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# Parental Attachment And Sexual Risk Behavior Among Adolescents

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**PARENTAL ATTACHMENT AND SEXUAL RISK BEHAVIOR AMONG  
ADOLESCENTS**

by

**AMY RUEDISUELI**

**DISSERTATION**

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

**DOCTOR OF PHILOSOPHY**

2010

MAJOR: SOCIOLOGY

Approved by:

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Advisor

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Date

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## DEDICATION

To my mother, who taught her children by example to defy the odds and gave me the opportunity to be the first in our family to graduate from college. She worked tirelessly to make her children unaware of their own poverty and aware only of their own limitless potential. She is an amazing woman, who is a living contradiction to the negative stereotype of the single mother. She taught us to read before pre-school, and write before kindergarten. She worked 12 hour days six days a week in a restaurant and still insisted on grading our homework before going to sleep—any wrong answer was marked and awaiting correction in the morning before school. Spelling words were repeated every night before bed. Trips to the library were a weekly adventure. When we were teenagers and wanted to work to help out, we were told that “school was our job” and we shouldn’t worry about bills. She made sure we had the clothes and spending money to “fit in”, and to this day I have no idea how she did it. The question in our house was not “will you go to college?” but rather “which university will you choose?” During my undergraduate years when I could not afford to live on campus, she drove me very early in the morning to the university and picked me up after work each night, adding hours to her commute and giving us both 14 hour work days. The most selfless person I have ever known, she sacrificed everything in hopes that her children would not have to struggle like she did. Neither her hopes nor her actions were in vain. We made it, mom!

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## CHAPTER 1 INTRODUCTION

The central question of this research is, “Does attachment to parents affect the likelihood of engaging in sexual risk behavior?” For the purposes of this study, sexual risk behavior is defined as having multiple sexual partners before age 18. According to prior research, having multiple sexual partners increases the risk of contracting sexually transmitted diseases and unplanned pregnancy (Santelli J.S. et al., 1998; Valois et al., 1999). The purpose of this research is to provide a more complete picture of the relationship between attachments to parents and the decision of adolescents to take sexual risks that could have long-term impacts on their lives.

Attachment to parents is defined in this study as emotional closeness, communication and shared activities between parents and adolescents. Very similar measures have been used in several studies dealing with attachment (Sokol-Katz and Zimmerman, 1997; Davis and Friel, 2001; Aseltine 1995). The research also examines whether the relationship between attachment and sexual risk behavior varies by race and gender. First, this research examines the predictors of having sex. Then, in the second stage, the focus is on the subgroup of adolescents who engage in sexual behavior, and examines the predictors of multiple sex partners. It will compare parental attachment of sexually active teenagers who do and do not engage in sexual risk behavior controlling for race and gender. This study uses secondary data collected by the United States Bureau of Labor Statistics for the National Longitudinal Survey of Children and Youth, 1997.

### Significance

In order to tailor interventions to meet the needs of high risk groups, policy makers need a better understanding of the impact of attachment on sexual risk behaviors for various sociodemographic groups. It becomes important to understand the relationship between parental attachment and sexual risk behavior in order to discover information that can help to inform



effective intervention programs. Every year, an estimated 4 million young people are diagnosed with a sexually transmitted infection and over one million teenage girls become pregnant (U.S. DHHS, 2000). A recent study by the Kaiser Foundation (2005) estimates that between 34% and 45% of high school students are sexually active. Sexually active adolescents are at risk for a number of health and social consequences such as Sexually Transmitted Infections including Acquired Immune Deficiency Syndrome and the complications associated with unintended pregnancy (Hayes, 1987). According to the Centers for Disease Control and Prevention, as of June 2006 there is a significant increase in the number of high school students that report having had sex (MMWR, 2006). Of those who report being sexually active, 34% report that their most recent sexual encounter was without a condom. In 2004 13% of all new HIV/AIDS cases reported to the CDC were among those aged 13-24 (Center for Disease Control, 2004). Other studies suggest that since 2000 approximately half of all new HIV/AIDS infections each year are comprised of persons aged 15-24 (Weinstock, 2004).

Policy makers need to identify high risk groups in order to tailor interventions to meet their needs. There are differences in infection rates and of unplanned pregnancy rates by sociodemographic characteristics, including gender, race and social class. There are greatly disproportionate rates of infection by race (Sly et. al., 1997). For example, much research shows that black female adolescents experience a disproportionate risk for contracting sexually transmitted infections when compared to adolescent females of other races. Still other studies suggest the importance of social class and the role it plays in socialization across categories of race and gender (Ramirez-Valles et al., 1998). This suggests that social class may play a more important role in sexual risk behavior than gender or race alone. However, it is important to note

that many contradictions exist in the literature, and not all findings about predictors of adolescent sexual behavior are in agreement about race, class or gender differences.

There is much confusion theoretically about the specific predictors that play a role in adolescent sexual risk taking. However, previous research has suggested that family connectedness is associated with reduced adolescent risk taking. In this research, I propose that social control theory can explain sexual risk taking of adolescents in that it allows for the examination of the relationship between social attachments, and the tendency toward negative behaviors. Specifically, control theory looks at attachment to or involvement in school, parents, positive peer groups and how these attachments relate to the individual's future goals.

What influences adolescents to take sexual risks? What factors prevent this?

Incomplete understanding of adolescent sexual behavior is hindering the ability of public policy and education systems to combat the problem of adolescent sexual risk taking. Much research at this point focuses on the act of first intercourse (Meier, 2003; Rosenbaum & Kandel, 1990). I argue that it is a relevant endeavor for researchers to examine factors influencing the number of sexual partners in order to further understand the behavior of young people and to enact systems to reduce risk to this population.

## CHAPTER 2 REVIEW OF THE LITERATURE

This research focuses on the area of parental attachment and its impact on sexual risk behavior. Sexual risk behavior is defined in this study as sex with multiple partners at a young age and in the time span of one year. Parental attachment for this study has two dimensions, parental supervision and positive parental relationship. This section discusses the literature on sexual risk behavior in regard to parental factors, including maternal and paternal influences on decisions about sexual behavior.

This research examines the strength of relationship with mother and father to see if stronger ties matter in making decisions about sexual risk. Amount of time spent interacting with parents and family in structured activities is also examined in relation to sexual risk. Most existing research in the area of the effect of parental relationship on sexual choices is focused solely on the mother and daughter relationship rather than the relationships between mother-son, father-son, daughter-father. While some previous research focuses on same gender parental impacts, this research looks at the importance of parental supervision and strength of relationship. Much research on the family investigates the relationship between mother's attitude and daughter's actions or the daughter's perceptions of the mother's attitude. Most research neglects the influence of either parent on the behavior or attitudes of adolescent boys (O'Connor, 2000).

Fathers are less likely to be interviewed in studies of sexual behavior. For example, the National Longitudinal Study of Adolescent Health, a commonly used dataset, interviewed fathers only when a willing female respondent was not in the household (Calhoun & Friel, 2001). Inclusion of data on fathers is less available and may explain why the research focuses on

females and the mother-daughter dynamic. Recent research suggests parental relationships impact on sexual risk behavior for both adolescent girls and boys (Henrich et al., 2006).

### Parental relationship

Previous studies show that young people who are satisfied with their relationship with parents were more than twice as likely to abstain from sex compared to teens who reported low levels of satisfaction with the relationship with their parents. Being satisfied with the parent-child relationship is also associated with lower probabilities of unprotected sex, and less likelihood of unwanted pregnancies. Dittus and Jaccard (2000) examined attitudes of young people about parental relationships and perception of their mother's attitudes about sexual abstinence. The study examined responses of 10,000 respondents in grades 7 to 11 from the Longitudinal Study of Adolescent Health database. Respondents were less likely to engage in sexual activity when they had positive relationships with their mother and believed she supported abstinence.

Researchers suggest that the child's same-sex parent is a more powerful influence than the opposite-sex parent on the sexual behavior of the child. Previous research shows that the mother-daughter bond influences the effect of the daughter's choices about whether or not to engage in sex and likelihood of practicing safer sex (Rodgers, 1999). In this study, sexual risk taking was assessed by using a composite measure of the number of sexual partners, the consistency of contraceptive use, and the effectiveness of contraceptive method. The sample of 350 primarily White 9<sup>th</sup> to 12<sup>th</sup> grade students was drawn from a population of 2,257 junior and high school students who were surveyed as part of a larger study. The respondents were mother-daughter pairs for this study.

Research shows that closeness to parents is associated with delayed sexual debut. Inazu & Fox (1980) report that adolescents with a positive opinion of their relationship with their parents were less likely to have any sexual experience. Later sexual debut is associated with fewer sexual partners, thus less sexual risk. Closeness to parents is also associated with increased communication about sexual practices, which is associated with less risky behavior. Increased communication tends to be positively related to the delay of sexual activity and to safer sexual practices, including fewer partners. Higher levels of teenage sexual intercourse are reported by those that do not feel close to their parents (Council of Economic Advisors, 2000).

Feeling connected and supported by the family is an important protective factor for various risky behaviors. Research suggests that adolescents with a close family relationship are less likely to seek out early sexual relationships. A work by Moore and Rosethal (1993) explored theory and current research on child sexual development, giving attention to risk behavior and the parent-child relationship. This research found that adolescents that experience a distant relationship with parents are more likely to seek out close relationships with others, including sexual relationships, as an expression of rebellion.

Research has begun to focus on family connectedness and feelings of closeness with parents as a more valid predictor of various types of risk behavior that previous research had suggested. Since the late 1990's several studies suggest that high levels of connectedness were associated with lower rates of sexual risk behavior (Crosby et al, 2009; Rodgers, 1999; DiClemente 2001). Another important finding of this study is that it challenged the common notion that parents should be mostly concerned with what they tell their children about sex in order to influence their behavior. Rather, this study asserts that other parental factors such as

knowing their children's friends and friends' parents were more influential factors in sex risk behavior (Blum, 2002).

### Parental Supervision

A major part of this study examines the effect of parental supervision and time spent with family on sexual behavior. Generally the literature treats parental supervision as being comprised of two components: parental monitoring and parental involvement. Degree of monitoring by parents is derived from the hours of parental presence in the home (Jacobson & Crockett, 2000). Parental involvement is treated as the number of hours of interaction the parent shares with the child, and is sometimes treated as a measure of the quality of the parent child relationship (Moore & Chase-Landsdale, 2001). Parental involvement also includes the amount of activities with family and the quality of communication between the parent and child (Miller, Forehand & Kotchick, 1999).

Parental monitoring and parental involvement represent two different aspects of parental relationship, but research suggests that these two dynamics are related because effective parental influence depends on more than supervision alone. Additional research has shown that more parental involvement can foster more parental social control (Neccomer & Udry, 1983). Research shows that the more time parents spend at home, the more likely they are to monitor their children (Whitbeck, Simons, & Goldberg, 1996). The amount of time parents spend supervising their children can be treated as a function of family structure where children living in dual parent homes have more supervision than those who live in single parent homes (Thomson, McLanahan & Curtin, 1992). Researchers have found that less parental supervision is associated with early adolescent sexual activity (Luster and Small, 1994).

Attention should be given to implications that research on parental supervision and sexual risk has in relation to family structure. Research shows that adolescents living in dual parent households have protective factors compared to those in single parent homes regarding sexual risk. For example, in one study, 523 seventh-grade students from five junior high schools and one middle school in the Washington, D.C. completed an anonymous self-administered questionnaire. Questions addressed age at first intercourse, demographics, grades, educational expectations, and risk behaviors. This study revealed that for racial and ethnic minorities, a group particularly at risk for the adverse impact of sexual risk, living with both parents is associated with lower sexual risk (Raine, 1999). Other research that does not focus strictly on minority groups has shown that adolescents in dual parent households have sex later and with fewer partners (Garis, 1998; Oman et. al., 2005).

For many years attention has been given to the sexual debut and habits of girls who are products of single parent homes. There is thought to be a strong modeling relationship between a daughter and her mother. Assertions have been made that girls with single mothers will see more extra-marital sexual behavior than a daughter of a married mother. Some researchers believe that daughters of single mothers will therefore be more open to the idea of engaging in premarital sex. Others suggest it is the level of interaction in the mother-daughter relationship and the mother's attitudes about sex in general that influence sexual debut more than the number of parents in the home (Davis & Friel, 2001).

More recent studies suggest that the single parent home simply offers less supervision for the child suggesting there is less social control and that the dual parent family offers more. Brako (2005) showed that increased communication about sexual risk could reduce sexual risk taking for adolescents in a single parent home. Research suggests that is it not daughters modeling the

behavior of the mother that has the strongest influence, but it is the number of hours of supervision that matter most in preventing sexual risk behavior. A single working parent may be the only source of income to the family and may be working many hours, thus providing less supervision in favor of more income to support the family (Thornton, 1991). Other research suggests that even in dual parent households, where both parents are working, the children have an increased opportunity to engage in sexual behavior because both parents are out of the home at work for many hours and not able to give supervision (Zelnick & Kantner, 1980).

There is a documented difference regarding gender and the impact of parental supervision on behavior. Females tend to receive more supervision from parents than males, and this has an impact on a variety of behaviors including sexual behavior. Females who receive a greater amount of supervision from parents report less instances of sexual risk behavior than those with less supervision. One study by Small & Luster (1994) used gathered data from 2,168 7<sup>th</sup>, 9<sup>th</sup> and 11<sup>th</sup> graders in a midsize southwestern city for the purpose of supplying data for various studies to improve life in the community. The study by Luster and Small looked at various factors that could predict abstinence. It was found that respondents who reported being closely monitored by parents and community were less likely to become sexually active and were more likely to practice safer sex if the decision was made to become sexually active. The relationship between parental supervision and abstinence was stronger for females than for males. Time spent with family per week is treated in this study as parental supervision. This study examines number of hours spent in routine family activity and number of hours spent with mother and father separately in relation to sexual behavior.



### Gaps in Existing Research

Many gaps in research on predictors of adolescent sexual risk behavior remain. Existing research on teen sexual risk behavior neglects an examination of the impacts of both parents, the experiences of sex risk among male adolescents, non-residential parents' influence on behavior, as well as issues with the reliability of adolescent reports of their sexual behavior.

This dissertation uses the National Longitudinal Survey of Youth data to examine predictors of sexual behavior is not common. There is little previous research using this database for this purpose. A keyword search of the database of publication on the Bureau of Labor Statistics website reveals only a total of nine studies under key categories "sexual behavior" and "sexual activity" for both the 1979 and 1997 data sets. The data set for this study has not been used to specifically address matters of sexual risk behaviors.

This study explores the dynamics of mother and father's involvement in the lives of their children and respective behaviors that occur regarding sexual risk. This study includes information on interaction with non-residential parents. Variables used in this study ask about relationship with parent, regardless of where they live in relation to the child. This is an aspect of the family dynamic that is ignored by most previous research. This study furthers the argument of Davis & Friel (2001) that factors beyond those of simple family structure, such as single or dual parent families, impact the sexual behavior patterns of young people.

Therefore this research will aim to examine in detail the impact of relationship with and supervision by both mother and father on adolescent female and male sexual risk behaviors. A point of clarification is that this study will examine the effect of the strength of relationship with the parent regardless of where they live in relation to the child. The data set for this study

includes items measuring strength of relationship between child for both residential and non-residential parents.

One of the most influential conclusions from previous research suggests that there are several factors associated with sexual risk behavior, and that the factors in sexual risk behavior are different as we age (Small & Luster 1994). Small and Luster argue that the reason for the diverse findings on sex risk behavior is that too many different models are being used. In addition, they attribute the inconsistent results to the differing and conflicting theoretical approaches used by various researchers. In fact, the important endeavor seems to be the identification of factors of sexual risk behavior across life course, including adolescence, and then applying appropriate models. This research seeks to contribute to knowledge by focusing on the predictors of risky sex during the adolescent years.

#### Social Control Theory and Risky Sexual Behavior

Social control theories (e.g., Nye, 1958; Hirschi, 1969) have been used to explain why early sexual behavior occurs (e.g., see Udry, 1988; Crockett et. al. 1996; Ramirez-Valles et al. 2002; Ream & Salvin-Williams 2005; Benda & Corwyn 1996; Benda & Corwyn 1998; Rostosky et. al., 2003). It is important to note that social control theory developed as an explanation of conformity to identify inhibiting factors that prevent deviance. This study uses Nye's (1958) and Hirschi's (1969) social control theories because they examine the factors that facilitate pro-social behaviors that result from strong indirect social bonds and direct social controls. For example, both Nye (1958) and Hirschi (1969) examined the effect of various factors on delinquency.

While early sexual debut and multiple sexual partners may not be considered deviant by some, an assumption of this study is that most social institutions do not approve of early sexual

behavior or adolescents being sexually involved with multiple partners. Since social control theory developed to explain the conformity through inhibiting factors, parental attachments and direct controls are examined in this study as causal factors that discourage deviant behaviors. In other words, greater parental attachment (indirect controls), monitoring (direct controls), and involvement in family activities will lead to less risky behavior.

Social control theorists such as Hirschi, 1969 argue that weak social bonds increase the likelihood of deviant behavior. Nye's (1958) theory stresses four types of social control: direct, indirect, internalized and opportunity control. Direct controls are defined as the perceived likelihood of punishment or reward occurring for a certain behavior. It includes such things as rewards, punishments and monitoring. Indirect controls are defined as emotional attachments to significant persons; in Nye's (1958) theory, parental attachments are seen as the main inhibiting force. Internalized control is a form of self-control that develops within an individual and is akin to the concept of a conscience. Controls over opportunity result from limits placed on choice of activities or control over one's own free time. This research will focus on attachment to parents, parental monitoring (direct controls), and involvement as factors in sexual risk behaviors. Specifically, the study will address emotional attachments to parents (attachments), number of hours spent each week supervised by either parent (monitoring), and time spent in routine family activities (involvement) as factors in sexual risk behavior. According to Nye (1958), these factors are defined as both direct and indirect controls. On the other hand, Hirschi's (1969) theory did not include "direct control" factors such as discipline and monitoring, but he did include the factor of "involvement" as an inhibiting force in preventing delinquency and other forms of deviance.

According to control theory, adolescents who do not effectively value the opinions of parents are more likely to violate social norms. On the other hand, adolescents with strong attachments will strive to behave in ways that will not displease or worry their parents. The interest of these adolescents is in protecting a positive relationship with parents rather than pursuing his or her individual desires. While Nye (1958) believes that both family attachment and direct controls such as monitoring are effective in controlling deviance, Hirschi believes that monitoring is not an effective mode of control. To Hirschi (1969), the more important aspect of control is indirect, which does not rely on the physical presence of a parent or other authority figure.

This research focuses on the issues of parental attachment, monitoring and involvement and their impact on sexual risk behavior, defined in this study as sex with multiple partners at a young age and measured within a time span of one year. Parental control for this study has three dimensions: parental attachment, parental supervision and involvement. It is hypothesized that that parental supervision, parental attachment and involvement will be inversely related to sexual risk behaviors.

*Hypothesis: Stronger parental attachments will be associated with lower likelihood of sexual risk behavior.*

*Hypothesis: Weaker parental attachments will be associated with sexual risk*

The following sections detail the study, beginning with Chapter Three that describes the methods used and limitations of the data. Chapter Four presents a discussion of the National Longitudinal Survey of Youth, and the sample selection for this study. Chapter Five examines the factors associated with and prediction of whether or not a respondent had sex. Chapter Six details the prediction of whether or not a respondent had multiple partners and the prediction of

number of partners over the past twelve months. Chapter Seven summarizes the findings of the study, limitations of this research and policy implications.

## CHAPTER 3 METHODS

### Data Description

This study employs secondary data analysis using a data set compiled by the United States Bureau of Labor Statistics, the National Survey of Children and Youth 1997 (NLSY 1997). The data allows for the examination of sexual behavior among our nation's youth because it includes extensive items regarding respondent's sexual experience and behavior, as well as items dealing with family relationships

The data used in this study is from round one of the NLSY97. I will briefly describe a few basic elements of the data. The total number of respondents in round one of 1997 was 8984. Not all of these respondents were asked the same sets of questions. Of the total number of respondents, 5,292 were asked and responded to the survey item regarding engaging in sex. Therefore, only those answering "yes" or "no" to the question were selected as the base sample for this study. This introduces possible biases into the sample, as the final sample excluded people who were not asked the question (those under 14 years old) as well as those who were asked the question but refused to answer it. Analysis was conducted to test for any significant differences by age, sex and race of the non-respondents and those included in the sample.

The NLSY 1997 (United States Bureau of Labor Statistics) is a longitudinal survey of young men and women born in the years 1980 to 1984. The sample was composed of 8,984 youth aged 12-17 at the onset of the study. While the study follows the same respondents through the transition from school to work, this study will focus on the data from year 1997. This is the first and most complete round of data collection. The questions used in this study were only asked as a complete set during the first wave of the NLSY97. The original purpose of the study was to measure the effect of various life factors on the transition to work life. However, a

great number of variables exist regarding social factors like family relationships, school experience, sexual behavior, and drug and alcohol use.

The data for this study include survey items addressing family style and communication processes as perceived by the respondent. This allows the study to address, among other things, the respondent's feelings of closeness with each parent and the amount of communication about sexual and other aspects of the adolescent's life. Questions asked include which person in the adolescent's life he or she would turn to if in need of advice on such things as employment, school problems and sexual information. The study includes variables that measure the quality of relationship with parents, which are a point of interest because research suggests that children reporting healthy relationships with parents may be more likely to demonstrate responsible sexual behaviors (Rodgers 1999).

### Limitations

In this study I will examine responses from the first wave of the survey because the family circumstances and questions vary from one survey year to the next. As with any survey about sexual behavior, it can be assumed that there may be an issue with underreporting or overreporting sexual behavior by the respondents in this study. Based on analyses of earlier rounds of NLSY data, there may be underreporting of sexual activity with the NLSY when compared to other national surveys that examine sexual activity (Marsiglio & Mott 1986). However, the study from the 1997 cohort has not been utilized or scrutinized in such a fashion. Published research discusses the best methods to capture accurate data surrounding sexual activity (Stone et. al. 1999, Gilmore et al. 2001, Fenton et. al 2001). However, there remains debate about the actual rate of underreporting, as it varies according to age, health status, gender, and sexual

orientation. While Meston et al. 1998 suggest that underreporting of sexual activity is common, the 1997 NLSY data set has yet to be examined in such a fashion.

This study was conducted using face to face interviews, similar to the procedure used in other studies. Face to face interviews about sexual behavior are thought to lead to respondents' giving perceived socially acceptable responses. These inaccurate responses are given because discussing sexual behavior often leads the respondent to feel embarrassed or threatened that they will be judged for their behavior (Herold & Way, 1988).

The data were collected through personal interviews, and it is possible that respondents may have altered their responses to questions that did not address sexual behavior because of the presence of the interviewer. Respondents are sometimes reluctant to report controversial or deviant attitudes or behaviors in interviews (Babbie 2002). Since a great deal of this study deals with variables on sensitive issues such as sexual experience, drug use, and relationships with parents, there is likelihood that some of the information in the data set is inaccurate . If certain behaviors are underreported, then it will alter the results of the study. With this research, the concern with missing values is not because of reduced sample size but because of the possibility that the reduced data set is biased. The reduced sample has been scrutinized for bias at each phase where it is reduced. This is discussed later in the Chapter 4.

There is also potential bias introduced by reducing the sample. The original sample consists of 8,984 respondents. That sample was reduced to 5,292 respondents for the purpose of this study. Not all respondents in the original 8,984 were asked all of the questions needed for this study. None of the respondents under 14 were asked questions about sexual behavior. Therefore, there is a significant difference in age between the portion of the sample that was omitted (because of not being asked the questions about sexual behavior) and the portion of the



sample that was retained for my study. There was no significant difference by race or sex between the omitted respondents and the included respondents. However, since no respondents under the age of 14 were asked questions about sexual behavior and therefore the mean age of the sample used for the study is significantly higher than that of the original sample.

### Analysis Description

The following are the variables used in the analysis:

Independent

Age

Sex

Race

Age at First Sex

Attachment Variables:

1. Respondent thinks highly of mother
2. Respondent wants to be like mother
3. Respondent enjoys time with mother
4. Respondent feels that mother helps with what is important
5. Mother knows respondent's friends
6. Mother knows teachers and school activities
7. Respondent feels that mother is supportive
8. Respondent thinks highly of father
9. Respondent wants to be like father
10. Respondent enjoys time with father
11. Respondent feels that father helps with what is important

12. Father knows respondent's friends
13. Father knows teachers and school activities
14. Respondent feels that father is supportive
15. Relationship with mother (scale variable created by survey developers)
16. Relationship with father (scale variable created by survey developers)
17. Hours spent each week engaged in routine family activities
18. Hours monitored weekly by mother
19. Hours monitored weekly by mother

Relationship with mother, relationship with father and index of family variables, a continuous variable which measures time spent with family in number of hours per week, were all recoded into quartiles to be adequate to run a Chi-Square. The continuous form of the variables were used in the regression analysis portion of the analysis. The variables for relationship with mother and father were constructed by the survey developers to reflect the level of positive interactions with parents, with higher numbers being more positive experiences. These two variables were constructed by the developers of the survey as a measure of the quality of relationship the respondent reported having with each parent. The variable values were derived by adding the numeric responses to all questions regarding each parent respectively. Therefore, there was a large range of values on the variable, and for the purposes of chi-square analysis, reduction into quartiles was needed.

Dependent Variables:

1. Have Sex?
2. Number of Sexual Partners

This research focuses on a two-stage analysis. The first objective predicted those adolescents who had sex. The second stage predicted multiple partners. First, the entire selected sample was examined to determine factors associated with having sex. Secondly, among the subsample who reported having sex, the predictors of having or not having multiple sexual partners were identified. Of the group that reports having sex, predictors of number of partners was also examined.

#### Phase 1: Predictors of Having Sex

Hypotheses for the first phase:

Weaker parental attachment will predict having sex

Stronger parental attachment will predict no sex

Being female will predict abstinence

Procedure for Phase 1:

For the entire sample, chi-square tests were run to test for relationship between the variable “r ever have sex” and categorical family process measure and demographic variables. For age, t-tests were run to check for the importance of age in the decision to have sex. The data was examined for significant differences by gender and race by using t-tests with the attachment variables. Logistic regression analysis was conducted to determine factors that predict the decision to have sex for the entire sample, since the dependent variable could only take the value of 0 or 1.

Literature suggests that motivators for sexual behavior differ by sex and race (Ott et al. 2006, Werner-Wilson 1998, Lauritsen 1994, Hayes 1987). Therefore, separate models were run for males and females and then separate models for Whites and African Americans.

## Phase 2: Predicting Multiple Partners

Hypotheses for the second phase:

Weaker parental attachment will predict greater number of sexual partners

Older age will predict greater number of sexual partners

Being male will predict greater number of sexual partners

Less parental supervision will lead to greater number of sexual partners

Procedure For Phase Two:

For the entire sample who reported having sex, chi-square tests were run to test for relationship between the variable measuring multiple partners (“multipart”) and categorical family process measure and demographic variables. For age, t-tests were run to check for the importance of age in the decision to have multiple partners. The data were examined for significant differences by gender and race by using t-tests with the attachment variables. Linear regression was conducted on the entire sample to predict the number of sexual partners in the past 12 months.

Literature suggests that factors in having multiple partners differ by sex and race. Therefore separate analyses were conducted to examine difference by sex and race in the decision to have multiple sexual partners. Chi-square tests were run to test for relationship between the variable “multipart” and family attachment variables. Chi-square tests were also run to test for a relationship between race and multiple partners. To test for a relationship between age and the decision to have multiple sexual partners, a t-test was run. Logistic regression was conducted to determine which independent variables in the study were predictors of having multiple partners for males, females, African Americans and Whites in the study.

As discussed in previous research, society tends to encourage sexual activity for males and discourage such activity for females. Therefore I predicted that sexual activity will be greater in males. Also, as a consequence of adolescent aging I expected the number of sexual partners to increase with age over time. Research has shown that parental supervision plays a role in the likelihood that a teen will engage in sex. Therefore, I predicted that greater parental monitoring would be associated with fewer sexual partners.

## CHAPTER 4 SAMPLE CHARACTERISTICS

This study has two separate phases. The first phase analyzes the predictors of having sex, while the second phase analyzes predictors of multiple partners among the subgroup who had sex. The initial data set contained 8,984 respondents. Respondents under the age of 14 were not asked questions about their sexual behavior and were omitted from the data set used in the current study. As a result, Phase 1 of the study included 5,292 respondents. Differences between the initial dataset and the reduced data set are discussed below and in the data limitations section.

For the second phase of the analysis only those who reported being sexually active were included in the prediction of multiple partners. Therefore, from the sample of 5,292 respondents from Phase 1, only those who reported having sex were selected for the second phase. A total of 1679 respondents who reported having sex were used as the sample for the second phase of analysis. Differences between those that reported having sex and those who reported no sex are discussed below and in the data limitations section. Possible bias introduced by sample reduction is also addressed at the end of this chapter. The following sections are separate descriptions of the Phase 1 sample of 5,292, the Phase 2 sample of 1,679 that reported having sex and the significant differences between these groups.

### Description of Sample for Phase 1-All respondents

Phase one includes all respondents who were 14 or older and asked whether they had ever had sex. Table 1 describes the sociodemographic characteristics of these 5,292 respondents. Males accounted for 50.80 percent of the sample while 49.20 percent was female. The age distribution of the sample used for this study ranges from 14 to 17 years old. The average age of respondents was approximately 15.33 with a standard deviation is .950; the variable is reasonably normally distributed. The table shows similar age distribution across sex and racial

groups. The racial composition of the sample was 58.30 percent Caucasian, 0.40 percent American Indian, Eskimo, or Aleut, 28.30 percent African American, and 1.80 percent Asian or Pacific Islander and 12.20 percent other racial categorizations.

Table 1. Respondent Characteristics for Those Asked About Sexual History\*

Characteristic	
Percent Male (n=2689)	50.8
Percent Female (n=2603)	49.2
Mean Age	15.33 (.95)
Mean Age Male	15.32 (.94)
Mean Age Female	15.33 (.95)
Mean Age African American	15.36 (.95)
Mean Age White	15.30 (.94)
Mean Age American Indian, Eskimo, Aleut	15.35 (.88)
Mean Age Asian or Pacific Islander	15.49 (.98)
Mean Age Other Race	15.35 (.96)
Percent African American (n = 1432)	28.3
Percent White (n=3507)	58.3
Percent Am. Indian, Eskimo, or Aleut (n = 23)	0.4
Percent Asian or Pacific Islander (n = 96)	1.8
Percent Other Races (n = 639)	12.2

\*standard deviation of mean appears in ( ).

As shown in Table 2, respondents who were asked questions about sexual behavior spent an average of 14.44 hours a week with parents engaged in routine family activities. Female respondents reported spending an average of 14.28 hours a week engaged in routine family activities. Male respondents reported more hours engaged in routine family activities, an average of 14.6 hours, but this difference was not statistically significant ( $t=1.28$ ,  $p=.198$ ).

American Indian, Eskimo or Aleut respondents spent the most time with family, an average of 15.88 hours weekly. White respondents reported spending an average of 14.66 hours weekly with family. African-Americans reported slightly less time engaged in family activities with an average of 14.14 hours weekly. Asian or Pacific Islanders reported spending the least amount of time with family with an average of 14 hours each week. Combining the

groups into Whites vs. Nonwhites revealed no significant differences in hours spent with family ( $t=1.77$ ,  $p=.076$ ).

Table 2. Estimated Number of Hours Spent with Family for Those Asked About Sexual History

Hours Spent Weekly with Family	Mean	SD
All	14.44	5.30
Males	14.60	5.19
Females	14.28	5.40
Independent Samples Test	$t=1.28$	$p=.198$
African American	14.14	6.02
White	14.66	4.91
American Indian, Eskimo, or Aleut	15.88	.89
Asian or Pacific Islander	14.00	4.10
Other	14.06	5.45
Whites	14.66	4.91
Nonwhites	14.34	1.48
Independent Samples Test	$t=1.77$	$p=.076$

Table 3 indicates that fifty-six percent of respondents strongly agreed that they thought highly of their mothers. Twenty-two percent of respondents strongly agreed that they wanted to be like their mothers. Thirty-nine percent reported strongly agreeing with the statement that they enjoy time with their mother. Forty-one percent strongly agreed that their mother helps out with what is important to them. Twelve percent strongly agreed that their mother knows their close friends. Twenty-seven percent strongly agreed that their mothers knew their teachers and/or were involved in their school activities

Table 3 shows that forty-eight percent strongly agreed that they thought highly of their father. Twenty-five percent strongly agreed that they wanted to be like their father. Thirty-six percent strongly agreed that they enjoyed time spent with their father. Thirty-two percent



strongly agreed that their father helps out with what is important to them. Six percent of the respondents strongly agreed that their fathers know their close friends. Sixteen percent strongly agreed that their father knows their teachers and/or is involved in their school activities.

Examining the data about maternal and paternal relationships requires a cautionary note. Not all respondents lived with mothers and fathers: 29% did not live with biological fathers, 4% did not live with biological mothers and 6% did not live with either biological parent. The data shown in Table 3 reflect respondents who answered the questions, and it is not possible to separate out those who refused to answer the question from those for whom the questions were not applicable because they did not live with a particular parent.

When comparing respondent reports about their parents from Table 3, opinions expressed about relationship with mother and relationship with father were similar with three exceptions. First, while 41.9% of all respondents said they strongly agreed that their mothers helped with what is important to them, only 32.8 % strongly agreed that their fathers helped with what is important to them. Second, only 6% strongly agreed that their fathers knew their close friends while 12% strongly agreed that their mother knew their close friends. Third, 27% strongly agreed that their mother is involved in their school activities while only 16% strongly agreed that their father is involved with school.

Table 3. Summary of Variables Regarding Maternal and Paternal Relationships for Those Asked About Sexual History

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Think Highly of Mother	8.2%	1.7%	7.8%	25.6%	56.8%
Want to Be Like Mother	6.8%	9.3%	27.4%	34.1%	22.4%
Enjoy Time With Mother	3.9%	2.3%	16.0%	38.9%	38.9%
Mother Helps with What is Important	2.7%	5.0%	17.1%	33.3%	41.9%
Mother knows close friends	5.3%	13.8%	27.3%	40.8%	12.7%
Mother know Teachers & School Acts	4.8%	12.9%	20.2%	34.8%	27.3%
Think Highly of Father	3.7%	4.2%	12.9%	31.2%	48.1%
Want to Be Like Father	7.1%	10.7%	27.1%	29.5%	25.6%
Enjoy Time With Father	4.0%	3.1%	19.0%	37.5%	36.4%
Father Helps with What is Important	5.5%	9.2%	21.7%	30.7%	32.8%
Father knows close friends	14.9%	26.6%	26.6%	26.0%	6%
Father know Teachers & School Acts	13.8%	20.0%	26.0%	24.1%	16.1%

In Table 4, male respondents reported being monitored by their mothers an average of 9.99 hours each week while females reported being monitored more often, an average of 10.24 hours weekly; this difference was statistically significant ( $t=5.039$ ,  $p < .000$ ). White respondents were monitored the most by their mothers, 10.16 hours each week. African Americans reported being monitored 9.99 hours each week by their mothers. American Indian, Eskimo, or Aleut respondents reported being monitored an average of 10 hours weekly. Respondents who were Asian or Pacific Islanders reported the least degree of monitoring, 8.5 hours each week. Combining the categories into whites vs. nonwhites showed means of 10.17 for whites and 9.56 for nonwhites. This difference was statistically significant ( $t = 2.95$ ,  $p = .008$ ).

Female and male respondents reported very similar average hours monitored by their fathers. Males reported 8.07 hours weekly while females reported 8.09 hours. This difference was not statistically significant ( $t=0.22$ ,  $p = .83$ ). White respondents reported the greatest number of hours of paternal supervision (8.13 hours) while African-Americans and American Indian, Eskimo, or Aleut respondents reported only slightly less time monitored by the father; both groups reported 8 hours average weekly paternal monitoring. Asians or Pacific Islanders reported

the least amount of paternal monitoring, an average of 6.0 hours weekly. Comparing whites to nonwhites, the mean hours were 8.13 and 7.40 respectively, with a significant  $t$  of 2.83,  $p = .007$ .

Table 4 Maternal and Paternal Supervision  
(Number of hours supervised by mother and father weekly)

Hours Spent Weekly Mother	Mean	SD
All	10.10	1.95
Males	9.99	1.96
Females	10.24	1.93
Independent Samples Test	$t=5.039$	$P<.000$
African American	9.99	2.07
White	10.16	1.82
American Indian, Eskimo, or Aleut	10	4.87
Asian or Pacific Islander	8.5	3.88
Other	9.93	3.31
Independent Samples Test	$t =2.95$	$P =.008$
Hours Spent Weekly Father		
All	8.80	1.93
Males	8.07	1.94
Females	8.09	1.93
Independent Samples Test	$t=0.22$	$P =.83$
African American	8.00	1.79
White	8.13	1.97
American Indian, Eskimo, or Aleut	8.00	5.888
Asian or Pacific Islander	6.0	4.68
Other	7.94	4.16
Independent Samples Test	$t=2.83$	$P =.007$

#### Sample for Phase 2-All respondents who reported having sex

Phase 2 includes all respondents who were 14 or older and reported that they had sex. Table 5 describes the sociodemographic characteristics of these 1679 respondents. Males accounted for 55.3 percent of the sample while 44.7 percent was female. The age distribution of the sample used for Phase 2 of this study ranged from 14 to 17 years old. The average age of respondents was 15.63. The average age of males in Phase 2 of the study was 15.59 and the

average age for females was 15.67. The racial composition of the sample was 46.2 percent Caucasian, 0.40 percent American Indian, Eskimo, or Aleut, 39.3 percent African American, and 1.3 percent Asian or Pacific Islander and 12.20 percent other racial categorizations.

After eliminating all respondents who did not have sex, the sample for Phase 2 of the analysis contained more males than females. The sample for Phase 2 also included a higher percentage of African Americans than the sample for Phase 1. The average age in the sample for Phase 2 was similar to Phase 1, falling between 15 and 16 years of age for both samples.

Table 5. Respondent Characteristics for those that reported having sex\*

Percent Male (n=928)	55.3
Percent Female (n=751)	44.7
Mean Age	15.63 (.92)
Mean Age Male	15.59 (.93)
Mean Age Female	15.67(.92)
Mean Age African American	15.58(.93)
Mean Age White	15.57(.90)
Mean Age American Indian, Eskimo, Aleut	15.35(1.13)
Mean Age Asian or Pacific Islander	15.49(.88)
Mean Age Other Race	15.35(.931)
Percent African American (n = 660)	39.3
Percent White (n=775)	46.2
Percent Am. Indian, Eskimo, or Aleut (n = 7)	0.4
Percent Asian or Pacific Islander (n = 21)	1.3
Percent Other Races (n = 205)	12.2

\*Standard deviations given in ( )

As shown in Table 6, respondents who reported having sex spent an average of 13.09 hours a week with parents engaged in routine family activities. Female respondents reported spending an average of 12.31 hours a week engaged in routine family activities. Male respondents reported an average of 13.6 hours. This difference was statistically significant ( $t=2.092, p=.05$ ).

Of the sample who reported having sex, White respondents reported spending an average of 13.95 hours weekly with family. African-Americans reported slightly less time engaged in family activities with an average of 12.81 hours weekly. American Indian, Eskimo or Aleut respondents reported spending the most time with family, an average of 15.5 hours weekly. Asian or Pacific Islanders reported spending the least amount of time with family with an average of 8.5 hours each week. Combining the groups into Whites vs. Nonwhites revealed no significant differences in hours spent with family ( $t=1.67$ ,  $p=.096$ ).

Table 6. Estimated Number of Hours Spent with Family for Respondents Who Reported Having Sex

Hours Spent Weekly with Family	Mean	SD
All those that report having sex	13.09	5.61
Males that report having sex	13.6	5.52
Females that report having sex	12.31	5.68
Independent Samples Test	$t=2.092$	$p=.037$
African Americans that report having sex	12.81	4.95
Whites that report having sex	13.95	6.21
American Indian, Eskimo, or Aleut that report having sex	15.5	3.5
Asian or Pacific Islanders that report having sex	8.5	6.36
Others that report having sex	12.3	5.47
Whites that report having sex	12.81	4.95
Nonwhites that report having sex	14.3	5.79
Independent Samples Test	$t=-1.67$	$p=.096$

Table 7 indicates that forty-eight percent of respondents strongly agreed that they thought highly of their mothers. Sixteen percent of respondents strongly agreed that they wanted to be like their mothers. Thirty-two percent reported strongly agreeing with the statement that they enjoy time with their mother. Forty percent strongly agreed that their mother helps out with what is important to them. Eleven percent strongly agreed that their mother knows their close friends.

Twenty-three percent strongly agreed that their mothers knew their teachers and/or were involved in their school activities

Table 7 shows that thirty-five percent strongly agreed that they thought highly of their father. Twenty-one percent strongly agreed that they wanted to be like their father. Twenty-six percent strongly agreed that they enjoyed time spent with their father. Twenty-three percent strongly agreed that their father helps out with what is important to them. Six percent of the respondents strongly agreed that their fathers know their close friends. Twelve percent strongly agreed that their father knows their teachers and/or is involved in their school activities.

When comparing respondent reports about their parents from Table 7, opinions expressed about relationship with mother and relationship with father are similar with two exceptions. First, while 48.3% of respondents said they strongly agreed that they thought highly of their mother, only 35.3 % strongly agreed that they thought highly of their father. Second, 23.5% strongly agreed that their mothers know teachers and are involved with school activities while only 12.6% strongly agreed that their father knew their teachers and were involved in school activities.

Table 7. Summary of Variables Regarding Maternal and Paternal Relationships for Respondents Who Reported Having Sex

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Think Highly of Mother	9.3%	2.7%	10.8%	28.8%	48.3%
Want to Be Like Mother	11.4%	14.1%	29.1%	29.1%	16.2%
Enjoy Time With Mother	5.4%	3.9%	20.4%	37.8%	32.4%
Mother Helps with What is Important	5.4%	8.7%	14.7%	30.6%	40.5%
Mother knows close friends	7.2%	18.0%	29.4%	33.9%	11.4%
Mother know Teachers & School Acts	9.3%	17.0%	21.3%	29.0%	23.5%
Think Highly of Father	7.5%	9.5%	16.9%	30.8%	35.3%
Want to Be Like Father	12.5%	15.0%	29.0%	22.5%	21.0%
Enjoy Time With Father	6.5%	5.0%	29.9%	32.3%	26.4%
Father Helps with What is Important	12.4%	14.4%	21.9%	27.9%	23.4%
Father knows close friends	22.9%	32.3%	19.4%	19.4%	6.0%
Father know Teachers & School Acts	24.6%	26.1%	19.1%	17.6%	12.6%

For the Phase 2 sample, all respondents reported being monitored an average of 9.82 hours each week by their mothers (Table 8). Male respondents reported being monitored by their mothers an average of 9.42 hours each week while females reported being monitored more often, an average of 10.23 hours weekly; this difference was not statistically significant ( $t=4.93$ ,  $p=.346$ ).

White respondents were monitored the most by their mothers, 10 hours each week. African Americans reported being monitored 9.44 hours each week by their mothers. American Indian, Eskimo, or Aleut respondents reported being monitored an average of 9 hours weekly. Respondents who were Asian or Pacific Islanders reported the same degree of monitoring, 9 hours each week. Combining the categories into Whites vs. Nonwhites showed means of 10 for whites and 9.23 for nonwhites. This difference was not statistically significant ( $t=-1.0$ ,  $P=.318$ ).

Female and Male respondents reported very similar average hours monitored by their fathers. Males reported 7.75 hours weekly while females reported 7.8 hours; this slight difference was not statistically significant. ( $t=1.146$ ,  $p=.146$ ). White respondents reported the greatest number of hours of paternal supervision (7.99 hours) while African-Americans reported 7.22 hours and American Indian, Eskimo, or Aleut respondents reported 6 hours of weekly monitoring. Asian or Pacific Islanders reported the least amount of monitoring by their fathers, 3.5 hours weekly. Comparing Whites to Nonwhites, the mean hours were 7.99 and 7.40 respectively, although this difference was not statistically significant ( $t=-.308$ ,  $p=.758$ ).

Table 8. Maternal and Paternal Supervision for Respondents Who Reported Having Sex  
(Number of hours supervised by mother and father weekly)

Hours Spent Weekly with Mother	Mean	SD
All that reported having sex	9.82	3.39
Males that reported having sex	9.42	3.34
Females that reported having sex	10.23	3.38
Independent Samples Test	t=-.943	p =.346
African Americans that reported having sex	9.44	3.60
Whites that reported having sex	10.00	3.26
American Indian, Eskimo, or Aleuts that reported having sex	9.00	2.28
Asian or Pacific Islanders that reported having sex	9.00	3.58
Others that reported having sex	8.83	3.22
Independent Samples Test	t =-1.0	p =.318
Hours Spent Weekly with Father		
All that reported having sex	7.78	3.93
Males that reported having sex	7.75	3.86
Females that reported having sex	7.80	4.01
Independent Samples Test	t=1.416	p =.146
African Americans that reported having sex	7.22	4.11
Whites that reported having sex	7.99	3.77
American Indian, Eskimo, or Aleuts that reported having sex	6.00	2.98
Asian or Pacific Islanders that reported having sex	3.50	.70
Others that reported having sex	6.00	5.30
Independent Samples Test	t=-.308	p =.758

Another key issue in the study is age and sexual activity. The following table (9) shows average age of respondents at first sex. Half of seventeen year olds in the study reported having had sex. The younger respondents reported very little sexual activity with the rate of activity increasing with age. Females in the study reported having sex at older ages and with fewer partners than males. Males reported being sexually active more often than females. Twenty-five percent of White respondents report having had sex. This is decidedly lower than 46% of



African American respondents. African-Americans were more likely to report having sex than other race groups.

The average number of sexual partners was higher for males (5.93) than for females (3.97). American Indian, Eskimo or Aleut respondents reported having the highest number of sexual partners an average of 7.0. Although it should be noted that each of these groups was very small. There were only 7 American Indian, Eskimo or Aleut respondents and 21 Asian or Pacific Islander respondents that reported having sex. This was followed by African Americans who reported 5.89, then Whites with a reported average of 4.19. Asian or Pacific Islanders reported the lowest number of sexual partners, an average of 2.0.

The average number of partners in the last twelve months for all respondents was 2.82. Males reported a higher number of sexual partners in the last twelve months (3.52) than females (1.97). This was followed by African Americans reporting 3.15 partners Whites had the lowest number of reported partners in the previous year, an average of 2.48. American Indian, Eskimo or Aleut respondents reported 3.57 partners over the last twelve months. Asian or Pacific Islanders reporting 2.87 partners over the last year. Again, both of these last two groups had very small n's in this phase of the study.

Table 9. Respondent Sexual Experience for Those that Reported Having Sex

	Age at first sex	average number of partners	average number of partners in the last 12 months
All	13.83	5.04	2.82
Males	13.93	5.93	3.52
Females	14.09	3.97	1.97
African American	14	5.89	3.15
White	14.04	4.19	2.48
American Indian, Eskimo, or Aleut	14.05	7.0	3.57
Asian or Pacific Islander	14.55	2.0	2.87
Other	13.84	5.79	3.14

### Comparing Respondents that Reported Having Sex With Those That Report No Sex

The second phase examines predictors of multiple partners. Therefore, respondents that did not report having sex were omitted from the second stage of the analysis. In this section I compare the groups that report having sex (who were included in the second phase of the analysis) with the group that reported having no sex.

When comparing those respondents that reported having sex with those that reported no sex, there are some interesting differences in reports about parental relationship and involvement. Of those that report having sex, forty-eight percent strongly agree that they think highly of their mother, while fifty-eight percent of those that report no sex strongly agree with this statement. Fifty percent of the abstinent respondents strongly agreed that they thought highly of their father while thirty-five percent of the group that reported having sex strongly agreed with this statement. Thirty-eight percent of those that reported no sex strongly agreed that they enjoy time with their father, compared with twenty-six percent of those that reported having sex. Thirty-four percent of those that never had sex strongly agreed that their father helps with what is important to them while only twenty-three percent of the group reporting sexual activity strongly agreed.

Table 10. Summary of Variables Regarding Maternal and Paternal Relationships

Respondents reporting no sex		Respondents reporting sex	
Variable	Strongly Agree		Strongly Agree
Think Highly of Mother	58.7%	Think Highly of Mother	48.3%
Want to Be Like Mother	23.8%	Want to Be Like Mother	16.2%
Enjoy Time With Mother	40.4%	Enjoy Time With Mother	32.4%
Mother Helps with What is Important	42.2%	Mother Helps with What is Important	40.5%
Mother knows close friends	13.0%	Mother knows close friends	11.4%
Mother know Teachers & School Acts	28.2%	Mother know Teachers & School Acts	23.5%
Think Highly of Father	50.5%	Think Highly of Father	35.3%
Want to Be Like Father	26.4%	Want to Be Like Father	21.0%
Enjoy Time With Father	38.3%	Enjoy Time With Father	26.4%
Father Helps with What is Important	34.6%	Father Helps with What is Important	23.4%
Father knows close friends	6.0%	Father knows close friends	6.0%
Father know Teachers & School Acts	16.7%	Father know Teachers & School Acts	12.6%

When asked about level of perceived parental support, 80.1% of the abstinent group said their mothers were very supportive while 73% of the sexually active group said their mother was very supportive. Seventy percent of those reporting no sex stated that their father was very supportive, compared to 57% of the sexually active group that felt their father was very supportive.

Table 11. Comparison of Respondent Perceived Parental Support

Respondents Reporting Sex	Very Supportive	Somewhat Supportive	Not Very Supportive
Mother is Supportive	73.7%	23.7%	2.6%
Father is Supportive	57.9%	34.3%	7.8%
Respondents reporting No Sex			
Mother is Supportive	80.1%	18.4%	1.5%
Father is Supportive	70.5%	25.6%	3.9%

As shown in Table 12, respondents that reported having sex spent an average of 13.09 hours a week engaged in routine family activities. Those that reported no sex spent an average

of 14.76 hours a week engaged in family activity. This difference was statistically significant ( $t=5.26, p<.000$ ). Respondents that reported having sex were monitored on average 9.82 hours a week by their mother. Those that reported no sex were monitored 10.1 hours weekly by their mother. This difference was statistically significant ( $t=7.17, p<.000$ ). Respondents who reported having sex were monitored on average 7.78 hours each week by their father. Those who reported no sex were monitored 8.04 hours weekly by their father. This difference was also statistically significant ( $t=5.590, p<.000$ ).

Also shown in Table 12 is the mean age of the group that reported sex versus the group that reported no sex. The average age of those reporting sex was higher (15.63) than those reporting no sex (15.39). This difference was statistically significant ( $t=4.71, p<.000$ ). Older age means increased likelihood of having sex. Sex was also significantly different between the samples (chi-square 19.55,  $p<.000$ ). Males were more likely to report having had sex. Race was also significant (chi-square 197.87  $p<.000$ ), with African Americans more likely to report having had sex.

Table 12 Differences Between Respondents Having Sex and Those Reporting No Sex.

	Sexual Activity	mean	SD
Hours spent with family	Report No Sex	14.76	5.16
	Report Having Sex	13.09	5.61
	Independent Samples Test	$t=5.263$	$p=.000$
Hours monitored by mother	Report No Sex	10.1	3.28
	Report HavingSex	9.82	3.39
	Independent samples test	$t=7.170$	$p=.000$
Hours monitored by father	Report No Sex	8.04	3.87
	Report HavingSex	7.78	3.93
	Independent samples test	$t=5.590$	$p<.000$
Age	Report No Sex	15.39	.92
	Report Having Sex	15.63	.92
	Independent Samples Test	$t=-4.71$	$p<.000$
Sex	19.55 chi-sq	df=1	$p<.000$
Race	197.87 chi-sq	df=4	$p<.000$

Bivariate analysis shows significant differences in race, sex, age, hours spent with family and parental monitoring between the populations that report having sex and the population that reports no sex. Multivariate analysis will test various models in the next chapter.

## CHAPTER 5 PREDICTORS OF HAVING SEX

Chapter 4 used bivariate analysis to illustrate relationship among study variables. This section utilizes multivariate analysis to examine predictors of having sex to test the following hypotheses:

Weaker parental attachment will predict having sex

Stronger parental attachment will predict no sex

Being female will predict abstinence

Logistic regression is used to explore predictors of having sex and to allow the strength of predictors to be assessed. For the entire sample, chi-square tests were run to test for relationship between the variable “r ever have sex” and categorical family attachment measures and demographic variables. For age, t-tests were run to check for the importance of age in the decision to have sex. Factor analysis was explored theoretically as well as on an exploratory basis. Factor loadings were not large, and when regressions were conducted with factors the R<sup>2</sup> was not improved and the log likelihood score increased by four times the initial value. The results of these analyses guided the choice of variables tested in the logistic regressions.

### *Maternal attachment as a factor in the decision to engage in sex*

Variables measuring aspects of relationships with parents are categorical and responses given are in one of five categories: Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. For the entire sample, Table 13 indicates that whether or not respondents chose to engage in sex was strongly related to whether or not the respondent reports wanting to be like their mothers (chi-square=33.574 df=4 p=.000), respondent feeling their mother is helpful with what is important to them (chi-square=24.851 df=4 p=.000), mother’s involvement in respondents’ school activities and education (chi-square=27.66 df=4 p=.000), respondent feeling their mother

is supportive (chi-square=26.842 df=2 p=.000) and respondent reporting a positive relationship with the mother (chi-square=25.146 df=3 p=.000). Respondents who wanted to be like their mothers and felt their mothers were helpful were less likely to have sex. Respondents with mothers who were involved in school activities were less likely to have sex. Respondents who felt their mother was supportive and reported a positive relationship with their mother were less likely to have sex.

*Paternal attachment as a factor in the decision to engage in sex*

For the entire sample, whether or not respondents chose to engage in sex was strongly related to the respondent thinking highly of their father (chi-square=36.463 df=4 p=.000), reporting the desire to be like their father (chi-square=19.752 df=4 p=.001), enjoying time with their father (chi-square=29.442 df=4 p=.000), feeling their father helps with what is important to them (chi-square=35.074 df=4 p=.000), reporting their father knows their close friends (chi-square=21.759 df=4 p=.000), father's involvement in respondents school activities and education (chi-square=34.492 df=4 p=.000), feeling their father is supportive (chi-square=59.177 df=2 p=.000), reporting a positive relationship with the father (chi-square=41.756 df=3 p=.000) (See Table 13). Spending more time engaged in routine family activity (chi-square=38.974 df=3 p=.000) was also a significant factor in the decision to have sex. Respondents who reported thinking highly of their father and a desire to be like their father were less likely to have sex. Respondents who felt their father was helpful and knew their close friends were also less likely to report having sex. Respondents who reported their father was involved in their school activities were less likely to report having sex. Respondents who felt their father was supportive and reported a positive relationship with their father were less likely to report having sex.

Respondents who spent more time with the family engaged in routine activities were less likely to report having sex.

Four maternal variables and seven paternal variables were significant in the decision to have sex. A respondent wanting to be like their mother and like their father were both significant in the decision to engage in sex. Respondents that felt their mother was helpful and their father was helpful were less likely to engage in sex. Having a mother and father that were involved in school activities also meant less likelihood of reporting having sex. Feeling that their mother and father were supportive meant a decreased likelihood of reporting sex. Three additional paternal attachment variables were significant. Respondents that reported thinking highly of their father were less likely to report having sex, while thinking highly of the mother was not significant. Respondents that enjoyed time with their father were less likely to have sex but enjoyment of time with mother was not significant. Respondents that reported their father knows their close friends were less likely to have sex, however having a mother that knows close friends was not significant.

*Demographic characteristics associated with the decision to have sex*

Respondent race (chi-square=135.827 df=1 p=.000), age (t=-16.029 p=.000), and sex (chi-square=19.559 df=1 p=.000) were all statistically significant factors in the decision to have sex. The category for race was divided into Whites and Other Races for the chi-square run to ensure enough cases per category to adequately calculate the statistic. Whites were less likely than other race groups to report having sex. Females were less likely than males to report having sex. Older respondents were more likely to report having sex.



Table 13 Predictors of Having Sex

Variables Associated with Having Sex	Chi-Square	df	p.
Want to be like mother	33.574	4	.000
Respondent feeling their mother is helpful with what is important to them	24.851	4	.000
Mother's involvement in respondents school activities and education	27.66	4	.000
Respondent feeling their mother is supportive	26.842	2	.000
Respondent thinking highly of their father	36.463	4	.000
Want to be like father	19.752	4	.000
Respondent enjoying time with their father	29.442	4	.000
Respondent feeling their father helps with what is important to them	35.074	4	.000
Respondent reporting their father knows their close friends	21.759	4	.000
Father's involvement in respondents school activities and education	34.492	4	.000
Respondent feeling their father is supportive	59.177	2	.000
Sex of the respondent	19.559	1	.000
Reporting a positive relationship with the mother	25.146	3	.000
Reporting a positive relationship with the father	41.756	3	.000
Spending more time engaged in routine family activity	38.974	3	.000
Race (White, non-white)	135.827	1	.000
Age	16.029*		.000

\*t value for Age and its associated p value

### Logistic Regression Analysis

The model was developed using maternal attachment, paternal attachment and family attachment measures. Age, sex and race were included as they have been shown in the literature as significant factors in the decision to have sex. All variables were force included in the equation, to assess their relative value in explaining the decision to have sex. All variables were examined for multicollinearity, by examining tolerance and VIF statistics. Multicollinearity can be a problem in logistic regression that results from high correlations between independent variables and can result in lack of statistical significance of individual independent variables. Multicollinearity was not an issue for any predictor variable used in the logistic regression. The following were the tolerance and VIF statistics, respectively, for each variable used in the regression: think highly of mother .789 & 1.268, enjoy time with mother .601 & 1.664, mother

helps with what is important .532 & 1.879, mother knows close friends.573 & 1.746, mother knows friends parents .634 & 1.576, mother knows teachers and school activities .699 & 1.431, mother supportive .554 & 1.805, think highly of father .399 & 2.506, enjoy time with father .435 & 2.300, father helps with what is important .414 & 2.413, father know close friends .509 & 1.966, father know .538 & 1.858, father knows teachers and school activities .696 & 1.436, and father supportive .520 & 1.922.

Maternal and Paternal attachment variables included in the equation were Likert scale measures of agreement with certain statements. Most variables were measured on a five point scale ranging from strongly disagree, disagree, neutral, agree or strongly agree. The two exceptions to this were the measure of perceived parental support of mother and father. These were divided into three response categories by the survey developers: not supportive, somewhat supportive and very supportive. The categorical maternal and paternal attachment variables used in the equation were the respondents level of agreement with the following statements: Respondent thinks highly of mother, wants to be like mother, enjoys time with mother, believes mother is helpful with what is important to respondent, mother knows respondent's friends, mother knows parents of respondent's friends, mother is involved in school, mother is supportive, Respondent thinks highly of father, wants to be like father, enjoys time with father, believes father helps with what is important to respondent, father knows friends, father is involved in school activities, father is supportive. Five continuous family attachment variables were used. The first three were amount of weekly hours spent engaged in routine family activity, hours of weekly supervision given by the mother, hours of weekly supervision given by the father. The two additional family attachment variables were named relationship with mother and relationship with father by the survey developers who created these variables by adding all the

responses for all maternal and paternal variables respectively. It was the goal of the developers to use this as a single measure of the level of relationship with each the mother and the father of the respondent. Demographic variables used were race, sex and age of the respondent.

Table 14 shows the results of logistic regression analysis conducted on the entire sample to determine factors that predict the decision to have sex. The dependent variable was coded 0 if respondent reported no sex and 1 if the respondent reported having sex. The model suggests seven significant predictors: perceived helpfulness of mother, degree to which mother knows respondents friends, level of mother's involvement in school activities, perception of mother's support, being male, time spent in routine family activity, and hours of maternal monitoring.

Respondents who felt their mother was helpful were less likely to engage in sex. When respondents reported that their mother knows their friends, they were less likely to report having sex. Respondents with mothers that were involved in school activities were less likely to engage in sex. The more a respondent felt their mother was supportive, the less likely they were to report having sex. Females are less likely to have sex than males in the study. Respondents who spent more time engaged in routine family activities were less likely to report having sex. More maternal monitoring decreased the likelihood of having sex. No paternal variables were found to be statistically significant predictors of having sex. The value of Cox and Snell R<sup>2</sup> is very low (.092) as is the value of Nagelkerke R<sup>2</sup> (.160) which indicates a great deal of unexplained variance. The model correctly classified 99.4% of those that did not engage in sex and 11.0% of the cases that reported having sex.

Table 14 Logistic Regression Results: Predictors of Having Sex

Variable	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
						Lower	Upper
thinkhighmom	-.048	.097	.245	.621	.953	.788	1.153
belikemom	-.107	.117	.829	.363	.899	.714	1.131
enjoytimem	-.081	.121	.449	.503	.922	.727	1.169
momhelps	-.274	.127	4.639	.031	1.315	1.025	1.687
momknowfs	-.482	.171	7.915	.005	1.619	1.157	2.264
momknowfps	-.250	.131	3.615	.057	1.284	.992	1.660
momknowteach	-.332	.146	5.143	.023	1.393	1.046	1.855
momsupport	-.499	.203	6.017	.014	1.646	1.105	2.452
thinkidad	-.124	.129	.926	.336	.883	.686	1.137
belikedad	.107	.122	.766	.381	1.113	.876	1.414
enjoytimed	.010	.135	.005	.943	1.010	.774	1.317
fatherhelp	-.081	.116	.494	.482	.922	.735	1.157
dadknowfs	-.108	.174	.381	.537	.898	.638	1.264
dadknoteach	-.143	.132	1.179	.278	.867	.669	1.122
dadsupport	.017	.201	.008	.931	1.018	.687	1.508
female	-.618	.185	11.108	.001	.539	.375	.775
Non-white	.061	.065	.881	.348	1.063	.936	1.208
age	.322	.165	3.813	.051	1.380	.999	1.906
relwmom	.000	.000	.092	.762	1.000	.999	1.001
relwdad	.000	.000	.948	.330	1.000	.999	1.000
famroutine	-.069	.018	14.684	.000	.933	.901	.967
mommon	-.322	.092	12.205	.000	.725	.605	.868
dadmon	.062	.076	.669	.413	1.064	.917	1.235
Constant	-3.955	2.592	2.327	.127	.019		

Model chi-square = 80.054, 5 df; -2 Log likelihood function = -157.304; Cox and Snell = .046; Nagelkerke = .074 \*race 0=White 1=Non-White

Literature suggests there are different motivators for males and females to engage in sexual activity. Analysis in this study has shown that respondents' sex is a significant factor in the decision to engage in sex. This study examined differences between males and females in family attachment, family support and demographic factors in the decision to have sex.

For females in the sample, chi-square tests were run to test for relationship between the variable "r ever have sex" and categorical family process measure variables.

*Maternal factors in the decision to have sex for females in the study*

As shown in Table 15, the decision to have sex was significantly related to the respondent reporting thinking highly of her mother (chi-square=10.744 df=4 p=.030), wanting to be like her mother (chi-square=33.790 df=4 p=.000), enjoying time with her mother (chi-square=13.26 df=4 p=.010), feeling that their mother helps with what is important to them (chi-square=22.350 df=4 p=.000), having a mother that is involved in respondent's school activities ( 29.520 df=4 p=.000), and feeling that their mother is supportive (chi-square=29.836 df=2 p=.000). The more that females reported wanting to be like their mother, the less likely they were to have sex. Female respondents who felt their mother was helpful and reported that their mothers were involved in school activities were less likely to have sex. Females who reported a positive relationship with their mother were less likely to report having sex. Respondents who felt their mother was supportive were less likely to report having sex.

*Paternal factors in the decision to have sex for females in the study.*

Respondents who reported thinking highly of her father were less likely to engage in sex (chi-square=30.911 df=4 p=.000). Respondents who reported aspiring to be like her father were less likely to report having sex (chi-square=22.033 df=4 p=.000). Respondents who enjoy time with their father were less likely to report having sex (chi-square=21.295 df=4 p=.000). Respondents who felt their father helps with what is important to them were less likely to report having sex (chi-square=19.851 df=4 .001). Reporting that her father is involved in school activities and knows her close friends meant less likelihood of reporting sex (chi-square=34.431 df=4 p=.000). Respondents that reported having a supportive father were less likely to report having sex (chi-square=42.696 df=2 p=.000). The more hours spent engaged in routine family

activities the less likely a respondent was to report having had sex (chi-square=29.170 df=3 p=.000).

*Demographic variables and the decision to have sex for females in the study*

Race (chi-square=17.105 df=1 p=.000) and age of the respondent is significantly related to the decision to have sex for females (t=11.893 p=.000) Older females were more likely to report having had sex. White females were the least likely to report having sex.

Table 15 Variables Associated With The Decision To Have Sex For Females

Variables Associated with Having Sex for Females	Chi-square	df	P
Think highly of mother	10.744	4	.030
Respondent wanting to be like mother	33.79	4	.000
Enjoy time with mother	13.263	4	.010
Respondent feeling that their mother helps with what is important to them	22.35	4	.000
Mother knows close friends	4.986	4	.289
Mother knows parents of friends	7.891	4	.096
Having a mother that is involved in respondent's school activities	29.52	4	.000
Respondent feeling that their mother is supportive	29.836	2	.000
Respondent thinking highly of their father	30.911	4	.000
Respondent aspiring to be like their father	22.033	4	.000
Respondent enjoying time with their father	21.295	4	.000
Respondent feeling that their father helps with what is important to them	19.851	4	.001
Father knows close friends	12.663	4	.013
Having a father that is involved in school activities	34.431	4	.000
Having a supportive father	42.696	2	.000
Spending time engaged in routine family activities	29.17	3	.000
Race (White, Non-White)	17.105	1	.000
Age	11.893*		.000

\*t value for Age and its associated p value

*Maternal factors associated with the decision to have sex for males in the study.*

For males in the sample, chi-square tests were run to test for relationship between the variable "r ever have sex" and categorical family process measure variables. As shown in Table 16, the decision to have sex for males in the study was related to enjoying time spent with their mother (chi-square=9.751 df=4 p=.045), having a mother that is helpful (chi-square=12.880

df=4 p=.012), mother knowing close friends (chi-square=15.031 df=4 p=.005), and mother knowing parents of friends (chi-square=11.290 df=4 p=.023). Female respondents were less likely to report having sex if they enjoyed time with their mother and felt she was helpful. Females in the study were also less likely to report having had sex if their mother was supportive, knew her friends and her friends parents.

*Paternal factors associated with the decision to have sex for males in the study.*

For males in the study, the decision to have sex was significantly related to thinking highly of their father (chi-square=13.12 df=4 p=.011) enjoying time with the father (chi-square=22.949 df=4 p=.000), having a father that helps with what is important to the respondent (chi-square=18.850 df=4 p=.001), father knowing close friends (chi-square=12.797 df=4 p=.012), father being involved in school (chi-square=10.337 df=4 p=.035), and having a supportive father (chi-square=23.199 df=2 p=.000). Males who enjoyed time with their father and felt he was helpful were less likely to report having had sex. Males with fathers that were involved in school, knew their friends and were supportive were less likely to report having sex.

Spending time engaged in routine family activities (chi-square=15.338 df=3 p=.002) was also significantly related to the decision to have sex as were race (chi-square=146.908 df=1 p=.000) and age of the respondent (t=10.935 p=.000). Whites were less likely to have sex than other races and older respondents were more likely to report having sex. However, there were not significant relationships between any maternal relationship variables and the decision to have sex for males in the study.

For females in the study, five maternal attachment variables were significant: thinking highly of mother, wanting to be like mother, feeling that mother is helpful, having a mother that is involved in school activities and feeling that mother is supportive all reduced the likelihood of

a female reporting having had sex. For males, significant maternal attachment variables were enjoying time with their mother, feeling that their mother is helpful, mother knowing friends and friends parents, and mother being supportive. The two maternal attachment variables that were significant for both males and females were mother's helpfulness and mother's support.

Seven paternal attachment variables were significant for both males and females and one additional paternal attachment variables was significant only for females. Both males and females, thinking highly of father, enjoying time with father, feeling that father is helpful, father knowing close friends, father being involved in school, and having a supportive father decreased the likelihood of reporting having sex. Females were influenced by one additional paternal variable that was not significant for males: wanting to be like their father. Females who reported a desire to be like their father had a decreased likelihood of reporting having sex. More paternal influences were indicated for females than males.



Table 16 Variables Associated With The Decision To Have Sex For Males In The Study

Variables Associated with Having Sex for Males	Chi-square	df	P
Think highly of mother	6.05	4	.195
Want to be like mother	6.882	4	.142
Enjoy time with mother	9.751	4	.045
Mother helps with what is important	12.880	4	.012
Mother knows close friends	15.031	4	.005
Mother knows parents of friends	11.290	4	.023
Mother knows teachers and school acts	6.007	4	.199
Mother supportive	5.794	4	.055
Think highly of father	13.125	4	.011
Want to be like father	5.896	4	.207
Enjoying time with the father	22.949	4	.000
Having a father that helps with what is important to the respondent	18.85	4	.001
Father knows close friends	12.797	4	.012
Father knows teachers and school acts	10.337	4	.035
Having a supportive father	23.199	2	.000
Spending time engaged in routine family activities	15.338	3	.002
Race (White,Non-white)	146.908	1	.000
Age	10.935*		.000

\*t-value for Age with its accompanying p value

Table 17 shows results of logistic regression analysis conducted to determine which independent variables were predictors of having sex for females in the study. The variables used were assessed for multicollinearity by examining the values of tolerance and VIF statistics. Multicollinearity was not an issue for any of the predictors used in the logistic regression.

The model was developed using maternal attachment, paternal attachment and family attachment measures. Age, sex and race were included as they have been shown in the literature as significant factors in the decision to have sex. All variables were force included in the equation, to assess their relative value in explaining the decision to have sex. Five predictors suggested: wanting to be like mother, mother knowing friends parents, level of maternal support, age, amount of time spent with family. Females that reported wanting to be like their mother were less likely to report having sex. When a female respondent's mother knew her friends'

parents, she was less likely to have sex. The higher the level of perceived maternal support, the lower the chances of a female respondent reporting having sex. Older respondents were more likely to report having had sex. Respondents who spent more time engaged in routine family activity were less likely to report having had sex. The value of Cox and Snell R<sup>2</sup> is very small (.124) as is the value of Nagelkerke R<sup>2</sup> (.244) which does not suggest a good model fit, however this model is a better fit than the model used on the entire sample. The model correctly classified 99.8% of the cases reporting no sex and 17.2% of the cases having sex.

Table 17 Logistic Regression Results for Females

Variables	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
						Lower	Upper
thinkhighmom	-.159	.161	.973	.324	.853	.623	1.170
belikemom	-.409	.203	4.069	.044	.664	.446	.988
enjoytimem	.385	.232	2.746	.098	1.469	.932	2.317
momhelps	.150	.221	.463	.496	1.162	.754	1.792
momknowfs	.385	.319	1.460	.227	1.470	.787	2.745
momknowfps	-.526	.244	4.647	.031	1.692	1.049	2.730
momknowteach	.320	.265	1.455	.228	1.377	.819	2.314
momsupport	-.729	.354	4.241	.039	2.074	1.036	4.152
thinkhidad	-.264	.211	1.575	.209	.768	.508	1.160
belikedad	.131	.235	.313	.576	1.140	.720	1.806
enjoytimed	-.027	.251	.012	.914	.973	.595	1.591
fatherhelp	.146	.223	.429	.512	1.157	.748	1.791
dadknowfs	.328	.310	1.122	.290	1.388	.756	2.548
dadknoteach	-.087	.238	.133	.715	.917	.574	1.463
dadsupport	.137	.348	.155	.694	1.147	.580	2.268
non-white	.024	.111	.048	.827	1.024	.825	1.272
age	.698	.298	5.499	.019	2.010	1.121	3.604
relwmom	.001	.001	.619	.431	1.001	.999	1.002
relwdad	.000	.001	.300	.584	1.000	.998	1.001
famroutine	-.108	.032	11.719	.001	.898	.844	.955
mommon	-.268	.167	2.588	.108	.765	.552	1.060
dadmon	-.172	.136	1.616	.204	.842	.645	1.098
Constant	-11.878	4.568	6.761	.009	.000		

Model chi-square = 74.384. 22 df; -2 Log likelihood function = 323.887; Cox and Snell = .124; Nagelkerke = .244 \*race 0=White 1=Non-White

For Males in the study, logistic regression was conducted and the model suggested five predictors: enjoying time with mother, helpfulness of mother, mother knowing respondents friends, amount of time spent with family and level of maternal monitoring. Respondents who enjoyed time with their mother were less likely to have sex. When respondents felt their mother was helpful, sex was less likely. Respondents who reported their mother knows their friends were less likely to have sex. As maternal monitoring increased, so did the likelihood of abstinence. Respondents who spent more time engaged in routine family activity were less likely to report having had sex. The value of the Cox and Snell  $R^2$  is very small (.049) as is the value of Nagelkerke  $R^2$  (.079) which does not suggest good model fit. The model correctly classified 99.2% of the cases reporting no sex and 11.1% of the cases reporting having sex. The model was a better fit for females in the study than for males.

Table 18 Logistic Regression Results for Males

	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
						Upper	Lower
thinkhighmom	.003	.128	.001	.980	1.003	.781	1.289
belikemom	.019	.153	.015	.902	1.019	.755	1.375
enjoytimem	-.303	.150	4.058	.044	.739	.550	.992
momhelps	-.345	.167	4.295	.038	1.412	1.019	1.958
momknowfs	-.549	.219	6.251	.012	1.731	1.126	2.661
momknowfps	.111	.163	.465	.495	1.117	.812	1.537
momknowteach	.305	.182	2.812	.094	1.357	.950	1.937
momsupport	.501	.260	3.727	.054	1.651	.992	2.746
thinkhidad	-.015	.175	.008	.930	.985	.699	1.387
belikedad	.173	.154	1.258	.262	1.189	.879	1.607
enjoytimed	-.036	.168	.046	.829	.964	.694	1.340
fatherhelp	-.155	.147	1.109	.292	.857	.643	1.142
dadknowfs	-.416	.230	3.277	.070	.660	.421	1.035
dadknoteach	-.190	.166	1.310	.252	.827	.598	1.145
dadsupport	-.054	.258	.044	.833	.947	.571	1.570
non-white	.044	.086	.261	.610	1.045	.883	1.236
age	.176	.207	.727	.394	1.193	.795	1.789
relwmom	.000	.001	.022	.883	1.000	.999	1.001
relwdad	.000	.001	.464	.496	1.000	.998	1.001
famroutine	-.056	.023	5.799	.016	.945	.903	.990
mommon	-.345	.116	8.806	.003	.708	.564	.890
dadmon	.187	.098	3.635	.057	1.206	.995	1.462
Constant	-2.078	3.265	.405	.524	.125		

Model chi-square = 58.750. 22 df; -2 Log likelihood function = 544.750; Cox and Snell = .089; Nagelkerke = .145 \*race 0=White 1=Non-White

Maternal attachment variables were significantly related to the decision to have sex for both males and females in the study. For females, feeling that their mother is supportive and wanting to be like her was significant in the decision to remain abstinent. Females in the study whose mothers knew their friends parents were less likely to report having sex. For males, enjoying time with their mother and feeling she is helpful is associated with no sex. Males whose mothers knew their friends were less likely to report having sex. Age was significant for females, with older females more likely to report having had sex. Number of hours spent weekly with family was significant for both males and females. As the number of hours of family activity

increase, the likelihood of having sex decreased for both groups. For males, hours of maternal monitoring was significant. More maternal monitoring decreased the likelihood of sex for males in the study.

#### Exploratory Logistic Regression for Females and Males

Table 19 shows results of exploratory forward logistic regression analysis conducted to determine which independent variables were predictors of having sex for females in the study. The independent predictors used were all of the parental attachment and demographic variables used in the first logistic regression above using the enter method. Forward logistic regression in SPSS begins the model with no predictors and then adds predictors that significantly contribute to the model's explanation of variance in the dependent variable. The model developed suggests four predictors: Age, thinking highly of father, level of involvement of father in school activities and hours spent engaged in routine family activities. Older females were more likely to report having sex. The higher the opinion of the father the less likely it was that females in the study would report having had sex. The likelihood of having sex also decreased with increased paternal school involvement and hours spent engaged in routine family activity. Regarding parental attachment variables, this forward logistic regression model suggested only paternal attachment variables as significant predictors in the decision to have sex for females in the study. The model correctly classified 99.4% of the cases that were abstinent and 6.3% of the cases that reported having sex.

Table 19 Forward Logistic Regression Results for Females

Variable	B	SE	Wald	Sig.	Exp (B)	95% CI for Exp(B)	
						Lower	Upper
thinkhidad	-.353	.122	8.357	.004	.703	.553	.893
dadknoteach	-.300	.126	5.659	.017	.741	.579	.949
age	.559	.277	4.081	.043	1.748	1.017	3.006
famroutine	-.109	.029	14.298	.000	.897	.848	.949
Constant	-7.086	3.963	3.198	.074	.001		

Model chi-square = 52.744, 4 df; -2 Log likelihood function = 345.527; Cox and Snell = .090; Nagelkerke = .177

Exploratory forward logistic regression analysis was conducted to determine which of the independent variables were predictors of having sex for males in the study. The model produced suggests three predictors: Enjoying time with mother, maternal monitoring, and hours spent in routine family activity. For males in the study, the likelihood of having sex decreases with increased maternal monitoring, and hours spent in routine family activity. The more a respondent reported enjoying time with their mother, the less likely they were to have sex. The model correctly classified 99.4% of the cases that reported no sex and 2.6% of the cases that reported having sex.

The exploratory logistic regression model for females in the study suggested paternal attachment variables but not maternal attachment variables as significant predictors. For males in the study maternal attachment variables but not paternal attachment variables were significant. For both males and females, the number of hours spent engaged in routine family activity each week was a significant predictor of whether or not the respondent reported having sex. The forward method explained a greater amount of variance in the model developed for females than for males.

Table 20 Forward Logistic Regression Results for Males

Variable	B	SE	Wald	Sig.	Exp (B)	95% CI for Exp(B)	
						Lower	Upper
Enjoy time with mother	-.248	.107	5.389	.020	.780	.633	.962
Maternal monitoring	-.083	.035	5.536	.019	.920	.858	.986
Hours spent in routine family activities	-.053	.022	5.610	.018	.948	.908	.991
Father helps with what is important	-.183	..093	3.855	.050	.833	.693	1.0
constant	1.289	.469	7.548	.006	3.630		

Model chi-square = 36.998. 4 df; -2 Log likelihood function = 566.582; Cox and Snell = .057; Nagelkerke =.093

Literature suggests that the likelihood of engaging in sex is different among different racial groups. Analysis in this study has shown that race is a significant factor in the decision to engage in sex. This section describes logistic regression models to further explore the differences in the likelihood of engaging in sex for the two largest race categories of the sample. Choosing to divide groups in to White and Other was avoided because literature suggests that motivators for having sex differ greatly between specific race groups. The categories White and African American were used because they were the race groups in the study with N's large enough to conduct the analysis.

#### Whites and African Americans in Phase 1

*Maternal factors associated with the decision to have sex for Whites in the study.*

For Whites in the sample, chi-square tests were run to test for relationship between the variable "r ever have sex" and the same categorical family attachment and demographic variables. For Whites in the study, reporting enjoying time with the mother meant less likelihood of engaging in sex (chi-square=25.005 df=4 p=.000) as did reporting thinking highly of mother (chi-square=11.7 df=4 p=.020). Enjoying time with mother also reduced the likelihood

of white respondents reporting having had sex (chi-square=25.005 df=4 p=.000). Whites who reported having a mother who helps with what is important to them were less likely to report engaging in sex (chi-square=18.434 df=4 p=.001). Whites who reported their mother knew their friends were less likely to engage in sex (chi-square=9.826 df=4 p=.043) as were those who reported their mother knew the parents of their friends (chi-square=26596 df=4 p=.000). Whites who reported having a mother who is involved in school activities were less likely to have sex (chi-square=19.917 df=4 p=.001). The more supportive a respondent felt their mother was, the less likely they were to report having had sex (chi-square=32.178 df=2 p=.000).

*Paternal factors associated with the decision to have sex for Whites in the study*

White respondents that reported thinking highly of their father were less likely to report having sex (12.875 df=4 p=.012). White respondents that wanted to be like their father were less likely to have sex (chi-square=10.287 df=4 p=.036). Respondents who reported enjoying time spent with the father were less likely to report having sex (chi-square=18.558 df=4 p=.001). Respondents who had a father who helps with what is important were less likely to report having sex (chi-square=18.464 df=4 p=.001). Having a father who is involved in school activities reduced the likelihood of a respondent having sex (chi-square=20.564 df=4 p=.000). Respondents who felt they have a supportive father were less likely to report having sex (chi-square=44.367 df=2 p=.000). Older white respondents were more likely to report having sex (t=13.164 p<.000). Increased time engaged in routine family activities decreased the likelihood of having sex for White respondents (chi-square=15.338 df=3 p=.002).



Table 21 Factors Associated with the Decision to have Sex for Whites

Variables associated with the decision to have sex for White respondents	Chi-Square	df	p.
Think highly of mother	11.7	4	.020
Want to be like mother	26.310	4	.000
Enjoy time with mother	25.005	4	.000
mom helps respondent	18.434	4	.001
Mother knows close friends	9.826	4	.043
mom knows friends parents	26.596	4	.000
mom involved in school activities	19.917	4	.001
supportive mother	32.178	3	.000
Think highly of father	12.875	4	.012
Want to be like father	10.287	4	.036
enjoys time with father	18.558	4	.001
father helps	18.464	4	.001
Father knows close friends	8.942	4	.063
father involved in school activities	20.564	4	.000
father supportive	44.376	3	.000
Sex of the respondent	.206	1	.650
Age	13.64*		.000

\*t value and associated p.

Table 22 shows variables associated with the decision to have sex for African Americans in the study. No maternal variables were significant in the decision to have sex for African Americans in the study. Three paternal variables were significant: Thinking highly of father (chi-square=12.578 df=4 p=.014), father's involvement in school activities (chi-square=10.220 df=4 p=.037) and having a supportive father (chi-square=9.220 df=3 p=.010). African American males were more likely to report having sex (chi-square=40.791 df=1 p=.000) and older respondents were more likely to report having sex (t=-7.581 p.<.000).

Maternal variables were only significant for White respondents in the study. Certain paternal variables were significant for both White and African American respondents. Thinking highly of father, having a father involved in school activities and feeling that father is supportive decreased the likelihood of having sex for both White and African American respondents. Being male was significant for African Americans in the decision to have sex, but not for White

respondents. Age was a significant factor in both groups, with older respondents of both groups being more likely to report having sex.

Table 22 Variables Associated with the Decision to have Sex for African-Americans

Variables associated with the decision to have sex for African-Americans	Chi-Square	df	p.
Think highly of mother	1.751	4	.781
Want to be like mother	7.845	4	.097
Enjoy time with mother	2.354	4	.671
mom helps respondent	2.541	4	.637
Mother knows close friends	2.624	4	.623
mom knows friends parents	3.529	4	.473
mom involved in school activities	11.154	4	.025
supportive mother	1.218	3	.544
Think highly of father	12.578	4	.014
Want to be like father	2.995	4	.559
enjoys time with father	7.777	4	.100
father helps	5.097	4	.278
Father knows close friends	3.991	4	.407
father involved in school activities	10.220	4	.037
father supportive	9.220	3	.010
Sex of the respondent	40.791	1	.000
Age	7.581*		.000

\*t and its associated p value

Table 23 shows results of logistic regression analysis conducted to determine which independent variables were predictors of having sex for Whites in the study. Four predictors were significant: wanting to be like mother, wanting to be like father, relationship with father, and hours spent with family. Whites that reported wanting to be like their mother and father were less likely to report having sex. The better White respondents felt their relationship was with their father, the less likely they were to report having had sex. Respondents that spent more time engaged in routine family activity were less likely to report having had sex. The value of Cox and Snell  $R^2$  is very small (.100) as is the value of Nagelkerke  $R^2$  (.198) which does not suggest a good model

fit. The model correctly classified cases 99.4% of the group that reported no sex and 11.2% of the group that had sex.

Table 23 Logistic Regression Results for Whites

	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
						Lower	Upper
thinkhighmom	.098	.153	.410	.522	1.103	.818	1.487
belikemom	-.357	.174	4.201	.040	.700	.497	.985
enjoytimem	-.219	.181	1.461	.227	.803	.563	1.146
momhelps	.317	.191	2.752	.097	1.372	.944	1.995
momknowfs	.318	.251	1.611	.204	1.375	.841	2.246
momknowfps	-.052	.200	.068	.794	.949	.641	1.405
momknowteach	.216	.209	1.067	.302	1.241	.824	1.870
momsupport	.327	.302	1.174	.279	1.387	.768	2.504
thinkhidad	.174	.198	.772	.380	1.190	.807	1.755
belikedad	.431	.187	5.343	.021	1.539	1.068	2.219
enjoytimed	-.035	.199	.030	.862	.966	.654	1.428
fatherhelp	-.027	.174	.024	.876	.973	.692	1.368
dadknowfs	.214	.255	.702	.402	1.238	.751	2.043
dadknoteach	-.089	.197	.204	.652	.915	.622	1.345
dadsupport	-.205	.302	.460	.498	.815	.450	1.473
female	-.400	.267	2.245	.134	.670	.397	1.131
age	.356	.241	2.184	.139	1.427	.890	2.288
relwmom	.001	.001	.526	.468	1.001	.999	1.002
relwdad	-.001	.001	4.851	.028	.999	.997	1.000
famroutine	-.096	.027	12.313	.000	.908	.861	.958
mommon	-.233	.134	3.009	.083	.792	.609	1.031
dadmon	-.035	.111	.099	.753	.966	.777	1.200
Constant	-3.409	3.749	.827	.363	.033		

Model chi-square =82.953. 22 df; -2 Log likelihood function = 427.066; Cox and Snell = .100; Nagelkerke =.198

For African Americans in the study, logistic regression was conducted and five predictors were significant: Mother knowing friends, mother knowing friends' parents, level of maternal support, sex of the respondent, amount of maternal monitoring. African Americans who said their mother knows their friends and the parents of their friends were less likely to report having sex. The more supportive a respondent felt their mother was, the less likely they were to have sex. Increased maternal monitoring led to decreased likelihood of sex for African American

respondents. The value of Cox and Snell  $R^2$  is (.161) as is the value of Nagelkerke  $R^2$  (.230) which suggests a fair model fit. The model correctly classified cases 91.3% of the group that reported no sex and 34.7% of the group that had sex.

For Whites in the study both maternal and paternal attachment were significant predictors of having sex. For African Americans in the study, only maternal attachment was a significant predictor of having sex. For Whites in the study, hours spent engaged in routine family activity reduced the likelihood of having sex. Maternal monitoring was significant in reducing the likelihood of having sex for African Americans in the study. Being male was a significant predictor of having sex for African Americans.

Table 24 Logistic Regression Results for Predictors of African-Americans Having Sex

	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
						Lower	Upper
thinkhighmom	-.074	.169	.192	.662	.929	.667	1.293
belikemom	.032	.205	.025	.875	1.033	.691	1.544
enjoytimem	-.103	.207	.249	.618	.902	.602	1.352
momhelps	-.039	.217	.032	.858	.962	.629	1.472
momknowfs	.700	.308	5.155	.023	2.013	1.100	3.684
momknowfps	-.692	.230	9.049	.003	1.998	1.273	3.137
momknowteach	.413	.269	2.363	.124	1.511	.893	2.558
momsupport	-.743	.359	4.284	.038	2.101	1.040	4.245
thinkhidad	-.218	.247	.784	.376	.804	.496	1.304
belikedad	.083	.211	.154	.695	1.086	.718	1.643
enjoytimed	-.189	.254	.550	.459	.828	.503	1.364
fatherhelp	-.089	.203	.191	.662	.915	.615	1.362
dadknowfs	-.354	.295	1.437	.231	.702	.394	1.252
dadknoteach	-.332	.218	2.307	.129	.718	.468	1.101
dadsupport	.013	.348	.001	.971	1.013	.512	2.004
female	-1.060	.354	8.978	.003	.347	.173	.693
age	.197	.316	.391	.532	1.218	.656	2.262
relwmom	.001	.001	.680	.409	1.001	.999	1.002
relwdad	.000	.001	.031	.860	1.000	.999	1.001
famroutine	-.040	.030	1.856	.173	.960	.906	1.018
mommon	-.484	.161	9.089	.003	.616	.450	.844
dadmon	.242	.130	3.496	.062	1.274	.988	1.643
Constant	-2.033	4.785	.180	.671	.131		

Model chi-square =42.977. 22 df; -2 Log likelihood function = 253.063; Cox and Snell = .161; Nagelkerke =.230

### Exploratory Logistic Regression for Whites and African Americans

Table 25 shows results of exploratory forward logistic regression analysis conducted to determine which independent variables were predictors of having sex for Whites in the study. All variables used in the first model using the enter method were used. The model suggests three predictors: Wanting to be like mother, maternal monitoring and time spent in routine family activities. Likelihood of having sex decreases with increased maternal monitoring and hours spent with family. Also, the more a respondent reported wanting to be like their mother, the less likely they were to report having sex. The model correctly classified 99.6% of the cases that reported no sex and 2.2% of the cases that reported having sex.

Table 25 Forward Logistic Regression Results for Whites

Variable	<i>B</i>	SE	Wald	Sig.	Exp ( <i>B</i> )	95% CI for Exp( <i>B</i> )	
						Lower	Upper
Be like mother	-.263	.108	5.911	.015	.769	.622	.950
Maternal monitoring	-.099	.025	15.378	.001	.906	.862	.952
Time spent in routine family activity	-.127	.039	10.624	.000	.880	.815	.950
constant	1.169	.438	7.113	.008	3.218		

Model chi-square =55.038. 3 df; -2 Log likelihood function = 499.981; Cox and Snell = .068; Nagelkerke =.134

For African Americans in the study, forward logistic regression suggested a model of three predictors: mother's involvement in school, thinking highly of father and the respondent's sex. Respondents who reported greater maternal involvement in their school activities were less likely to report having sex. Respondents who were female were also less likely to report having had sex as were those who thought highly of their father. The model correctly classified 96.9% of the cases reporting no sex and 13.9% of those reporting sex.

Table 26 Forward Logistic Regression Results for Predictors of African-Americans Having Sex

Variable	B	SE	Wald	Exp (B)	Sig.	95% CI for Exp(B)	
						Lower	Upper
Mother knows school acts	-.263	.123	4.583	.769	.032	.604	.978
Think highly of father	-.337	.131	6.657	.714	.010	.553	.922
female	-.911	.312	8.527	.402	.003	.218	.741
constant	2.108	.687	9.405	8.322	.002		

Model chi-square =21.242. 3 df; -2 Log likelihood function = 276.272; Cox and Snell = .083; Nagelkerke =.119

There were not a sufficient number of cases to examine any other racial groups in the study. Literature suggests that there are very different motivators for having sex for different race groups. For this reason, combining race categories into White and Other was avoided.

The exploratory forward logistic regression model suggested two maternal attachment variables, but no paternal attachment variables as predictors of having sex for Whites in the study. The forward model for African Americans suggested one paternal attachment variable and one maternal attachment variable. Hours spent in routine family activity were a significant predictor of sex for Whites but not for African Americans. Being female was a significant predictor of abstinence in female African Americans but sex of the respondent was not a significant predictor of sexual activity for Whites.

### Conclusions

The analysis examined the association between certain family and demographic variables with the decision to become sexually active in a sample of teens aged 14-17. Examining parental attachment factors for the entire sample, it was found that certain family variables play a significant role in the decision to engage in sex. Hours monitored by mother and hours spent engaged in routine family activities reduced the likelihood of having sex. Race is also a factor, with non-whites in the sample more likely to engage in sex as were older respondents.

Results for the logistic regression model run on the entire sample supported the hypotheses that stronger parental attachment will predict no sex and that being female will predict abstinence. Only maternal attachment variables were significant predictors of whether or not a respondent reported having sex for the entire sample. Number of hours spent with family was also significant in predicting sexual activity of abstinence.

For females in the study the chances of having sex were reduced by time spent in routine family activity and hours of maternal monitoring. A female respondent reporting that their father is helpful with what is important to them also reduced the likelihood of sex. As age increased, the likelihood of a female reporting sex was increased. Female respondents who thought highly of their father and who reported that their father was involved in their school activities were less likely to report having sex.

For males in the study, chances of reporting sex were decreased with every additional hour of maternal monitoring per week. Males that reported enjoying time with their mother were less likely to report having had sex. Spending more time engaged in routine family activities also reduced the likelihood of males having sex.

Maternal attachment variables were significantly related to the decision to have sex for both males and females in the study. Age was significant for females, with older females more likely to report having had sex. Number of hours spent weekly with family was significant for both males and females. As the number of hours of family activity increase, the likelihood of having sex decreases for both groups. For males, weekly hours of maternal monitoring were significant. More maternal monitoring decreased the likelihood of sex for males in the study.

For Whites in the study, greater amounts of maternal monitoring each week meant a decreased likelihood of reporting having sex. Spending more time each week engaged in routine family activity also decreased the likelihood of having sex.

For African Americans in the study having a mother who is involved in school activities decreased the likelihood of having sex. Respondents who thought highly of their father were less likely to report having sex. Female African Americans were less likely to report having sex than males.

For Whites in the study both maternal and paternal attachment were significant predictors of having sex. For African Americans in the study, only maternal attachment was a significant predictor of having sex. For Whites in the study, hours spent engaged in routine family activity reduced the likelihood of having sex. Maternal monitoring was significant in reducing the likelihood of having sex for African Americans in the study. Being male was a significant predictor of having sex for African Americans.

Exploratory logistic regression suggested paternal variables as the only significant family attachment predictors in the decision to have sex for females. Age was a significant predictor of the decision to have sex for females, but not males. For males, exploratory logistic regression suggested both maternal and paternal predictors. Number of hours spent with family per week was significant for both males and females.

Exploratory logistic regression for Whites in the study suggested only maternal attachment variables as significant in the decision to have sex. Hours spent weekly with family were a significant predictor of sex for Whites but not for African Americans. Both maternal and paternal attachment measures were significant predictors of sex for African Americans. Being male was a significant predictor of having sex for African Americans but not for Whites.



Stronger parental attachment reduced the likelihood of having sex. Respondents who reported a great deal of involvement and high regard for their parents were less likely to report having sex. Female respondents were less likely than male respondents to report having sex when analyzing the entire sample. However, there were differences by race in the significance of respondent's sex in the decision to engage in sexual activity. Being female predicted abstinence for the overall sample and for African Americans, but not for Whites. Maternal attachment was a stronger influence than paternal attachment for the overall sample, and for males and females when analyzed separately. Maternal influences were stronger for African Americans than for Whites.

This section examined the predictors of having sex or not having sex. It was found that there were significant demographic and family attachment factors involved in the decision to have sex or remain abstinent. The next chapter examines the predictors of multiple sexual partners and the factors associated with the number of sexual partners during the past 12 months.

## CHAPTER 6 MULTIPLE PARTNERS

Chapter 5 examined variables associated with the decision to have sex. This section utilizes multivariate analysis to examine predictors of multiple partners among those engaging in sex to test the following hypotheses:

Weaker parental attachment will predict multiple partners

Older age will predict multiple partners

Being male will predict multiple partners

Less parental supervision will predict multiple partners

The analysis begins with the entire sample of those having sex and uses logistic regression to predict the probability of having more than one partner. Factor analysis was explored theoretically as well as on an exploratory basis. Factor loadings were not large, and when regressions were conducted with factors the  $R^2$  was not improved and only one factor was found significant. Therefore the decision was made to utilize the individual variables and assess their relative value. OLS regression is then employed to predict the number of partners among those engaging in sex. Separate analyses for males versus females and whites versus African Americans are presented. Of the 1679 respondents who reported having sex, 1016 reported having multiple partners. The range in reported number of sex partners over the last 12 months was 1 to 25. The mean number of sex partners over the last year was 2.82.

Logistic regression was used to identify predictors of multiple partners and to examine the strength of predictors. For the entire sample that had sex ( $n=1679$ ), chi-square tests were run to test for relationships between the variable “multiple partners” and categorical family attachment measure and demographic variables. For age, t-tests were run to check for the

importance of age in the decision to have sex with multiple partners. The results of these analyses guided the variables tested in the logistic regressions.

*Factors in the decision to have sex with multiple partners among those having sex*

For the sample of those engaging in sex, whether or not respondents had multiple sex partners was strongly related to the respondent feeling their father was supportive (chi-square=7.680 df=2 p=.021), sex of the respondent (chi-square=34.309 df=1 p<.000), race of the respondent (chi-square=41.727 df=1 p<.000), and age of the respondent (t=16.179 p<.000). Respondents who felt their father was supportive were less likely to engage in sex with multiple partners. Males were more likely to report sex with multiple partners than females. Older respondents were more likely to report having multiple partners and African Americans were more likely than Whites in the study to have sex with multiple partners.

Table 27 Predictors of Having Sex With More Than One Partner.

Variables Associated with Having Sex	Chi-Square	df	p.
Want to be like mother	1.771	4	.778
Enjoy time with mother	6.549		.162
Respondent feeling their mother is helpful with what is important to them	3.396	4	.494
Mother's involvement in respondents school activities and education	6.374	4	.173
Mother knows friends	7.601		.107
Mother knows parents of friends	7.003		.136
Respondent feeling their mother is supportive	.131	2	.937
Respondent thinking highly of their father	5.457	4	.244
Want to be like father	.630	4	.960
Respondent enjoying time with their father	3.001	4	.558
Respondent feeling their father helps with what is important to them	3.202	4	.525
Respondent reporting their father knows their close friends	1.238	4	.872
Father's involvement in respondents school activities and education	2.473	4	.649
Respondent feeling their father is supportive	7.680	2	.021
Sex of the respondent	34.309	1	.000
Race (White, non-white)	41.727	1	.000
Age	16.179*		.000

\*t value for Age and its associated p value

#### Logistic Regression Analysis to predict probability of having multiple partners

The dependent variable was coded 0 if respondent reported only one partner and 1 if the respondent reported multiple partners over the last 12 months. The model was developed using maternal attachment, paternal attachment and family attachment measures and the procedures and coding of variables were the same as those reported in the previous chapter. Age, sex and race were included as they have been shown in the literature as significant factors in the decision to have sex with multiple partners. All variables were force included in the equation, to assess

their relative value in explaining multiple partners. All variables were examined for multicollinearity, by examining tolerance and VIF statistics. The following were the values for tolerance and VIF, respectively, for each variable included in the regression: think highly of mother .789 & 1.268, enjoy time with mother .601 & 1.664, mother helps with what is important to respondent .532 & 1.879, mother know close friends .573 & 1.746, mother know friends parents .634 & 1.576, mother know teachers .699 & 1.431, mother supportive .554 & 1.805, think highly of father .399 & 2.506, enjoy time with father .435 & 2.300, father helps with what is important .414 & 2.413, father knows close friends .509 & 1.966, father knows friends parents .538 & 1.858 father know teachers .696 & 1.436, and father supportive .520 & 1.922.

Table 28 shows the results of logistic regression analysis conducted on the entire sample to determine factors that predict multiple partners. The model suggests eight significant predictors: level of enjoyment of time spent with mother, mother knowing respondent's friends, respondent feeling father is helpful, feeling father is supportive, gender, race of the respondent, relationship with mother and amount of maternal monitoring.

Respondents who enjoyed time with their mother were less likely to have multiple partners. Respondents whose mothers knew their close friends were less likely to have multiple partners. When respondents reported that their father was helpful with what is important to them and that their father is supportive, they were less likely to report multiple partners. Males were more likely to report multiple partners as were nonwhites. Respondents with a good relationship with their mother were less likely to report multiple partners. Increased monitoring by the mother decreased the likelihood of having multiple sex partners. The value of Cox and Snell  $R^2$  is (.393) and the value of Nagelkerke  $R^2$  (.587) which indicates a good model fit. The model

correctly classified 69.7% of those who had a single partner and 95.1% of the cases that reported multiple partners.

Table 28 Logistic Regression Results: Predictors of Having Multiple Partners among those Engaging in Sex

Variables	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
						Lower	Upper
thinkhighmom	-.457	.353	1.678	.195	.633	.317	1.264
belikemom	-.454	.456	.988	.320	.635	.260	1.554
enjoytimem	-1.810	.605	8.952	.003	.164	.050	.536
momhelps	-.544	.459	1.405	.236	1.723	.701	4.237
momknowfs	-1.163	.548	4.507	.034	3.198	1.093	9.354
momknowfps	-.370	.461	.645	.422	1.448	.587	3.572
momknowteach	-.646	.467	1.915	.166	1.908	.764	4.767
momsupport	-1.645	.842	3.817	.051	5.179	.995	26.967
thinkhidad	-.805	.460	3.068	.080	2.237	.909	5.507
belikedad	.219	.399	.302	.583	1.245	.570	2.719
enjoytimed	-.150	.480	.097	.755	.861	.336	2.205
fatherhelp	-1.011	.463	4.765	.029	.364	.147	.902
dadknowfs	-.315	.594	.280	.596	.730	.228	2.339
dadknoteach	.182	.392	.215	.643	1.199	.557	2.584
dadsupport	-2.166	.903	5.751	.016	8.722	1.486	51.206
female	-2.142	.730	8.611	.003	.117	.028	.491
White	-1.701	.577	8.687	.003	5.481	1.768	16.990
age	.267	.594	.202	.653	1.306	.407	4.188
relwmom	-.004	.002	4.267	.039	1.004	1.000	1.008
relwdad	-.001	.001	.133	.715	1.001	.998	1.003
famroutine	-.044	.063	.481	.488	1.045	.923	1.182
mommon	-.742	.346	4.602	.032	.476	.242	.938
dadmon	-.361	.284	1.612	.204	1.435	.822	2.505
Constant	-13.489	9.109	2.193	.139	.000		

Model chi-square = 67.961. 23 df; -2 Log likelihood function = 82.758; Cox and Snell = .393; Nagelkerke = .587 \*race 0=White 1=Non-White

Forward logistic regression analysis was used to predict whether or not a respondent reported having sex with multiple partners. Table 29 shows the results of forward logistic regression analysis conducted on the entire sample to determine factors that predict multiple partners. The model suggests seven predictors: Enjoying time with mother, having a supportive mother, having a father that is involved in school and who is supportive, sex and race. Respondents who felt their mother and father were supportive were less likely to report multiple partners. Respondents that enjoyed time spent with their mother were less likely to report multiple partners. Males were more likely than females to have multiple partners. Having a father who was not involved in school was associated with multiple partners. African-Americans were more likely to report having multiple partners. The model correctly classified 51.5% of those that did not report multiple partners and 91.3 % of the cases that reported multiple partners.

Table 29 Forward Logistic Regression Results for Prediction of Multiple Partners Among Those Engaging In Sex

Variable	B	SE	Wald	Sig.	Exp (B)	95% CI for Exp(B)	
						Lower	Upper
Enjoy Time with Mother	1.242	.426	8.510	.004	.289	.125	.665
Mom Supportive	1.418	.626	5.135	.023	4.127	1.211	14.066
Dad knows teachers/school acts	.427	.212	4.043	.044	1.532	1.011	2.322
Dad Supportive	1.305	.490	7.083	.008	3.689	1.411	9.647
Female	-2.047	.577	12.604	.000	.129	.042	.400
African American	1.208	.403	8.971	.003	3.348	1.518	7.383
Relationship with Mother	.003	.001	10.290	.001	1.003	1.001	1.004
constant	-5.155	2.442	4.456	.035	.006		

Model chi-square = 47.981. 23 df; -2 Log likelihood function = 102.737; Cox and Snell = .297; Nagelkerke =.444 \*race 0=White 1=Non-White



### OLS Number of partners in the last 12 months for respondents having sex

For the sample of those engaging in sex, linear regression analysis was conducted to examine the degree of relationship between attachment variables and the number of sex partners reported in the last 12 months. The process of forward selection was used, whereby the independent variables with the highest correlation with the dependent variable are entered into the equation first and subsequent variables are added in terms of their assessed contribution to the explained variance in the dependent variable. Seven significant predictors were suggested: Sex of the respondent, hours of maternal monitoring, thinking highly of mother, helpfulness of father, supportiveness of father, thinking highly of father, and reporting a positive relationship with father. Female respondents were less likely to report multiple partners than males. Increased maternal monitoring decreased the likelihood of multiple partners. Respondents who thought highly of their mother and father were less likely to report multiple partners. Increased perception of helpfulness from fathers decreased the likelihood of multiple partners. Respondents who felt their father was supportive were less likely to report multiple partners as were those that reported a positive relationship with their father. This model accounted for 19.2% of the variance in the dependent variable, having multiple partners.

Table 30 Forward Linear Regression Results To Predict Number of Partners among those Having Sex

Variables	B	Std Error	Beta	t	Sig
Female	-.81	.335	-.076	-3.499	.000
Maternal Monitoring	-.283	.459	-.086	-4.026	.000
Think Highly of Mother	-1.097	.805	-.272	-3.273	.001
Father is Helpful	-1.593	.511	-.427	-3.469	.001
Father Supportive	-1.478	.001	-.200	-1.835	.049
Think Highly Father	-1.630		-.398	-3.190	.002
Relationship with father	-.003		-.420	-2.573	.011
constant	2.644	3.059		.864	.389

R<sup>2</sup>=.192 f=62.65 Sig=.000

Literature suggests there are different motivators for males and females to have multiple sexual partners. Analysis in this study has shown that respondents' sex is a significant factor in the decision to have multiple partners. This study examined differences between males and females in family attachment, family support and demographic factors in the decision to have multiple partners.

For females in the sample, chi-square tests were run to test for relationship between the variable "multiple partners" and categorical family attachment measure variables.

*Factors associated with multiple partners for females having sex*

As shown in Table 31, the decision to have multiple partners for females was significantly related to the respondent's perception of paternal support (chi-square=8.541 df=2 p=.014), race of the respondent (chi-square=17.63 df=1 p=.001) and age (t=17.647 p<.000). The more support a female respondent reported feeling from her father, the less likely she was to report multiple partners. Non-white female respondents were more likely than white female respondents to report having had sex. Older female respondents were more likely to report having had sex

Table 31 Variables Associated With Multiple Partners For Females Having Sex

Variables Associated with Having Sex	Chi-Square	df	p.
Want to be like mother	.550	4	.968
Enjoy time with mother	6.383	4	.172
Respondent feeling their mother is helpful with what is important to them	3.810	4	.432
Mother's involvement in respondents school activities and education	4.682	4	.322
Mother knows friends	3.196	4	.526
Mother knows parents of friends	6.729	4	.151
Respondent feeling their mother is supportive	1.352	2	.509
Respondent thinking highly of their father	9.206	4	.056
Want to be like father	1.246	4	.870
Respondent enjoying time with their father	1.957	4	.744
Respondent feeling their father helps with what is important to them	.174	4	.996
Respondent reporting their father knows their close friends	5.319	4	.256
Father's involvement in respondents school activities and education	.213	4	.995
Respondent feeling their father is supportive	8.541	2	.014
Race (White, non-white)	17..63	1	.001
Age	17.647*		.000

\*t value for Age and its associated p value

*Factors associated with multiple partners for males in the study.*

For males in the sample, chi-square tests were run to test for relationship between the variable “multiple partners” and categorical family attachment measure variables. As shown in table 32, the decision to have multiple partners for males in the study was related to mother knowing close friends (chi-square=10.808 df=4 p=.029), race of the respondent (chi-square=28.718 df=1 p=.012), and age (t=8.364 p=.000). Males who reported their mother knew their close friends were less likely to report having multiple partners. White males were less likely to report having multiple partners than non-whites in the study. Older males were more likely to report having multiple partners.

For females in the study, only one family attachment variable was shown significant in the decision to have multiple partners, this was the paternal attachment variable assessing the perceived level of support received from the father. No maternal attachment variables were significant for females in the study. For males in the study, no paternal variables were

significant and only one maternal variable was significant. For both males and females, race and age were significant with Whites of both sex categories less likely to report multiple partners and older respondents of both sex categories more likely to report multiple partners.

Table 32 Variables Associated With Multiple Partners For Males Having Sex

Variables Associated with Having Sex	Chi-Square	df	p.
Want to be like mother	3.196	4	.526
Enjoy time with mother	3.811	4	.423
Respondent feeling their mother is helpful with what is important to them	3.693	4	.449
Mother's involvement in respondents school activities and education	5.195	4	.268
Mother knows friends	10.808	4	.029
Mother knows parents of friends	4.497	4	.343
Respondent feeling their mother is supportive	2.350	2	.309
Respondent thinking highly of their father	1.917	4	.751
Want to be like father	1.497	4	.827
Respondent enjoying time with their father	7.633	4	.106
Respondent feeling their father helps with what is important to them	8.301	4	.081
Respondent reporting their father knows their close friends	3.437	4	.488
Father's involvement in respondents school activities and education	1.358	4	.851
Respondent feeling their father is supportive	3.593	2	.166
Race (White, non-white)	28.718	1	.000
Age	8.364*		.000

\*t value for Age and its associated p value

Table 33 shows results of logistic regression analysis conducted to determine which independent variables were predictors of multiple partners for females in the study. Two predictors were significant: enjoyment of time with mother and feeling that father is supportive. Females who reported enjoying time with their mother were less likely to report having multiple partners. The more support a female felt from her father, the less likely she was to report multiple partners. The value of Cox and Snell  $R^2$  is very small (.051) as is the value of Nagelkerke  $R^2$  (.071) which does not suggest a good model fit. The model correctly classified 11.3% of the cases reporting a single partner and 97.8% of the cases reporting multiple partners.

Table 33 Logistic Regression to predict multiple partners for Females Having Sex

Variables	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
						Lower	Upper
thinkhighmom	-.621	.328	3.582	.058	.538	.283	1.022
belikemom	-.224	.307	.533	.465	1.251	.685	2.284
enjoytimem	-1.107	.377	8.636	.003	.331	.158	.692
momhelps	-.235	.320	.540	.462	1.266	.675	2.372
momknowfs	-.141	.418	.113	.736	1.151	.508	2.609
momknowfps	-.521	.372	1.957	.162	1.684	.811	3.493
momknowteach	-.365	.317	1.323	.250	1.440	.773	2.682
momsupport	-.041	.184	.051	.822	1.042	.727	1.494
thinkhidad	-.639	.620	1.064	.302	1.895	.562	6.383
belikedad	-.502	.551	.828	.363	.606	.206	1.784
enjoytimed	-.403	.581	.483	.487	1.497	.480	4.673
fatherhelp	-.040	.535	.006	.940	.961	.337	2.741
dadknowfs	-.711	.571	1.546	.214	2.035	.664	6.238
dadknoteach	-.535	.472	1.286	.257	1.708	.677	4.309
dadsupport	-.547	.204	7.162	.007	1.727	1.158	2.577
non-white	.079	.111	.505	.477	1.082	.870	1.346
age	-.040	.077	.275	.600	1.041	.896	1.210
relwmom	-.001	.001	1.432	.231	1.001	.999	1.004
relwdad	-.000	.001	.003	.955	1.000	.998	1.003
famroutine	-.029	.046	.389	.533	.972	.888	1.063
mommon	-.395	.247	2.565	.109	.673	.415	1.093
dadmon	-.256	.266	.927	.336	.774	.460	1.304
Constant	-1.174	2.169	.293	.588	.309		

Model chi-square = 31.954. 22 df; -2 Log likelihood function = 747.739; Cox and Snell = .051; Nagelkerke = .071 \*race 0=White 1=Non-White

For Males in the study, logistic regression was conducted and the model suggested two predictors: feeling that mother is helpful and feeling that father is helpful. The more a male respondent felt his mother and father helped with what was important to him, the less likely he was to have multiple partners. The value of the Cox and Snell  $R^2$  is very small (.044) as is the value of Nagelkerke  $R^2$  (.071) which does not suggest good model fit. The model correctly classified 5.6% of the cases reporting one partner and 99.3% of the cases reporting multiple partners.

Maternal and paternal attachment variables were significantly related to multiple partners for both males and females in the study. For females, enjoying time with mother meant a decreased likelihood of reporting multiple partners. The more support a female respondent thought her father was, the less likely she was to have multiple partners. Males in the study had a decreased likelihood of multiple partners if they thought their mother was helpful and their father was helpful.

Table 34 Logistic Regression to predict multiple partners for Males Having Sex

	B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
						Upper	Lower
thinkhighmom	-.038	.276	.019	.890	.962	.560	1.653
belikemom	-.288	.316	.834	.361	1.334	.719	2.476
enjoytimem	-.468	.412	1.294	.255	.626	.279	1.403
momhelps	-.946	.411	5.311	.021	2.577	1.152	5.763
momknowfs	-.251	.467	.288	.591	1.285	.514	3.210
momknowfps	-.078	.381	.042	.837	1.081	.513	2.280
momknowteach	-.004	.380	.000	.991	1.004	.477	2.116
momsupport	-.043	.258	.028	.868	1.044	.629	1.731
thinkhidad	-.024	.482	.002	.961	1.024	.398	2.633
belikedad	-.068	.464	.021	.884	.935	.377	2.320
enjoytimed	-.565	.563	1.008	.315	.568	.189	1.712
fatherhelp	-1.478	.478	9.575	.002	.228	.089	.582
dadknowfs	-.169	.563	.090	.764	.845	.280	2.546
dadknoteach	-.041	.384	.012	.914	.959	.452	2.037
dadsupport	-.311	.239	1.690	.194	1.365	.854	2.181
non-white	.089	.112	.635	.426	.915	.735	1.139
age	-.081	.078	1.086	.297	1.085	.931	1.264
relwmom	-.001	.001	.700	.403	.999	.996	1.001
relwdad	-.003	.002	2.725	.099	1.003	1.000	1.006
famroutine	-.035	.047	.550	.458	1.036	.944	1.137
mommon	-.315	.271	1.359	.244	.729	.429	1.240
dadmon	-.157	.261	.362	.547	1.170	.702	1.949
Constant	3.732	2.727	1.873	.171	41.767		

Model chi-square = 33.561. 22 df; -2 Log likelihood function = 697.103; Cox and Snell = .044; Nagelkerke = .071 \*race 0=White 1=Non-White

OLS for Females and Males To Predict Number of Partners for Those Having Sex

Table 33 shows results of forward OLS analysis conducted to determine which independent variables were predictors of the number of partners in the last year for females in the study. An overall model of four predictors was suggested: The extent that a respondent wants to be like her mother, the extent to which a respondent wants to be like her father, the quality of relationship with her mother and the quality of relationship with her father. Recall that the variables measuring relationship with mother and relationship with father are the summation of all responses on the Likert scale items measuring parental attachment. The model explains 30% of the variance in number of partners in the past year for females in the study.

Table 35 Forward Linear Regression Results for Number of Partners in the Last 12 Months for Females Having Sex

Variables	B	Std Error	Beta	t	Sig.
(Constant)	-25.740	22.850		-1.126	.026
Respondent want to be like mother	-15.773	5.962	-.533	-2.645	.011
Respondent want to be like father	-19.640	6.767	.685	-2.903	.006
Relationship with mother	-.045	.013	.681	-3.442	.001
Relationship with father	-.031	.012	-.613	-2.637	.012

$R^2=.301$        $F 3.536$        $Sig. .009$

Exploratory forward OLS analysis was conducted to determine which independent variables were predictors of the number of partners in the past year for males in the study. Two predictors were significant in the prediction of the number of partners for males in the study. Thinking highly of their father and wanting to be like their father were significant in the



prediction of the number of partners in the past year for males in the study. The model explains 25.9% of the variance in the number of partners over the past twelve months for males.

Table 36 Forward Linear Regression Results for Number of Partners in the Last 12 Months for Males Having Sex.

Variables	B	Std Error	Beta	T	Sig
(Constant)	13.059	6.623		1.972	.053
Think highly of mother	-2.424	1.384	-.206	-1.752	.084
Mother knows friends parents	2.805	1.553	.216	1.807	.075
Mother involved in school	-2.161	1.246	-.186	-1.735	.087
Think highly of father	4.674	2.125	.350	2.200	.031
Want to be like father	-3.528	1.494	-.284	-2.361	.021
Enjoy time with father	-3.154	1.871	-.229	-1.685	.096
Father helps with what is important	2.404	1.313	.233	1.832	.071

$R^2=.259$

F3.446 Sig. .003

The exploratory regression model for females in the study suggested paternal attachment variables but not maternal attachment variables as significant predictors. For males in the study maternal attachment variables but not paternal attachment variables were significant. For both males and females, the number of hours spent engaged in routine family activity each week was a significant predictor of number of partners in the past year. The forward method explained a greater amount of variance in the model developed for females than for males.

Literature suggests there are significant differences in the motivation for different race groups to have multiple partners. In this section, logistic regression analysis is used to examine the predictors of multiple partners for Whites and African Americans engaging in sex in the study. Research suggests that there are very different motivators by race for having multiple sexual partners, therefore dividing the sample into White and Other was avoided. Whites and

African Americans were chosen because they are the only racial groups with sufficient N's to conduct the analysis.

*Factors Associated with multiple partners for Whites Having Sex*

As shown in table 37, the decision to have multiple partners for Whites was significantly related to the respondent's sex (chi-square=6.756 df=1 p=.009) and age (t=9.150 p<.000). None of the maternal or paternal variables were shown by chi-square tests to be statistically significant in the decision to have multiple partners for Whites in the study. For White respondents in the study, males were more likely than females to have multiple partners and older respondents were more likely to have multiple partners.

Table 37 Variables Associated with Multiple Partners for Whites Having Sex

Variables Associated with Having Sex for Females	Chi-square	df	P
Think highly of mother	3.2536	4	.472
Respondent wanting to be like mother	2.798	4	.592
Enjoy time with mother	5.499	4	.240
Respondent feeling that their mother helps with what is important to them	3.208	4	.524
Mother knows close friends	8.006	4	.091
Mother knows parents of friends	6.962	4	.073
Having a mother that is involved in respondent's school activities	4.437	4	.350
Respondent feeling that their mother is supportive	.165	2	.921
Respondent thinking highly of their father	7.369	4	.118
Respondent aspiring to be like their father	1.632	4	.803
Respondent enjoying time with their father	4.116	4	.391
Respondent feeling that their father helps with what is important to them	2.893	4	.576
Father knows close friends	.565	4	.967
Having a father that is involved in school activities	5.944	4	.203
Having a supportive father	5.617	2	.060
Sex of the respondent	6.756	1	.009
Age	9.150*		.000

\*t-value and its associated p value.

*Factors Associated with multiple partners for African Americans Having Sex*

As shown in table 38, the decision to have multiple partners for African Americans was significantly related to the respondent's sex (chi-square=23.514 df=1 p=.009) and age (t=5.764

$p < .000$ ). None of the maternal or paternal variables were shown by chi-square tests to be statistically significant in the decision to have multiple partners for African Americans in the study. For African American respondents in the study, males were more likely than females to have multiple partners and older respondents were more likely to have multiple partners.

Table 38 Variables Associated with Multiple Partners for African Americans Having Sex

Variables Associated with Having Sex for Females	Chi-square	df	P
Think highly of mother	3.215	4	.523
Respondent wanting to be like mother	3.885	4	.422
Enjoy time with mother	3.508	4	.477
Respondent feeling that their mother helps with what is important to them	3.406	4	.492
Mother knows close friends	3.302	4	.509
Mother knows parents of friends	3.560	4	.469
Having a mother that is involved in respondent's school activities	2.420	4	.659
Respondent feeling that their mother is supportive	.798	2	.671
Respondent thinking highly of their father	1.530	4	.821
Respondent aspiring to be like their father	2.961	4	.564
Respondent enjoying time with their father	7.253	4	.123
Respondent feeling that their father helps with what is important to them	3.014	4	.556
Father knows close friends	.810	4	.937
Having a father that is involved in school activities	4.108	4	.392
Having a supportive father	2.634	2	.268
Sex of the respondent	23.514	1	.000
Age	5.764*		.000

\*t-value and its associated p value.

Table 39 shows results of logistic regression analysis conducted to determine which independent variables were predictors of multiple partners for Whites having sex in the study. The variables used were assessed for multicollinearity by examining the values of tolerance and VIF statistics. Multicollinearity was not an issue for any of the predictors used in the logistic regression. The model was developed using maternal attachment, paternal attachment and family attachment measures. Age, sex and race were included as they have been shown in the literature as significant factors in the decision to have sex with multiple partners. All variables were force included in the equation, to assess their relative value in explaining the decision to

have multiple partners. Five predictors were suggested: having a helpful mother, father's involvement in school, level of perceived support from father, sex of the respondent, and number of hours of weekly maternal monitoring. White respondents that felt their mother helps with what is important to them were less likely to report multiple partners. When a respondent's father was involved in school they were less likely to report multiple partners. If a respondent felt his father was supportive they were less likely to report multiple partners. White females were less likely than white males to have multiple partners. When number of hours of weekly monitoring increases, the chance of multiple partners decreases. The value of Cox and Snell  $R^2$  is very small (.068) as is the value of Nagelkerke  $R^2$  (.096) which does not suggest a good model fit. The model correctly classified 8.4% of the cases reporting a single partner and 98.4% of the cases reporting multiple partners.

Table 39 Logistic Regression Results To Predict Multiple Partners for Whites Having Sex

Variables		B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I. for EXP(B)	
							Lower	Upper
	thinkhighmom	-.096	.295	.107	.743	.908	.510	1.617
	belikemom	-.590	.391	2.272	.132	1.804	.838	3.885
	enjoytimem	-.673	.369	3.331	.068	.510	.247	1.051
	momhelps	-.873	.427	4.185	.041	2.394	1.037	5.524
	momknowfs	-.578	.426	1.838	.175	1.782	.773	4.111
	momknowfps	-.439	.434	1.025	.311	1.552	.663	3.633
	momknowteach	-.682	.387	3.106	.078	1.978	.926	4.225
	momsupport	-.040	.201	.040	.842	.961	.648	1.425
	thinkhidad	-.860	.626	1.884	.170	2.363	.692	8.067
	belikedad	-.519	.512	1.024	.311	.595	.218	1.625
	enjoytimed	-.107	.624	.029	.864	.899	.264	3.053
	fatherhelp	-.335	.562	.354	.552	.716	.238	2.154
	dadknowfs	-1.393	.833	2.797	.094	4.025	.787	20.583
	dadknoteach	-1.309	.614	4.541	.033	3.702	1.111	12.338
	dadsupport	-.447	.191	5.453	.020	1.563	1.074	2.274
	female	-.434	.183	5.644	.018	.648	.453	.927
	age	-.110	.111	.973	.324	1.116	.897	1.389
	relwmom	-.001	.001	.172	.679	.999	.997	1.002
	relwdad	-.000	.002	.044	.833	1.000	.997	1.003
	famroutine	-.018	.069	.067	.796	1.018	.890	1.164
	mommon	-.735	.305	5.805	.016	.480	.264	.872
	dadmon	-.406	.359	1.278	.258	.666	.330	1.347
	Constant	-.097	2.158	.002	.964	.907		

Model chi-square = 44.781. 22 df; -2 Log likelihood function = 748.724; Cox and Snell = .068; Nagelkerke = .096

Table 40 shows results of logistic regression analysis conducted to determine which independent variables were predictors of multiple partners for African Americans having sex. Three predictors were suggested: enjoying time with mother, having a helpful father, and sex of the respondent. African American respondents who reported enjoying time with their mother were less likely to report having multiple partners. Respondents who felt their father helps with what is important to them were less likely to report multiple partners. African American males were more likely to report having multiple partners. The value of Cox and Snell  $R^2$  is very small (.097) as is the value of Nagelkerke  $R^2$  (.162) which does not suggest a good model fit. The model correctly classified 11.7% of the cases reporting a single partner and 99.6% of the cases reporting multiple partners.

Table 40 Logistic Regression Results To Predict Multiple Partners for African Americans Having Sex

Variables		B	S.E.	Wald	Sig.	Exp(B)	95.0% C.I.for EXP(B)	
							Lower	Upper
	thinkhighmom	-.667	.460	2.100	.147	.513	.208	1.265
	belikemom	-.035	.358	.010	.922	.965	.478	1.949
	enjoytimem	-1.270	.496	6.556	.010	.281	.106	.742
	momhelps	-.298	.494	.362	.547	1.347	.511	3.549
	momknowfs	-.105	.599	.031	.861	.900	.278	2.912
	momknowfps	-.414	.435	.907	.341	1.513	.645	3.551
	momknowteach	-.312	.435	.516	.473	1.366	.583	3.203
	momsupport	-.392	.308	1.619	.203	1.480	.809	2.706
	thinkhidad	-.478	.617	.599	.439	1.612	.481	5.405
	belikedad	-.434	.537	.652	.419	1.544	.538	4.426
	enjoytimed	-.637	.590	1.165	.280	1.891	.595	6.012
	fatherhelp	-1.474	.626	5.542	.019	.229	.067	.781
	dadknowfs	-.597	.587	1.033	.309	1.816	.575	5.739
	dadknoteach	-.026	.446	.003	.954	.975	.407	2.336
	dadsupport	-.664	.354	3.522	.061	1.942	.971	3.885
	female	-1.200	.259	21.468	.000	.301	.181	.500
	age	-.083	.150	.303	.582	1.086	.809	1.458
	relwmom	-.002	.002	1.049	.306	1.002	.998	1.005
	relwdad	-.002	.002	1.107	.293	1.002	.999	1.005
	famroutine	-.002	.047	.002	.963	.998	.911	1.093
	mommon	-.286	.288	.986	.321	.751	.427	1.321
	dadmon	-.118	.280	.177	.674	.889	.513	1.539
	Constant	-1.257	3.058	.169	.681	.285		

Model chi-square = 55.627. 22 df; -2 Log likelihood function = 445.167; Cox and Snell = .097; Nagelkerke=.162

### OLS for Whites and African Americans

Table 41 shows results of OLS analysis conducted to determine which independent variables were predictors of the number of multiple partners for Whites having sex in the study. An overall model of four predictors was suggested: Respondent enjoying time spent with their mother, respondent's mother knowing parents of friends, hours of weekly supervision by the mother, and perceived helpfulness of the father. White respondents who had a helpful mother had fewer sexual partners. Mother's knowing the parents of their children's friend decreased the number of sexual partners. As maternal monitoring increased, the number of reported sexual partners decreased for whites in the study. Respondents who thought their father was helpful had fewer sex partners. The model explains 27% of the variance in number of partners in the past year for females in the study.

Table 41 Forward Linear Regression Results for Number of Partners in the Last 12 Months for Whites Having Sex

Variables	B	Std Error	Beta	t	Sig
(Constant)	5.382	1.968		2.734	.008
Enjoy time with mother	-1.125	.574	-.242	-1.959	.055
Mother knows friends parents	-2.375	.840	-.423	-2.829	.006
Maternal monitoring	-.675	.275	-.397	-2.452	.017
Father helps with what is important	-1.092	.531	-.256	-2.057	.044

$R^2=.270$

F5.351 Sig. .001

Table 42 shows results of OLS analysis conducted to determine which independent variables were predictors of the number of sex partners for African Americans having sex in the study. An overall model of six predictors was suggested: thinking highly of mother, wanting to be like mother, thinking highly of father, level of support felt from father, wanting to be like father, level of support from the mother. African American respondents that thought highly of



their mother and father had fewer sexual partners. The more support a respondent felt from their parents, the fewer sexual partners they reported having. The more respondents reported wanting to be like their mother and father, the fewer sexual partners they had. The model explains 59.2% of the variance in number of partners in the past year for African Americans in the study.

Both maternal and paternal factors accounted for the number of sexual partners reported in the last year by Whites and African Americans. Maternal variables were a stronger influence for Whites than for African Americans. Maternal monitoring was a significant factor for Whites but not for African Americans in the study.

Table 42 Forward Linear Regression Results for Number of Partners in the Last 12 Months for African Americans Having Sex

Variables	B	Std Error	Beta	t	Sig
(Constant)	-.071	3.885		-.018	.986
Think highly of mother	-3.269	.596	-.645	-5.486	.000
Want to be like mother	-1.215	.468	-.287	-2.596	.012
Think highly of father	-1.433	.454	-.340	-3.155	.003
Father is supportive	-3.744	.970	-.458	-3.860	.000
Want to be like father	-1.335	.482	-.328	-2.772	.008
Mother is supportive	-2.141	.958	-.231	-2.234	.030

R<sup>2</sup>=.592

F12.569 Sig. .000

### Conclusions

The analysis examined the association between certain family attachment and demographic variables with the decision to be sexually active with multiple partners in a sample of teens aged 14-17. Examining parental attachment and multiple partners for the entire sample that reported having sex, it was found that certain family variables play a significant role in the decision to engage in sex with multiple partners. Sex of the respondent, race and age were

significant factors in the sex with multiple partners for the sample that reported having sex. Males and older respondents were more likely to report having multiple partners. Both maternal and paternal attachment variables were significant in the prediction of multiple partners. Respondents who reported enjoying time with their mother and that their mother knows their close friends were less likely to have multiple partners. Respondents who felt their fathers were helpful with what is important to them were less likely to report having sex. Feeling that father was supportive meant a decreased likelihood of reporting having sex. Increased maternal monitoring also reduced the likelihood of having multiple sexual partners.

Demographic and family attachment variables were identified to predict the number of sexual partners over the last 12 months for the entire sample. The hypothesis that being male would predict more partners was supported by this analysis. More paternal than maternal variables were significant predictors of number of sexual partners. Increased parental attachment through monitoring and support decreased the number of sexual partners reported.

Results for the logistic and linear regression model runs on the entire sample support the hypotheses that stronger parental attachment will predict fewer sexual partners and that weaker parental attachment will predict more sexual partners. A summary of significant variables is shown in table 43. Both maternal and paternal attachment variables were significant predictors of whether or not a respondent reported having sex for the entire sample. Both maternal and paternal variables were significant predictors of the number of sexual partners reported in the last 12 months for the entire sample. Sex of the respondent and age were also significant in the prediction of multiple partners. Males and older respondents were more likely to report multiple partners.

Table 43 Summary of Significant Predictors of Multiple Partners among those Having Sex

	Likelihood of Having More than One Partner	Actual Number of Partners
Respondent thinks highly of mother		*
Enjoy time with mother	*	
Mother knows friends	*	
Respondent thinks highly of father		*
Father helps with what is important	*	*
Father is supportive	*	*
Sex of the respondent	*	*
Race	*	
Relationship with mother	*	
Relationship with father		*
Maternal monitoring	*	*

Maternal and paternal attachment variables were significantly related to the decision to have multiple partners for both males and females in the study. For females, feeling that father is supportive means a decreased likelihood of reporting multiple partners. Males in the study had a decreased likelihood of multiple partners if they thought their mother was helpful and their father was helpful.

The prediction of number of partners in the last 12 months for males and females revealed that paternal variables were significant predictors of the number of partners for males and females. No maternal variables were significant predictors for males in the study. Reporting a desire to be like their father meant fewer sexual partners for both males and females in the study.

Table 44 Summary of Significant Predictors of Multiple Partners among those Having Sex for Females

	Likelihood of Having More than One Partner	Actual Number of Partners
Wants to be like mother		*
Enjoy time with mother	*	
Wants to be like father		*
Father is supportive	*	
Relationship with mother		*
Relationship with father		*

Table 45 Summary of Significant Predictors of Multiple Partners among those Having Sex for Males

	Likelihood of Having More than One Partner	Actual Number of Partners
Respondent thinks highly of mother		*
Mother helps with what is important	*	
Mother knows parents of friends		*
Mother involved in school		*
Respondent thinks highly of father		*
Wants to be like father		*
Enjoys time with father		*
Father helps with what is important	*	*

Both maternal and paternal attachment variables were significant in the prediction of multiple partners for Whites and African Americans in the study. Sex of the respondent was also a significant factor in the decision to have multiple partners for both Whites and African Americans in the study. For both groups, being male predicted multiple partners. Weekly

parental monitoring was significant for Whites but not for African Americans in the study. When predicting the number of sex partners reported in the last year, both maternal and paternal factors accounted for the number of sexual partners reported by Whites and African Americans. Maternal variables were a stronger influence for Whites than for African Americans. Maternal monitoring was a significant factor for Whites but not for African Americans in the study in the prediction of number of partners reported.

Table 46 Summary of Significant Predictors of Multiple Partners among those Having Sex for Whites

	Likelihood of Having More than One Partner	Actual Number of Partners
Mother helps with what is important	*	
Enjoy time with mother		*
Mother knows friends parents		*
Fathe helps with what is important		*
Father involved in school	*	
Father is supportive	*	
Sex of the respondent	*	
Maternal monitoring	*	*

Table 47 Summary of Significant Predictors of Multiple Partners among those Having Sex for African Americans

	Likelihood of Having More than One Partner	Actual Number of Partners
Think highly of mother		*
Enjoy time with mother	*	
Want to be like mother		*
Mother is supportive		*
Father helps with what is important	*	
Think highly of father		*
Want to be like father		*
Father is supportive		*
Sex of the respondent	*	

Stronger parental attachment reduced the likelihood of having sex with multiple partners. Respondents who reported a great deal of involvement and high regard for their parents were less likely to report multiple partners. Female respondents were less likely than male respondents to have multiple partners when analyzing the entire sample. Maternal attachment was a stronger influence than paternal attachment for the overall sample, and for males and females when analyzed separately.

This section examined the variables associated with the decision to have sex with multiple partners. It was found that there were significant demographic and family attachment factors involved in the decision to have with multiple partners. The next chapter summarizes the findings of this study about the decision to have sex and the decision to have sex with multiple partners.

## CHAPTER 7 CONCLUSIONS

This research focused on the relationship between parental attachment and the likelihood of sexual risk behavior among adolescents aged 14-17. This study defines sexual risk as having sex at a young age, during adolescence. The purpose of this research is to provide a more complete picture of the relationship between attachments to parents and the decision of adolescents to take sexual risks that could have long-term impacts on their lives.

Attachment to parents was defined in this study as emotional closeness, supervision and shared activities between parents and adolescents. The research also examined whether the relationship between attachment and sexual risk behavior varied by race and gender. The research took place in two phases. The first phase examined the predictors of adolescents having sex and the second phase examined the predictors of multiple sex partners among adolescents who had sex. It compared parental attachment of sexually active teenagers with and without multiple partners while controlling for race and gender.

The study tested the hypothesis that greater parental attachment reduces the likelihood of having sex and having multiple partners. Additional hypotheses were that being female would predict abstinence, and that older age would predict sexual activity. This study employed secondary data analysis using a data set compiled by the United States Bureau of Labor Statistics, the National Survey of Children and Youth. The data were collected in 1997 from a national random sample, and used interviews to collect data from respondents aged 14-17. The data allowed for the examination of sexual behavior among our nation's youth because it included extensive items regarding respondents' sexual experience and behavior, as well as items dealing with parental attachment.

This study had two separate phases. The first phase analyzed the predictors of having sex, while the second phase analyzed predictors of multiple partners among the subgroup who had sex. The initial data set contained 8984 respondents. Respondents under the age of 14 were not asked questions about their sexual behavior and were omitted from the data set used in the current study. As a result, Phase 1 of the study included 5,292 respondents.

For the phase one sample of 5292 respondents, males accounted for 50.80 percent of the sample while 49.20 percent was female. The age distribution of the sample used for this study ranged from 14 to 17 years old. The average age of respondents was approximately 15.33. There was a similar age distribution across sex and racial groups. The racial composition of the sample was 58.30 percent Caucasian, 0.40 percent American Indian, Eskimo, or Aleut, 28.30 percent African American, and 1.80 percent Asian or Pacific Islander and 12.20 percent other racial categorizations.

For the second phase of the analysis only those who reported being sexually active were included in the prediction of multiple partners. Therefore, from the sample of 5,292 respondents from Phase 1, only those who reported having sex were selected for the second phase. A total of 1,679 respondents who reported having sex were used as the sample for the second phase of analysis. In the phase two sample, males accounted for 55.3 percent of the sample while 44.7 percent was female. The age distribution of the sample used for Phase 2 of this study ranged from 14 to 17 years old. The average age of respondents was 15.63. The racial composition of the sample was 46.2 percent Caucasian, 0.40 percent American Indian, Eskimo, or Aleut, 39.3 percent African American, and 1.3 percent Asian or Pacific Islander and 12.20 percent other racial categorizations.



Of the 1,679 respondents who reported having sex, 1,016 reported having multiple partners. Males accounted for 59.4 percent of those reporting multiple partners and females accounted for 40.6 percent. The average age of those reporting multiple partners was 15.86. The racial composition of those reporting multiple partners was 42.6 percent Caucasian, .3 percent American Indian, Eskimo, or Aleut 44.7 percent African American, and .7 percent Asian or Pacific Islander and 11.7 percent other racial categorizations.

Phase 1 of the study used logistic regression analysis to identify significant predictors of having sex. The second phase of the study used logistic regression to find significant predictors of having multiple partners. Then, linear regression was conducted to identify significant predictors of the number of partners reported in the last year.

#### Findings: Predictors of Having Sex

Table 48 summarizes the significant predictors of having sex and having multiple partners. Across all three analyses, maternal monitoring and being female reduced the likelihood of having sex, reduced the likelihood of having multiple partners, and decreased the number of multiple partners. In addition, mother knows friends reduced the probability of having sex and having multiple partners. Feeling that father was helpful and he was supportive reduced the likelihood of multiple partners and the number of multiple partners. None of the following variables predicted sexual behavior: age, paternal monitoring, father involvement in school activities, father knows close friends, wants to be like father, respondent enjoys time with father, mother knows parents of friends, wants to be like mother. The regressions suggest that maternal factors are more important than paternal factors. Maternal variables such as mother being helpful, mother involved in school activities, mother is supportive predict having sex but do not predict multiple partners.

Table 48 Summary of Significant Predictors of Sex and Predictors of Multiple Partners

	Have Sex?	Multiple Partners?	Number of Partners?
Think highly of mother			*
Want to be like mother			
Enjoy time with mother		*	
Respondent feeling their mother is helpful	*		
Mother's involvement in school activities	*		
Mother knows friends	*	*	
Mother knows parents of friends			
Respondent feeling their mother is supportive	*		
Respondent thinking highly of their father			*
Want to be like father			
Respondent enjoying time with their father			
Respondent feeling their father helps with what is important to them		*	*
Respondent reporting their father knows their close friends			
Father's involvement in respondents school activities and education			
Respondent feeling their father is supportive		*	*
Relationship with mother		*	
Relationship with father			*
Maternal monitoring	*	*	*
Paternal monitoring			
Hours spent with family each week	*		
Sex of the respondent	*	*	*
Race		*	
Age			

Literature suggests that motivators for sexual behavior differ by sex and race (Ott et al. 2006, Werner-Wilson 1998, Lauritsen 1994, Hayes 1987). Therefore, separate models were run for males and females and then separate models for Whites and African Americans.

Table 49 summarizes the regressions run for females only to predict having sex and multiple partners. Fewer significant predictors emerge for the female respondents, and none of the independent predictors were significant across all three of the dependent variables. Wanting to be like mother predicted a lower likelihood of having sex and fewer partners among those having sex. Mother knowing parents of friends, feeling mother is supportive, hours spent weekly

with family and age were all reduced the probability of females having sex. Enjoying time with mother and feeling that father is supportive reduced the chances of multiple partners. Wanting to be like mother and father, relationship with mother and relationship with father reduced the number of partners over the last year. Maternal factors were more important than paternal ones in the prediction of sexual behavior of females.

Table 49 Summary of Predictors of Sex and Predictors of Multiple Partners for Females

	Have Sex?	Multiple Partners?	Number of Partners?
Think highly of mother			
Want to be like mother	*		*
Enjoy time with mother		*	
Respondent feeling their mother is helpful			
Mother's involvement in school activities			
Mother knows friends			
Mother knows parents of friends	*		
Respondent feeling their mother is supportive	*		
Respondent thinking highly of their father			
Want to be like father			*
Respondent enjoying time with their father			
Respondent feeling their father helps with what is important to them			
Respondent reporting their father knows their close friends			
Father's involvement in respondents school activities and education			
Respondent feeling their father is supportive		*	
Hours spent with family weekly	*		
Relationship with mother			*
Relationship with father			*
Maternal monitoring			
Paternal monitoring			
Sex of the respondent			
Race			
Age	*		

Table 50 summarizes the predictors for males. Feeling their mother is helpful reduces the likelihood of having sex and multiple partners, feeling that father is helpful reduces the chances of having multiple partners and reduces the number of partners in the past year. Although none

of the other independent variables predict across more than one dependent variable. Enjoying time with mother, feeling mother is helpful, mother knowing close friends, hours spent weekly with family and maternal monitoring all decreased the likelihood of males having sex. Feeling mother and father are helpful reduced the likelihood of multiple partners for males. Thinking highly of father and wanting to be like father reduced the number of partners over the past twelve months. For males in the study, only maternal variables were significant in the prediction of having sex. Both paternal and maternal variables were significant in the prediction of having multiple partners. Only paternal variables (thinking highly of father and wanting to be like father) were significant in the prediction of actual number of partners in the past year.

For males and females in the study, only maternal variables were significant predictors of having sex. Both maternal and paternal variables were significant in the prediction of having multiple partners for both sexes. For females, both paternal and maternal variables were significant in the prediction of number of partners, but for males only paternal variables were significant. Relationship with and supervision by the mother is significant in the prediction of whether or not both males and females will engage in sex. However, when comparing results for the prediction of multiple partners there are some different factors between the genders that are significant. For females, a supportive father and enjoyment of time with mother were significant predictors of multiple partners but for males it was feeling that mother and father are helpful. For the prediction of multiple partners, wanting to be like mother and wanting to be like father were both significant predictors of the number of reported sex partners over the past 12 months. However, for males wanting to be like their father and thinking highly of their father was significant and no maternal variables were significant. It seems that paternal forces are more

powerful for males than for females in the prediction of number of partners over the previous year.

Table 50 Summary of Predictors of Sex and Predictors of Multiple Partners for Males

	Have Sex?	Multiple Partners?	Number of Partners?
Think highly of mother			
Want to be like mother			
Enjoy time with mother	*		
Respondent feeling their mother is helpful	*	*	
Mother's involvement in school activities			
Mother knows friends	*		
Mother knows parents of friends			
Respondent feeling their mother is supportive			
Respondent thinking highly of their father			*
Want to be like father			*
Respondent enjoying time with their father			
Respondent feeling their father helps with what is important to them		*	
Respondent reporting their father knows their close friends			
Father's involvement in respondents school activities and education			
Respondent feeling their father is supportive			
Hours spent weekly with family	*		
Relationship with mother			
Relationship with father			
Maternal monitoring	*		
Paternal monitoring			
Sex of the respondent			
Race			
Age			

Table 51 summarizes regression results for Whites in the study. Maternal monitoring predicts both having multiple partners and then number or sexual partners. All other significant predictors only predict one dependent variable. Wanting to be like mother and father, hours spent weekly with family and relationship with father reduced the chances of having sex for Whites in the study. Feeling that mother is helpful, father's involvement in school, having a supportive father, hours of weekly maternal monitoring and being female all decrease the likelihood of having multiple partners. Enjoying time with mother, mother knowing parents of friends, having a helpful father, and hours of weekly maternal monitoring predict the number of

partners for Whites in the study. The model for Whites suggested fewer predictors than for the overall sample.

Table 51 Summary of Predictors of Sex and Predictors of Multiple Partners for Whites

	Have Sex?	Multiple Partners?	Number of Partners?
Think highly of mother			
Want to be like mother	*		
Enjoy time with mother			*
Respondent feeling their mother is helpful		*	
Mother's involvement in school activities			
Mother knows friends			
Mother knows parents of friends			*
Respondent feeling their mother is supportive			
Respondent thinking highly of their father			
Want to be like father	*		
Respondent enjoying time with their father			
Respondent feeling their father helps with what is important to them			*
Respondent reporting their father knows their close friends			
Father's involvement in respondents school activities and education		*	
Respondent feeling their father is supportive		*	
Hours spent weekly with family	*		
Relationship with mother			
Relationship with father	*		
Maternal monitoring		*	*
Paternal monitoring			
Sex of the respondent		*	
Race			
Age			

Table 52 shows predictors for African Americans in the sample. Among African Americans, being male was a significant predictor for having sex and multiple partners. Mother's support significantly predicted having sex and number of partners. None of rest of predictors were significant for more than one form of the dependent variable for African Americans in the study. Mother knowing friends, parents of friends and feeling mother is supportive all reduced the likelihood of having sex. Enjoying time with mother and feeling father is helpful decreased

the chances of multiple partners. Thinking highly of mother, wanting to be like mother, feeling mother is supportive, thinking highly of father, wanting to be like father and feeling father was supportive all decreased the number of partners over the past year for African Americans in the study.

For both Whites and African Americans, more maternal variables were significant than paternal variables. None of the significant predictors of any of the three dependent variables were shared between these race groups. Significant predictors for having sex, multiple partners and number of partners were distinctly different for Whites and African Americans.

In the prediction of whether or not a respondent reported having sex, only maternal variables were significant for African Americans while more paternal variables were significant for Whites as were hours spent weekly with family. In the prediction of multiple partners, maternal monitoring was important for Whites but not for African Americans. Significant predictors of the number of partners over the past 12 months for African Americans included having a supportive mother and father and thinking highly of mother and father, but parental support and high regard was not a factor for Whites in the study. Maternal monitoring was important for Whites but not for African Americans.



Table 52 Summary of Predictors of Sex and Predictors of Multiple Partners for African Americans

	Have Sex?	Multiple Partners?	Number of Partners?
Think highly of mother			*
Want to be like mother			*
Enjoy time with mother		*	
Respondent feeling their mother is helpful			
Mother's involvement in school activities			
Mother knows friends	*		
Mother knows parents of friends	*		
Respondent feeling their mother is supportive	*		*
Respondent thinking highly of their father			*
Want to be like father			*
Respondent enjoying time with their father			
Respondent feeling their father helps with what is important to them		*	
Respondent reporting their father knows their close friends			
Father's involvement in respondents school activities and education			
Respondent feeling their father is supportive			*
Relationship with mother			
Relationship with father			
Maternal monitoring			
Paternal monitoring			
Sex of the respondent	*	*	
Race			
Age			

### Summary of Findings

The summary tables confirm that more maternal than paternal variables were significant in the prediction of all three dependent variables: having sex, having multiple partners, and number of partners in the last year. Hours spent weekly with family were significant in the prediction of all three dependent variables, as were hours of weekly maternal monitoring. Paternal variables were better predictors of having multiple partners and number of partners than predictors of having sex. In all three analyses for the entire sample, maternal factors were more important than paternal factors. For males and females in the study, only maternal variables

were significant predictors of having sex. Both maternal and paternal variables were significant in the prediction of having multiple partners for both sexes. For females, both paternal and maternal variables were significant in the prediction of number of partners, but for males only paternal variables were significant. For both Whites and African Americans, more maternal variables were significant than paternal variables. None of the significant predictors of any of the three dependent variables were shared between these race groups. Significant predictors for having sex, multiple partners and number of partners were distinctly different for Whites and African Americans.

The findings of this study support the hypotheses that direct control, indirect control and involvement all impact adolescent sexual behavior. Although it is important to note that Hirschi would not have predicted the significance of direct controls he would have predicted positive effects of indirect controls and involvement. Nye would have predicted the significance of both direct and indirect controls but absorbed the concept of involvement into his concept of direct control.

The effects of involvement, direct and indirect controls were significant in the prediction of whether or not respondents reported having sex. Maternal attachment (indirect control) was significant in the prediction of all three dependent variables: having sex, having multiple partners, and number of partners in the last year. Hours spent weekly with family (involvement) was significant only in the prediction of whether or not a respondent reported having sex. Maternal monitoring, a direct control, was significant in the prediction of all three dependent variables. Paternal attachment variables were better predictors of having multiple partners and number of partners than of having sex.

For females in the study, indirect controls and involvement were significant in the prediction of having sex. Only maternal attachment (indirect control) was significant in the prediction of having sex for females. The number of hours spent engaged in weekly routine family activity (involvement) reduced the likelihood of reporting sex for females. Indirect controls were significant in the prediction of multiple partners and the number of partners in the past year. Both maternal and paternal attachment variables were significant in the prediction of having multiple partners for females.

For males involvement, direct and indirect controls were all significant in the prediction of having sex. Maternal attachment was the only significant indirect control. Number of hours spent weekly with family (involvement) and increased hours of maternal monitoring (direct controls) both reduced the likelihood of reported sex. Indirect controls were significant in the prediction of multiple partners for males. Only paternal attachment variables were significant as indirect controls in the prediction of multiple partners and the number of partners in the past year for males.

For White respondents, involvement and indirect controls were significant in the prediction of whether or not a respondent reported having sex. The likelihood of having sex was reduced by the number of hours spent weekly in routine family activities (involvement) and both maternal and paternal attachment (indirect controls). Indirect and direct controls were significant in the prediction of multiple partners and number of partners in the past year. Increased maternal monitoring (direct control) decreased the likelihood of multiple partners and reduced the number of partners reported in the past year for White respondents. Higher maternal and paternal attachment (indirect control) reduced the likelihood of multiple partners and number of partners in the past year for Whites.

For African Americans respondents, indirect controls were significant in the prediction of having sex, multiple partners, and the number of partners in the past year. Increased maternal attachment (indirect control) decreased the likelihood of having sex. Increased paternal and maternal attachment reduced the likelihood of multiple partners and the number of partners reported in the past year.

### Limitations

As with any survey about sexual behavior, it can be assumed that there may be an issue with underreporting or over-reporting sexual behavior by the respondents in this study. However, there remains debate about the actual rate of underreporting, as it varies according to age, health status, gender, and sexual orientation. This data for this study was collected using face to face interviews, similar to the procedure used in other studies. Face to face interviews about sexual behavior are thought to lead to respondents' giving perceived socially acceptable responses. These inaccurate responses are given because discussing sexual behavior may be embarrassing for the respondent or leave them fearful of being judged for their behavior.

A great deal of the data collected for the NLSY deals with variables on sensitive issues such as sexual experience, drug use, and relationships with parents. Therefore, it is likely that some of the information in the data set is inaccurate. If certain behaviors are underreported, then it will alter the results of the study.

Some of the variables used in this study examine emotional relationship with parent. It is possible that the level of reported relationship with parent is a function of family structure, which is not controlled for in this study. If a parent is absent from the respondent's life, it likely follows that a weak parental relationship is reported. Therefore, it is possible that the

relationship between attachment and sex risk behavior may actually be influenced by number of parents present in the home, not necessarily a weak relationship in and of itself.

There is also potential bias introduced by reducing the sample. The original sample consisted of 8,984 respondents. That sample was reduced to 5,292 respondents for the purpose of this study. Not all respondents in the original 8984 were asked all of the questions needed for this study. None of the respondents under 14 were asked questions about sexual behavior. Therefore, there is a significant difference in age between the portion of the sample that was omitted (because of not being asked the questions about sexual behavior) and the portion of the sample that was retained for my study. There was no significant difference by race or sex between the omitted respondents and the included respondents. However, since no respondents under the age of 14 were asked questions about sexual behavior, the mean age of the sample used for the study is significantly higher than that of the original sample.

#### Future Research and Policy Implications

More research is needed to uncover the various motivators for sexual risk behavior in adolescents. Research, including the findings of this study, suggests that there are different predictors of sexual behavior for different race groups and that predictors for sexual activity are different among males and females. Further research should explore the various specific family attachment factors that have an impact on each social category, since it seems that one model may not apply across social groups. Also, recent research on adolescent sexual behavior is beginning to focus on the changing role of parent, from protector to friend, and the impact of this change on adolescent sexual behavior. It is important to constantly assess changing relationship dynamics in the family, because these changes can have an impact on many types of adolescent risk behavior.

In order to tailor interventions and programs to reduce sexual risk, policy makers need a better understanding of the impact of attachment on sexual risk behaviors for various sociodemographic groups. It is important to understand the relationship between parental attachment and sexual risk behavior in order to design effective public health programs. Sexually active adolescents are at risk for a number of health and social consequences such as Sexually Transmitted Infections including Acquired Immune Deficiency Syndrome and unintended pregnancy. While some research suggests that the number of teenage pregnancies are declining, the age of sexual initiation and average number of partners is on the rise. These risk factors increase the probability of negative health consequences.

Policy makers need to identify high risk groups in order to tailor interventions to meet their needs. There are differences in infection rates and of unplanned pregnancy rates by sociodemographic characteristics, including gender and race. Incomplete understanding of adolescent sexual behavior is hindering the ability of public policy and education systems to combat the problem of adolescent sexual risk taking. Behavioral science needs to continue to study the problem of adolescent sexual risk taking in order to move toward practical prevention measures, and to protect so many young people from making choices that can have adverse health impacts that last the duration of their lives.

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**ABSTRACT****PARENTAL ATTACHMENT AND SEXUAL RISK BEHAVIOR AMONG ADOLESCENTS**

by

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This study sought to uncover parental attachment variables that are associated with risky adolescent sexual behavior. The study employed secondary data analysis and used a data set compiled by the United States Bureau of Labor Statistics, the National Survey of Children and Youth 1997 (NLSY 1997). This was a national sample of nearly 8,000 respondents from 12-16 years of age. Variables measuring parental monitoring and emotional closeness were used in logistic and linear regression models to predict whether a respondent reported having sex, whether multiple partners were reported and the reported number of sexual partners in the past year. The study finds that maternal and paternal variables were significant in the prediction of having sex, having multiple partners, and number of partners in the last year. The number of hours spent weekly with family and number of hours of weekly maternal monitoring were significant in the prediction of all three dependent variables. Paternal variables were better predictors of having multiple partners and number of partners than predictors of having sex. Maternal factors were more important in the prediction of whether or not a respondent reported being sexually active.

## **AUTOBIOGRAPHICAL STATEMENT**

My undergraduate work was in political science and sociology, and at that time I was interested in a career in politics. I worked for awhile at the state and county level and then returned to graduate school, feeling unfulfilled. I began graduate study in sociology and became interested in human rights and health issues. I took a M.A. degree at Eastern Michigan University and began teaching and working in market research before coming to Wayne State University to pursue a doctorate. Through my graduate work at Wayne State, I became interested in public health issues including reproductive health and HIV/AIDS. As I pursued my doctorate (and worked on this dissertation), I made my first trip to South Africa, one of the hardest hit places on the planet by the HIV pandemic. I have since been back to the continent once or twice each year, exploring various behaviors and practices that prevent the spread of this disease. Women's rights and poverty in Africa are among the two major factors that I have begun to focus on in relation to health. My future research will focus on reproductive and sexual health and involve further investigation into motivations for sexual behavior. However, it will most likely be qualitative, and localized to specific regions in East Africa.