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ATTACHMENT, IDENTITY DEVELOPMENT, AND SEXUAL BEHAVIOR  
AMONG COLLEGE STUDENTS

by

Diana D. Coyl

A thesis submitted in partial fulfillment  
of the requirements for the degree

of

MASTER OF SCIENCE

in

Family and Human Development

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## ABSTRACT

Attachment, Identity Development, and Sexual Behavior  
Among College Students

by

Diana D. Coyl, Master of Science

Utah State University, 1997

Major Professor: Dr. Randall M. Jones  
Department: Family and Human Development

The prevalence of nonmarital sexual behavior among adolescents continues to rise, as does the number of sexually transmitted diseases, AIDS, and unwanted pregnancies. College-age adolescents appear to be even more susceptible to these problems. Sound theoretical knowledge would seem useful in designing more effective prevention programs. The purpose of this study was to identify theoretical factors that contribute to or decrease such behaviors.

Two hundred fifty-two single college students completed measures designed to examine relations among identity development, attachment patterns, gender, and sexual behavior in older adolescents. Attachment and identity measures were used to explore variations in sexual behavior relating to identity development and the quality of intimate relationships formed in late adolescence. Three measures were used to assess these theoretical constructs and to measure sexual behavior: The Personal Opinion



Survey contains Grotevant and Adams' 64-item Extended Version of the Objective Measure of Ego Identity Status; a modified version of Simpson, Rholes, and Nelligan's 13-item Attachment Style measure; and 19 items that assess sexual behaviors.

Results confirmed statistically significant relations among identity development, attachment patterns, gender, and sexual behavior. Specifically, correlational analyses confirmed relations among identity, attachment, and premarital intercourse, age of first intercourse, and items pertaining to risky sexual behavior. Identity was also statistically significantly related to premarital intercourse. Attachment and identity subscale scores were predictive of sexual behavior when multiple regression equations were generated. Previous studies of identity, gender, and intimacy among older adolescents support the findings of this study. Other researchers have found relationships between attachment and intimacy among this population. The results of this study and future research areas are discussed.

(99 pages)

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## CHAPTER I

### INTRODUCTION

Research on adolescent sexual behavior includes a broad spectrum of correlates including: religious background, socio-economic status, age, gender, race, drug use, family structure, and attitudes toward premarital sex, among others. Many social scientists hope to provide information that will contribute to future prevention efforts by identifying correlates such as these.

Nevertheless, the prevalence of nonmarital sexual behavior among adolescents continues to rise (Moore, Miller, Gleib, & Morrison, 1995; The Alan Guttmacher Institute, 1994). Not surprisingly, there has been a corresponding increase in sexually transmitted diseases (STDs) and AIDS among adolescents. Estimates of STDs for sexually active adolescents are as high as 30%, and young heterosexuals exhibit the fastest rate of increase for contracting AIDS (Desiderato & Crawford, 1995). Two related concerns include inconsistent contraceptive use among adolescents and the related risk of pregnancy. Reports of adolescent contraceptive use vary. According to one source, only a third of sexually active adolescents between the ages of 15-19 regularly use contraceptives (Rice, 1996). Others report that two thirds of teenagers use some method of contraception the first time they have sex (usually a condom) and between 72% and 84% of teenage women use some method of contraception regularly (Moore et al., 1995). However, the number of young women having children outside of marriage continues to rise at a disturbing rate (The Alan Guttmacher Institute, 1994). For women, especially,

the consequence of an unplanned pregnancy may thwart educational and career goals and limit future options. By investigating potential differences among females and males in sexual behavior and the consequences of that behavior, gender may prove to be an important factor to consider when designing prevention programs. All of these trends provide evidence that adolescent premarital sexual behavior is still an area worthy of concern and investigation.

In addition, patterns of sexual behavior among college students do not suggest that education is making them wiser in this area of their lives. Sexual activity with multiple partners and inconsistent contraceptive use place this group of late adolescents at risk for contracting STDs, AIDS, and becoming pregnant (Desiderato & Crawford, 1995).

Prevention efforts directed toward unmarried college students typically focus on education about STDs and AIDS. Counseling programs have worked more specifically with women in attempting to improve their self-concept, explore troublesome issues related to intimacy, or provide training in assertiveness (Tavris, 1992). Among young adolescents, such as those in junior and high schools, scare tactics or discussions about the harsh realities of teen pregnancy and related consequences have been employed. These and similar approaches have often been reactive, lacking in consistency, and vaguely structured around concepts such as raising self-esteem (Jones, 1990), altering power differentials between men and women, or other related concerns (Tavris, 1992).

Sound theoretical structure for prevention is what is often, most obviously missing. Few (if any) of these programs can point to a theory from which their intervention is derived, much less provide compelling support for the effectiveness of their efforts.

Evaluations that have been conducted on school-based interventions at the secondary level (junior and high schools) have not provided strong evidence of their success (Kirby et al., 1994). Indeed, the continued rise in teen pregnancy, substance use and abuse, and school dropout rates attests to the lack of ability of such programs to reduce these problems among adolescents (Jones, 1994).

### Conceptual Framework

Attachment theorists suggest that youth who have warm and nurturing relationships with their primary caregivers tend to grow up secure, possessing a greater sense of self-esteem, are well-adjusted, and experience greater emotional well-being. Historically, studies of attachment have focused on samples of infants and very young children (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969); however, recent studies have generalized attachment constructs to explain adolescent development (Feeney & Noller, 1990; Kenny, 1987; Kobak & Sceery, 1988).

The relations between quality of attachment and mental health, physical health, reaction to stress, and illness have been examined in pre- and early adolescent samples (Greenberg, Siegel, & Leitch, 1983), and more recently studies have been conducted with older college-age adolescents (Feeney & Noller, 1990; Feeney, Noller, & Patty, 1993; Kenny, 1987; Kobak & Sceery, 1988; Lapsley, Rice, & FitzGerald, 1990; Ryan & Lynch, 1989). Secure attachment between parents and older adolescents, particularly those who venture off to college, may influence these adolescents' decision to engage in problem behaviors, including risky sexual behavior. Current studies of older adolescent-parent

attachment have been correlated with present behavior and emotional well-being (Greenberg et al., 1983; Kobak & Sceery, 1988; Ryan & Lynch, 1989).

In reviewing attachment theory outlined by Bowlby and Ainsworth in conjunction with Erikson's psychosocial theory of development, a number of striking similarities come to light. Bowlby's study of institutionalized children revealed that they often experience emotional problems. They also had difficulty forming intimate and lasting relationships with others. Bowlby further speculated that the cause of their emotional problems was related to a lack of secure attachment to a mother-figure early in life (Bowlby, 1969).

Similarly, Erikson proposed that the first and most basic issue that humans must resolve concerns their ability to trust others and their environments. Mothers create a sense of trust in their children by being responsive to their needs in timely and appropriate ways. According to Erikson, "A drastic loss of accustomed mother love without proper substitution, . . . can lead, . . . to acute infantile depression. [Further] impressions of having been deprived, of having been divided, and of having been abandoned, leave a residue of basic mistrust," that will negatively influence their responses to psychosocial issues pertaining to later stages including identity development and the formation of intimate relationships (1968, p. 101).

On the other hand, Bowlby pointed out that children who have good attachment relationships use their mother-figures as a secure base from which they may explore their environment (Crain, 1992). This idea corresponds nicely with Erikson's beliefs that trust (established through the mother-infant relationship) is necessary for development of autonomy (Erikson, 1968). Positive resolution of subsequent stages in Erikson's model--



initiative versus guilt; industry versus inferiority; identity versus role confusion, and intimacy versus isolation--may parallel patterns of attachments. A correspondence between secure attachment and healthy resolution of Erikson's stages, as well as the pairing of insecure-avoidant attachment patterns and negative outcomes of the psychosocial stages, appears logical.

Positive support for the relation between warm and supportive parents and adolescents' high self-concept and ego identity development has been found (Marcia, 1980). Successful resolution of identity crises has also been correlated with a lower incidence of adolescent problem behavior (Jones, 1992). Other researchers (Greenberg et al., 1983; Kenny, 1987; Ryan & Lynch, 1989; Steinberg & Silverberg, 1986) have found that the quality of attachment in parent-child relationships does influence psychosocial development and behavior.

#### Research Questions

The purpose of this study is to examine the relations among attachment, identity, gender, and sexual behavior among unmarried college students. The sexual behavior of unmarried college students will be investigated, employing attachment and psychosocial measures because of their potential to explain the variation in sexual behaviors that may be associated with aspects of identity development and the quality of romantic attachment relationships.

Both theories provide possible explanations for the quality of intimate relationships and the ability to form successful relationships in adulthood. Are measures of attachment

and identity related to current sexual behavior among never-married college students? More specifically, do relations exist among attachment, identity, and the following indicators of sexual behavior: premarital intercourse, age of first intercourse, and risky sexual behavior (defined as having engaged in one or more of these activities: had sex on the first date, had sex with someone known less than 24 hours, had sex with more than one person in a 24 hour period, and lack of contraceptive use)? These research questions will be analyzed by gender to explore the possibility that males and females differ in the ways that attachment and identity are related to sexual behavior.

CHAPTER II  
REVIEW OF LITERATURE

Sexual Behavior Among Older Adolescents

In the past, adolescence has been considered a transition period between childhood and adulthood where young people gradually begin to participate in behaviors and assume roles traditionally reserved for adults. In the United States, however, a disturbing trend toward accelerated or early initiation into more risky adult behaviors--e.g., sexual relations, drinking, and smoking--continues to be evident. Adolescents in the U.S. are having sexual experiences at younger ages and in greater numbers than previous generations. More than one half of females and over two thirds of males have had intercourse before their 18th birthday (Moore et al., 1995). While more adolescents are engaging in sexual experiences at early ages, the gap between their sexual behavior and assuming other adult roles such as economic independence and marriage continues to widen (The Alan Guttmacher Institute, 1994). According to Forrest (cited in Moore et al., 1995) the time span between first intercourse and marriage is about 7 years for women and 10 years for men.

Patterns for sexual behavior vary across age groups. Unmarried teenagers (ages 15 to 19) generally engage in serial monogamy (Moore et al., 1995). In addition, some estimates (e.g., Moore et al., 1995; The Alan Guttmacher Institute, 1994) suggest that teenagers are more consistent in their use of contraception than are young adults, based on

lower rates of unintended pregnancy for teenagers compared with those in their early twenties.

In contrast, frequency of sex is higher among women between the ages 20-24 than among 15- to 19-year-old women (The Alan Guttmacher Institute, 1994). College students typically engage in sexual activity with one or more partners during their college years (Baldwin, Whitley, & Baldwin, 1990). Desiderato and Crawford (1995) found that over one third of the sexually active college students (36.6%) reported having more than one sexual partner during an 11-week period since the school year began. Of the sexually active students in their sample, only 24% reported using condoms 100% of the time. Those with multiple partners were significantly less consistent in their contraceptive use. Almost one half of the sexually active students (men, 52.1%; women, 48.5%) did not disclose to their current partner about previous risky sexual behavior. Those with multiple sexual partners were even less likely to disclose about past sexual experiences.

Other researchers (McDonald et al., 1990) have observed a positive correlation between number of sexual partners and prevalence of STDs. Sigmon and Gainey (1995) found that although college students in their sample were informed about STDs and safe sex practices, only 60% of the men and 55% of the women said they actually took precautions to guard against these dangers. In Desiderato and Crawford's (1995) college sample, 19% of sexually active respondents reported having had at least one STD.

Differences in sexual behavior found between younger adolescents (ages 15-19) and older adolescents (ages 20-24) may be attributed, in part, to the age at which they became sexually active. Those who initiate sex at younger ages tend to move more

quickly to subsequent sexual partners (Moore et al., 1995). The 1992 National Health Interview Survey--Youth at Risk Behavior Supplement also found a strong association between early initiation of intercourse and a greater number of partners in early adulthood. The percentage of males and females who had six or more sexual partners by age 20, and who had initiated sex at age 14 or younger, was much greater (74% for males, 57% for females) than those teenagers who had not initiated sex until age 17 (only 10% of these males and females had had six or more partners).

A number of researchers have found correlations between smoking, alcohol use, and sexual activity (Desiderato & Crawford, 1995; Hernandez & Diclemente, 1992; Sigmon & Gainey, 1995; The Alan Guttmacher Institute, 1994). Sigmon and Gainey (1995) asked students at a northeastern college if they were more likely to engage in sex if they had been drinking alcohol; the majority of both men and women responded with "almost always" or "sometimes." Although these students seemed knowledgeable regarding the risks of HIV/AIDS, and 100% considered it important to discuss precautions, 48% of males and 43% of females reported not using protection during sex after drinking alcohol.

The literature consistently identifies factors that contribute to greater risks for college students. Early initiation of intercourse increases the likelihood of more partners. As the number of partners increases, so too does the risk of contracting STDs, including AIDS. Many college students practice inconsistent contraceptive use. Drinking behavior and sexual activity have been consistently correlated. In addition, those who drink are less likely to use methods of protection if they have been drinking before sexual relations

occur. Many college students don't inform their current partners about past risky sexual behavior. Those who have multiple partners are the least likely to disclose, more likely to drink heavily prior to intercourse, more likely to have an STD, and less likely to use some form of contraception consistently.

### Gender Differences in Sexual Behavior and Consequences

#### Attitudes

In recent times, women have made significant gains toward equality with men in a number of social settings: educational, professional, political, etc. The study of women's personal lives and values has also become an area of growing research and commentary. In particular, ideas about female sexuality have changed radically and include the acknowledgment that women do have sexual desires and seek their fulfillment (Hendrick, Hendrick, Slapion-Foote & Foote, 1985; Tavris, 1992). Men still tend to begin sexual relations at younger ages than women and typically have more partners over a lifetime. The number of sexually active teen males at each age is approximately equal to the number of sexually active teen females who are one year older (Moore et al., 1995).

Nevertheless, gender differences in sexual attitudes still persist. Males tend to be more permissive about premarital sex than females. Hendrick, et al. (1985) noted women scored higher on measures of sexual conventionality and responsibility than did the men in their sample, but they found no differences in sex avoidance across genders. Overall, these researchers concluded that men and women's attitudes about sex are gradually

converging. Other research indicates that many of today's young women are narrowing the gender gap in sexual experiences. Seventy-one percent of women in their early twenties have had more than one partner, and 21% have had six or more partners (The Alan Guttmacher Institute, 1994). According to Moore et al. (1995) by age 20 the number of females who have had sex (76%) compared with the number of males who have (80%) is nearly equal.

One disturbing gender difference in sexual experience remains prevalent, that of unwanted sexual intercourse and related behaviors. Typically, more women experience coercion or pressure to engage in sexual activities than do males, especially at younger ages. According to Benson, Charlton, and Goodhart (cited in Miller, Monson, & Norton, 1995), women in the 16-24 age group are more susceptible to date and acquaintance rape than other age groups. Seventy-four percent of women who had intercourse before age 14 and 60% of women who had intercourse before age 15 report having had sex involuntarily (The Alan Guttmacher Institute, 1994). These problems exist at the college level, as well. A study at East Carolina University (cited in Rice, 1996) revealed that unwanted pressure to engage in sexual behavior was the most frequently mentioned dating problem expressed by women.

Some men also experience pressure to engage in unwanted sexual activity (Smith, Pine, & Hawley, 1988). In one study, men listed enticement, desire to please, inexperience, intoxication, reluctance not to, partner's verbal coercion, and gender-role expectations as primary reasons for engaging in the behavior (Muehlenhard & Cook, 1988). Poppen and Segal (1988) found that noncoercive or unwanted sex for other

reasons (e.g., not being able to say "no") was comparable for both sexes.

Still, a coercive strategy employed by a partner that results in unwanted sex is a more common experience for females than males (Poppen & Segal, 1988). Women do experience more verbal and physical coercion than men. Date rape remains a common occurrence among teens and college-age youth, and coercive sex has many negative consequences (Miller et al., 1995). Makepeace (1986) found that although males and females were about equal in reporting initiating, committing, and sustaining violence, females more consistently reported serious forms of violence done to them. They were usually the principal victim, sustained sexual assault, physical injury, and emotional trauma much more frequently than did males. Alcohol was often associated with incidents of courtship violence and alcohol may be used as an excuse to be violent.

#### Possible Negative Consequences of Sexual Behavior

Gender differences also exist in regard to the chance of acquiring a sexually transmitted infection. In a single act of unprotected intercourse with an infected partner, a woman is twice as likely as a man to acquire gonorrhea, chlamydia, or hepatitis B.

Unplanned pregnancy generally has negative consequences for young single women. Although the risk of becoming pregnant is slight (3% for fertile women) in a single act of unprotected intercourse, it rises dramatically to 90% during the course of a year of unprotected sexual relations (The Alan Guttmacher Institute, 1994). One million teenage females become pregnant each year. Although pregnancy rates among sexually experienced teenagers have declined for the last two decades, the proportion of teenagers



who have intercourse has grown. Thus, the overall teen pregnancy rate has increased. About one half of adolescent pregnancies end in birth; slightly over one third end in abortion, and the rest end in miscarriage. Among females who deliver, the vast majority keep their babies (The Alan Guttmacher Institute, 1994). Older adolescent females are not exempt from these risks. The proportion of out-of-wedlock births to U.S. females in their twenties has increased four-fold. Adult women account for a larger majority of unintended pregnancies, abortions, and births than do teenage females (The Alan Guttmacher Institute, 1994).

An unplanned pregnancy and birth have long-term consequences for the well-being of the mother and child. Many of these young women do not complete educational goals, thus forfeiting opportunities for higher status and better-paying jobs. Often they raise their child without emotional or financial support from the father. If a woman's family of origin is also unwilling to provide these supports, she may find herself isolated and unable to cope. Though a man may bear the burden of guilt for abandoning a woman and the child they created together, a woman clearly carries the heavier, multiple burden of having to provide for that child.

#### Prevention Efforts

In response to these alarming trends, the number of school-based sex education programs continues to grow. Unfortunately, such programs have not been characterized by any uniform standards or consistency in the information they provide. Only a few schools work in conjunction with a clinic where contraceptives are readily available for

adolescents (The Alan Guttmacher Institute, 1994). At the college level, information about STDs/AIDS is the most common approach. Through family studies, and some psychology and sociology courses, students gain additional information about sexual relations, contraceptive methods, pregnancy, and childbirth. In addition, most student health services provide reasonably priced contraceptives. However, there is little evidence that these measures are influencing the sexual behavior of college students (Desiderato & Crawford, 1995; Hernandez & Diclemente, 1992).

It seems obvious that information and contraceptive supplies alone are insufficient to curb the rising rate of premarital sexual behavior and some of its negative consequences, for example, STDs and unwanted pregnancies. Moreover, HIV education programs targeted toward adolescents appear to effectively increase knowledge about disease transmission and sometimes influence attitudes toward HIV victims, but "few have demonstrated effectiveness in modifying adolescents' risk behaviors, such as unprotected sexual intercourse" (Hernandez & Diclemente, 1992, p. 437). Prevention efforts directed toward providing information or skills that will presumably reduce problem behavior typically fail to acknowledge the variety of reasons that adolescents engage in these behaviors (Jones, 1994).

Researchers who study adolescent sexual behavior often do so without a particular theoretical perspective (Miller & Fox, 1987). In a review of recent research concerning adolescent sex, contraception, and childbearing, Moore et al. (1995, p. 13) concluded,

Many studies are atheoretical *ad hoc* examinations that contribute to our knowledge base, but not to our understanding of the complex determinants of

early pregnancy and childbearing. As with data, stronger theories are needed, and more theory-drive research is essential.

There are very few theories that specifically address the issues and concerns of adolescents. However, psychosocial and attachment models do seem appropriate for understanding adolescent sexual behavior. Erikson's psychological theory of development describes fundamental challenges and tasks that individuals must resolve throughout the life cycle. Attachment theorists believe our primary relationships with parents, especially the relationship between a mother and child, also influence our individual development and social relations over the life span. Both Erikson's (1968) discussion of identity development and Ainsworth et al. (1978) and Bowlby's (1969; 1973) attachment research provide useful theoretical models from which adolescent behaviors and attitudes may be studied and better understood.

Other researchers (e.g., a study by Jessor, Chase, & Donovan, 1980 cited in Jones, 1992) have concluded that psychosocial theories have been quite successful in explaining much of the variability in composite measure of problem behavior. In addition, characteristics of individual identity statuses appear to influence differing motivation for substance use (Christopherson, Jones, & Sales, 1988; Jones & Hartmann, 1988) and risky sexual behavior (Hernandez & Diclemente; 1992, King, 1993).

Greenberg et al. (1983) found that adolescents' attachment to peers and parents was related to self-esteem and life satisfaction. Kobak and Sceery (1988) observed relationships between attachment style and ego-resiliency. In addition, attachment style was associated with competence in social settings. Feeney and Noller (1990) and

Feeney et al. (1993) found that attachment style was related to attitudes about sex and the love relationships pursued by unmarried college students. For purposes of this study, Erikson's theory and Bowlby and Ainsworth's attachment theory will serve as important theoretical guides in selecting measures and analyzing and interpreting data.

selecting measures and analyzing and interpreting data.

### Erikson's Theory of Psychosocial

#### Development

Erikson's (1963) psychosocial theory describes the fundamental tasks associated with the development of psychosocial maturity. More specifically, psychosocial maturity is the total configuration of individual, interpersonal, and social adequacy skills in conjunction with the personality mechanisms that regulate them (Adams, Gullotta, & Markstrom-Adams, 1994). Throughout the life course, each person confronts a series of crises or turning points that constitute periods of increased vulnerability and heightened potential. When appropriately resolved, these crises contribute to character development and psychosocial maturity. Each crisis or stage builds upon previous ones that shape an individual's growing and changing personality (Erikson, 1968).

The fifth stage in Erikson's model, identity versus role-confusion, addresses the very issues that adolescents are grappling with. As they begin to mature physically, adolescents no longer see themselves as children, yet they have not achieved adult status either. In addition, changing expectations from others, such as parents and peers, contribute to a sense of confusion about which roles and self-definitions are now

appropriate. Grotevant and Cooper (1986) studied changes in parent-child relationships during adolescence and found support for differences in family experiences related to individual differences in adolescents' identity formation. In addition, adolescents whose family interactions were characterized by warmth, encouragement, and acceptance better weathered maturational, emotional, and social changes that are common during adolescence (Grotevant & Cooper, 1985).

Older adolescents are still in the process of identity development after they leave high school. If they attend college, new information, experiences, and opportunities may challenge the beliefs and values with which they were raised. Many first-year college students experience a heightened sense of freedom and ability to explore previously forbidden behaviors and roles. What is needed most for healthy identity resolution is a period of moratorium, a time to integrate elements of identity that were established in childhood, thereby providing a sense of continuity, at the same time allowing for the integration of new aspects of their emerging adult identity (Erikson, 1968). However, not all adolescents undergo a period of moratorium that leads to positive identity development and a strong sense of commitment to chosen values. Some remain in a state of role confusion. These youth may have abandoned, or perhaps may have never been subjected to, early parental prohibitions concerning risky behaviors.

#### The Measurement of Identity

Influenced by Erikson's theory, much research has linked adolescent identity development to behavior, attitudes, and other psychological measures. Marcia's (1966)

operationalization of Erikson's fifth stage of psychosocial identity development is the most widely recognized construct. The major components of the model deal with exploration and commitment. Marcia classified youth into four identity statuses based on individual responses to concerns, beliefs, and values that are theorized to be a part of this period in an adolescent's life. The four statuses are identity achievement, moratorium, foreclosure, and diffusion. Identity-achieved youth have undergone a period of exploration about who they are and what they want from life. As a result of this process, they have made strong commitments toward future goals. Moratorium youth are in the process of exploring options before making commitments. Foreclosed youth are characterized by strong commitments to the values of significant adult authority figures, typically their parents. They have not questioned these values or future decisions, nor have they explored alternatives. Diffused youth are characterized by their lack of both exploration and commitment. They tend to drift along, following the path of least resistance and conflict, lacking future-orientation (Schiedel & Marcia, 1985).

Interview and self-administered questionnaires developed by Marcia (1966) and others (e.g., EOM-EIS: Grotevant & Adams, 1984) have been used to classify adolescents in the four identity statuses. Stephen, Fraser, and Marcia (1992) studied the mutability and flexibility of identity, which may change or evolve over the life course, reformulating itself in response to significant life events or crises.

According to Erikson, part of the identity formation process requires ". . . playful, if daring, experimentation in fantasy and introspection" (Erikson, 1968, p. 164). Many adolescents experience a sense of identity crisis or a period of self-exploration, which,

according to Erikson's model, is developmentally appropriate and normal. However, this can be a very confusing, troubling time for some youth. Beliefs about individual adequacy impact interpersonal adequacy, which in turn influences social relations, and views about self, others, and environments. Experimentation or exploration is a characteristic of the moratorium identity status.

Bilsker and Marcia (1991) proposed that the "moratorium status [which they define as] actively engag[ing] in the task of questioning parental beliefs in order to form unique personal commitments, should manifest a greater disposition toward regressive experiences than individuals in other status categories" (p. 77). Testing this assertion, they compared a sample of college students on measures of identity status and the Taft Ego Permissiveness Inventory, designed to measure adaptive regressive experiences, for example, withdrawal from external reality via trance-like experiences, reveries, drug-induced states, and so forth. As predicted, students who fit in the moratorium identity-status group scored higher on measures of adaptive regression.

#### Identity and Risky Behavior

Several studies have shown a clear relationship between ego identity status and involvement in problem behavior among adolescents (Christopherson et al., 1988; Hernandez & Diclemente, 1992; Jones & Hartmann, 1988; Jones, Hartmann, Grochowski, & Glider, 1989). Christopherson et al. (1988) assessed ego-identity development and substance use using a random sample of 1,691 subjects (grades 7 through 12) from public schools in Arizona. They found that females were more psychosocially mature than males

as indicated by greater percentages of females being classified in the mature statuses (achievement and moratorium). Males were more likely to be diffused in the Interpersonal Domain, whereas females were more likely to be classified in moratorium for this domain. Males were more likely to be ideologically foreclosed, but females were more likely to be in ideological moratorium. Another interesting finding was related to motivations for substance use. When comparing groups across ideological identity status, achieved and moratorium youth were much more likely to cite curiosity as a motivation for substance use than were those classified as foreclosed and diffused. In fact, motivations for substance use or abstinence were related significantly to identity status and domain. For instance, a greater percentage of foreclosed youth cited religion or no interest as reasons for nonuse in the Interpersonal Domain. Overall, the variance in motivational responses shared with psychosocial maturity depended upon the question asked and the identity domain (Ideological or Interpersonal) under which it was compared (Christopherson et al., 1988).

In a related study, Jones and Hartmann (1988) provided additional support for differences in substance use by identity status. Students identified as diffused, in their sample of 6,975 public and private school students (7th through 12th grade), were at greater risk for substance use/abuse than students in the other three statuses. Consistently, diffused individuals reported higher rates and more diverse substance use while foreclosed youth reported lower rates of experience than any other status. For example, these researchers found that diffused compared to foreclosed youth "were about twice as likely to have tried cigarettes and alcohol, three times as likely to have tried marijuana, four



times as likely to have tried inhalants, and five times as likely to have used cocaine" (p. 358). Achieved and moratorium youth were similar in the levels of use, which fall between the two extreme statuses, foreclosed and diffused (Jones & Hartmann, 1988).

The identity statuses have been useful in evaluating variations in sexual behavior, as well. King (1993) examined identity status and sexual behavior among never-married college students at selected universities in Utah and Arizona ( $N = 579$ ). Students identified by the four identity statuses differed in attitudes, motivations, and behavior patterns related to sex. In general, diffused subjects were most likely and foreclosed subjects were least likely to engage in risky sexual behavior. Statistically significant positive relations were found for students classified as diffused and their responses to the following questions: "Have you ever: Had sex with someone you have known less than 24 hours?; Had sex with more than one person in a 24-hour period?; and Had sex with someone on the first date?" There was a positive relation between foreclosure and sexual abstinence. Among sexually active subjects, identity achieved youth were more likely to consistently use contraceptive methods. Differences in motivation for engaging in sexual behavior were found among the different identity statuses. Diffused students were more likely to cite "curiosity/experimentation" as a reason for pursuing sexual relations, whereas achieved persons were most likely to say "they're in love, committed." Reasons for abstaining from sexual activity or for using or not using contraceptives also differed by identity status (King, 1993).

Hernandez and Diclemente (1992) selected a sample of male college students ( $N = 176$ ) to examine the relation between ego-identity development, self-control, and

risky sexual behavior. They found that subjects with higher cumulative ego-identity scores who did not engage in unprotected sex indicated more goal-directedness and more self-assuredness. Higher cumulative ego-identity scores also correlated positively with self-control and negatively with disinhibition. In reviewing other research that links ego-identity development with such factors as self-actualization, self-regard, and self-preservation, Hernandez and Diclemente (1992) concluded from their cross-sectional data that "enhancing ego-identity development would promote adolescent health and disease prevention behavior" (p. 445). The findings reviewed above provide substantial support for the efficacy of designing intervention programs that acknowledge and utilize levels of psychosocial maturity, and in particular, levels of identity development.

Sexual behavior might also be related to Erikson's sixth stage: Intimacy versus Isolation. In his book, Identity: Youth and Crisis, Erikson (1968) described true intimacy as a stage that clearly follows identity formation. He acknowledged that sexual intimacies may occur prior to stage five, but these experiences do not represent true interpersonal intimacy. Adolescents who have not resolved issues of identity may be intimately involved with another person, yet "retain a deep sense of isolation" (Erikson, 1968, p. 136).

#### Identity, Intimacy, and Gender

It is useful to examine how well Erikson's stages describe the developmental processes of both sexes. The psychosocial model has come under criticism by some feminist scholars and researchers who feel that it describes males' life experiences much more so than females'. Some women do not experience the crises in the sequences

outlined by Erikson, and have questioned whether psychosocial theory accurately describes their life events and priorities (Tavris, 1992).

Gilligan's critique (1982) is probably the most well-known. In her book, In a Different Voice (1982), she implies that females and males organize their lives around different themes. Women's identity is best understood within a context of relationships, the fulfilling of expressive roles, in which attachment and relatedness are essential characteristics. In contrast, men focus more on individual achievement and goals, the fulfilling of instrumental roles, and thus male identity development can best be understood within a context of separateness.

Responding to concerns that women's identity development may center more on interpersonal issues, Marcia (1980) expanded his Identity Status Interview (ISI) to include questions about sex role attitudes and sexual behavior standards. The rationale for these changes rests on the assumption that sexual and interpersonal issues would be more important in determining identity status for women, while occupational and ideological issues would be more determining of identity status for men. Bilsker, Schiedel, and Marcia (1988) found no significant differences between the sexes in overall identity status; there were comparable numbers of men and women in each status category. However, within content areas, sexual and interpersonal issues were more predictive of identity status for women (64%) and ideology issues were more predictive of identity status for men (73%). No significant differences were found between men and women in the area of occupation. These findings are consistent with Gilligan's assertions about the importance of relationships to the identity of women (Bilsker et al., 1988).

Schiedel and Marcia (1985) observed that females were twice as likely to be rated as preintimate or intimate than were males across the age ranges. Males tended to score higher on intimacy as they became older. In addition, diffused and foreclosed males scored lower in intimacy, whereas a third of the diffused and foreclosed females scored high in intimacy. This research suggests that intimacy is more contingent upon advanced identity development for males than for females. Again, support for Gilligan's theory is indicated.

Archer (1989) used a sample of high school students to evaluate gender differences and identity in relation to process, domain, and timing variables. She described these variables as follows: *process* refers to the identity status which represents an individual self-definition; *domain* refers to the content areas of a person's life that are relevant to self-definition, (e.g., sex-role orientation, family roles, biology, and social environment); *timing* refers to the times when identity activity is ongoing in various domains. No gender differences were found between identity status and vocational choice, religious beliefs, and sex-role orientation. *Timing* differences for identity activity were not significantly different for males and females. However, females were more likely to be in moratorium or identity achieved with regard to family roles. Females were also more likely to anticipate conflicts between family and career and perceive it as their own issue.

These findings are consistent with Erikson's belief that interpersonal issues are essential in forming women's identity, and vocational and ideological issues are of lesser

importance (cited in Paterson, Sochting, & Marcia, 1992). However, recent historical changes (e.g., the women's movement and the issues it raises about women's work and family roles) may be more influential in forming women's identities than was the case formerly (Archer, 1989; Bilsker et al., 1988). Current research indicates gender differences in timing of intimacy and identity achievement, whereas men appear more likely to follow the sequence described by Erikson. Further, sexual and interpersonal issues seem more predictive of women's identity than men's identity. The finding of no gender differences in religious and vocational domains may reflect the continued loosening of rigid gender roles and career expectations for young men and women today.

#### Summary

Erikson has provided researchers and educators with a theoretical model that described key issues of adolescent development. His writing about identity development and intimacy formation has provided important insights into the challenges or tasks that late adolescents must typically confront and resolve. Studies of identity development and intimacy (Archer, 1989; Bilsker et al., 1988) add support for gender differences in these areas. Identity development has also been correlated with a variety of problem behaviors among adolescents (Christopherson et al., 1988; Jones & Hartmann, 1988; Jones et al., 1989). Jones (1994) has argued that Erikson's model provides predictive tools for understanding youth's differing motivations for engaging in problem behaviors thereby providing better criteria for designing intervention programs.

## Attachment Theory

Bowlby's attachment theory resulted from his efforts to determine how and why infants become emotionally attached to their primary caregivers (Simpson, 1990) and how interpersonal relationships are influenced by the quality of early attachment relationships. Further, Bowlby (1969) was interested in how personality development in young children was influenced by separation from and reunions with their mothers. His observations of institutionalized children had a profound effect on his views of human attachment patterns (Crain, 1992). His initial orientation and training was in psychoanalysis, which he later integrated with the biological discipline of ethology (Ainsworth et al., 1978). From this perspective, behavior is best understood by a study of the environment from which it evolves.

Bowlby maintained that certain behavior patterns are "instinctual" and contribute to the survival of all species, including humans (Bowlby, 1969). He attributed the development of an attachment control system to neural and biological foundations, which include emotional and behavior responses designed to maintain proximity between infants and their primary caregivers (Simpson, 1990). He further asserted that behavioral systems were species specific and evolved to enhance chances of survival. Behaviors such as signaling, greeting, crying, and proximity seeking help maintain nearness to adult caregivers, who among other things, provide protection for their infants (Waters, Vaughn, Posada, & Kondo-Ikemuran, 1995). Accordingly, attachment behaviors are a part of a

behavioral system that is composed of observable behaviors, intraorganismic, and organizational components.

Infants learn to adapt their attachment behavior in relation to the perceived quality of responses from their mothers. Mothers' responses are also shaped by their children's behaviors. Intentional attachment behavior directed toward the mother has been observed in infants as young as 6 months old (Bowlby, 1969). If a mother is perceived by an infant as consistently responsive and nurturing, then that person may be used as a secure base, which allows the infant to explore his or her environment at different times and across contexts, while still being able to receive comfort or reassurance as needed (Waters et al., 1995).

Ainsworth et al. (1978) studied attachment patterns among Ugandan babies and their mothers, as well as infants and mothers in the United States. The Strange Situation paradigm (SS) was originally devised in 1964 and used to assess attachment-related behaviors by infants in unfamiliar situations. In-home observations of mothers and infants were also collected in conjunction with the SS data. These studies found general support for three behavioral patterns or attachment categories (Ainsworth et al., 1978).

1. Type A or insecure avoidant attachment was associated with mothers who were insensitive, interfering, and rejecting of their infants. These children did not appear distressed by separations from their mothers and upon reunion were either indifferent to their presence or actively avoided them. They had learned not to count on their mothers and developed a defensive posture as a means of avoiding further disappointments.

2. Type B or secure attachment was associated with mothers who were responsive, consistent, and sensitive to their infants' needs. Children from this group used their mothers as a secure base from which to explore and to receive reassurance. They were obviously distressed during separation, sought proximity and reassurance upon reunions, and then resumed exploration, continuing to use their mothers as a secure base.

3. Type C or insecure resistant-ambivalent or anxious/ambivalent attachment was associated with mothers who were inconsistent in their responses to their infants (e.g., loving and warm on some occasions, but not on others). In addition, these mothers scored high on measures of interfering and ignoring. These infants did not use their mothers as a secure base from which to explore. They either stuck by her or paid no attention to her. After separations, they sought contact but resisted being held or comforted. They often appeared angry or ambivalent toward their mothers or overly dependent and clingy (Crain, 1992).

Although criticisms have been raised about the validity of the SS paradigm, cross-cultural studies indicate some universality of secure-base behaviors (Waters et al., 1995). Ainsworth and colleagues have argued that individual differences in infant-mother attachment can contribute substantially to an understanding of how qualitative differences in attachment patterns and interpersonal relationships arise. Attachment patterns manifest themselves in behavior and emotional responsiveness, and influence subsequent personality development (Ainsworth et al., 1978).

Bowlby proposed that a distinction be made between attachment (the affectional bond between a mother and child) and attachment behaviors, such as smiling, crying, and



grasping. Bowlby actually wrote very little about the relation between behaviors and attachment itself (Ainsworth et al., 1978). However, Bowlby and Ainsworth both believed in the durability of attachment relationships, even when attachment figures were no longer present. Bowlby discussed "internal working models," which a child creates of both himself and his attachment figure (Bowlby, 1969). Though attachment behaviors may dissipate or change over time, the bond between mother and child remains. A child internalizes representations of the mother as a soothing, caring object, which can be recalled in times of distance from her (Rice, 1990). Stroufe and Waters (1977) provided additional support for an organizational component of attachment in which they defined the goal of attachment to be "felt security" regardless of proximity or contact with the mother. Bowlby suggested that internal working models influence an individual's affect, behavior, and perceptions of self, others, and relationships. To promote adaptation, working models must assimilate new experiences to existing expectations and accommodate variations in current relationships (Bowlby, 1973). Bowlby believed these constructs tend to be stable within individuals over time (Bowlby, 1969). Further, they are said to operate unconsciously, guide behavior in relationships with parents, and influence expectations, strategies, and behavior in later relationships (Crowell & Treboux, 1995).

A central proposition in attachment theory is that children's early experiences with primary caretakers form a prototype for later relationships outside the family (Crowell & Treboux, 1995). Two key features of these internal representations or working models are related to beliefs about: (a) whether or not the attachment figure is likely to respond to

calls for support and protection and (b) whether or not the individual is the sort of person towards whom people in general, and the attachment figure, specifically, are likely to respond to in a helpful way (Bartholomew & Horowitz, 1991).

The relationship between a mother and an infant may exert a profound influence on that child's subsequent relationships with others and their approach to life's opportunities and challenges. Bowlby's study of institutionalized children and those that had been separated from their mothers but later reunited revealed that those losses and separations continued to influence personality development and the quality of other relationships well into adulthood (Bowlby, 1969). Research by Ainsworth et al. (1978) provided additional support for the enduring influence of early attachment relationships between children and their mothers. Attachment theory and studies of attachment provide a useful way of viewing the impact of primary social relationships on subsequent interpersonal development. Intrapsychic and organizational aspects of attachment theory may be more relevant in studying attachment relationships during adolescence.

#### Adolescent Attachment

Recently, researchers have begun to apply attachment theory to aspects of adolescent development. Grotevant and Cooper (1986) and others (Armsden & Greenberg, 1987; Kobak & Sceery, 1988) have suggested that adolescents who share warm and nurturing relations with parents may continue to use their parents as a secure base from which they can independently explore new environments. Among early adolescents (seventh graders), Papini, Roggman, and Anderson (1991) found that

perceived attachment to parents diminished with advanced pubertal development, but adolescents who perceived positive attachment relationships with their parents reported less depression and social anxiety. Thus, potentially stressful changes associated with puberty may be moderated by positive family attachments.

Greenberg et al. (1983) chose a sample of adolescents ranging in age from 12 to 19 to test two hypotheses about the influence of perceived attachment to both parents and peers on measures of well-being. Presumably, as adolescents become older they distance themselves somewhat from their parents and turn to peers more often for emotional support (Steinberg & Silverberg, 1986). However, Greenberg et al. (1983) found that attachment to parents showed a moderating effect under conditions of high life-stress. Their results indicated no difference in utilization of parents between older and younger adolescents in their sample. Across grade levels the adolescents in this study continued to value the support and counsel received from parents.

Kobak and Sceery (1988) evaluated attachment patterns in first-year college students. These researchers viewed attachment as a theory of affect regulation. Group differences were found on measures of ego-resilience or the ability to constructively modulate negative feelings in problem-solving and social contexts, peer ratings of affect regulation, and representations of self and others. The securely attached group was rated as more ego-resilient, less anxious, and less hostile by peers than the dismissing and preoccupied groups. Securely attached subjects also reported higher levels of support from family than did the dismissing group.

Kenny's (1987) study also found support for a secure attachment pattern in the first-year college students. Most students viewed their parents as encouraging of independence by remaining supportive. Students described their interactions with parents as enjoyable and sought their parents "help more than a moderate amount" (p. 23). Gender differences were few; males were more likely to try to work out problems on their own.

Ryan and Lynch (1989) employed Steinberg and Silverberg's (1986) measure of emotional autonomy and reinterpreted the construct as a relationship that allows for progressive autonomy within the context of emotional support. Further, they suggested that "individuation is not something that happens from parents but with them" (Ryan & Lynch, 1989, p. 341). Detachment was described as an absence of consistent attachment or cohesion between parent and child. Three investigations were undertaken with groups of early adolescents (seventh graders), a high school sample (ninth through twelfth graders), and young adults (17-22 years old). For all three samples, the more "emotional autonomy" these adolescents expressed, the less connected or secure they felt within their families. Emotional autonomy seemed more synonymous with "emotional detachment" than with self-regulation or self-reliance. Whereas Steinberg and Silverberg (1986) found greater conformity to peers in situations where parental support was lacking, Ryan and Lynch (1989) found that those who reported secure attachment to parents reported more emotional security with friends. Those who reported more emotional detachment from parents also perceived themselves as less worthy of love in general.

In summary, several studies have revealed consistent descriptions of older adolescent and young adult attachment styles in relation to Bowlby's notions of internal working models of self and others. Individuals who correspond to the secure attachment style see themselves as friendly, good-natured, and likeable and view others as being generally well intentioned, reliable, and trustworthy. Those who conform to an insecure anxious attachment style tend to see themselves as being misunderstood, unconfident, and underappreciated, and they view significant others as being typically unreliable and either unwilling or unable to commit themselves to enduring relationships. Those characterized by the insecure avoidant attachment style often see themselves as being suspicious, aloof, and skeptical and view others as being basically unreliable, or overly eager to commit themselves to relationships (Simpson, 1990). Empirical support has been found for these mental models (Collins & Read, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987). These studies suggest that patterns of attachment are stable across time in the general population (Crowell & Treboux, 1995).

#### Adolescent Attachment and Sexual Behavior

If parent-child relationships serve as prototypes of later love relationships, they should mediate the emotional quality and the type of romantic relationships in which people engage. Simpson (1990) found that people who scored higher on the secure attachment index indicated that they were involved in relationships characterized by greater interdependence, commitment, trust, satisfaction, and lower levels of insecurity. In contrast, people who scored higher on the avoidant and anxious indexes reported that they

were involved in relationships defined by lesser amounts of interdependence, commitment, trust, and satisfaction. Main, Kaplan, and Cassidy (1985) observed that people can experience changes in attachment style, but they generally adopt the same style in different relationships. This finding lends support for the continuity of attachment styles over time.

Some researchers (e.g., Bartholomew & Horowitz, 1991; Crowell & Treboux, 1995) have raised the issue that measures of adult attachment assess different constructs. The AAI (George, Kaplan, & Main, 1987) elicits responses about attachment relationship between subjects and their parents. The AAS (Hazan & Shaver, 1987) and its adaptations provide information about adult romantic relationships. Behaviors or feelings that may appear to be indicative of long-standing attachment styles may be influenced more by current romantic relationships. Crowell and Treboux (1995, p. 319) further stated, "Care should be exercised when discussing the results of studies which use adult attachment measures, as unfortunately the shared terminology implies considerable overlap of meaning which is not supported by the research."

Some studies have explored the relations between individuals' attachment history and their attachment style toward adult romantic partners (Collins & Read, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987, 1990; Kobak & Sceery, 1988). Hazan and Shaver (1987) hypothesized that romantic love is an attachment process experienced differently among individuals because of variations in their attachment histories. They argued that the best predictors of adult attachment style were respondents' perceptions of the quality of their relationships with each parent and the parents' relationships with each other. In support of this proposition, the results of their study revealed that individuals

with different attachment orientations entertain different beliefs about the course of romantic love, the availability and trustworthiness of love partners, and their own love-worthiness.

In a follow-up study, Shaver and Hazan (1988) examined the relation between attachment patterns and sexuality in older adolescents (college freshmen). They found that securely attached individuals more typically involve themselves in relationships characterized by mutual intimacy and pleasure in sexual relations; avoidant attached persons pursue sexual experiences without emotional commitment and tend to be more promiscuous; anxious/ambivalent men and women perceive sexual relations as a means of satisfying their needs for love and security. Studies of adult attachment reviewed by Feeney and Noller (1990) found indirect support that attachment groups may differ in motivations for sexual behavior. For example, avoidant subjects reported fewer and less intense love experiences and expressed limited commitment to the partner in the relationship. Anxious/ambivalent subjects reported frequent and intense love experiences with rapid physical and emotional involvement. Secure subjects reported more loving, enduring, and satisfying relationships.

In their study of college students, Feeney and Noller (1990) found that attachment style was predictive of self-esteem, love styles, and beliefs about relationships among undergraduate students. Securely attached students reported the most satisfaction in their relationships. Avoidant subjects reported fewer and less intense love experiences. In addition, they reported limited commitment to their partner and were more accepting of

multiple relationships. Ambivalent subjects were characterized by emotional dependency, preoccupation, and jealousy.

In a follow-up study, Feeney et al. (1993) assessed attachment style and gender differences in older adolescents' dating relationships. Previous findings were supported. Where no statistically significant gender differences were found in the Feeney and Noller (1990) study, in this study, female avoidants and male anxious/ambivalents were least likely to report sexual involvement. In addition, males were more accepting of casual and uncommitted sex, and both male and female avoidant subjects were more accepting of this than were male and female secure subjects.

#### Adolescent Attachment and Identity Development

In reviewing studies that focus on adolescent attachment styles, identity development, and sexual behavior, similarities between avoidant attachment and diffused identity come to light. Identity diffusion is characterized by a lack of exploration and commitment to future goals and values. Presumably diffused individuals would also be less committed in their interpersonal relationships. King's (1993) report that identity diffused subjects exhibited a greater propensity to engage in risky sexual behavior lends some support to the idea of less commitment. Feeney, Noller, and Patty (1993) observed that older adolescents who fit the avoidant attachment pattern were also less committed to their partners in intimate relationships. They tended to view sex as a recreational activity rather than an expression of intimacy and they were more likely to have multiple partners. It is logical to suggest that individuals described by an avoidant attachment style and



diffused identity would report greater frequency of casual sex and less commitment in their dating relationships.

In contrast, the secure attachment style appears to share important characteristics with identity-achieved adolescents and may contribute to identity development. Grotevant and Cooper (1986) have suggested that secure attachment for adolescents would promote ego development and provide a foundation for emotional development and intimacy. Kroger (1985) found that identity-achieved adolescents were the most securely attached group in her study. Based on this finding, Rice (1990) suggested that a secure attachment style would foster exploration and identity development. Further, adolescents who report secure attachment relationships with their parents also report high levels of social competence, general life satisfaction, and somewhat higher levels of self-esteem (Rice, 1990).

In regard to dating behaviors and relationships, subjects who may be categorized by secure attachment styles and identity achievement are more likely to report sexual intimacy within the context of a serious, committed relationship. Such findings have been noted in separate studies of identity and attachment in relation to sexual behavior (Feeney & Noller, 1990; Feeney et al., 1993; Kenny, 1987; King, 1993).

A few researchers have looked at correlates between attachment and identity (Kroger, 1985; Kroger & Haslett, 1988; Lapsley et al., 1990). Kroger (1985) found no statistically significant differences between male and female New Zealand undergraduate college students with respect to identity status (operationalized in terms of Marcia's descriptions, [1966]) or attachment style. For men and women, identity-achieved and

foreclosed subjects were linked more frequently with secure attachment style than anxious or detached categories. Foreclosed identity status conformed to the severe anxious attachment pattern more frequently than any other identity status.

However, in a subsequent longitudinal study, Kroger and Haslett (1988) found no support for the prediction of identity development by previous attachment style. Correspondence between secure attachment style and identity achievement remained consistent, but students' attachment style tended to vary between assessment period (1984 to 1986); their identity status did not change. Kroger and Haslett (1988) questioned the appropriateness of their attachment measure for healthy college students because it had been used primarily with inpatient adolescents. Attachment and identity were not related in the expected directions and this finding may suggest that attachment relations do not directly influence identity development or achievement. Quintana and Lapsley (1987) also found that attachment and identity were not statistically significantly related.

In a later study by Lapsley et al. (1990), a statistically significant association between attachment and identity was found. In addition, women scored higher than men on measures of trust and communication with peers. Women also scored higher on measures of personal and social identity. These findings correspond with previous studies of ego identity that found that sexual and interpersonal issues were more predictive of identity status for women (Bilsker et al., 1988; Schiedel & Marcia, 1985).

Rice (1990) suggested that inconsistent findings among these studies may be related to the variety of measures of identity that were used. Although all of these studies used measures of identity based on Erikson's theory, they did not all use the same

instrument. The measures used by Quintana and Lapsley (1987) and Kroger and Haslett (1988) assessed a variety of identity-related tasks, whereas the measures used by Lapsley et al. (1990) addressed specific aspects of personal and social identity. Rice (1990) pointed out that both attachment and identity are complex constructs that have been measured in a variety of ways, and "it may be that certain aspects of identity are influenced by certain dimensions of attachment while other aspects are not" (p. 525). Additional investigations of the association between attachment style and identity development seem warranted.

#### Literature Summary

Researchers are beginning to investigate the association between attachment patterns and adolescent development and specifically, how parent-child attachment style may influence dating competence and related sexual behaviors during adolescence. In addition, studies of identity status and behavioral patterns in older adolescents are underway. Research that links psychosocial and attachment factors in adolescent development with problem behavior is a step toward designing better intervention programs that acknowledge differences in motivation and participation, and reasons for abstaining from risky behaviors. Previous emotional appeals and information-based prevention/intervention programs have failed to significantly reduce drug use and risky sexual behavior (Jones, 1994). A theoretical approach could provide valuable insight into the variation in sexual behaviors.

### Objectives

For this study, the relations among several variables were explored using a sample of never-married college students. Is there a relation between attachment and sexual behavior? Is there a relation between identity development and sexual behavior? Are there relations among measures of attachment and identity, gender, and sexual behavior?

## CHAPTER III

### METHODS

This chapter provides information about the research methodology for this study. The following discussion will include the research questions and relevant information about the research design, sample, measurement, procedures, data reduction, and analysis.

#### Research Questions

Several research questions relating to the sexual behavior of unmarried college students were explored. The specific research questions of this study were:

1. Is there a relation between attachment and sexual behavior?
  - (a) Is attachment related to premarital intercourse?
  - (b) Is attachment related to age of first intercourse among those who are sexually active?
  - (c) Is attachment related to risky sexual behavior among those who are sexually active?
  
2. Is there a relation between identity development and sexual behavior? In an effort to replicate previous findings, the following research questions will be investigated:
  - (a) Is identity related to premarital intercourse?
  - (b) Is identity related to age of first intercourse among sexually active singles?

(c) Is identity related to risky sexual behavior for those singles who are sexually active?

3. Are there relations among attachment indexes, identity scales, and sexual behavior for single, sexually active male and female college students?

#### Design

This study employed a correlational design. The independent variables (identity, and attachment) and the dependent variable (sexual behavior) were measured at a southwestern university using an anonymous, in-class questionnaire.

#### Sample

Students enrolled in upper division family and human development courses were surveyed during fall quarter of 1995. A sociological definition of adolescence (e.g., being single and still in college in contrast to more typical symbols of adulthood in American culture, e.g., being married and pursuing a full-time professional career) was used to select single students between the ages of 18-25 for this sample. An  $N = 252$  with a mean age of 21.6,  $SD = 1.49$  was obtained. As is typical of family and human development courses, the majority of students were female (80%). For this sample, 202 single females ranging in age from 18-25 with a mean age of 21.39,  $SD = 1.41$  and 50 males ranging in age from 18-25 with a mean age of 22.38,  $SD = 1.56$  completed the measures. Participation was voluntary based upon the cooperation of instructors and individual students within each class surveyed.

## Measurement

Owing to the sensitive nature of the questions involving sexual behavior, a questionnaire seemed the most appropriate method of measurement. In addition, participants were assured complete anonymity in their responses.

The Personal Opinion Survey (POS) contains four demographic questions, the 64-item (5-point Likert scale) Extended Version of the Objective Measure of Ego Identity Status (EOM-EIS: Grotevant & Adams, 1984), 13 questions about attachment (Simpson, 1990), and 19 questions about sexual behavior including age at first coitus, number of partners ever, current number of partners, and four questions about contraceptive use.

## Demographics

Four questions were asked to ascertain age, gender, marital status, and distance from college to former high school. These questions were asked to gather descriptive information about the sample.

## Ego-Identity

Marcia's (1966) Identity Status Interview (ISI) provides a means of classifying individuals' identity status through a series of incomplete sentences. The interview format requires individual administration, scoring, and training of interviewers (Jones & Streitmatter, 1987). As mentioned earlier, Marcia (1980) expanded his ISI to include questions about sex role attitudes and sexual behavior standards in response to feminists'

concerns that the original domains failed to recognize issues important to female identity development. However, the constraints and costs associated with interviewing remain and make use of this instrument less feasible, especially when large samples are desired.

Other researchers have attempted to create identity measures consistent with Marcia's theoretical notions. Adams, Shea, and Fitch (1979) created the Objective Measure of Ego Identity Status (OMEIS) that assesses identity with regard to occupation, religion, and politics. Grotevant, Thorbecke, and Meyer (1982) expanded Marcia's interview format to include questions about friendship, dating, and sex roles. Grotevant and Adams later developed the Extended Objective Measure of Ego Identity Status (EOM-EIS; 1984). This paper-and-pencil measure is easier to administer and evaluate. The 5-point Likert-type scale is potentially more sensitive to differences in levels of responses (Jones, Akers, & White, 1994).

The 64-item instrument (EOM-EIS) assesses social maturity in regard to occupational, religious, educational, and social dimensions of identity development. It addresses ideological and interpersonal domains with specific questions about friendship, dating, sex roles, recreation, occupation, politics, religion, and philosophical lifestyle (Jones & Streitmatter, 1987). Items assess exploration and commitment, and can be used to categorize subjects into one of Marcia's four identity statuses: achievement, moratorium, foreclosure, and identity diffusion (Jones et al., 1994).

Construct validity and reliability (internal and test-retest) of this instrument have also been demonstrated in other studies, which provide estimates for high school (Jones & Hartmann, 1988) and junior high students (Jones & Streitmatter, 1987). In a summary of



13 studies, Adams, Bennion, and Huh (1987) found that the median Cronbach alpha coefficient for the four subscales was .66. Test-retest reliabilities had a median correlation of .76. Estimates of internal consistency for each of the EOM-EIS subscales reported by King (1993) using Cronbach alphas were .66 for achievement, .75 for moratorium, .83 for foreclosure, and .72 for diffusion. Sample items from the instrument include:

#### Achievement subscale items

After a lot of self-examination, I have established a very definite view on what my own lifestyle will be.

I've had many different kinds of friends, but now I have a clear idea of what I look for in a friendship.

#### Moratorium subscale items

Sometimes I wonder if the way other people date is the best way for me.

I know my parents don't approve of some of my friends, but I haven't decided what to do about it yet.

#### Foreclosed subscale items

My rules or standards about dating have remained the same since I first started going out and I don't anticipate that they will change.

I've never really questioned my religion. If it's right for my parents it must be right for me.

#### Diffusion subscale items

I guess I just kind of enjoy life in general; I don't spend much time thinking about it.

I've never had any real close friends--it would take too much energy to keep a friendship going.

## Attachment

In an effort to assess adult attachment styles, Main and colleagues (George et al., 1987) developed the Adult Attachment Interview (AAI). It is a 1-hour structured interview that elicits subjects' recollections and evaluations of early attachment experiences. Patterns of responses indicate categories or states of mind with respect to attachment relations with each parent (Crowell & Treboux, 1995).

Stability of the measure has been demonstrated and gender differences are generally not found in the distribution of classifications (Crowell & Treboux, 1995). When the AAI (George et al., 1987) has been utilized in conjunction with the Strange Situation paradigm (Ainsworth et al., 1978), the correspondence between an infant's attachment classification (using the SS) and their mother's (using the AAI) fell between 66%-82%. Benoit and Parker (1994) found that maternal AAI classifications remain stable over two assessment periods (from their subjects' pregnancies to 11 months after delivery). According to Crowell and Treboux (1995), discriminant validity has been demonstrated with respect to intelligence, memory, cognitive complexity, social desirability, and overall social adjustment.

Other adult attachment measures include: Attachment Interviews (Bartholomew & Horowitz, 1991); Crowell's (1990) Current Relationship Interview (cited in Crowell & Treboux, 1995); Adult Attachment Q-sort (Kobak & Sceery, 1988); Marital Q-sort (Kobak & Hazan, 1991), among others (cited in Crowell & Treboux, 1995). Adult attachment has also been assessed via questionnaires, which allows for the collection of

large samples with minimal cost and time constraints. Hazan and Shaver (1987) created a measure, the Adult Attachment Styles (AAS), composed of three attachment vignettes, corresponding to descriptions provided by Ainsworth et al. (1978) of the three attachment styles: secure, anxious/avoidant, and anxious/ambivalent. However, the measure was found to have some problematic psychometric properties (Hazan & Shaver, 1987, Simpson, 1990). Subsequent adaptations of the AAS have been created and used in several studies (Collins & Read, 1990; Feeney & Noller, 1990; Simpson, 1990; Simpson, Rholes, & Nelligan, 1992).

Simpson (1990) broke Hazan and Shaver's (1987) vignettes into 13 individual sentences that elicit responses on a 7-point Likert-type scale (1 = strongly disagree and 7 = strongly agree). Five items were taken directly from Hazan and Shaver's (1987) "secure" vignette description. Cronbach's alpha coefficient for the avoidant/secure (A/S) index was .51, with higher scores reflecting greater security, and lower scores reflecting greater avoidance in romantic attachment relationships. Four items were taken from the "anxious/avoidant" and "anxious/ambivalent" vignettes, respectively. Cronbach alphas for the avoidant and anxious/ambivalent indexes were .79 and .59, respectively. Higher scores indicated greater avoidance and greater ambivalence. Modifications were made to control for acquiescence response biases, and to reduce item response difficulty. Respondents are asked to answer the items according to how they feel toward romantic partners.

In a subsequent study, Simpson et al. (1992) again attempted to establish discriminant validity for the AAS index. The Rubin's Love Scale and the Relationship

Closeness Inventory (RCI; Berscheid et al., 1989; both cited in Simpson et al., 1992) were completed by subjects in conjunction with the A/S index. For men, A/S scores were not reliably correlated with either love or closeness ( $r_s = -.18$  and  $-.15$ , respectively). Among women, the A/S index was reliably but weakly correlated with both love and closeness ( $r_s = -.25$  and  $-.35$ , respectively). Simpson et al. (1992) concluded that the independence of men's and women's scores on the A/S index suggests that it does not assess the global quality of a current romantic relationship, which the other two measures do. Information about additional efforts to establish the validity and reliability of this index was not found. This is the measure that was used in this study.

Sample items from the instrument include:

Secure/avoidant index items

I find it relatively easy to get close to others.

I'm comfortable having others depend on me.

Anxious index items

I often worry that my partner(s) don't really love me.

I worry about being abandoned by others.

Sexual Behavior

Sexual behavior was assessed by 19 questions. A series of questions began with the stem "Have you ever:". The respondents were asked to circle yes or no beginning with the question, "Kissed" followed by questions that describe more intense or riskier sexual behavior, for example, "Had sexual intercourse," "Had sex with someone you had

known less than 24 hours?" and so on. A few additional questions dealt with marital status, age at first intercourse, frequency of intercourse in the last 6 months, and number of partners currently and in total. Questions concerning contraceptive use assessed whether or not the subject and his or her partner(s) ever used any method(s) of contraception, and for those who did, a list of methods (e.g., pill, IUD, sponge, condom, etc.) was provided. Frequency of contraceptive use was also asked, which allowed for five levels of responses that ranged from "rarely" to "always." In addition, if respondents indicated they did not use a contraceptive method, a list of reasons was provided, including an open-ended category.

The following items were used to examine the specific research questions of this study. Age at first intercourse was determined by one item: "How old were you the first time you had sex voluntarily?" Premarital sexual behavior was assessed by the following item: "Have you ever: Had sexual intercourse?" Risky sexual behavior was examined by four separate items: "Have you ever: Had sex on the first date?; Had sex with someone you had known less than 24 hours?; Had sex with more than one person in a 24 hour period?; and Have you ever used any method(s) of contraception?"

#### Procedures

Undergraduate students were asked to participate in a study of personal attitudes, beliefs, and behaviors. Oral instructions were provided by graduate students involved in this study. Students were instructed not to put their names on the questionnaire. They were instructed to work carefully and to complete all responses honestly. Surveys were

administered in class and took about 30-40 minutes to complete. Extra credit was offered but no one was coerced to participate. Those who did participate were thanked for their cooperation.

Because this study dealt with human subjects and assessed attitudes and behaviors of a sensitive nature, the questionnaire was submitted to the Internal Review Board (IRB) at Texas Tech University and Utah State University for research on human subjects.

Approval was obtained from both institutions.

## CHAPTER IV

## RESULTS

Since all of the research questions pertain to unmarried college students, only those subjects who met age and marital status criteria were used for all of the following analyses. Of the original sample of  $N = 339$ , 252 students identified themselves as single (50 male and 202 female), and fell within the specified age range of 18-25 (mean age was 21.58,  $SD = 1.49$ ).

## Identity

Cronbach alpha coefficients were calculated to ensure that internal consistency estimates for the EOM-EIS subscales from this sample were similar to those of past research (e.g., King, 1993) with a comparable sample (never-married, late adolescents). Specifically, internal consistency was calculated for each of the EOM-EIS subscales (see Table 1: achievement alpha = .65, moratorium alpha = .75, foreclosure alpha = .85, and diffusion alpha = .73). These estimates were nearly identical to those reported by King (1993; alpha = .66 for achievement, alpha = .75 for moratorium, alpha = .83 for foreclosure, and alpha = .72 for diffusion).

Interscale correlations between EOM-EIS subscales were generated to provide evidence of convergent-discriminant relations (i.e., construct validity). These coefficients are shown in Table 1. Theoretically, achievement scores and diffusion scores should yield low (zero) correlations because they are conceptually unrelated. However, an inverse

Table 1

## Reliabilities and Interscale Correlations for the EOM-EIS and Attachment Subscales

Subscale	1	2	3	4	5	6
1 Achievement (.65)		-.19	-.02	-.26	.22	-.04
2 Moratorium (.75)			.12	.66	-.25	.35
3 Foreclosure (.85)				.12	-.09	-.02
4 Diffusion (.73)					-.14	.14
5 Secure/avoidant (.71)						-.20
6 Anxious (.79)						

Note. Diagonal coefficients are Cronbach alphas; off-diagonal coefficients are Pearson's correlations. Degrees of freedom for all correlation coefficients were 251.

association was found, as indicated by the statistically significant Pearson  $r$  between achievement and diffusion ( $r = -.26, p < .001$ ). King (1993) also reported a correlation between achievement and diffusion at  $r = -.26 (p < .001)$ .

The means (with standard deviations and sample size in parentheses) for each subscale were: achievement mean was 68.08 ( $SD = 7.82, N = 248$ ), for males the mean was 66.84 ( $SD = 8.36, n = 50$ ), for females the mean was 68.40 ( $SD = 7.67, n = 198$ ); moratorium mean was 51.27 ( $SD = 9.45, N = 242$ ), for males the mean was 52.19 ( $SD = 8.98, n = 48$ ), for females the mean was 51.04 ( $SD = 9.57, n = 194$ ); foreclosure mean was 45.51 ( $SD = 11.23, N = 245$ ), for males the mean was 44.25 ( $SD = 10.62, n = 48$ ), for females the mean was 45.82 ( $SD = 11.38, n = 197$ ); and diffusion mean was 42.94 ( $SD = 8.79, N = 247$ ), for males the mean was 46.42 ( $SD = 8.58, n = 50$ ), for females the mean



was 42.06 ( $SD = 8.64$ ,  $n = 197$ ). Other EOM-EIS subscale scores should be somewhat correlated as they share either a dimension of crisis or one of commitment. Moratorium and diffusion both lack commitment ( $r = .66$ ), and diffusion and foreclosure both lack crisis ( $r = .12$ ).

#### Attachment

The psychometric properties of the 13-item attachment scale also were examined. Procedures similar to those used by Simpson et. al. (1992) were employed. Two subscales were created that correspond to descriptions of secure/avoidant and anxious attachment. Items for the secure/avoidant index were recoded so that higher scores reflected greater security and lower scores reflected greater avoidance. For the anxious index, higher scores reflected greater anxiousness. The secure/avoidant subscale mean (with standard deviations and sample size in parentheses) was 34.17 ( $SD = 7.70$ ,  $N = 250$ ), for males the mean was 34.22 ( $SD = 7.40$ ,  $n = 50$ ), for females the mean was 34.14 ( $SD = 7.79$ ,  $n = 200$ ). The anxious subscale mean (with standard deviations and sample size in parentheses) was 15.63 ( $SD = 6.61$ ,  $N = 250$ ), for males the mean was 15.66 ( $SD = 6.23$ ,  $n = 50$ ), for females 15.62 ( $SD = 6.72$ ,  $n = 200$ ). Internal consistency estimates for the two attachment scales were secure/avoidant  $\alpha = .71$  ( $\alpha$  for males = .71, for females  $\alpha = .72$ ). For the anxious factor  $\alpha = .79$  ( $\alpha$  for males = .77, for females  $\alpha = .80$ ). A Pearson correlation coefficient between the avoidant and ambivalent subscales ( $r = -.20$ ) indicated a small negative relation between the two constructs.

Pearson correlation coefficients were calculated among the identity and the attachment subscales to examine relations among the two theoretical models. The results of this analysis were somewhat similar to past research (Kroger, 1985). The achievement subscale was positively correlated with the secure/avoidant attachment subscale ( $r = .22$ ) and negatively correlated with the anxious attachment subscale ( $r = -.04$ ). The diffusion subscale was positively correlated with the anxious attachment subscale ( $r = .14$ ) and negatively correlated with the secure/avoidant attachment subscale ( $r = -.14$ ). However, in this study, the moratorium subscale was negatively correlated to the secure/avoidant subscale ( $r = -.25$ ) and positively correlated with the anxious subscale ( $r = .35$ ) and the foreclosure subscale was negatively correlated with both the secure/avoidant subscale ( $r = -.09$ ) and the anxious subscale ( $r = -.02$ ).

#### Scoring of Measures

Continuous (i.e., secure/avoidant, anxious, achievement, moratorium, foreclosure, and diffusion) scoring strategies were employed to examine each of the hypotheses. Point-biserial correlation coefficients were calculated among the attachment and identity subscales and each item pertaining to premarital sexual behavior. Pearson correlation coefficients were calculated among the attachment and identity subscales and age of first intercourse. For respondents who had engaged in premarital sexual behavior, Point-biserial correlations were also calculated among the two attachment and identity subscales and four items relating to risky sexual behavior: (1) sex on the first date; (2) sex with someone known less than 24 hours; (3) sex with more than one person in 24 hours;

(4) whether contraceptives were ever used. Table 2 displays this information.

### Research Questions

#### Research Question 1a

Is attachment related to premarital intercourse? Point-biserial correlation coefficients were generated to examine the relation between the attachment subscales (secure/avoidant and anxious) and premarital sex. The anxious subscale did not yield statistically significant correlations with premarital sex--for males (secure/avoidant  $r_{pb} = .19, p > .05$ ; anxious  $r_{pb} = -.04, p > .05$ ), or for females (anxious  $r_{pb} = .03, p > .05$ ). However, a statistically significant correlation coefficient was found for females on the secure/avoidant subscale ( $r_{pb} = .19, p < .05$ ). Approximately 4% of the variability in premarital intercourse was related to attachment subscale scores.

#### Research Question 1b

Is attachment related to age of first intercourse among those who are sexually active? Pearson correlation coefficients were generated to examine the relation between the attachment subscales and age of first intercourse for those who were sexually active. For this analysis, the range for age at first voluntary sexual relations was 11-22 ( $N = 194$ ). The mode and the median were 16. Statistically significant correlations were found for females (secure/avoidant  $r = .19, p < .05$  and anxious  $r = -.18, p < .05$ ), but not for males (secure/avoidant  $r = .13, p > .05$  or anxious  $r = .16, p > .05$ ). Correlational analyses confirm a relation between attachment and mean age of first intercourse for

Table 2

Pearson and Point-Biserial Correlations for Premarital and Risky Sexual Behavior in Relation to Attachment and Identity Subscales by Gender

Questionnaire Item	Secure/Avoidant		Anxious		Achievement		Moratorium		Foreclosure		Diffusion	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1. Premarital Sex <sup>a</sup>	.19 (50)	.19* (200)	.04 (50)	.03 (200)	-.04 (50)	.05 (198)	.04 (48)	.13 (194)	-.26 (48)	-.18* (197)	-.05 (50)	.12 (197)
2. Age of first intercourse	.13 (45)	.19* (145)	.16 (45)	-.18* (145)	-.16 (45)	-.03 (143)	-.21 (43)	-.24* (141)	.05 (43)	.04 (143)	-.32* (45)	-.14 (144)
3. Sex on the first date <sup>a</sup>	-.13 (45)	-.10 (148)	-.02 (45)	.15 (148)	-.30* (45)	-.15 (146)	-.09 (43)	.05 (144)	-.32* (43)	-.20* (146)	.04 (45)	.15 (147)
4. Sex with someone known less than 24 hours <sup>a</sup>	-.09 (45)	-.11 (148)	-.41* (45)	.21* (148)	-.16 (45)	-.09 (148)	.20 (43)	.00 (144)	-.27 (43)	-.16* (146)	.40 (45)	.10 (147)
5. Sex with more than one person in 24 hours <sup>a</sup>	.07 (45)	-.04 (148)	-.03 (45)	.15 (148)	-.11 (45)	-.11 (148)	.09 (43)	.05 (144)	-.10 (43)	.10 (146)	.08 (45)	.11 (147)
6. Ever Used contraception <sup>a</sup>	.13 (45)	-.04 (148)	-.14 (45)	.05 (148)	.30* (45)	.04 (148)	-.33* (43)	-.07 (144)	.10 (43)	.11 (146)	-.24 (45)	-.10 (147)

Note. Values enclosed in parentheses represent the sample size.

<sup>a</sup>Recoded to a binary digit.

\* $p < .05$ .

females but not for males. Approximately 4% of the variability in age of first intercourse was related to attachment subscale scores.

#### Research Question 1c

Is attachment related to risky sexual behavior among those who are sexually active? Point-biserial correlation coefficients were generated to examine relations among the attachment subscales and four items pertaining to risky sexual behavior. Two coefficients were statistically significant when paired with the item "sex with someone you have known less than 24 hours," for females (anxious  $r_{pb} = .21, p < .05$ ) and for males (anxious  $r_{pb} = -.41, p < .05$ ). All other correlation coefficients for male and female secure/avoidant and anxious subscale scores in relation to other items pertaining to risky sexual behavior were not statistically significant. Four percent of the variability for females was related to the anxious attachment subscale. For males, 16% of the variability in response to this item was related to the anxious attachment subscale. Sixteen percent of the variability may suggest practical significance also.

#### Research Question 2a

Is identity related to premarital intercourse? Point-biserial correlation coefficients were generated to examine the relations among identity subscales (achievement, moratorium, foreclosure, diffusion) and the item pertaining to premarital sexual behavior. A statistically significant correlation was observed for females' foreclosure subscale scores ( $r = -.18, p < .05$ ). All other correlations for males and females using the identity

subscales were not statistically significant. Approximately 4% of the variability in premarital intercourse was related to identity subscale scores.

#### Research Question 2b

Is identity related to age of first intercourse among sexually active singles? For this analysis, the age range for voluntary sexual relations was 11-22 ( $N = 194$ ). Pearson correlation coefficients were generated to examine the relations among identity subscales and age of first intercourse for sexually active subjects. Statistically significant correlations were found between age of first intercourse for males' diffusion subscale scores ( $r = -.32, p < .05$ ) and females' moratorium subscale scores ( $r = -.24, p < .05$ ). For males, about 9% of the variability in age of first intercourse was related to identity subscales scores. For females, about 4% of the variability in age of first intercourse was related to identity subscales scores.

#### Research Question 2c

Is identity related to risky sexual behavior for those singles who are sexually active? Point-biserial correlation coefficients were generated to examine the relations among the identity subscales and four items pertaining to risky sexual behavior. Statistically significant correlations were observed for (a) sex on the first date and males' achievement subscale scores,  $r_{pb} = -.30, p < .05$ ; males' foreclosure subscale scores,  $r_{pb} = -.32, p < .05$ ; and for females' foreclosure subscale scores,  $r_{pb} = -.20, p < .05$ ; (b) sex with someone known less than 24 hours and females' foreclosure subscale scores,  $r_{pb} = -.16, p < .05$ ; and males' diffusion subscale scores,  $r_{pb} = .40, p < .05$ ; and (c) have you

ever used contraception and males' achievement subscale scores,  $r_{pb} = .30, p < .05$ ; and males' moratorium subscale scores,  $r_{pb} = -.33, p < .05$ . Between 4% and 16% of the variability in risky sexual behavior was related to identity subscale scores, depending on the specific item that was correlated with the identity subscale scores. Correlational analyses confirm a relation between identity and risky sexual behavior.

### Research Question 3

Are there relations among attachment subscales, identity subscales, and sexual behavior for single, sexually active male and female college students? Multiple regression equations were generated using the sexual behavior items as dependent variables, and gender, identity subscale scores, and attachment subscale scores as independent variables. The following analyses (Table 3 provides a summary) provide information about which variables were most strongly associated with sexual behavior.

For the first multiple regression equation relating to premarital intercourse, two identity subscales and one attachment subscale were associated with this item. Foreclosure subscales scores were negatively related with premarital sex,  $\beta = -.19, p < .05$  and moratorium and secure/avoidant subscale scores were positively related with premarital sex,  $\beta = .14, p < .05$ , and  $\beta = .19, p < .05$ , respectively. Eight percent of the variability in premarital sex was shared with these two identity and one attachment subscales.

A  $t$  test was computed that indicated no statistically significant difference,  $t(189) = -.13, p > .05$ , between males and females for age of first intercourse. For the

Table 3

Contributions of Identity and Attachment Measures, and Gender for Predicting Sexual Behavior

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Dependent variable:

Independent variables	Beta	t	p	Adjusted R**
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Premarital sex:

1. Foreclosure	-.19	-2.86	.01	.03
2. Moratorium	.14	2.24	.03	.05
3. Secure/avoidant	.19	2.87	.01	.08

Mean age of first intercourse:

1. Moratorium	-.19	-2.51	.01	.03
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Sex on the first date:

1. Gender	.33	4.68	.00	.11
2. Foreclosure	-.22	-3.21	.00	.15
3. Achievement	-.18	-2.68	.01	.18

Sex with someone known  
less than 24 hours:

1. Gender	.38	5.56	.00	.14
2. Foreclosure	-.19	-2.72	.01	.17
3. Diffusion	.21	3.11	.00	.21

(table continues)



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 Dependent variable:

Independent variables	Beta	t	p	Adjusted R <sup>**</sup>
Sex with more than one person in a 24-hour period:				
1. Gender	.22	2.97	.00	.04
Frequency of contraceptive use:				
1. Achievement	.17	2.28	.02	.02

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 \*\* p < .05

multiple regression equation, only moratorium subscale scores were a statistically significant predictor of age of first intercourse; as moratorium scores decrease, age increases ( $\beta = -.19$ ,  $p < .05$ ). Still, only 3% of the variability in age of first intercourse was shared with moratorium subscale scores.

Regression equations relating to risky sexual behavior were generated with the following results. Eighteen percent of the variability in sex on the first date was associated with three variables (gender and two of the identity subscales). Being male was associated with sex on the first date ( $\beta = .33$ ,  $p < .05$ ). Both of the committed identity subscales were negatively related to this item (foreclosure  $\beta = -.22$ ,  $p < .05$  and achievement  $\beta = -.18$ ,  $p < .05$ ). Besides being statistically significant, 18% of the variability may indicate practical significance as well.

Gender and two of the identity subscales were also predictive of sex with someone known less than 24 hours. Twenty-one percent of the variability in this item was

associated with gender, diffusion, and foreclosure subscale scores. Again, males were more likely to engage in this behavior than were females ( $\beta = .38, p < .05$ ). Diffusion scores were positively related ( $\beta = .21, p < .05$ ) and foreclosure scores were negatively related ( $\beta = -.19, p < .05$ ) to sex with someone known less than 24 hours.

Only gender was predictive of having sex with more than one person in a 24-hour period. Being male was associated with this item ( $\beta = .22, p < .05$ ). Only 4% of the variability in this item was associated with gender.

For those who have had sex, responses to the frequency of contraceptive use were examined. The original question asked, "In general, how often do you and your partner use a contraceptive method when you have sex?" Five responses were possible, which ranged from rarely to always. For this analysis, those who responded by marking rarely, sometimes, and often were categorized as inconsistent contraceptive users, and those who responded by marking almost always or always were categorized as consistent contraceptive users. Only one of the identity subscales was predictive of this item. Achievement subscale scores were positively related to contraceptive use ( $\beta = .17, p < .05$ ). However, only 2% of the variability in contraceptive use was related to an identity subscale.

Attachment subscale scores were predictive of only one item, premarital sex. Identity subscale scores were associated with all but one item (sex with more than one person in a 24-hour period). Gender was the most powerful and consistent predictor of risky sexual behavior, excluding frequency of contraceptive use.

### Summary

Internal consistency estimates for the EOM-EIS subscales were found to be consistent with past research (e.g., King, 1993) using a similar sample. Interscale correlations between EOM-EIS subscales were generated to provide evidence of construct validity. These correlations were also similar to previous findings by King (1993). In addition, the psychometric properties of the 13-item attachment scale were examined. High internal consistency estimates were found for the two attachment subscales corresponding to descriptions of avoidant and ambivalent attachment.

Correlational analyses confirmed relations among attachment and premarital intercourse, age of first intercourse, and items pertaining to risky sexual behavior. Attachment subscale scores were predictive of premarital sex when a multiple regression equation was generated.

Relations among identity subscale scores and sexual behavior also were found. Specifically, correlational analyses confirmed relations between identity and premarital intercourse, age of first intercourse, and risky sexual behavior. Finally, identity subscale scores were consistent predictors of sexual behavior when multiple regression equations were generated. Achievement and foreclosure scores were negatively related to risky sexual behavior, and diffusion was positively associated with having sex with someone known less than 24 hours. Being male was the strongest and most consistent predictor of sexual behavior. From a practical standpoint, this information could prove useful in

designing prevention programs that target noncommitted (high diffusion, low foreclosure and achievement) males.

## CHAPTER V

## DISCUSSION

The purpose of this study was to examine the relations among attachment, identity, gender, and sexual behavior among unmarried male and female college students.

Attachment and identity measures were used because of their potential to explain variation in sexual behaviors relating to identity development and the quality of intimate relationships formed in late adolescence. Previous prevention efforts to address undesirable sexual behavior among this population have been essentially atheoretical. Identifying factors from a particular theory or theories that contribute to or decrease such behaviors would seem useful in designing more effective prevention programs.

Three research questions were generated to explore the relations between attachment and sexual behavior.

(1a) Is attachment related to premarital intercourse?

(1b) Is attachment related to age of first intercourse among those who are sexually active?

(1c) Is attachment related to risky sexual behavior among those who are sexually active?

Three additional research questions were formulated to examine the relations between identity and sexual behavior.

(2a) Is identity related to premarital intercourse?

(2b) Is identity related to age of first intercourse among sexually active singles?

(2c) Is identity status related to risky sexual behavior for those singles who are sexually active?

Finally, relations among attachment and identity subscales, and sexual behavior were explored using multiple regression equations.

The Personal Opinion Survey (POS) was administered to students enrolled in upper division family and human development courses during fall quarter of 1995. Participation in the study was strictly voluntary, although an extra credit incentive was offered. The POS contains four demographic questions, the 64-item (5-point Likert scale) Extended Version of the Objective Measure of Ego Identity Status (EOM-EIS: Grotevant & Adams, 1984), 13 questions about attachment (Simpson, 1990), and 19 questions about sexual behavior. The final sample of never-married college students was  $N = 252$ , 202 single females ranging in age from 18-25 ( $M = 21.39$ ) and 50 single males ranging in age from 18-25 ( $M = 22.38$ ).

#### Discussion of Results

Attachment is related to premarital intercourse. Correlational analysis confirmed a relation between attachment and premarital sex. Attachment is related to age of first intercourse, as well. Correlational analysis confirmed a relation between attachment subscales and age of first intercourse. A relation between attachment and risky sexual behavior was also found. Correlational analyses yielded statistically significant results.

Although the effect sizes for these correlation coefficients were typically small (on average 4% of the variability if attachment subscale scores was related to premarital and risky sexual behavior and age of first intercourse), these results are consistent with previous research related to attachment style, romantic relationships, and sexual behavior.

Simpson (1990) found that people who scored higher on the secure attachment index were involved in relationships of greater intimacy, commitment, and trust. Hazan and Shaver (1987) also found support for the proposition that individuals with different attachment orientations entertain different beliefs about romantic love, trustworthiness, and their own love-worthiness. These factors would appear to influence sexual behavior. In a follow-up study, Shaver and Hazan (1988) focused more specifically on variation in sexual behavior across attachment styles and found differences among subjects classified as anxious/ambivalent, avoidant, and securely attached. Feeney and Noller (1990) and Feeney et al. (1993) reported similar results regarding attachment style, love styles, and dating relationships. In all of these studies, attachment style was related to sexual behavior.

Correlational analysis confirmed a relation between identity and premarital intercourse. Identity was related to age of first intercourse, and risky sexual behavior. Correlational analyses indicated a relation between identity and risky sexual behavior.

These findings are consistent with previous studies that show a relation between identity status and problem behavior among adolescents (Christopherson et al., 1988; Hernandez & Diclemente, 1992; Jones & Hartmann, 1988; Jones et al., 1989). More specifically, Jones and Hartmann (1988) observed that students characterized by identity

diffusion were at greater risk for substance use/abuse than students in the other three statuses. Foreclosed youth reported the lowest rates of substance use. In this study, subjects characterized by identity diffusion were also more likely to engage in premarital sex and risky sexual behavior, both of which could be considered problem behavior for unmarried adolescents. Similarly, foreclosure scores were negatively related to involvement in premarital sexual behavior.

Findings in this study correspond with those of King's (1993) study of identity status and sexual behavior among never-married college students at universities in Utah and Arizona. Variations in sexual behavior were reported across identity statuses in both this study and King's (1993). In general, diffused subjects were most likely to engage in premarital sex and risky sexual behavior and foreclosed subjects were least likely. Similar to King's (1993) finding, this study also indicated that achievement subscale scores were associated with consistent contraceptive use.

Hernandez and Diclemente (1992) reported that subjects with higher cumulative ego identity scores were less likely to engage in unprotected sex than subjects characterized by other identity subscale scores. In this study, achievement scores for males were negatively related to premarital intercourse and several items pertaining to risky sexual behavior, and positively related to ever having used contraceptives and consistent contraceptive use.

Relations among attachment subscales, identity subscales, and sexual behavior for single, sexually active male and females college students were explored using multiple regression equations. Identity scores were predictive of sexual behavior. Gender was the



most consistent predictor. Being male was associated with sex on the first date, whereas both of the committed identity subscales were negatively related to this item. Foreclosure scores were negatively related to sex with someone known less than 24 hours. Being male and higher diffusion scores were related to this item. Being male was related to having sex with more than one person in a 24-hour period. Achievement scores were positively related to frequency of contraceptive use. These findings are consistent with past research, which indicates males are involved in earlier sexual behavior (Moore et al., 1995) and that males tend to be more permissive about premarital sex and unconventional sexual behaviors than females (Hendrick et al., 1985).

#### Limitations

This study employed a nonprobability sample, which makes it impossible to generalize findings to a larger population. Further, it is not possible to ascertain whether or not the results generated here would be representative of other never-married college students. In addition, information about adolescent sexual behavior among other populations, for example similarly aged adolescents who do not attend college and younger adolescents, could not be obtained.

Both the identity and the attachment measures used in this study yielded results consistent with other studies of identity, attachment styles, problem behaviors, and sexual behavior. However, a questionnaire format may not provide researchers with the most accurate or complete data. Items pertaining to risky sexual behavior were preceded by the

stem, "Have you ever." This does not allow for information about how frequently such behaviors occur or even if they are a current part of the subjects' sexual behavior.

#### Recommendations for Future Research

Future studies should be designed to provide a more representative sample of single college students, via random sampling techniques involving several colleges and universities across the United States. Efforts should also be made to collect data from adolescents not attending college, for example by surveying businesses that employ young adults or by random-digit phone interviews, as well as from younger populations, such as high school and junior high school students. Such samples would allow researchers to see how generalizable the results from this study about sexual behavior, attachment, and identity are when adolescents from a variety of backgrounds, educational experiences, and ages are studied.

The findings of this study related to attachment and sexual behavior were consistent with past research. Future efforts should be directed toward developing or testing measures of attachment that provide a link or distinction between early attachment patterns formed with primary caregivers and later attachment relationships outside the family. Bowlby's concept of internal working models should demonstrate some continuity in attachment patterns from childhood to late adolescence and from caregiver-infant attachment to attachment in romantic relationships. It would be interesting to design a measure of attachment that includes items pertaining to parent-child attachment, then correlate these items with responses pertaining to romantic attachment.

An interview format for both attachment and identity questions would allow for more open-ended responses. Interviewing subjects might contribute to greater freedom of responses and allow the interviewer to probe a particular issue or clarify subjects' questions if any arise. However, when considering the sensitive nature of the questions in this study dealing with sexual behavior, interviewing may be too intrusive. The anonymity provided by questionnaires may contribute to greater honesty in responding. It would be useful to include questions indicative of current sexual practices.

Longitudinal studies have the potential of providing a clearer pattern of continuity or discontinuity in attachment patterns, identity development, and intimacy from early childhood to late adolescence. Longitudinal data collection may enable researchers to observe children's acquisition of knowledge and experiences relating to sexual behavior as it occurs over time. Attachment patterns that are assessed in childhood may be examined again during adolescence to explore continuities or discontinuities in attachment patterns. Data collection on the same individuals during childhood and adolescence would allow researchers to evaluate whether attachment patterns between children and their parents are similar or dissimilar to attachment patterns that these children form with friends or intimate partners. In addition, longitudinal data would allow researchers to examine the relations among previous stages in psychosocial development and identity development in adolescence.

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## APPENDIX

## PERSONAL OPINION SURVEY

Date of Birth: \_\_\_\_\_ Sex: Male \_\_\_\_\_ Female \_\_\_\_\_

Marital Status: Single \_\_\_\_\_ Married \_\_\_\_\_ Divorced \_\_\_\_\_

How many miles from Texas Tech to your High School \_\_\_\_\_

**DIRECTIONS:** Each of the following statements reflect personal feelings held by some people in this society. We are interested in how much you agree with each statement. Because these statements reflect personal feelings and attitudes, there are no right and wrong answers. The BEST response to each of the following statements is your **PERSONAL OPINION**. We have tried to cover many points of view. You may find yourself agreeing with some of the statements and disagreeing with others. Regardless of how you feel, you can be sure that many others feel the same as you do.

RESPOND TO EACH STATEMENT ACCORDING TO YOUR PERSONAL FEELINGS BY  
CIRCLING THE ANSWER THAT BEST REFLECTS YOUR OPINION

- |    |  |                           |                             |               |            |                          |                        |
|----|--|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 1. | My parents know what's best for me in terms of how to choose friends.  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 2. | In finding an acceptable viewpoint to life itself, I often exchange ideas with friends and family.                         | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 3. | All my recreational preferences were taught to me by my parents and I haven't really felt a need to learn any others.      | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 4. | I have lots of different ideas about how a marriage might work, and now I'm trying to arrive at some comfortable position. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 5. | I know what my parents feel about men's and women's roles, but I pick and choose what my own lifestyle will be.            | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

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|-----|---|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 6.  | After a lot of self-examination, I have established a very definite view on what my own lifestyle will be.                        | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 7.  | My own views on a desirable lifestyle were taught to me by my parents and I don't see any reason to question what they taught me. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 8.  | I really have never been involved in politics enough to have made a stand one way or another.                                     | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 9.  | My parents had it decided a long time ago what I should go into for employment and I'm following their plans.                     | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 10. | I guess I just kind of enjoy life in general, I don't see myself living by any particular viewpoint to life.                      | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 11. | Even if my parents disapproved, I could be a friend to a person if I thought she/he was basically good.                           | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 12. | When I'm on a date, I like to "go with the flow."   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 13. | Religion is confusing to me right now. I keep changing my views on what is right and wrong to me.                                 | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

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|-----|---|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 14. | I just can't decide what to do for an occupation. There are so many that have possibilities.  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 15. | I haven't thought much about what I look for in a date--we just go out to have a good time.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 16. | I've been thinking about the roles that husbands and wives play a lot these days, but I haven't made a final decision for myself yet.         | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 17. | I guess I'm pretty much like my folks when it comes to politics. I follow what they do in terms of voting and such.                           | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 18. | Men's and women's roles seem very confused these days, so I just "play it by ear".  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 19. | I'm really not interested in finding the right job, any job will do. I just seem to go with what is available.                                | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 20. | While I don't have one recreational activity I'm really committed to, I'm experiencing numerous activities to identify one I can truly enjoy. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

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|-----|--|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 21. | I am not completely sure about my political beliefs, but I'm trying to figure out what I truly believe in.                     | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 22. | I've thought my political beliefs through and realize that I can agree with some and not other aspects of my parent's beliefs. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 23. | I know my parents don't approve of some of my friends, but I haven't decided what to do about it yet.                          | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 24. | I'm not sure what religion means to me. I'd like to make up my mind, but I'm not done looking yet.                             | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 25. | I've come through a period of serious questions about faith and can now say that I understand what I believe as an individual. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 26. | Some of my friends are very different from each other. I'm trying to figure out exactly where I fit in.                        | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 27. | When it comes to religion, I haven't found anything that appeals to me and I really don't feel the need to look.               | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

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|-----|---|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 28. | I've tried numerous recreational activities and have found one I really love to do by myself or with friends.                 | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 29. | I couldn't be friends with someone my parent's disapprove of.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 30. | My parent's recreational activities are enough for me--I'm content with the same activities.                                  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 31. | My parent's views on life are good enough for me, I don't need anything else.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 32. | I don't give religion much thought and it doesn't bother me one way or another.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 33. | I've been experiencing a variety of recreational activities in hopes of finding one or more I can enjoy for sometime to come. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 34. | My dating standards are flexible, but in order to change, it must be something I really believe in.                           | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 35. | I've had many different kinds of friends, but now I have a clear idea of what I look for in a friendship.                     | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |



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|-----|---|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 36. | I don't have any close friends--I just like to hang around with the crowd and have a good time.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 37. | A person's faith is unique to each individual. I've considered it myself and know what I believe.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 38. | I've never really questioned my religion. If it's right for my parents it must be right for me.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 39. | There are many ways that married couples can divide up family responsibilities. I've thought about lots of ways, and know how I want it to happen for me. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 40. | My ideas about men's and women's roles are quite similar to those of my parents. What's good enough for them is good enough for me.                       | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 41. | I would never date anyone my parents disapprove of.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 42. | I've never had any real close friends--it would take too much energy to keep a friendship going.  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 43. | Sometimes I wonder if the way other people date is the best way for me.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

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|-----|--|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 44. | I haven't really considered politics. It just doesn't excite me much.  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 45. | After considerable thought, I've developed my own individual viewpoint of what is an ideal 'lifestyle' and don't believe anyone will be likely to change my perspective. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 46. | I haven't chosen the occupation I really want to get into, and I'm just working at whatever is available until something better comes along.                             | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 47. | The standards or 'unwritten rules' I follow about dating are still in the process of developing--they haven't completely gelled yet.                                     | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 48. | My folks have always had their own political and moral beliefs about issues like abortion and mercy killing and I've always gone along accepting what they have.         | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 49. | My rules or standards about dating have remained the same since I first started going out and I don't anticipate that they will change.                                  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

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|-----|---|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 50. | I'm not ready to start thinking about how married couples should divide up family responsibilities yet.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 51. | There's no single 'lifestyle' which appeals to me more than another.  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 52. | It took me a while to figure it out, but now I really know what I want for a career.  | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 53. | I'm still trying to decide how capable I am as a person and what jobs will be right for me.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 54. | Politics is something that I can never be too sure about because things change so fast. But I do think it is important to know what I politically stand for and believe in. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 55. | I might have thought about a lot of different jobs but there's never really been any questions since my parents said what they wanted.                                      | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 56. | I have one recreational activity I love to engage in more than any other and doubt I'll find another that I enjoy more.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

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|-----|---|---------------------------|-----------------------------|---------------|------------|--------------------------|------------------------|
| 57. | My ideas about men's and women's roles have been taught to me by my family.   | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 58. | I'm looking for an acceptable perspective for my own 'lifestyle' view, but I haven't really found it yet.               | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 59. | I seem only to get involved in recreational activities when others ask me to join them.                                 | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 60. | I attend the same church my family has always attended. I've never questioned why.                                      | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 61. | It took me a long time to decide, but now I know for sure what direction to move in for a career.                       | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 62. | I join my friends in leisure activities, but I really don't seem to have a particular activity I pursue systematically. | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 63. | I've dated different types of people and now know exactly what my own "unwritten rules" for dating are.                 | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |
| 64. | There are so many political parties and ideals. I can't decide which to follow until I figure it all out.               | STRONGLY<br>DISAGREE<br>1 | MODERATELY<br>DISAGREE<br>2 | DISAGREE<br>3 | AGREE<br>4 | MODERATELY<br>AGREE<br>5 | STRONGLY<br>AGREE<br>6 |

Please indicate how you typically feel toward romantic (dating) partners in general. Keep in mind that there are no right or wrong answers.

- |     |   |                        |   |   |   |   |   |                     |
|-----|---|------------------------|---|---|---|---|---|---------------------|
| 1.  | I find it relatively easy to get close to others.                       | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 2.  | I'm not very comfortable having to depend on other people.              | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 3.  | I'm comfortable having other people depend on me.                       | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 4.  | I worry about being abandoned by others.                                | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 5.  | I don't like people getting too close to me.                            | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 6.  | I'm somewhat uncomfortable being too close to others.                   | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 7.  | I find it difficult to trust others completely.                         | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 8.  | I'm nervous whenever anyone gets too close to me.                       | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 9.  | Others often want me to be more intimate than I feel comfortable being. | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 10. | Others often are reluctant to get as close as I would like.             | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 11. | I often worry that my partner(s) don't really love me.                  | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |

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|-----|---|------------------------|---|---|---|---|---|---------------------|
| 12. | I worry about my partner(s) leaving me.   | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |
| 13. | I often want to merge completely with others, and this desire sometimes scares them away. | Strongly Disagree<br>1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree<br>7 |

The following questions have to do with relationships. Although some of the questions are sensitive we encourage your honesty and assure you once again of complete anonymity.

A. Are you:

1. Married and monogamous.
2. Married but not monogamous.
3. Unmarried and in a monogamous sexual relationship.
4. Unmarried and sexually active, but not monogamous.
5. Unmarried and dating one person, but not sexually active.
6. Unmarried and dating more than one person, but not sexually active.
7. Unmarried and not dating.

B. Have you ever:

	<u>Yes</u>	<u>No</u>
1. Kissed	Y	N
2. Made out (kissed for a long time)	Y	N
3. Touched the genitals of someone of the opposite sex?	Y	N
4. Allowed someone of the opposite sex to touch your genitals?	Y	N
5. Had oral sex?	Y	N
6. Had sexual intercourse (had sex)?	Y	N
7. Had sex with one person while you were in a committed relationship with another person?	Y	N
8. Had sex on the first date?	Y	N
9. Had sex with someone you have known less than 24 hours?	Y	N
10. Had sex with more than one person in a 24 hour period?	Y	N
11. Done more sexually than you wanted to at the time?	Y	N
12. Engaged in sexual behaviors that you later regretted?	Y	N
13. Had anal intercourse?	Y	N
14. Had sex with someone of the same gender?	Y	N

C. How old were you the first time you had sex voluntarily?

1. \_\_\_\_\_ years old
2. have not had sex yet

D. In the last 6 months how often have you had sex?

0. Zero times
1. I have only had sex 1-2 times ever
2. Once every few months
3. A few times a month
4. A few times a week
5. Daily
6. Other (specify) \_\_\_\_\_

E. How many partners have you ever had sex with? number of different partners \_\_\_\_\_

F. How many partners have you had sex with in the last 6 months? number of partners \_\_\_\_\_

(PLEASE TURN PAGE)

G. Have you and your partner(s) ever used any method(s) of contraception

1. I have never had sex
2. No, I have never used contraception when I had sex \_\_\_\_\_
3. yes \_\_\_\_\_

H. If Yes:

Which method do you usually use?

- |                         |   |
|-------------------------|---|
| 1. Pill or Implant      | 7. Rhythm<br>(calendar)                               |
| 2. IUD (loop, coil)     | 8. Condom<br>(rubber)                                 |
| 3. Cream, jelly, foam   | 9. Withdrawal<br>(pulling out)                        |
| 4. Suppository (insert) | 10. Sterilization<br>(vasectomy<br>or tubal ligation) |
| 5. Diaphragm            | 11. Other _____                                       |
| 6. Sponge               |   |

In general, how often do you and your partner use a contraceptive method when you have sex?

- |              |                  |
|--------------|------------------|
| 1. Rarely    | 4. Almost Always |
| 2. Sometimes | 5. Always        |
| 3. Often     |                  |

Why do you use contraceptives?

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I. If No:

what are the reasons you have not used a contraceptive method?  
(Circle all that apply)

1. I didn't think we would have sex
2. I forgot or didn't really think about it
3. I/my partner didn't want to use a method
4. I didn't think I/my partner could get pregnant
5. I wanted to get myself/my partner pregnant
6. I thought it was dangerous to use them
7. I thought it was wrong to use them
8. My parents would disapprove
9. I didn't know where to get contraceptives
10. I thought contraceptives cost too much
11. It would be too embarrassing to obtain/use
12. Other \_\_\_\_\_