazan and Shaver's (1987) three-typology scale and observed couples' problem solving and confiding communication through a series of four videotaped interactions. They also measured the couples' overall marital satisfaction using the Marital Q Set. The Marital Q Set is an 84-item measure of attachment security and marital functioning. Attachment security is determined through an assessment of reliance on one's romantic partner and one's own availability in the relationship. The remaining items assess interpersonal functioning within marriage. Respondents read each of the 84 items and rate them on a scale from 1 to 9 as very uncharacteristic to very characteristic.

As they hypothesized, Kobak and Hazan (1991) found that attachment was related to overall marital adjustment. Furthermore, they, like Pistole (1989), found that attachment was related to methods of communication in problem solving. Both insecurely attached husbands and wives were more likely to react negatively and reject their spouses during the problem solving task. On the other hand, securely attached spouses worked together and were supportive of each other during the same task. While the issue of safe sex practices was not approached in this study, it does shed light on the nature of marital relationships and illustrates that, although couples may be in committed relationships, they can experience insecurity and this insecurity can be related to poor communication that can negatively affect the relationship. This suggests that in a study of attachment, communication, and sexual behavior, long-term dating and married couples should not be excluded under the assumption that they, as committed couples, are immune to these effects. The similar patterns of communication in all types of romantic relationships, from early dating to married couples, provide information that could be useful in studies of attachment and sexual behavior.

Attachment Style and Sexual Behavior

While a wealth of theory and research exists on the topic of attachment style and outcomes in romantic relationships, few have been devoted to the topic of attachment and sexual behavior. In their theoretical paper, Belsky, Steinberg, and Draper (1991) suggested that individuals whose relationships with their parents was not stressful or wrought with conflict developed secure relationships with their parents. As a result, they predicted, in adolescence those secure individuals would not have behavioral problems including precocious sexual behavior. On the other hand, those children whose attachments to parents were insecure would be at risk for behavioral problems and precocious sexual behavior. While this theory makes sense on the surface, it lacks an explanation of the mechanism through which individuals achieve this outcome. Upon review of the literature, it appears as though communication in romantic relationships may be the mechanism to add. The present study seeks to address this gap in the literature. The empirical studies that do exist have reported similar findings despite a variety of approaches to data collection.

One study has found evidence that the relationship between insecure attachment styles and sexual behavior is more complex than Belsky et al. (1991) suggested. Gentzler and Kerns (2004) used a series of questionnaires on attachment styles, sexual behaviors, and sexual attitudes to obtain information from a predominantly white college-aged sample of 328 males and females. They found that avoidant individuals were more accepting of casual sex (approve of sexual intercourse with little to no commitment) but that the number of partners avoidant individuals had was not related to their attachment style.

While this finding somewhat supports Belsky et al.'s (1991) theory, Gentzler and Kerns (2004) found information about another insecure group that was not in line with the earlier

theory. They discovered that anxious-ambivalent men had fewer sexual partners than avoidant males but both avoidant and anxious-ambivalent males and females experienced unwanted but consensual sex. The findings of this study make it clear that additional research is needed on the differences in behavior and attitudes between the typologies of insecure attachment. One possible reason for the difference is that anxious-ambivalent men are unsure about being part of a romantic relationship and are less likely to engage in sexual activity that occurs in those relationships.

In a two-part study of attachment styles and relationship factors, Feeney, Noller, and Patty (1993) discovered information about attachment, sexual attitudes, and sexual behaviors in undergraduate males and females. The first part of their study used questionnaires to collect information on young adults' attachment styles and sexual attitudes. The attachment styles were classified in line with Bowlby's (1982) theory as secure, avoidant, and anxious-ambivalent. The initial study found that avoidant individuals were more likely than secure or anxious-ambivalent individuals to approve of sexual intercourse with little to no commitment (casual sex).

The second part of the Feeney et al. (1993) study acquired information through students' six-week diaries. This unrestricted self-report data provided information about students' sexual behavior over the course of a month and a half. It showed that avoidant females and anxious-ambivalent males were less likely than other students to participate in sexual intercourse during the data collection period. Data from anxious-ambivalent males supported the findings from the first part of the study. The information from avoidant females, however, was unexpected. It was suggested that avoidant males, but not females, have more casual sex than other individuals. The authors posit that this is due to the power dynamic attached to sexual behavior through gender roles that encourage males but discourage females to seek sex.

In order to collect more detailed information, a longitudinal study of attachment and sexual behavior and attitudes among 470 predominantly white males and females at an Australian University was conducted (Feeney, Peterson, Gallois, & Terry, 2000). This study utilized the Bartholomew four-category typology measure of attachment and used both questionnaires and diary reports over an eight week period. The questionnaire assessed students' attachment typologies, anxiety over relationships, and discomfort with closeness. Responses from the questionnaires and diary reports were categorized using two newly-defined attachment styles, discomfort and anxiety. Those who identified with either the secure or preoccupied typology reported being less uncomfortable with closeness when compared to fearful or dismissing individuals. On the other hand, the fearful and dismissing individuals reported having less anxiety about relationships than the other two typologies. Feeney et al., (2000) chose to narrow down the typologies to two based on debate about the number of adult attachment styles and a desire to group their findings by dimensions of attachment rather than styles. This helped increase sample sizes within groups and strengthen their statistical findings. While they grouped participants by two dimensions rather than four styles, these dimensions addressed the participants' feelings toward relationships (anxiety or discomfort) and not feelings about self and others. This grouping may be helpful when analyzing a relatively small sample size but it could also lead to a misunderstanding of the motivation behind different groups' behaviors.

The six-week diaries exposed a number of items relevant to sexual behavior including (but not limited to) number of partners, frequency of protected sex (use of condoms), and frequency of discussing sexually transmitted infections with partners. It was found that those who experienced anxiety about relationships were less likely to discuss contraception, less likely to have conversations about HIV/AIDS, less likely to regularly use condoms or participate in

other methods of safe sex, and were more likely to have used drugs before sex. Those who experienced discomfort with closeness were quite the opposite. They were more likely to have conversations about HIV/AIDS and to use condoms regularly.

The results of this study indicate that elements of attachment typologies are related to serious issues within the topic of sexual behavior. Most importantly, it appears that attachment style is related to participation in unsafe sex or practices that may reduce the safety of sexual behavior. If, as the literature suggests, insecure attachment is related to poor communication, perhaps this extends to communication about safe sex. Some studies have found that a lack in safe-sex communication is related to unsafe sex practices. Those who use the information from these studies to develop education programs about safe sex may benefit from knowing the different reasons why people avoid discussing the topic and how attachment styles can influence that.

Communication and the Negotiation of Condom Use

Studies addressing risk reduction in the contraction of HIV/AIDS and other STIs point to the effectiveness of partners' communication about the use of condoms (Catania, Coates, & Kegels, 1994; Edgar, Freimuth, Hammond, McDonald, & Fink, 1992; Kelly & Kalichman, 1995). These studies have found that poor communication is related to lower levels of condom use. Kelly and Kalichman (1995) discuss the problems faced when trying to curtail high-risk sexual behavior. Public HIV prevention programs do not always rely on findings from applicable basic research to guide their education methods. Kelly and Kalichman (1995) discuss the need to address the problem of sexual coercion wherein a resistant partner is prodded into doing something he or she is not sure about. A lack of open communication in relationships may override any sexual education partners may have received.

In a questionnaire study of 204 sexually active college students, Edgar et al. (1992) found that more than 50% of their participants had not used a condom during their last sexual encounter. Of that group, one third claimed to have wanted to use a condom but did not bring up the subject with a partner because they were either embarrassed or afraid to ask. In contrast, the respondents who had used a condom during their last sexual encounter were likely to verbally discuss the subject with their partner. Over 80% of those confronted with verbal requests to use a condom did so without hesitation.

Catania, Coates, & Kegels (1994) surveyed 716 sexually active at-risk heterosexuals about correlates of condom use. Among several other measures that are beyond the scope of this topic, measures of condom use and health protective sexual communication were used and results were compared. The health protective sexual communication scale assessed the level of communication individuals had with partners about safe sex practices, not communication about methods used to have more enjoyable sex. Catania et al. (1994) found that verbal communication about health protection, including condom use, is important not only in new sexual relationships but in established relationships as well. They made the point that verbal communication is the primary way partners negotiate their needs but this does not have to be limited to sexual pleasure needs. Health concerns can be and are addressed in this way as well.

Research has shown that communication about safe sex in general between partners is related to condom use (Catania et al., 1994; Edgar, et al. 1992; Kelly & Kalichman, 1995). A lack of communication is related to risky sexual behavior including non-use of condoms (Edgar et al., 1992). Several studies have shown that attachment style is related to methods of communication (Collins & Read, 1990; Hazan & Shaver, 1987; Kobak & Hazan, 1991; Mikulincer & Nachshon, 1991; Pistole, 1989) and risky sexual behavior (Bogaert & Sadava,

2002; Brennan & Shaver, 1995; Feeney et al., 1993; Feeney et al., 2000; Gentzler & Kerns, 2004; Stephan & Bachman, 1999). If individuals with certain types of attachment styles are less likely to communicate with their partners about important issues, it seems necessary to explore how this pattern could apply to communication about safe sex and could affect condom use. Although previous research has explored parts of this relationship, none has explored them altogether. The purpose of the current study is to examine whether or not the relationship between attachment style and communication about contraception exists and, if so, how that could affect condom use.

CHAPTER 3

THE CURRENT STUDY

Purpose of the Current Study

The purpose of the current study is to go beyond what is known about adult attachment and relationship quality to develop a model that will demonstrate a relationship between attachment and participation in risky sexual behavior, including condom use. In addition, I will identify the mediating mechanisms in this relationship.

Conceptual Models

The models below show the relationship between attachment style, communication, and sexual behavior, including condom use. Previous studies have shown a relationship between attachment styles and sexual behavior (Feeney et al., 1993; Feeney et al., 2000; Gentzler & Kerns, 1993). The current study will attempt to verify the relationship between attachment styles and sexual behavior. I expect the relationships in this sample to be similar to those in previous studies; preoccupieds are more likely to engage in risky sex (i.e. elevated number of sex partners, lower instances of condom use) than are secure and dismissive individuals (Feeney et al., 2000). This pattern of behavior may also be the case for fearful individuals. However, they are the least likely to engage in intimate relationships in the first place. As a result, it may be difficult to identify a risky pattern of behavior in the data.

Past research has indicated a relationship between attachment style and communication patterns that I expect to be related to sexual behavior and condom use (Collins & Read, 1990; Kobak & Hazan, 1991; Mikulincer & Nachshon 1991; Pistole, 1989). Using condoms has been found to be directly related to discussing their use with partners. (Catania, Coates, & Kegels, 1994; Edgar, Freimuth, Hammond, McDonald, & Fink, 1992; Kelly & Kalichman, 1995). A

review of the literature suggests that secure individuals may be more self-disclosing and may have more effective methods of communication. As found in previous studies, I expect to find that talking about sex and condom use will be related to less risky sexual behavior. Dismissing individuals have a positive model of self and a negative view of others which will make them less likely to participate in risky sexual behavior or in sex without using a condom. Preoccupied individuals have a negative model of themselves but a positive model of others which stunts their self-disclosure and leads them to resolve or avoid conflict by giving in to the desires of their partner. This behavior puts these individuals at risk by reducing or halting the discussion of sex and condom use which will result in less use of condoms. Fearful individuals are also at risk of this but are so for a somewhat different reason. They have negative models of both themselves and others which lead them down a path similar to preoccupied individuals'. They see themselves as unworthy of self disclosure and fulfillment of their desires and do not expect partners to be sensitive to those things even if they were voiced. It may be more difficult to observe this, however, because these individuals are not as likely as others to even participate in close romantic relationships. As a result, I expect to observe a pattern wherein fearful individuals have little to no communication but report less risky behavior much like dismissing individuals will.

Research Questions

Research Question 1: Is there a relationship between attachment style and engagement in risky sexual behavior? It is expected that there will be a significant direct relationship between attachment style and engagement in risky sex.

Specifically, secure individuals will report lower participation in risky sex (including increased numbers of partners and lack of condom use). This is due to the fact that they have a positive view of self that should help them protect themselves from the risks of that behavior.

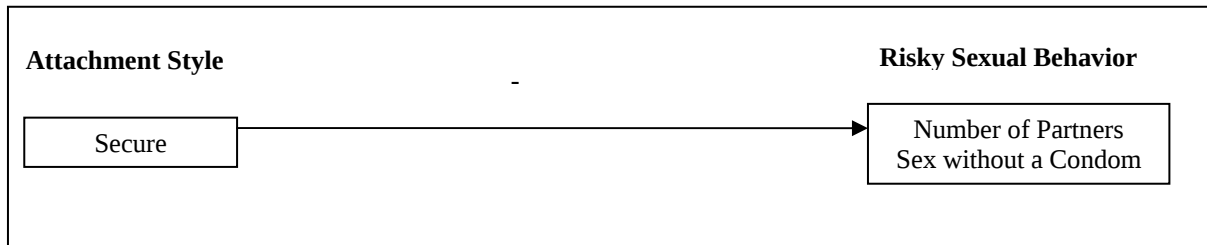


Figure 1 Secure Attachment Style and Risky Behavior

It is expected that dismissing individuals will also have low participation in risky sex, perhaps even lower than secure individuals. This is due to the fact that they have a positive view of self and a negative view of others which may make them more likely to distrust partners and, therefore, protect themselves through condom use and limiting partner numbers.

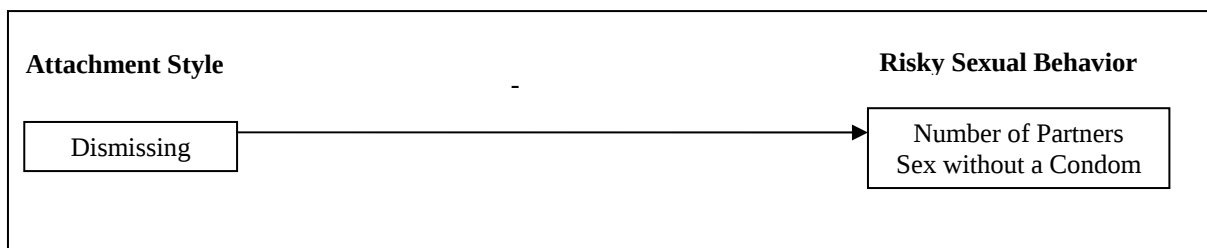


Figure 2 Dismissing Attachment Style and Risky Behavior

Due to their negative view of self, positive view of others, and eagerness to please, preoccupied individuals will have higher participation in risky sex.

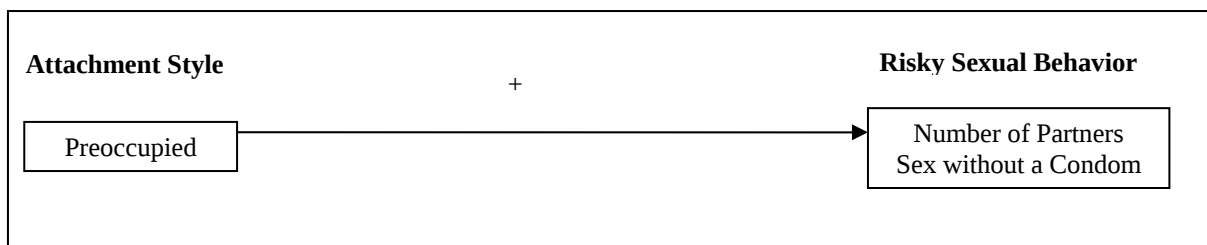


Figure 3 Preoccupied Attachment Style and Risky Behavior

Fearful individuals, may exhibit the same relationship but for different reasons. They may not report on sexual behavior patterns due to lack of intimate relationships. As a result, they will report lower number of partners and less condom use.

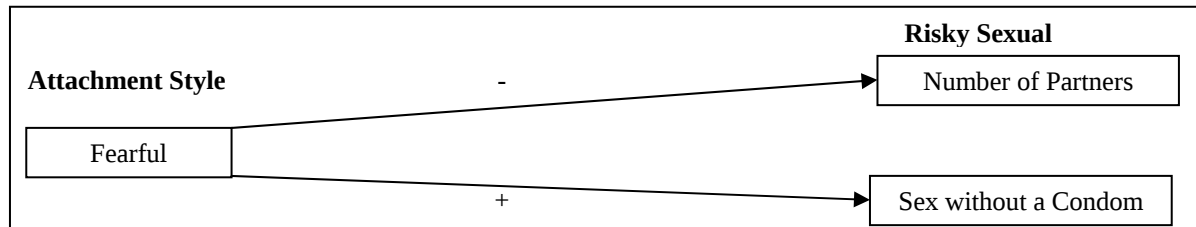


Figure 4 Fearful Attachment Style and Risky Behavior

Research Question 2: Does communication mediate the relationship between attachment style and engagement in risky sexual behavior? It is expected that communication around sex will mediate the relationship between attachment style and risky sexual behavior. Secure individuals will engage in high levels of open communication which will, in turn, be associated with less risky sex. It may, therefore, be the case that the effect of attachment style on risky sexual behavior is indirect through communication. It is expected that the negative relationship between a secure attachment style and participation in risky sex is expected to be direct as well as indirect through communication.

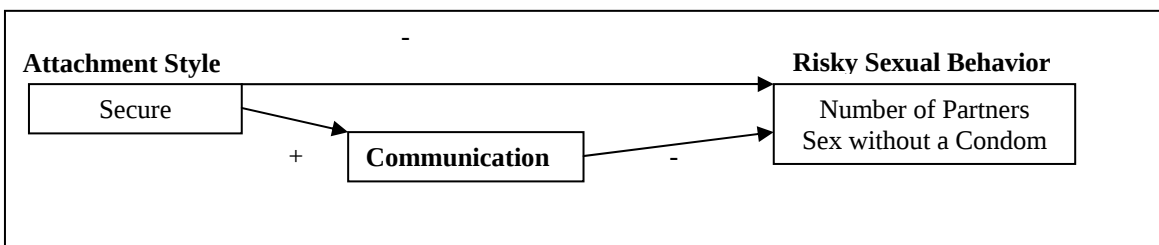


Figure 5 Mediating Effect of Communication on Secure Attachment Style and Risky Behavior

A dismissing attachment style is expected to be negatively associated with open communication. This, however, should not affect their participation in risky sexual behaviors. Instead, it is expected that the primary effect of a dismissing attachment style on risky sexual behavior is a direct one, not indirect through communication. They do not require

communication to protect themselves, however, to the extent that communication is a factor, it is expected that any communication that does occur would result in lower participation in risky sex.

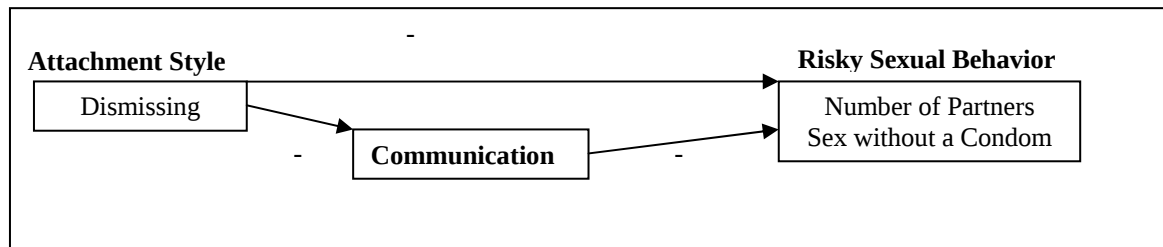


Figure 6 Mediating Effect of Communication on Dismissing Attachment Style and Risky Behavior

Preoccupied individuals will be less likely to report high levels of communication as a result of their desire to please their partners which will, in turn, be associated with higher participation in risky sex.

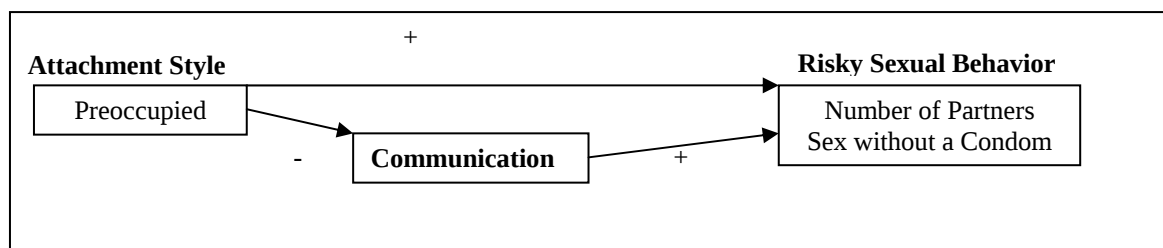


Figure 7 Mediating Effect of Communication on Preoccupied Attachment Style and Risky Behavior

Again, a consistent pattern for fearful individuals may be difficult to observe given the possibility that they may have had few intimate relationships. This could explain why these individuals would be more likely to report low levels of communication while, at the same time, low participation in risky sex (or sex of any kind). That said, it is expected that preoccupied individuals will have lower levels of good communication due to their negative view of self and others. These views could limit their desire to communicate or could limit their belief in their ability to communicate. This lack of communication could also be an indication of reduced

numbers of partners with whom they could even communicate. Which, in turn, would result in their decreased report of number of partners and sex without a condom.

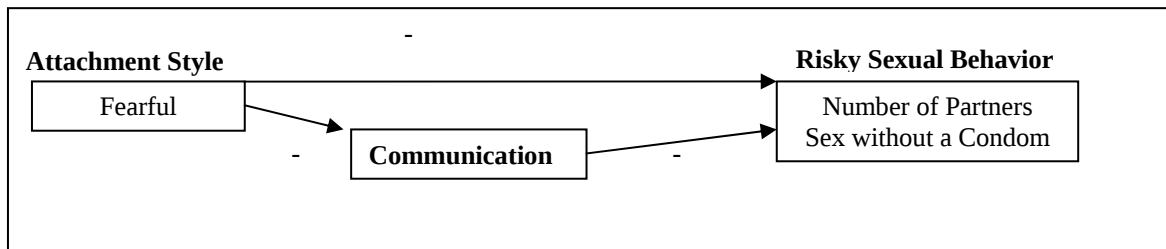


Figure 8 Mediating Effect of Communication on Fearful Attachment Style and Risky Behavior

CHAPTER 4

METHOD

Sample and Procedures

Data were collected from 1453 undergraduates (1238 females and 215 males) enrolled at the University of Georgia during the 2005-06 academic year. The sample was recruited in undergraduate classes and by flyers posted around campus in the fall of 2005 and the spring of 2006. Participants who were enrolled in the Child and Family Development 2100 course were offered 10 bonus points to participate. Participants who were recruited by the flyer were included in a drawing for an iPod nano as an incentive. Questions included in the survey focused on family of origin, current and past relationship experiences, and attitudes and behaviors regarding sex, marriage, substance use, and religion. The study was explained to prospective subjects several days in advance of the administration of the survey instrument. They were told that the survey would focus on issues associated with dating, sex, and family relationships and that some items were of a sensitive and personal nature. Participants were told they could discontinue taking the survey at any time if they became uncomfortable with the questions. Participation was voluntary and there were no identifiers on the survey instrument. Pencil and paper surveys were administered and, due to the personal nature of some items, completion of the survey was proctored like an exam. Participants were made aware that the data would be used at the aggregate level in the preparation of manuscripts for the purposes of presentation at professional meetings and publication in research journals. The response rate was nearly 100%. Data was obtained from 215 males and 1238 females. Only data from the females are used in the present analyses as previous research suggests attachment style is more predictive of sexual behaviors for females than for males (Feeney et al., 2000).

Approximately 90% of the respondents were White with an average age of 19.5 years. The majority were in their sophomore or junior year of college. In terms of living situation, 48% of the respondents lived off campus, 30% lived in dorms, and 22% were fraternity or sorority members. Seventy-five percent of the respondents indicated that their parents were married to each other. Median family income was between \$50,000 - \$70,000.

Measures

Attachment. Attachment typology was assessed using Bartholomew and Horowitz's (1991) four-category measure of attachment. This measure was developed to reflect attachment styles based on the combination of self image and image of others. Attachment styles were validated by self-report measures of interpersonal functioning as well as self-concept. Self and friend reports were also used and revealed specific patterns in self image and image of others for each attachment style. Respondents were asked to select one of the following four descriptions of their approach to romantic relationships. The secure description includes ease in becoming close to and depending on others, comfort with having others depend on self, and lack of worry about being alone or rejected. The Dismissing description focuses more on independence with expressed comfort from being without close relationships and a preference to depend on self rather than others. Conversely, the Preoccupied description includes a need to be in close relationships coupled with the experience of having others not reciprocate this. It also mentions fear of abandonment. Finally, the Fearful paragraph describes comfort with being close to others and a desire to be in close relationships that is not achieved as a result of lack of trust in others.

Communication about Safe Sex Practices. This concept was measured using 2 items that could indicate level of communication about safe sexual practices. Each item was used separately in the analysis of mediating effects on the relationship between attachment and risky

sex. The first item asked respondents to indicate on a Likert scale ranging from 1 (Never) to 4 (Always) how often they discuss the use of condoms with a partner. A high score on this measure was an indication of good communication. It was used in the analysis of mediating effects of communication on the relationship between attachment and condom use.

Students were also asked about the likelihood of their honesty with partners about their sexual histories. They were directed to indicate this on a Likert scale ranging from 1 (very unlikely) to 4 (very likely). Again, a high score on this item reflects good communication. This item was also used in the analysis of the mediating effect of communication on the relationship between attachment style and number of partners.

Number of Partners. Respondents were asked to report their number of sexual partners (none, one, two to four, five to nine, or ten or more) for penile/vaginal, oral, and anal sex. Responses were coded on a scale from 0 to 4. Those who indicated no sexual partners were assigned a 0; those with one partner were assigned a “1”; those with two to four partners were assigned a “2”, those with five to nine partners were assigned a “3”; those with ten or more partners were assigned a “4.” A higher score on this variable indicates riskier behavior.

Condom Use. Frequency of condom use during different types of sexual activity was assessed by three questions. Respondents were asked to indicate on a scale from “always” to “I have never engaged in this activity” which best described their use of condoms during penile/vaginal, anal, and oral intercourse. Those who reported having never engaged in this activity were assigned a “0”; those who always used condoms were assigned a “1” while those who never used condoms were assigned a “4” and those who usually and sometimes used condoms were assigned a “3” and “2” respectively. A higher score on this variable indicates riskier behavior.

CHAPTER 5

RESULTS

Data analysis was conducted using survey responses from 1,238 female participants to run several simple and multiple regression models. Table 2 shows the frequency of attachment styles. Forty-seven percent of the young women identified as secure, 15% as preoccupied, 28% fearful, and 8% as dismissing. This distribution of attachment styles is consistent with the pattern found in previous studies (Feeney et al., 2000).

Table 2 Approach to Romantic Partners

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid secure	586	47.3	47.3	47.3
preoccupied	190	15.3	15.3	62.7
fearful	350	28.3	28.3	91.0
dismissing	101	8.2	8.2	99.1
missing	11	.9	.9	100.0
Total	1238	100.0	100.0	

The respondents were asked to indicate the number of partners with whom they had sexual intercourse (involving penile/vaginal penetration), oral sex (involving oral/genital contact), or anal sex (involving anal/penile penetration). Table 3 presents the frequency and distribution of responses ranging from “none” to “ten or more.”

Table 3 Number of Partners

		Penile/Vaginal		Oral		Anal	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Valid	None	458	37.0	325	26.3	1052	85.0
	One	265	21.4	238	19.2	137	11.1
	Two to Four	299	24.2	437	35.3	35	2.8
	Five to nine	152	12.3	177	14.3	7	.6
	Ten or more	63	5.1	60	4.8	5	.4

When asked to indicate how likely it is that they would be honest with a sexual partner about their sexual history, seventy-five percent indicated that it was “very likely.” The remaining quarter of the sample indicated some reluctance to be honest, with ten percent responding that it was “somewhat unlikely” or “very unlikely” that they would be honest about this issue. Table 4 presents the frequency and distribution for responses to this item.

Table 4 Honesty with Partner about Sexual History

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very likely	934	75.4	75.4	75.4
	somewhat likely	192	15.5	15.5	91.0
	somewhat unlikely	63	5.1	5.1	96.0
	very unlikely	45	3.6	3.6	99.7
	missing	4	.3	.3	100.0
	Total	1238	100.0	100.0	

The next set of questions focused on condom use during various sexual activities. Table 5 illustrates the results. Sexually active respondents were more likely to use condoms during vaginal/penile intercourse than any other type of sexual activity. One-fifth of the sample reported that they always use condoms, almost one-tenth indicated that they never use condoms, and about one-third indicate sporadic condom usage during this activity. A greater proportion of the sample admitted to having engaged in oral sex than in vaginal/penile intercourse (72% compared to 63%). However, respondents were less likely to use condoms during oral sex than during penile/vaginal intercourse. Specifically, over 90% of respondents indicated that they “never” use condoms during oral sex.

Table 5 Condom Use During Penile/Vaginal, Oral, and Anal Sex

		Penile/Vaginal		Oral		Anal	
		Frequency	Percent	Frequency	Percent	Frequency	Percent
Valid	I have never engaged in this activity	456	36.8	344	27.8	1043	84.2
	Never	110	8.9	829	67.0	132	10.7
	Sometimes	210	17.0	27	2.2	14	1.1
	Usually	206	16.6	17	1.4	10	.8
	Always	256	20.7	20	1.6	38	3.1

Table 6 presents the frequencies for discussion of condom use with partners. Of the sexually active portion of the sample, about one-third indicate that they never discuss condom use, approximately 16 % indicate that they always discuss use of condoms, and about half sporadically discuss the use of condoms with a partner.

Table 6 Discussion of Condom Use with Partners

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I have never engaged in this activity	390	31.5	31.5	31.5
	Always	134	10.8	10.8	42.3
	Usually	248	20.0	20.0	62.4
	Sometimes	171	13.8	13.8	76.2
	Never	293	23.7	23.7	99.8
	missing	2	.2	.2	.2
	Total	1238	100.0	100.0	100.0

Table 7 presents a correlation matrix of all of the study variables discussed above.

Table 7 Correlation Matrix of All Study Variables

	Secure	Pre-occupied	Fearful	Dismissing	Number of Penile/ Vaginal Partners	Number of Oral Sex Partners	Number of Anal Sex Partners	Honesty about Sex	Condom Use, Penile/ Vaginal	Condom Use, Oral	Condom Use, Anal	Condom Use Discussion
Secure	1	-.409**	-.604**	-.286**	-.053	-.022	.021	.134**	-.015	.015	.014	.002
Pre-occupied	-.409**	1	-.270**	-.128**	.067*	.098**	.054	-.047	-.003	.039	.001	.057
Fearful	-.604**	-.270**	1	-.189**	.023	-.034	-.056*	-.093**	.009	-.016	-.037	-.034
Dismissing	-.286**	-.128**	-.189**	1	-.028	-.034	-.017	-.029	.016	-.052	.033	-.025
Number of Penile/ Vaginal Sex Partners	-.053	.067*	.023	-.028	1	.701**	.283**	-.396**	.594**	.383**	.292**	-.130**
Number of Oral Sex Partners	-.022	.098**	-.034	-.034	.701**	1	.240**	-.300**	.495**	.519**	.240**	-.003
Number of Anal Sex Partners	.021	.054	-.056*	-.017	.283**	.240**	1	-.118**	.091**	.139**	.469**	.040
Honesty about Sex	.134**	-.047	-.093**	-.029	-.396**	-.300**	-.118**	1	-.161**	-.148**	-.174**	-.031
Condom Use, Penile/ Vaginal	-.015	-.003	.009	.016	.594**	.495**	.091**	-.161**	1	.447**	.157**	-.576**
Condom Use, Oral	.015	.039	-.016	-.052	.383**	.519**	.139**	-.148**	.447**	1	.180**	-.060
Condom Use, Anal	.014	.001	-.037	.033	.292**	.240**	.469**	-.174**	.157**	.180**	1	-.060
Condom Use Discussion	.002	.057	-.034	-.025	-.130**	-.003	.040	-.031	-.576**	-.060	-.060	1

Indicates sig at .05 and ** at .01

Identifying as secure was significantly and positively related to honesty about one's sexual history. Identifying as preoccupied was significantly and positively related to number of genital sex partners and number of oral sex partners. Identifying as fearful was negatively related to number of anal sex partners as well as willingness to be honest about sexual history. The negative correlation indicates that fearful individuals are less likely to be honest about their sexual histories. Finally, identifying as dismissing was not significantly related to any of the hypothesized variables.

The finding that a preoccupied style of attachment is associated with number of genital and oral sex partners and that a fearful attachment style is associated with number of anal sex partners and less honesty about sexual history provides partial support for the expected pattern of findings associated with research question 1.

Multiple regression models were run to assess the relationship between attachment style and risky sex as it is mediated by communication. Attachment styles were dummy coded so that the Secure typology served as the reference group. Tables 8 and 9 show the results of the first step in regression analysis. This step was used to examine the relationship between attachment style and number of partners. Table 8 shows that preoccupied individuals have a significantly higher number of penile/vaginal partners than do secure individuals. Table 9 shows that preoccupied individuals have a significantly higher number of oral sex partners than do secure individuals.

Table 8 Attachment and Number of Penile/Vaginal Partners

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
1 (Constant)	1.205	.050		23.895	.000
Preoccupied	.258	.102	.076	2.536	.011
Dismissing	-.046	.131	-.010	-.353	.724
Fearful	.112	.082	.042	1.363	.173

Table 9 Attachment and Number of Oral Sex Partners

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	1.502	.048		31.424	.000
	Preoccupied	.293	.097	.091	3.034	.002
	Dismissing	-.106	.125	-.025	-.848	.397
	Fearful	-.036	.078	-.014	-.461	.645

The next step in regression analysis examined the relationship between attachment style and honesty about one's sexual history. Table 10 shows that all attachment styles are less likely to be honest about their sexual histories than are secure individuals.

Table 10 Attachment and Honesty about Sexual History

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.739	.030		123.304	.000
	Preoccupied	-.186	.062	-.091	-3.018	.003
	Dismissing	-.175	.079	-.065	-2.207	.027
	Fearful	-.212	.050	-.129	-4.265	.000

The final step in assessment of the mediating model is shown in Tables 11, 12, and 13. Honesty about one's sexual history was added as an independent variable along with the attachment styles. This was run with number of penile/vaginal, number of oral sex and number of anal sex partners. Table 11 shows that, once honesty is added to the model, the association between attachment style and number of genital partners is reduced and is no longer significantly different from attachment style for any other type of attachment.

Table 11 Mediating Effect of Honesty on Attachment and Number of Penile/Vaginal Sex Partners

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.654	.170		21.527	.000
	Preoccupied	.115	.094	.034	1.221	.222
	Dismissing	-.161	.121	-.036	-1.329	.184
	Fearful	-.023	.076	-.008	-.296	.768
	Honesty	-.655	.044	-.397	-14.997	.000

Table 12 shows that, once honesty is added to the model, the association between attachment style and number of oral sex partners is reduced and is no longer significantly different from attachment style for any other type of attachment.

Table 12 Mediating Effect of Honesty on Attachment and Number of Oral Sex Partners

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.313	.166		19.903	.000
	Preoccupied	.180	.092	.056	1.944	.052
	Dismissing	-.190	.119	-.045	-1.605	.109
	Fearful	-.134	.075	-.052	-1.796	.073
	Honesty	-.485	.043	-.310	-11.310	.000

Table 13 Mediating Effect of Honesty on Attachment and Number of Anal Sex Partners

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	.565	.086		6.576	.000
	Preoccupied	.014	.048	.009	.292	.771
	Dismissing	-.061	.061	-.030	-1.004	.316
	Fearful	-.084	.039	-.067	-2.181	.029
	Honesty	-.094	.022	-.122	-4.254	.000

Finally, Table 13 shows that when honesty is added to the model, the main effect of attachment on number of anal sex partners is still significant. Tables 11 and 12 provide support for the second hypothesis, which assesses the mediating model, while Table 13 does not.

Regression analysis was not conducted to assess the mediating effect of discussion of condom use on the relationship between attachment style and risky sex. The correlation matrix provided no support for the hypothesis that attachment style is related to risky sex or that this relationship is mediated by discussion of condom use.

CHAPTER 6

CONCLUSIONS

The purpose of this study was to address two research questions. The first investigated the relationship between attachment style and engagement in the risky sexual behaviors of increased partner number and lack of condom use. The second examined the extent to which communication mediates the relationship between attachment style and engagement in those risky sexual behaviors. It was expected that there would be a significant relationship between attachment style and engagement in risky sex. Secure individuals were expected to report lower participation in risky sex because they have a positive view of self that should help them protect themselves from engaging in harmful behavior. Dismissing individuals will also have low participation in risky sex (lower than even secures) because they have a positive view of self and a negative view of others which may make them more likely to distrust partners and, therefore, protect themselves. Preoccupied individuals have a negative view of self, positive view of others, and eagerness to please that will cause them to have higher rates of participation in risky sex. Fearful individuals were not expected to report on sexual behavior patterns due to lack of intimate relationships so they should report a lower number of partners, and less condom use.

First, partial support was found for the hypothesis that attachment style is related to number of sex (penile/vaginal) partners. Preoccupied individuals reported a higher number of partners, as hypothesized. Dismissing individuals, as hypothesized, reported fewer partners but the difference was not significant. Compared to secure individuals, it is easy to understand how preoccupied individuals' behavior can be significantly different. A possible explanation for the lack of significant difference between secure and dismissing behavior is that secure individuals' behavior may not be as easily predicted as hypothesized. Secure individuals may have as low a

number of partners as do dismissing individuals, with no significant difference. They may also use condoms less than expected because of their positive view of others. They may trust partners to be STI-free and, therefore, forgo condom use. This, though, is additional hypothesizing. No measures were included to conduct additional analysis that could support these explanations.

No support was found for the expected relationship that attachment style is related to condom use. Analysis showed no significant relationships between attachment style and condom use during penile/vaginal, oral, or anal sex.

The second research question investigated the mediating effect of communication on the relationship between attachment style and risky sexual behavior. It was expected that communication around sex would mediate the relationship between attachment style and risky sexual behavior. Again, due to patterns in view of self and others, it was expected that secure individuals would be more likely to report high levels of communication which would, in turn, be associated with less risky sex. Dismissing individuals would be more likely to report low levels of communication. That, however, was not expected to affect their participation in risky sexual behaviors. Preoccupied individuals would be less likely to report high levels of communication which would, in turn, be associated with higher participation in risky sex. Again, a consistent pattern for fearful individuals would be difficult to observe given the possibility that they would have had few intimate relationships. This could explain why these individuals would be more likely to report low levels of communication while, at the same time, low participation in risky sex (or sex of any kind). Results partially supported this set of hypotheses.

Given the fact that some support was found for the hypothesized direct relationship between attachment and number of partners, a mediating model was analyzed. This model

suggested that attachment style would be related to honesty about one's sexual history which would then be related to number of partners. Results showed that attachment style was related to number of partners. Preoccupied individuals reported a higher number of partners than did secure individuals. This difference was significant.

The next step in analysis showed that attachment style was related to honesty about one's sexual history. Preoccupied individuals were least likely to be honest compared to secure individuals, followed by fearful and dismissing individuals, in that order. All groups were less likely to be honest about their sexual history when compared to secure individuals.

When honesty about one's sexual history was added to the original model, the main effect between attachment style and number of partners was significantly reduced for all but one of the relationships. This result provides partial support for the hypothesis that honesty about one's sexual history mediates the relationship between attachment style and number of sexual partners.

A regression model illustrating the mediating effect of communication on attachment style and condom use was not needed as the correlation matrix provided no support for either the direct relationship or the mediated relationship. This was an unexpected result and provided no support for the hypothesis that attachment style is related to condom use or that this relationship is mediated by discussion of condom use. This finding could be the result of poor measures or other unknown safe sex practices.

This study is not without limitations. First, there is the issue of a single-item measure of communication. Using one question to gauge an individual's honesty about sexual history or discussion of condom use is not ideal. Future research should use a reliable and valid scale for each construct. At this point it cannot be definitively said that attachment has nothing to do with

communication about condom use. This item was measured by asking respondents, “how often do you discuss condom use with a sexual partner?” This item is subject to interpretation and may not have provided the information desired. Perhaps a better measure could provide more clarity on the issue.

Second, the study does not include questions about other methods of contraception or respondents’ perception of risk with regard to sexually transmitted infections (STIs). Some respondents may not use condoms and may not discuss their use because they use other methods they believe are safe. Future research should include measures that assess other methods of protection and people’s perception of their safety in an effort to understand the thought process of respondents when it comes to safe sex and how that may or may not be related to attachment style.

Another limitation of this study is the sample. The use of a convenience sample results in study findings that are not generalizable. These results reflect the possibly unique responses of a sample of predominantly white, economically advantaged, collegiate females.

Finally, although measures of sexual activity included penile/vaginal, oral, and anal sex, it is not quite clear why there are some marked differences in these behaviors. Why is condom use more prevalent in penile/vaginal intercourse than in oral and anal sex? One could speculate but there is no data to answer the question. Future research should be conducted to understand perceptions surrounding these behaviors and how those may be related to attachment, communication, and safe sex practices.

Partial support was found for some of the expected patterns in this study but research in this area is far from complete. Future research using more in-depth measures may yield even more support for these hypotheses and others stemming from this study.

Results of this study can be used to inform others besides those involved in future study. They can help inform classes on both parenting and sex education. Although results are mixed, parents should be educated on the development of attachment styles and their role in this development. If attachment styles can affect future relationships, perhaps even intimate ones, parents may find instruction on secure attachment development helpful.

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APPENDIX A

Attachment

Which of the following best describes your approach to romantic partners?

- A. It is easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone and having others not accept me.
- B. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.
- C. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.
- D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, I prefer not to depend on others or have others depend on me.

APPENDIX B

Communication about Safe Sex Practices

If a potential sexual partner were to ask you about your prior sexual history, how likely is it that you would be completely honest with him/her about your past?

- A. Very likely
- B. Somewhat likely
- C. Somewhat unlikely
- D. Very unlikely

Please answer the next question using the following response format:

- A. Always
- B. Usually
- C. Sometimes
- D. Never
- E. I have never engaged in this activity.

How often do you discuss the use of condoms with sexual partners?

APPENDIX C

Number of Partners

Please answer the next questions using the following response format:

- A. None
- B. One
- C. Two to four
- D. Five to nine
- E. Ten or more

With how many persons have you had sexual intercourse (that is, penile/vaginal penetration)?

With how many persons have you had oral sex (that is, oral/genital contact)?

With how many persons have you had anal intercourse (that is, penile/anal penetration)?

APPENDIX D

Condom Use

Please answer the next questions using the following response format:

- A. Always
- B. Usually
- C. Sometimes
- D. Never
- E. I have never engaged in this activity.

How often do you use condoms when you have sexual intercourse?

How often do you use condoms when you have oral sex?

How often do you use condoms when you have anal intercourse?