EARLY PARENT CHILD RELATIONSHIPS AND LATER RISKY SEX OUTCOMES AMONG AFRICAN AMERICAN ADOLESCENTS

by

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(Under the Direction of Thomas McNulty)

ABSTRACT

This study assesses the relationship between parental warmth and monitoring in early childhood and later risky sex outcomes among a sample of African American adolescents. I use the Family and Community Health Study (FACHS) to examine the effects of variables related to both social control and self-control theories to determine which theory provides a better explanation for this relationship. Findings suggest that family structure, parental monitoring, self-control, community control, and friend's deviance are all associated with risky sex outcomes among African American adolescents in the sample. For females, living with a single mom, low levels of parental monitoring, and low levels of self-control at wave 1 are associated with more risky sex by wave 4. For males, living with a mom and step dad, having deviant friend's, and low levels of community control at wave 1 are associated with more risky sex outcomes by wave 4

INDEX WORDS: Risky Sex, Parenting Quality, Parental Warmth, Parental Monitoring, Family Structure, Social Control, Self-Control

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CHAPTER 1

INTRODUCTION

Statement of the Problem

Decreasing risky sexual behaviors among adolescents remains a priority for health practitioners, policy makers, and parents alike. The Center for Disease Control and Prevention defines risky sex as any sexual behavior that increases an individual's risk of unintended pregnancy and contracting HIV/AIDS or other STIs (Center for Disease Control and Prevention [CDC], 2014). Researchers examine risky sexual behaviors such as age at sexual debut, concurrent sexual partners, condom use consistency, and total number of sex partners among others. These risky sex behaviors have a number of adverse outcomes and some of them are disproportionately affecting African Americans, youth, and women. Such outcomes can be physical, psychological, and emotional, as well as short term and long term.

Racial and ethnic group comparisons regarding risky sex show that almost half of African American teens are currently sexually active as opposed to White teens, of which only 31% are currently sexually active (CDC, 2002). The CDC reports that African American youth begin engaging in sexual behavior earlier than youth in other racial groups (CDC, 2009). These statistics illustrate the importance of examining outcomes of risky sexual behavior among African American adolescents.

People who engage in risky sex have a higher likelihood of contracting HIV/AIDS. According to the Center for Disease Control and Prevention in 2011, an estimated 15,958 African American people were diagnosed with AIDS. HIV/AIDS has affected African

Americans more than any other racial/ethnic group in the United States. Although African Americans make up only 12% of the population, this group accounted for 44% of all new estimated HIV infections among individuals over the age of 13. This means that based on the population size, African Americans account for 8 times as many new HIV infections as whites (CDC, 2010). The number of new estimated HIV infections for African American women has declined by 21% from 2008 to 2010; however, this rate is still around 20 times that of White women (CDC, 2010). In 2010, young people from age 13-24 accounted for 26% of all new HIV infections even though they made up only 17% of the entire population (CDC, 2010).

Not only do risky sexual behaviors increase the likelihood of contracting HIV/AIDS, they also increase the likelihood of contracting a sexually transmitted infection (STI). African Americans experience higher rates of sexually transmitted infections compared to other racial/ethnic groups in the United States (CDC, 2010). Additionally, young people between the ages of 16 and 24 account for about half of all new sexually transmitted infections even though they only comprise about one quarter of sexually active individuals in the U.S. (CDC, 2010). HIV/AIDS and other STI's are not the only adverse outcome of risky adolescent sex; women, especially, experience a number of additional consequences.

Unprotected sex increases the likelihood that an adolescent girl will become pregnant (Brown & Eisenberg, 1995). Research has also found that adolescents who have sex at earlier ages have greater likelihoods of having an unintended pregnancy (Hayes, 1987). Approximately 750,000 teens become pregnant in the United States each year but over 40% of those pregnancies end in abortion or miscarriage. This results in about 450,000 births to teen mothers each year (Alan Guttmacher Institute, 2011). Approximately 40% of African American teenage girls

became pregnant at least one time before their 20th birthday; that is two times the national average (The National Campaign to Prevent Teen and Unplanned pregnancy, 2014).

Beyond HIV/AIDs, other STIs and unintended pregnancy, adverse psychological and emotional consequences have been linked to risky sexual behavior. For example, having multiple casual sex partners is associated with depression and anxiety (Grello et al. 2003). One study that investigated the mental health outcomes of higher numbers of sex partners found that this risky sexual behavior is associated with an increased likelihood of substance dependence disorder, especially among women. (Ramrakha et al. 2013). Risky sexual behaviors also have long term effects for an individual's life course. For example, in 2004 Previti and Amato found that number of premarital sex partners is positively correlated with marital instability.

Given the range of adverse outcomes of risky sex, it is no surprise that there has been an extensive amount of research done on factors that influence adolescent's sexual behavior. In this study, I will focus on the individual traits of self-control and risk taking tendencies. In addition, I will examine the impact of family-level processes including parental warmth and monitoring. I will also investigate the influence of the community-level process of community control on risky sex outcomes. Next I examine religiosity as an important factor when predicting risky sex. Finally, I consider deviant peer groups' influence on risky sex.

Purpose of the Study

The main purpose of this study is to shed light on the relationship between quality of parenting and risky sex. More specifically, past research shows evidence supporting the claim that parental warmth and monitoring have an effect on risky sexual behaviors by influencing a variety of important factors and processes. In this study, I am going to test the direct and potential mediating influences of social control and self-control variables using a sample of

diverse African American adolescents from Iowa and Georgia. I will examine and compare the effects of factors related to social control theory (including friend's deviance, community control, and religious involvement), and self-control theory (including self-control and risk taking tendencies) in order to determine which theory best explains this relationship.

CHAPTER 2

THEORETICAL BACKGROUND

Social Control Theory

Travis Hirschi's (1969) Social Control theory is based on the assumption that all individuals are born with antisocial tendencies. This theory assumes that an individual is innately deviant. Social Control theorists argue that instead of asking why some people are deviant, social scientists should ask why many people conform. In *Causes of Delinquency* Hirschi argues that people conform because they have established bonds to societal institutions that protect them from deviant behavior, including parents and their values, religious institutions, and their neighborhoods and communities. People engage in delinquent acts when that bond to society is broken or weakened.

According to Hirschi's social control theory (sometimes referred to as social bond theory) there are four elements to the social bond. They are attachment, commitment, involvement, and belief. The theory states that people conform to society because they form attachment with others and are concerned with meeting the expectations of the people who they care about. Commitment refers to an individual's level of investment in conventional goals. Antisocial behavior reduces the likelihood that an individual will achieve such goals encouraging individuals to conform. Involvement is the third element of the bond to society. This refers to the degree to which an individual engages in conventional activities such as religious organizations, community organizations, school, employment, etc. Hirschi argues that adolescents who are involved in such activities are too busy to participate in delinquent acts such as risky sexual

behavior. The fourth element of the bond to society is belief. Belief constitutes the extent to which an individual has the understanding that the rules of a particular society are morally correct and that people should adhere to them.

One of the predictions of Hirschi's social control theory is that individuals with weak or broken social bonds are attracted to one another and subsequently form deviant peer groups. In opposition to previous criminological assumptions, Hirschi argues that a deviant peer group is not a cause of delinquency but that the causal order is reversed. Empirical research does not lend evidence to this prediction. For example, Landor et. al (2011) showed that parental religiosity influences later adolescent sexual behavior through its affect on affiliation with less sexually permissive peers.

Social Control theory would hold that adolescent risky sexual behavior is a form of deviance. Bonds with conventional aspects of society should aid individuals in avoiding this behavior. This theory provides a direct link between religious involvement, community control, parenting, and risky sex. For instance, religious involvement may instill beliefs and attitudes in young people that support abstinence from sex, subsequently decreasing an adolescent's likelihood of engaging in any sexual behavior. Considering community control, a young person who lives in a community that monitors and controls his or her behavior has less opportunity to engage in deviant behavior including risky sex. Finally, adolescents who are attached to warm parents who monitor them may adopt their parents' values and meet set expectations of them diminishing their propensity for risky sexual behavior.

Self-control Theory

Like Social Control theory, Gottfredson and Hirschi's (1990) self-control theory rests on the assumption that all individuals are born with deviant tendencies. However, in this newer

theory Gottfredson and Hirschi no longer focus much less on how an individual's bond to society protects his or her from deviant behavior; the new emphasis is on how self-control protects an individual from delinquency, crime, and analogous acts. According to this theory, everyone is born with low self-control. Low self-control is characterized as impulsive, insensitive, risk-taking, and uncompromising behavior. For example babies and toddlers are self-centered, and seek immediate gratification. For Gottfredson and Hirschi, a child learns self-control from the parenting they receive. In order to teach children self-control, parents must be caring and supportive, must set behavioral expectations, must monitor the child's behavior, and must discipline the child when they fail to meet set expectations. Once an individual learns self-control, he or she becomes considerate of others, they compromise immediate desires for long-term gratification, and they consider the consequences of their actions.

On the other hand, if parents fail to nurture, monitor, and discipline their children then the children fail to learn self-control. Based on the theory, an individual's self-control is fixed after age 10. If they have not developed the trait by that age, then they will never develop it. The theory states that people with low self-control seek immediate gratification and lack self-discipline, therefore these individuals are at risk for adolescent delinquency, adult crime and analogous behaviors including risky sex. Self-control theory provides a clear link between parenting, self-control, risk-taking tendencies, and risky sex. For instance, the effect of warmth and monitoring on risky sex may be mediated by self-control and risk taking tendencies. Empirical research supports many of these claims (Griffin 2012; Quinne & Fromme 2010; Raffaelli & Crocket 2003). Below, I outline several studies providing evidence that factors related to both social control and self-control theory are important for predicting risky sexual behaviors.

CHAPTER 3

LITERATURE REVIEW

Family structure

Research suggests that many adverse outcomes that adolescents face are related to family structure. A large body of research suggests that a quarter of single mothers engage in ineffective parenting. This is twice the percentage of married mothers. (Simons and associates, 1996; Brody and Forehand, 1988; Hetherington, Cox, and Cox, 1982). This ineffective parenting is most likely due to the high stress and impaired functioning due to an overload of responsibility and, in many cases, poverty.

Research shows that children living in step- families are between two and three times more likely to engage in delinquent behavior and experience conduct problems than children living in two-biological parent homes (McLanahan & Sandefur, 1994). Cherlin (1978) argued that this could be due to what she labeled an "incomplete institution," meaning that the norms of step-families are unclear and were never fully socialized into our culture. Subsequently there are no clear guidelines for position roles among step-families. (Ganong & Coleman, 2000; Grizzle, 1998). Evidence shows that step-parents engage in more distant parenting than biological parents subsequently denying adolescents certain protective factors such as monitoring and warmth (Coleman and Ganong, 1997; Coleman, Ganong, and Fine, 2000).

A limited body of research exists that examines child and adolescent well-being for young people who live with extended families. This research suggests that in some aspects young people living with extended families do just as well as young people living in two-

biological parent homes. According to Deleire and Kalil (2002) children who lived in extended family homes were not any more likely to smoke or drink than children who lived in two-parent biological homes. The two groups were also just as likely to go to college as one another. Other studies show that Black youth living in extended families had better school outcomes than their counterparts living in single-parent homes (Entwisle and Alexander, 1996). Although there are clear advantages to living in an extended family, evidence shows that, overall, children who live in two-biological parent homes experience the most advantages.

Parental Warmth

An extensive body of research suggests that parenting qualities influences adolescent risky sex in a multitude of ways. Much of this research focuses on warmth and similar constructs as protective factors against adolescent risky sex. For example, evidence suggests that parental support, which is a related concept, is negatively associated with risky adolescent sex (Barnes & Farrell, 1992).

In some cases parental warmth has been found to be a protective factor for adolescent outcomes even in among other adverse circumstances. In 2012, Gardner, Martin, and Brooks-Gunn found that caregiver warmth was negatively correlated with early sexual debut and sex with multiple partners regardless of neighborhood disadvantage. Scaramella (1998) and colleagues found that the influence of parental warmth on involvement in a pregnancy by 12th grade is mediated by risk taking tendencies in middle adolescence and academic competence in early adolescence.

Miller (2002) found that parental connectedness which includes warmth is negatively correlated with adolescent pregnancy risk through later sexual debut as well as less frequent intercourse. Longmore (2009) and colleagues found that parental caring was a significant

predictor of later teen sexual initiation. Pittman and Chase-Lansdale (2001) found that authoritative parenting (which includes warm and firm parenting) is negatively correlated with sexual debut for adolescents girls in impoverished communities.

Parental Monitoring

Parents are the first and primary socialization agents for children. Evidence shows that parental monitoring is negatively associated with risky sex acts. In 2006, Wight and colleagues found that low levels of parental monitoring were associated with sexual risk behaviors including early sexual debut. Another study found that frequent parental monitoring was negatively associated with biologically confirmed STIs among 476 detained adolescents (Crosby et. al, 2006). DiClemente and colleagues (2001) found that adolescents who perceived less parental monitoring were more likely to test positive for STIs, to report not using a condom during last intercourse, to have more than one sexual partner in the last six months, and to have had a new sexual partner in the last 30 days.

Parental monitoring has been found to be an important protective factor cutting across racial and ethnic groups. For example, Kerr et. al (2003) found that lack of parental monitoring was associated with risky sexual behaviors among a sample of 446 Hispanic youth. Other studies have found that parental monitoring is negatively associated with contracting sexually transmitted infections. One study found that African American adolescent females from low-income backgrounds who perceived low monitoring from their parents had a higher likelihood of contracting STIs than their counterparts who received higher levels of monitoring (Crosby et. al, 2003).

Studies show that parental monitoring can mediate the relationship between predictors of risky sex and those risky sexual behaviors. For example, in 2012 Voisin and colleagues found

that parental monitoring mediated the relationship between community violence and risky sex. In 2008, Manlove and colleagues used data from the 1997 National Longitudinal Survey of Youth to reveal that parental monitoring mediated the relationship between family religiosity and both number of sex partners and consistent contraceptive use. Some evidence suggests that monitoring is more important for girls than boys. For instance, in 2002, Donenberg and colleagues found that among 169 ethnically diverse youth seeking mental health treatment in Chicago, parental monitoring and permissiveness were more strongly associated with risky sexual behaviors for adolescent girls than boys.

Self-control

According to Gottfredson and Hirschi's self-control theory and empirical studies, low self-control may contribute to the outcome of risky sexual behavior. For instance, Griffin (2012) and colleagues found that self-control in adolescence had an enduring protective effect on risk behaviors in a longitudinal study. They found that self-control was associated with a greater probability drinking less and having less risky sex eight years later. In a longitudinal study that followed 1,136 college students, evidence revealed that individuals who were high in self-regulation at time one did less heavy episodic drinking**,** had less alcohol-related problems, practiced unprotected sex less often, even when considering gender (Quinn & Fromme 2010). Raffaelli and Crockett (2003) found that self-control was significantly associated with risky sexual behaviors four years later. When the researchers examined individual sexual behaviors the results showed that self-control may affect choices made after becoming sexually active, such as number of partners, rather than sexual debut itself.

Friend's Deviance

Social control theory suggests that effective parenting can strengthen social bonds and be a conventionalizing influence. Through social-control processes parents influence who their children associate with. Evidence supports the claim that parents who engage in monitoring and are involved with their child can influence their child's friend choices (Smith 2003). Empirical research shows that family processes protect children and adolescents from involvement with deviant peers, subsequently protecting them from risky behaviors (Dishion, Capaldi, Spracklen, & Li, 1995).

Potard (2008) and colleagues revealed that the perception of peer engagement in sexual activity including oral sex is associated with a higher frequency of sexual initiation and commitment to oral sex. They also found that sexual permissiveness among peers is associated with a higher frequency of risky sexual behaviors and that the belief that their peers use condoms was associated with the refusal to have unprotected sex. Bearman and Bruckner (1999) found that adolescent girls had an increased risk of pregnancy if they had friends who were having sex or pregnant. Wallace (2008) and colleagues found that peer norms help shape African American adolescents sexual attitudes and behaviors. This research shows that adolescents make choices according to how acceptable those behaviors are thought to be by their peers.

Religiosity

Social control theory suggests that religious involvement should protect adolescents from engaging in deviant behaviors including risky sex. Affiliation with a religion increases an individual's bond to society through commitment and involvement. Commitment refers to the extent to which an adolescent is invested in conventional goals (Hirschi 1969). Involvement

refers to an individual's affiliation with conventional aspects of society such as religion (Hirshci, 1969).

Research suggests that adolescents' religiosity (e.g., religious participation, affiliation, prayer, and attendance) is negatively correlated with risky sexual behavior such as early sexual debut and inconsistent condom use (Rostosky et al. 2004). In 2003, McCree and colleagues found that African American adolescent females who reported higher levels of religiosity were more likely to have initiated sex at a later age and to have used a condom in the past six months than those who reported lower levels of religiosity. Using a longitudinal study of 3,691 adolescents in 2003 Rostosky, Regenerus, and Wright found that religiosity at wave 1 of the study reduced the likelihood of sexual debut at wave 2 of the study. Miller and Gur (2002) showed that personal devotion and frequent attendance at religious events are both positively associated with sexual responsibility among adolescent girls.

The religiosity of the family is also important for the outcome of risky sex in adolescence. Manlove and colleagues (2008) found that adolescents with greater family religiosity had fewer sex partners and more consistent condom use. This could be because the family's religious beliefs are passed down to the adolescent. For example, Landor and colleagues (2011) found that parental religiosity decreases adolescent risky sexual behavior through its affect on adolescent religiosity as well as other factors.

In a study of mostly rural adolescents, Rew, Carver, and Li (2011) found that adolescents who engaged in risky sex reported lower religiosity than those who did not engage in risky sex. For college aged adolescents, higher levels of religiosity were associated with less frequent sexual encounters (Fehring et. al, 1998). Lefkowitz and colleagues (2004) found that youth who were not having sexual intercourse reported attending religious services more often than youth

who were sexually active. In a study using the 2002 National Survey of Family Growth which included 3,168 young women and men (age 15-21), individuals who viewed religion as very important, attended church frequently, and had religious attitudes about sex were 27-54% less likely to have ever had sex and had less sexual partners than their less religious peers (Haglund & Fehring, 2009). Taken together, these studies show that religiosity is an important protective factor against adolescent risky sexual behaviors. This relationship has been found across racial and ethnic groups, across age groups among adolescents, and among both genders.

Community Control

The erosion of social bonds among the adults in neighborhoods may result in a lack of community expectations and standards of youth behaviors. In such communities the behavior of adolescents may go unmonitored. According to social control theory, this lack of attachment in the community and lack of commitment to conventional goals weaken an individual's bond to society and subsequently does not assist them in refraining from deviant acts such as risky sex.

Empirical studies show a negative correlation between community control factors and risky sex. Simons and colleagues (2005) found that community control factors deterred African American adolescents from affiliating with deviant peers and engaging in problem behavior. This study also found that the positive effects of authoritative parenting were enhanced by a neighborhood that was high in community control. Browning (2008) and colleagues found that collective efficacy is negatively associated with having more than one sex partner versus having only one. Browning (2005) found that community monitoring mechanisms were associated with later sexual debut under certain circumstances. Carlson (2014) and colleagues found that neighborhood disadvantage factors partially explain racial disparities in the odds of adolescent sexual debut.

CHAPTER 4

HYPOTHESES

Based on previous research and the above theories, my general predictions are that each of the social control and self-control variables will decrease the magnitude of the parental warmth and parental monitoring coefficients, revealing that these variables help explain the relationship between parenting quality and risky sex. I hypothesize that the results will show support for both social control theory and self-control theory. Specifically, I derive the following hypotheses:

H1: I predict that parental warmth at wave 1will be negatively associated with risky sex at wave 4.

a. I predict that parental warmth will be negatively associated with early sexual debut by wave 4.
b. I predict that parental warmth at wave 1 will be positively associated with condom use consistency at wave 4.
c. I posit that parental warmth at wave 1 will be negatively associated with number of sex partners at wave 4.

H2: I predict that parental monitoring at wave 1 will be negatively associated with risky sex at wave 4.

a. I posit that parental monitoring at wave 1 will be negatively associated with early sexual debut by wave 4.

b. I hypothesize that parental monitoring at wave 1 will be positively associated with condom use consistency at wave 4.
c. I predict that the parental monitoring at wave 1 will be negatively associated with number of sex partners at wave 4.

H3: I predict that religious involvement at wave 1 will be inversely associated with risky sex outcomes by wave 4.

d. I posit that religious involvement at wave 1 will be negatively associated with early sexual debut by wave 4.
e. I hypothesize that religious involvement at wave 1 will be positively associated with condom use consistency at wave 4.
f. I predict that the religious involvement at wave 1 will be negatively associated with number of sex partners at wave 4.

H4: I posit that friend's deviance at wave 1 will be positively correlated with risky sex outcomes by wave 4.

a. I posit that friend's deviance at wave 1 will be positively associated with early sexual debut by wave 4.
b. I hypothesize that friend's deviance at wave 1 will be negatively associated with condom use consistency at wave 4.
c. I predict that the friend's deviance at wave 1 will be positively associated with number of sex partners at wave 4.

H5: I hypothesize that community control at wave 1 will be negatively associated with risky sex outcomes by wave 4.

a. I posit that community control at wave 1 will be negatively associated with early sexual debut by wave 4.
b. I hypothesize that community control at wave 1 will be positively associated with condom use consistency at wave 4.
c. I predict that the community control at wave 1 will be negatively associated with number of sex partners at wave 4.

H6: I posit that self-control at wave 1 will negatively associated with risky sex outcomes by wave 4.

a. I posit that self-control at wave 1 will be negatively associated with early sexual debut by wave 4.
b. I hypothesize that self-control at wave 1 will be positively associated with condom use consistency at wave 4.
c. I predict that the self-control at wave 1 will be negatively associated with number of sex partners at wave 4.

H7: I predict that risk taking tendencies at wave 1 will be positively associated with risky sex outcomes at wave 4.

a. I posit that risk taking tendencies at wave 1 will be positively associated with early sexual debut by wave 4.
b. I hypothesize that risk taking tendencies at wave 1 will be negatively associated with condom use consistency at wave 4.
c. I predict that the risk taking tendencies at wave 1 will be positively associated with number of sex partners at wave 4.

Table 1: Descriptive Statistics (COMBINED)

Variable	Observation	Mean	Std. Dev.	Min	Max
Sexual Debut	611	15.64648	1.747898	11	22
Condom Use Consistency	610	3.321311	.9160339	1	4
Number of Sex Partners	603	4.023217	1.412847	1	6
Single Mom	611	.4255319	.4948285	0	1
Two Biological Parents	611	.193126	.3950744	0	1
Mom and Step Dad	611	.1129296	.3167661	0	1
Other Family Structures	611	.2684124	.4434965	0	1
Education	558	12.45161	2.200944	1	20
Warmth	609	30.7931	4.831015	9	36
Monitoring	607	17.00329	2.755131	7	20
Self Control	608	16.45559	2.850128	9	21
Risk Tendencies	603	8.890547	2.371192	6	18
Friend’s Deviance	610	22.76721	4.534296	11	47
Religious Involvement	605	10.5405	3.854613	4	20
Community Control	577	12.18718	2.657466	4	16

Table 2: Descriptive Statistics (FEMALES ONLY)

Variable	Observation	Mean	Std. Dev.	Min	Max
Sexual Debut	334	15.9521	1.71658	11	22
Condom Use Consistency	334	3.176647	.9872731	1	4
Number of Sex Partners	331	3.613293	1.364597	1	6
Single Mom	335	.4507463	.4983125	0	1
Two Biological Parents	335	.1910448	.3937123	0	1
Mom and Step Dad	335	.0865672	.2816204	0	1
Other Family Structures	335	.2716418	.4454715	0	1
Education	303	12.37954	2.196741	1	20
Warmth	332	30.40964	5.250317	9	36
Monitoring	332	17.1988	2.735511	8	20
Self Control	332	16.36446	3.034993	9	21
Risk Tendencies	330	8.751515	2.349173	6	18
Friend’s Deviance	334	22.46707	4.419836	11	43
Religious Involvement	333	10.97898	3.936565	4	20
Community Control	313	12.14696	2.600074	4	16

Table 3: Descriptive Statistics (MALES ONLY)

Variable	Observation	Mean	Std. Dev.	Min	Max
Sexual Debut	277	15.27798	1.716919	11	20
Condom Use Consistency	276	3.496377	.7885461	1	4
Number of Sex Partners	272	4.522059	1.308315	1	6
Single Mom	276	.3949275	.4897231	0	1
Two Biological Parents	276	.1956522	.3974225	0	1
Mom and Step Dad	276	.1449275	.3526672	0	1
Other Family Structures	276	.2644928	.4418639	0	1
Education	255	12.53725	2.207179	1	19
Warmth	277	31.25271	4.238501	17	36
Monitoring	275	16.76727	2.765207	7	20
Self Control	276	16.56522	2.61174	9	21
Risk Tendencies	273	9.058608	2.391054	6	17
Friend’s Deviance	276	23.13043	4.651219	15	47
Religious Involvement	272	10.00368	3.688516	4	20
Community Control	264	12.23485	2.728138	4	16

CHAPTER 5

DATA AND METHODS

Sample

The Family and Community Health Study (FACHS) is the largest in-depth study of African American families in the United States. This study focuses on the way family and community processes, as well as genetics, influence child, adolescent, and adult well-being. FACHS is an ongoing longitudinal study in which 867 African American families in Georgia and Iowa were interviewed on various aspects of their personal lives, family, health, and community. A group of 115 blocks in Georgia and 144 blocks in Iowa were identified for the study and the families were recruited from those blocks. The original criterion for the study was that a 9 or 10-year old had to be present in the home; families that met this qualification were randomly selected from rosters. The respondents are residents of both rural and urban towns ranging from relatively poor to wealthy. The first four waves of data were collected approximately every two years from 1997 to 2007. During the first 10 years of the study, there were four assessments conducted with the youth, their siblings, and their caretakers. This investigation of life-course trajectories has extensive data on the key aspects of the current study- family structure, quality of relationship between the caregiver(s) and the target and risky sexual behavior.

By wave 4 of the of the sample the total number of respondents was 714. Only respondents who are having sex are included in the present sample. For this reason I lose 102 cases. In order to explore the relationship between early childhood predictors and later adolescent sexual behavior, I use waves 1 and 4 of the FACHS data. At wave 1, target

respondents were between 10 and 11 years old. I use this wave for information for both control variables (family structure and education) and all predictor variables (parental warmth, parental monitoring, self-control, risk taking tendencies, friend's deviance, religious involvement, and community control). At wave 4 respondents were between 18 and 19 years old and 86% of them had started having sex. I use this wave for the outcome of risky sexual behavior.

Dependent Variables: Risky Sex Outcomes

I measure three different outcomes of risky sexual behavior. First, the FACHS inquires about respondents' sexual debut asking "How old were you when you first had sex (with someone of the opposite sex)?" The sexual debut variable is a continuous variable ranging from 11 through 22. All respondents who report having sex before the age of 11 are grouped into the age 11 sexual debut category (13 cases). The analysis of this outcome included 611 responses. The mean age in which targets report having sex is between 15 and 16 with a standard deviation of 1.75 (Table 1). The mean age of sexual debut is slightly higher for males than females (Tables 2 & 3). Because this outcome variable is normally distributed, I use OLS regression for the analyses.

The second risky sex behavior is regarding the target respondents' condom use consistency, the question reads "When you have sex, how often do you use a condom?" The condom use variable is an ordinal variable coded 1 for 'Never', 2 for 'Sometimes', 3 for 'Most of the time', and 4 for 'All of the time'. There were 610 responses. Most respondents suggested that they use condoms either most of the time or all of the time (Table 1). Males reported using condoms more often than females (Tables 2 & 3). For this ordinal variable I use Ordinal logistic regression.

Finally, respondents are asked "With how many people have you had sex?" The variable regarding the number of sexual partners that each respondent had is an ordinal variable coded 1 for 'None', 2 for 'One' 3 for 'Two', 4 for 'Three or four', 5 for 'Five or six', and 6 for 'Seven or more'. 606 targets reported the number of partners with whom they had sex (Table 1). The average response category was higher for males than females (Tables 2 & 3). While, on average males responded between 'Three or four' and 'Five or six' (Table 3), females responded between 'Two' and 'Three or four' (Table 2).

Control Variables: Family Structure, Female, Education

Family structure is represented by four dummy variables distinguishing between respondents living with a single mother; respondents living with both biological parents (reference category); respondents living with a biological mother and a step-father; and respondents living with other family structures (this could include, but is not limited to, having a step-mother or a caregiver that is a grandparent, sibling, or another family member). Female is a dummy variable reporting target gender coded 1 for female and 0 for males.

Education is a continuous variable that asks primary caregivers "What is the highest level of education you have completed?" The primary caregivers are able to respond with a numeric grade if their education did not exceed 12^{th} grade. After that, response categories are "High School grad or GED," "1 year of college, vocational, or tech training", "2 years of college", "Associates degree", "3 years of college", "BS, BA", "Bachelor's plus", "MS, MA, Chiropractic with a BA/BS", "Master's Plus", "PhD, JD, DDS, MD, DVM, etc." On average, parents had either a high school degree or 1 year of college (Table 1).

Independent Variables: Warmth and Monitoring

Empirical evidence has shown that the quality of the relationship between a parent and child has important implications for risky adolescent sexual behavior. I include two scales regarding the target's report of the relationship between the primary caregiver and the target in Wave 1. Research suggests that caregiver warmth may be a protective factor against risky sexual behavior in adolescence. Warmth has evidenced a positive correlation with frequency of contraceptive use and is negatively correlated with number of sex partners (Hope et al. 2005; Trejos-Castillo et al. 2009). To get at these effects, the second scale I include is Primary Caregiver Warmth. This contains items such as- 'During the past 12 months, how often did your PC let you know he or she really cares about you?', and 'During the past 12 months, how often did your PC act supportive and understanding toward you?' For this measurement instrument, higher values correspond to more warmth. The scale ranges from 9 to 36 and on average respondents scored a 30.79 with a standard deviation of 4.83 (Table 1).

Finally, Rew, Carver, and Li (2011) found that adolescents who engaged in risky sex behaviors reported lower parental monitoring so I include a Primary Caregiver Monitoring scale that asks respondents questions like- 'How often does your PC know what you do after school?' and 'How often does your PC know where you are and what you are doing?'. Higher values correspond to more monitoring. The Monitoring scale ranges from 7 to 20 and the average score was 17.00 with a standard deviation of 2.75 (Table 1). See appendix A at the end of the document for each item in the Primary Caregiver Warmth and Monitoring scales.

Self-control Variables: Self-control and Risk Taking Tendencies

Research has shown that factors such as self-control are positively correlated with risky behaviors (Griffin 2012; Quinn & Fromm 2010; Rafaelli & Crocket 2003). There are two scales

regarding target self-control. The first scale is Self-Control, measuring targets' level of self-control at wave 1. This scale asks the targets to report their agreement level with statements such as the following- 'You usually sit still in class,' 'You usually think before you act,' and 'When you promise to do something, people can count on you to do it.' This scale ranges from 9 to 21, with higher values signifying more self-control. On average, respondents scored a 16.46 with a standard deviation of 2.85 (Table 1). For a complete list of scales in each item, see appendix A.

Risk taking tendencies is the second scale measuring target reports of their own risk taking tendencies at wave 1. Targets report their agreement with statements like the following- 'You would do almost anything for a dare' and 'Life with no danger would be dull for you.' This scale ranges from 6 to 18 and higher values equal more risk. Respondents scored 8.89 on average with a standard deviation of 2.37 (Table 1).

Social Control Variables: Friend's Deviance, Religious Involvement, Community Control

Research links friend's deviance to risky adolescent sex (Potard 2008; Wallace 2008). Friend's Deviance is a scale measuring the target's report of deviant behaviors of their friends at wave 1. It asks targets their level of agreement with statements like these- 'During the past 12 months, how many of your close friends have used crack or cocaine?' and 'During the past 12 months, how many of your close friends stolen something worth more than $50?' This scale ranges from 11 to 47 and higher values equal more deviance. The average score was 22.78 with a standard deviation of 4.53 (Table 1). See appendix A for all items.

Studies have shown that adolescent religiosity is linked with sexual behavior (Rostosky et al. 2004). Previous research has shown a negative correlation between religiosity and adolescents' number of sexual partners (Lammers et al. 2000). Adolescent religiosity has been shown to mediate the relationship between parental religiosity and adolescent sexual behavior

(Landor et al. 2011). Taken together, these findings provide a multitude of evidence that suggests religiosity be taken into account when examining adolescent risky sexual behavior. Religious involvement is a scale measuring religiosity at wave 1. This measure asks targets questions like 'How often in the past month did you attend church services?' and 'How often in the past month did you attend social events at your church?'. The religious involvement scale ranges from 4 to 20 and higher values equal more involvement. The average score was 10.54 with a standard deviation of 3.85 (Table 1). For a list of items on this scale, see appendix A at the end of this document.

Collective efficacy theory states that social-organization at a community level is a key factor in influencing individual adolescent sexual behavior (Brooks-Gunn et al. 1993; Sampson 1997; Sampson et al. 1997; Wilson 1996). Previous research has shown that factors such as community cohesion and expectations for adult support and protection are significantly negatively correlated with risky sex behaviors (Browning et al. 2008). In order to account for these factors I include a scale measuring the target's perception of community control in their neighborhood in wave 1. This scale contains items such as- 'If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighbors would do something like call the school or parents?' and 'If a child was showing disrespect to an adult, how likely is it that people in your neighborhood would scold that child or tell the child's parents?' This scale ranges from 4 to 16 and higher values equal more community control. On average, respondents scored 12.19 and the standard deviation was approximately 2.66 (Table 1). To see each item in this scale, see appendix A.

CHAPTER 6

RESULTS

Correlation Matrix

Appendix B displays the correlation matrix for the combined sample. Each independent variable, except for religious involvement is significantly correlated with one or more of the risky sex outcomes. First, the results show that living with two biological parents at wave 1 is positively correlated sexual debut and condom use consistency and negatively correlated with number of sex partners. Second, parental warmth at wave 1, while not significant in any of the regression models, is positively correlated with the outcome of sexual debut and the outcome of condom use consistency by wave 4. Third, parental monitoring at wave 1is correlated with positively correlated with condom use consistency and negatively correlated with number of sex partners at wave 4. Fourth, self-control at wave 1 is positively correlated with sexual debut and condom use consistency and negatively correlated with number of sex partners. Fifth, the variable regarding risk taking-tendencies measured at wave 1is negatively correlated with the outcome of condom use consistency at wave 4. Next, Friend's deviance at wave 1 and sexual debut by wave 4 are negatively correlated. Finally, community control at wave 1 and condom use consistency at wave 4 are positively correlated. Taken together, this suggests that these variables are relevant in considering predictors of risky sex outcomes. All variables are correlated in the expected direction.

Table 4: OLS of Sexual Debut (COMBINED)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Single Mom	-.13828*	-.1418319*	-.1490636*	-.1425366*	-.1463759*	-.1508285*	-.1571982**
Mom and Step-Dad	-.1297573*	-.119591*	-.1015383*	-.1074229*	-.1112122*	-.1045472*	-.0859913
Other Family Structure	-.1324346*	-.1375194*	-.1324041*	-.1361866*	-.1374579*	-.1149195	-.1084036
Education	.0040733	-.0046595	.002826	-.0104575	-.0082605	.0000976	-.0022861
Warmth		.0349349	.0022971	.0271411	.0193124	.0367967	-.0083837
Monitoring		.1859551***	.1707837***	.1681976***	.1851184***	.1921774***	.1706851***
Self-Control			.098134*				.0941206*
Risk Taking Tendencies			-.019229				.0122624
Friend's Deviance				-.05202			-.0640069
Religious Involvement					.0526978		.0624856
Community Control						-.0538116	-.0713298
Constant	16.054***	13.739***	13.344***	14.523***	13.731***	14.035***	14.183***
N	557	552	542	550	545	521	508
R-Squared	.016	.056	.061	.055	.056	.056	.069

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Table 5: OLS of Sexual Debut (FEMALES ONLY)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Single Mom	-.196*	-.171*	-.202*	-.174*	-.172*	-.181*	-.210*
Mom and Step-Dad	-.048	-.019	-.004	-.016	-.021	-.011	.011
Other Family Structure	-.114	-.087	-.094	-.089	-.087	-.066	-.070
Education	-.018	-.002	.001	.006	-.003	.013	.026
Warmth		.025	-.025	.036	.019	.055	.018
Monitoring		.260***	.241	.277***	.262***	.257***	.264***
Self-Control			.227***				.247***
Risk Taking Tendencies			.018				.034
Friend's Deviance				.062			.091
Religious Involvement					.042		.023
Community Control						-.071	-.067
Constant	16.593***	13.317***	11.840***	12.404***	13.175***	13.175***	10.325***
N	302	299	293	298	297	280	273
R-Squared	.020	.093	.136	.097	.095	.104	.160

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Table 6: OLS of Sexual Debut (MALES ONLY)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Single Mom	-.094	-.115	-.121	-.108	-.120	-.120	-.117
Mom and Step-Dad	-.187*	-.190*	-.174*	-.159*	-.170*	-.170*	-.134
Other Family Structure	-.172*	-.191*	-.190*	-.185*	-.188*	-.166	-.155
Education	.035	.018	.013	.016	.016	.130	.002
Warmth		.096	.100	.068	.074	.065	.040
Monitoring		.059	.037	.033	.056	066	.036
Self-Control			-.047				-.067
Risk Taking Tendencies			-.038				.018
Friend's Deviance				-.114			-.170*
Religious Involvement					. 008		.019
Community Control						-.008	-.034
Constant	15.394***	13.804***	14.767***	15.352***	14.090***	14.175***	16.939***
N	255	253	249	252	248	241	235
R-Squared	.031	.049	.042	.053	.039	.035	.053

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

OLS Regression of Sexual Debut

Table 4 displays the results of the OLS regression models predicting age of sexual debut for both males and females in the sample. Model 2 consists of the control variables as well as warmth and monitoring. Each family structure is significant in the negative direction at the .05 level. This means that adolescents who live in a home with a single mom, with a mom and step dad, and with any other family structure are more likely to have an earlier sexual debut than adolescents who live with both biological parents. Neither education nor parental warmth is statistically significant. Monitoring is significant at the .001 level in the positive direction. This means that adolescents who report more monitoring from their parents are more likely to report a later sexual debut than adolescents who report less monitoring. In model 3, I enter the self-control variables. Self-control is significant at the .05 level in the positive direction. This means that for adolescents in the sample, self-control is positively correlated with later sexual debut. Risk taking tendencies is not statistically significant. Models 4, 5, and 6 show that neither friends deviance, religious involvement, nor community control is significant.

Model 7 displays the significance of each predictor when all variables are included. The full model shows that living in a home with a single mother is negatively associated with later sexual debut. Living with a mom and step dad or in any other family structure is no longer significantly different from living with both biological parents when all other factors in the model are considered. This model also reveals that monitoring is positively associated with a later sexual debut when all other variables are included in the model. Finally, the full model shows that self-control is still significant when all other factors are accounted for. Overall Table 4 shows that higher levels monitoring and self-control at wave 1 are associated with later sexual debut and that living with a single mom is associated with earlier sexual debut.

In Table 5, the results of OLS regression predicting age of sexual debut for females are presented. The results for females tell a story similar to those of the combined sample. Higher levels of monitoring and self-control at wave 1 are associated with a later sexual debut. Living with a single mother is associated with an earlier sexual debut.

Table 6 shows the OLS regression results for the predictors of age of sexual debut for males only. Model 2 shows that living with a mom and step dad and other family structures are associated with earlier sexual debut compared to counterparts who are living in two-biological parent families. This remains consistent up until model 7 where friend's deviance becomes significant and the family structure variables lose their explanatory power. Model 7 suggests that for males, friend's deviance at wave 1 is associated with earlier sexual debut.

Table 7: Ordinal Logistic Regression of Condom Use Consistency (COMBINED)

Condom Use	model1	model2	model3	model4	model5	model6	model7
Single Mom	-0.614*	-0.581*	-0.649*	-0.576*	-0.585*	-0.482	-0.558*
Mom and Step Dad	-0.681*	-0.634	-0.558	-0.612	-0.634	-0.568	-0.525
Other Structure	-0.576*	-0.562*	-0.556*	-0.560*	-0.585*	-0.481	-0.504
Education	-0.047	-0.051	-0.045	-0.051	-0.053	-0.045	-0.044
Female	-0.657***	-0.690***	-0.720***	-0.691***	-0.740***	-0.692***	-0.733***
Warmth		0.027	0.010	0.026	0.022	0.016	-0.002
Monitoring		0.042	0.036	0.040	0.041	0.035	0.032
Self-control			0.068*				0.066*
Risk tendencies			-0.041				-0.038
Friend's deviance				-0.001			0.004
Religious involvement					0.024		0.022
Community Control						0.082*	0.071*
N	556	551	541	549	544	520	507
Log Likelihood	-584.703	-574.355	-563.540	-571.526	-566.825	-538.853	-525.257
Pseudo R Squared	0.019	0.024	0.031	0.024	0.026	0.029	0.034

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Table 8: Ordinal Logistic Regression of Condom Use Consistency (FEMALES ONLY)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Single Mom	-0.655*	-0.566	-0.718*	-0.562	-0.606	-0.515	-0.662
Mom and Step-Dad	-0.163	-0.009	0.085	-0.008	-0.083	0.079	0.133
Other Family Structure	-0.469	-0.424	-0.403	-0.424	-0.454	-0.351	-0.352
Education	-0.054	-0.047	-0.042	-0.045	-0.051	-0.029	-0.026
Warmth		0.024	0.003	0.024	0.017	0.012	-0.010
Monitoring		0.078	0.072	0.079	0.081	0.084	0.079
Self-Control			0.105**				0.097*
Risk Taking Tendencies			-0.035				-0.041
Friend's Deviance				0.004			0.008
Religious Involvement					0.045		0.039
Community Control						0.047	0.035
N	302	299	293	298	297	280	273
Log likelihood	-350.819	-345.082	-335.909	-343.709	-342.401	-323.216	-312.384
Pseudo R-Squared	0.008	0.016	0.029	0.016	0.020	0.018	0.032

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Table 9: Ordinal Logistic Regression of Condom Use Consistency (MALES ONLY)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Single Mom	-0.542	-0.544	-0.576	-0.540	-0.507	-0.364	-0.413
Mom and Step-Dad	-1.080*	-1.118*	-1.084*	-1.082*	-1.078*	-1.112*	-1.108*
Other Family Structure	-0.755	-0.719	-0.785	-0.712	-0.735	-0.631	-0.731
Education	-0.046	-0.053	-0.054	-0.052	-0.052	-0.063	-0.072
Warmth		0.032	0.027	0.031	0.034	0.026	0.022
Monitoring		-0.009	-0.018	-0.013	-0.011	-0.038	-0.030
Self-Control			0.003				-0.004
Risk Taking Tendencies			-0.054				-0.033
Friend's Deviance				-0.000			0.005
Religious Involvement					-0.016		-0.012
Community Control						0.136**	0.135**
N	254	252	248	251	247	240	234
Log likelihood	-231.245	-225.362	-222.274	-223.977	-219.652	-209.037	-204.478
Pseudo R-Squared	0.013	0.015	0.016	0.014	0.015	0.033	0.032

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Ordinal Logistic Regression of Condom Use Consistency

Table 7 displays the Ordinal Logistic regression results for condom use consistency for males and females. By model 2, I have entered the control variables as well as warmth and monitoring. Living with a single mom, a mom and step-dad, and living with other family structures are both inversely associated with condom use consistency. This means that adolescent females and males in the sample living in these types of family structures may be more likely to use condoms less consistently than adolescents who live in a two parent biological home. The control for gender is also significant. This means that females in the sample use condoms less consistently than males. In model 3 I enter self-control and risk taking tendencies. Self-control is statistically significant at the .05 level in the positive direction. This means that for both female and male adolescents in the sample, higher reports of self-control at wave 1 are positively associated with more consistent condom use. Models 4 and 5 show that friend's deviance and religious involvement do not reach statistical significance. In model 6 I enter community control and it is statistically significant in the positive direction at the .05 level. This means that an adolescent living in a neighborhood high on community control is more likely to use condoms more consistently than one living in a neighborhood low on community control.

Model 7 is the full model. This model reveals that when all factors relevant to this study are considered, living with a single mother is negatively associated with condom use consistency compared to living with two biological parents. Living with other family structures is no longer statistically different from living with two biological parent homes for the outcome of condom use consistency. Females still use condoms less consistently than males considering all factors. The full model also reveals that both self-control and community control are positively associated with condom use consistency.

In table 8, the results of Ordinal Logistic regression predicting condom use consistency for females are presented. Model 3 shows that female adolescents who are living with a single mother are less likely than female adolescents who live in two parent biological homes to use condoms consistently. Model 3 also reveals that higher reports of self-control at wave 1 are associated with more consistent condom use at wave 4 for adolescent females in the sample. Models 4, 5, and 6 suggest that friend's deviance, religious involvement, and community control are not significant predictors for adolescent condom use consistency at wave 4.

Model 7 is the full model. Living with a single mom is no longer statistically different from living with two biological parents for the outcome of condom use consistency for adolescent females in the sample. This model reveals that when considering all factors, only self-control is correlated with condom use consistency for the adolescent females in the sample. Adolescent girls who reported having higher levels of self-control at wave 1 also reported using condoms more consistently at wave 4.

Table 9 shows the Ordinal Logistic regression results for the predictors of condom use consistency for males only. Model 2 reveals that only the family structure 'mom and step dad' is statistically significant at the .05 level in the negative direction. This means that adolescent males in the sample who live with their mom and step dad are less likely to use condoms consistently than adolescent males who live with both biological parents. This remains consistent across all models. In model 6, I enter community control and it is significant at the .01 level in the positive direction. This means that adolescent boys who live in communities with higher levels of control at wave 1 report using condoms more consistently at wave 4.

Table 10: Ordinal Logistic Regression of Number of Sex Partners (COMBINED)

Variable	model1	model2	model3	model4	model5	model6	model7
Single Mom	0.555**	0.557**	0.596**	0.558**	0.553*	0.606**	0.632**
Mom and step-dad	0.505	0.507	0.456	0.473	0.475	0.458	0.413
Other Structure	0.476*	0.479*	0.478*	0.480*	0.467*	0.373	0.372
Education	0.058	0.062	0.058	0.061	0.062	0.049	0.045
Female	-1.142***	-1.109***	-1.107***	-1.109***	-1.074***	-1.122***	-1.099***
Warmth		-0.035	-0.027	-0.035	-0.030	-0.034	-0.026
Monitoring		-0.028	-0.020	-0.027	-0.030	-0.027	-0.021
Self-control			-0.068*				-0.052
Risk tendencies			0.004				0.014
Friend’s deviance				-0.006			-0.002
Religious Involvement					-0.003		0.000
Community Control						0.030	0.036
Log Likelihood	-865.679	-855.330	-837.333	-853.162	-846.015	-807.458	-786.909
Pseudo R Squared	0.034	0.037	0.039	0.036	0.035	0.037	0.037
N	550	545	535	543	538	514	501

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Table 11: Ordinal Logistic Regression of Number of sex partners (FEMALES ONLY)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Single Mom	0.349	0.301	0.430	0.305	0.315	0.396	0.498
Mom and Step-Dad	-0.575	-0.690	-0.735	-0.709	-0.665	-0.732	-0.790
Other Family Structure	0.038	-0.009	0.047	-0.002	-0.003	-0.141	-0.103
Education	0.045	0.037	0.037	0.030	0.039	0.025	0.020
Warmth		-0.030	-0.021	-0.035	-0.026	-0.030	-0.024
Monitoring		-0.093*	-0.075	-0.108*	-0.097*	-0.099*	-0.088
Self-Control			-0.078*				-0.064
Risk Taking Tendencies			0.039				0.055
Friend's Deviance				-0.033			-0.026
Religious Involvement					-0.026		-0.014
Community Control						0.025	0.025
N	299	296	290	295	294	277	270
Log likelihood	-480.333	-470.582	-458.297	-468.604	-466.749	-439.774	-426.624
Pseudo R-Squared	0.006	0.017	0.024	0.019	0.018	0.022	0.028

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Table 12: Ordinal Logistic Regression of Number of sex partners (MALES ONLY)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Single Mom	0.813*	0.825*	0.782*	0.817*	0.796*	0.757*	0.686*
Mom and Step-Dad	1.467***	1.555***	1.468***	1.492***	1.467***	1.474***	1.340**
Other Family Structure	1.055**	1.045**	0.976**	1.038**	1.007**	0.909*	0.845*
Education	0.104	0.110*	0.102	0.110*	0.108	0.095	0.089
Warmth		-0.053	-0.045	-0.050	-0.049	-0.047	-0.040
Monitoring		0.035	0.035	0.040	0.030	0.049	0.042
Self-Control			-0.041				-0.025
Risk Taking Tendencies			-0.016				-0.022
Friend's Deviance				0.004			0.010
Religious Involvement					0.030		0.029
Community Control						0.000	0.019
N	251	249	245	248	244	237	231
Log likelihood	-372.869	-369.003	-363.692	-368.230	-363.019	-351.852	-343.518
Pseudo R-Squared	0.021	0.025	0.025	0.024	0.024	0.022	0.022

Notes: * p<0.05; ** p<0.01; *** p<0.001
Reference category is two biological parents

Ordinal Logistic Regression of Number of Sex Partners

Table 10 displays the Ordinal Logistic regression results for number of sex partners for males and females in the sample. The effect of living with a single mom remains significant throughout all models in the positive direction at the .05 level. This means that adolescents in the sample who live with a single mom at wave 1 are more likely to have a higher number of sex partners than adolescents living with both biological parents. Models 1 and 2 reveal that living with other family structures is positively correlated with having a higher number of sex partners. Females tend to have less sex partners than males. By model 7 only the family structure category of single mom is significant. This means when all other factors are considered, adolescents living with a single mom are more likely to have higher numbers of sexual partners than adolescents who live with both biological parents. Considering all other factors, females still have less sex partners than males.

In table 11, the results of Ordinal Logistic regression predicting number of sex partners for females are presented. Monitoring is significant at the .05 level in the negative direction from model 2, 4, 5 and 6. In model 3 I enter self-control and monitoring loses significance. Self-control is significant in the negative direction at the .05 level. However, by model 7 all factors lose significance.

Table 12 shows the Ordinal Logistic regression standardized coefficients for the predictors of number of sex partners for males only. Each family structure category remained statistically significant in the positive direction through all seven models. Education was significant only in models 2 and 4. This means that living in all other family structures is associated with higher numbers of sex partners for males in the sample than living with both biological parents.

Overall, results suggest living with family structures other than two biological parent homes, low levels of monitoring, self-control, and community control, as well as having deviant friend's all predict more risky sexual behaviors. Findings suggest that living with a single mom as well as low levels of monitoring and self-control were especially important predictors of risky sexual behavior among females. For males, living with a mom and step-dad, or other family structures, friend's deviance, and low levels of community control were associated with the risky sex outcomes. Monitoring seemed to be the most significant predictor for females and family structure seemed to be the most significant predictor for males. The models lend support for both self-control theory and social control theory.

CHAPTER 7

CONCLUSION

Discussion

The purpose of this study was to examine the predictors of risky sexual behaviors including early sexual debut, condom use inconsistency, and high numbers of sexual partners among a diverse sample of African American adolescents. Numerous studies have examined this outcome and found that many factors such as parental warmth, parental monitoring, self-control, friend's deviance, religiosity, and community control are important to consider. Studies consistently find that parenting quality is a significant predictor of sexual behavior. Social Control theory suggests that bonds to society protect an individual from deviant behavior such as risky sex. I examine friend's deviance, religiosity, and community control to account for this theory. Self-control theory suggests that self-control developed from effective parenting protects an individual from their innate tendencies toward deviant behaviors such as risky sex. I examine the impact of self-control and risk-taking tendencies to account for this theory. The findings from this study suggest that both theories have merit in examining risky sexual behavior. Family structure, Monitoring, self-control, and community control were significant predictors of sexual behavior.

First, I was interested in the extent to which parental monitoring and parental warmth predicted risky sexual behavior. Both of these variables fall under both theoretical perspectives. Numerous studies have found that parenting quality matters for risky sex. My first two hypotheses were that high scores on both parental monitoring and parental warmth, controlling

for family structure and parents education level, would predict less risky sexual behavior among African American adolescents in the sample. While the results showed that a high level of parental warmth at wave 1 was not significant predictor of any of the risky sexual behaviors by wave 4, regression models revealed that high levels of monitoring at wave 1 did predict less risky sexual behavior by wave 4. Interestingly, this was especially true for females in the sample. This finding lends support to my second hypothesis, but not my first.

Next, I was interested in the extent to which the Social control variables at wave 1 predicted adolescent risky sexual behaviors at wave 4. Social Control theory suggests commitment, involvement, attachment, and belief in conventional aspects of society create a social bond that protects individuals from their innate antisocial tendencies. From this theoretical standpoint and considering the evidence from previous research I predicted that religiosity, friend's deviance, and community control would be significant predictors of risky adolescent sexual behavior. The findings from this study suggested that out of the factors considered here, community control is associated with less risky sex for both males and females, while friend's deviance is sometimes significant predictor of risky sexual behaviors for African American males in the sample. Religious involvement was never statistically significant. These results lend some support to my hypotheses regarding social control theory.

Further, I wanted to shed light on the predictors related to self-control. Self-control theory suggests that it is not this social bond that protects individuals from their natural deviant tendencies, but self-control. Self-control theory states that individuals are born seeking immediate gratification (Gottfredson & Hirshchi, 1990). This theory states that children learn self-control through effective parenting. If parents are nurturing, set expectations for children, and discipline the children when they do not meet set expectations, children will develop self-

control. Empirical research shows that low self-control is linked to risky sexual behavior in adolescents (Beaver 2009). I predicted that self-control would be negatively associated with risky sex outcomes among adolescents in the sample and my findings confirmed this hypothesis. Self-control was significant for early sexual debut and condom use consistency for females. This significance was evident in the full model but disappeared for males when considering the two genders separately. Risk Taking tendencies was not significant in any model.

In a final attempt to explore the two theories, I compare the standardized coefficients of variables related to each theory and examine how they influence the magnitude of the monitoring effect. The effect of monitoring did not change significantly from one model to the next on any of the risky sex outcomes. This study suggests that future research should use an integrated model of social control and self-control theory as a useful perspective from which to view predictors of risky adolescent sexual behavior among African American adolescents.

Family structure also revealed itself to be an important predictor of sexual behavior. This variable had disparate impacts on males and females. For females, living with a single mom was an important predictor of early sexual debut and inconsistent condom use. For males, living with a mom and step dad was a significant predictor of early sexual debut and inconsistent condom use. When considering the outcome regarding number of sexual partners, family structure was not a significant predictor for females; however, living with a single mom, a mom and step dad, and living with other family structures were all associated with higher numbers of sex partners than males living with two biological parents. Interestingly, living with a mom and step dad was significant at the highest level (.001) for males.

Limitations

This study has three noteworthy limitations. First, more comprehensive measures may yield different results. For example, in the current study, I use community control which asks target respondents questions such as 'If some children were spray-painting graffiti on a local building, how likely is it that your neighbors would do something about it?', while other studies use more exhaustive measures of collective efficacy. For example, research shows that neighborhood disadvantage measures that include information about poverty, female headed households, social-cohesion, and racial and ethnic make-up are useful in predicting risky sexual behavior outcomes (Browning 2008; Carlson et. al 2014). Also, the current study measures religiosity using a scale regarding how frequently a respondent is involved in various religious activities. However, evidence shows that this is not the only important predictor of risky sex regarding religion. Landor and colleagues (2011) point out that religious commitment along with religious involvement may be more meaningful in assessing risk behaviors among adolescents. Religious commitment includes items regarding the importance of religion.

Second, a study that uses three or more time points could shed light on the relationships between changes over time and risky sex outcomes. For instance, parental monitoring at waves 1 and 2 may influence friend choices by wave 3. Peer groups in adolescence may be more relevant for risky sex outcomes at wave 4. The influence that peer groups have on behavior becomes increasingly important during adolescence (Akers & Sellers, 2012).

Finally, higher rates of risky adolescent sexual behavior among African Americans may suggests that additional processes are at work for this racial/ethnic group. My analysis contains only African American adolescents from Iowa and Georgia. For this reason, this sample is not representative of all adolescents (or all African Americans). However, similar studies with

different sample characteristics can compare risk and protective factors with studies, such as this one, that use the FACHS data.

Implications

This study has important implications regarding parents' ability to monitor their children, an adolescents' level of self-control, community control, friend's deviance, and for both social control and self-control theories. First, it is difficult to imagine laws, policies, and programs that would make it easier for parents to monitor their children. Further complicating the possibility of increased monitoring is the fact that no person can be in two places at once and parents are expected to provide financially for their children, which usually means working somewhere other than at home. Policies that offer employer incentives to allow for more flexibility to parents may make it easier for parents to monitor their children. Employer flexibility may be especially important in making it easier for single moms to monitor their children.

Government funded community resources such as recreation centers, parks, playgrounds, cultural centers, community swimming pools, etc. may make it easier for parents and other adults in the neighborhood to get to know one another. This could lead to more cohesion and control. Subsequently, neighborhood dwellers may feel more comfortable taking action when a young person in the community is spotted engaging in deviant behavior. On the same token, young people may feel reluctant to engage in deviant and risky behavior when they are familiar with other adults in the neighborhood and when they are aware that their own parents are cordial or friendly with those adults. This could increase community control. According to this study and other research, this increase community control could be a protective factor against risky sexual behaviors.

According to Gottfredson and Hirschi (1990) self-control is developed from nurturing monitoring parents who set expectations for their children and discipline them when they do not meet those expectations. This study showed that self-control is a significant predictor of sexual behavior. Employer incentives for flexibility in work places and government funded community resources may make it easier for both parents and community members to monitor and nurture youth while setting expectations for them and disciplining them when they do not meet set expectations. This could increase a child's level of self-control subsequently protecting them from risky sexual behaviors.

According to this study and previous research, friend's deviance is a relevant factor in predicting risky adolescent sex. Social control theory would posit that adolescents conform because of bonds with conventional society including parents and their beliefs. When adolescents are attached to their parents and adopt their beliefs, parents can influence the adolescent's friend groups. For this reason, programs that promote parental monitoring may decrease adolescents' association with deviant peers subsequently decreasing their engagement in risky sex.

As this study shows, increased parental monitoring, community control, self-control, and living in a two biological parent home are all protective factors against risky sexual behaviors among a diverse sample of African American adolescents including early sexual debut, condom use inconsistency, and higher numbers of sexual partners. This study provides support for both social control and self-control theories. Future studies may want to examine how these theories work together to impact risky sexual behavior. Researchers may investigate how parental monitoring and community control at time 1are associated with friend's deviance and self-

control at time 2 and how all of these important factors influence one another and then impact risky sex at time 3.

In summary this study shows how both social control and self-control theories are important for understanding the outcome of risky adolescent sex. Increased monitoring from parents and community members may have positive implications for self-control and influence young people's choices of peer groups. These factors together may help to decrease risky sex outcomes. Future research should use an integrated model of social control and self-control theories in order to shed light on the outcome of risky adolescent sex. As mentioned before, risky sex increases the likelihood that an adolescent will contract HIV/AIDS and other STIs or become pregnant unintentionally. Such outcomes can lead to long term and short term consequences as well as psychological and emotional problems.

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APPENDICES

Appendix A: Scale Items and Alphas

Primary Caregiver Warmth Wave 1 (alpha .8164)**.** During the past 12 months how often did your PC …

1. Help you do something that was important to you?'.
2. Let you know he or she really cares about you?'.
3. Listen carefully to your point of view?'
4. Act supportive and understanding toward you?'.
5. act loving and affectionate towards you?'.
6. have a good laugh with you about something that was funny?'.
7. let you know that he or she appreciates you, your ideas or the things you do?'.
8. tell you he or she loves you?'.
9. understand the way you feel about things?'.

Primary Caregiver Monitoring Wave 1 (alpha .6222). 'How often does your PC …

1. know what you do after school?'.
2. know where you are and what you are doing?'.
3. know how well you are doing in school?'.
4. know if you are doing something wrong?'.

Community Control Wave 1(alpha .607).

1. If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighbors would do something like call the school or parents? Is it...
2. If some children were spray-painting graffiti on a local building, how likely is it that your neighbors would do something about it? Is it...
3. If a child was showing disrespect to an adult, how likely is it that people in your neighborhood would scold that child or tell the child's parents? Is it...
4. How easy is it for you to pick out people who are outsiders or who obviously don't live in your area? Is it...
5. How easy is it for you to pick out people who are outsiders or who obviously don't live in your area? Is it...

Risk Taking Tendencies Wave 1(alpha .851)

1. 'You could do something most people would consider dangerous like driving a car fast.
2. 'You would prefer doing something dangerous rather than sitting quietly. Is
3. 'You enjoy taking risks.
4. 'You would enjoy fast driving.
5. 'You would do almost anything for a dare.
6. 'Life with no danger would be dull for you.

Friend's Deviant Behavior Wave 1 (alpha .849). During the past 12 months, how many of your close friends have...

1. Stolen something worth less than $50?
2. Stolen something worth $50 or more?
3. Gone joyriding, that is, taken a motor vehicle such as a car or motorcycle, for a ride or drive without the owner's permission?
4. Gotten into fights where someone got hurt?
5. Attacked someone with a weapon or with the idea of hurting them?
6. Used a weapon, force, or strong-arm methods to get money or other things from people?
7. Used tobacco (cigarette, smokeless tobacco, etc.)?
8. Used alcohol (beer, wine, bourbon, vodka, etc.)?
9. Used marijuana?
10. Used crack or cocaine?
11. Used inhalants such as solvents, gasoline, rush, or glue?
12. Used a needle to inject drugs for fun or to get "high?"
13. Gotten high using drugs of some kind?
14. Drunk a lot of alcohol - 3 or more drinks at one time?
15. Had sex without using a condom?
16. Gotten pregnant or gotten a girl pregnant outside of marriage?

Self-control Wave 1 (alpha .6710)

1. 'When you promise to do something, people can count on you to do it'.
2. 'You can deliberately calm down when you are excited or wound up'.
3. 'You stick with what you're doing until you've finished with it'.
4. 'When you have to wait in line, you do it patiently'.
5. 'You usually sit still in class'.
6. 'You usually think before you act'.
7. 'You prefer to concentrate on one thing at a time'.

Religious Involvement Wave 1 (alpha .8374). 'How often in the past month did you…

1. attend church services?'.
2. attend social events at your church?'.
3. go places or do things with friends from your church?'.
4. attend Sunday school, a class, or discussion group on religion?'.

Appendix B: Correlation Matrix

Table 13: Correlation Matrix (COMBINED)

	Sexual Debut	Condom Use Consistency	Number of Sex Partners
Single Mom	-0.0339	-0.0578	0.0250
Two Biological Parents	0.1140*	0.1099*	-0.0848*
Mom and Step Dad	-0.0458	-0.0175	0.0462
Other Family Structures	-0.0310	-0.0210	0.0147
Education	0.0244	-0.0283	0.0604
Warmth	0.0991*	0.1061*	-0.0651
Monitoring	0.1822*	0.0780	-0.1201*
Self-Control	0.1231*	0.1305*	-0.1201*
Risk Taking Tendencies	-0.0777	-0.0890*	0.0740
Friend's Deviance	-0.0798*	-0.0312	0.0446
Religious Involvement	0.0714	0.0318	-0.0432
Community Control	0.0031	0.1148*	-0.0237

Notes: * $p<0.05$
Pairwise deletion