THE INFLUENCE OF RELIGIOSITY ON ADOLESCENT RISKY SEXUAL BEHAVIOR

by

ANTOINETTE MARIE LANDOR

(Under the Direction of Leslie G. Simons)

ABSTRACT

The present study expands the current literature on religion and adolescent sex by examining the extent to which religiosity influences adolescent risky sexual behaviors and identifies the various mechanisms through which this influence occurs, specifically among African Americans. Structural equation modeling was used to investigate the effects of parental religiosity on three adolescent risky sexual behaviors. Analysis was performed separately for males and females on early initiation of sex, frequency of sex, and non-condom use to examine whether various mechanisms of influence affect males and females differently. The SEM models did not show a direct influence between parental religiosity and early initiation of sex frequency of sex, and non-condom use; however, the results indicated that there were several indirect influences shown to reduce such risky behaviors. These mediating mechanisms are ， quality of parenting, adolescent religiosity, and association with conventional peers. The results suggest that parental religiosity indirectly acts as a protective factor against various risky sexual behaviors in African Americans adolescents based on gender.

INDEX WORDS: Adolescents, Sex, Risky sexual behavior, Religion, Parenting, African Americans, Peers, Teens, Condom use

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DEDICATION

I would like to dedicate this thesis to an intelligent, courageous, and beautiful woman named Joyce Landor— my mommy. She is my HERO and best friend. As a recent breast cancer survivor who withstood surgery, chemo-therapy, and radiation, all while keeping a smile on her face and remaining extremely positive about life and "beating cancer," she has given me the strength to remain steadfast in this journey called graduate school. Throughout my life, her love has guided me, her wisdom has encouraged me, and her strength has inspired me to embrace my limitless potential and achieve above and beyond my own imaginations. Thank you mommy for being everything you are and more. Love you!

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CHAPTER 1

INTRODUCTION

The current health and social crisis of sexually transmitted infections and unintended pregnancy among adolescents signals that it is essential to know more about the contextual influences on adolescent sexual behavior. Research shows that early initiation of sexual activity and unprotected sex leads to negative physical and psychological outcomes. Adolescents who engage in sex at earlier ages have more lifetime sex partners, a greater likelihood of acquiring HIV/AIDS and other sexually transmitted infections (STIs), and a greater likelihood of having an unintended pregnancy (O'Donnell, O'Donnell, and Stueve, 2001; Simons, Peterson, and Burt, in press). African American youth and adults are disproportionately at risk for such negative outcomes (Browning, Leventhal, and Brooks-Gunn, 2004; Kirby, 2002). They account for 49 percent of all new HIV/AIDS cases in the United States but comprise of only 13 percent of the total U.S. population. The rate of AIDS diagnoses for African American adults and adolescents are 10 times the rate for Caucasians and nearly 3 times the rate for Hispanics (Center for Disease Control, 2005). The rates of STIs and unintended pregnancies are also significantly higher for African Americans compared to European Americans (Center for Disease Control, 2000). Therefore, it has become increasingly important to identify factors that may promote safer sexual behaviors such as delayed sexual debut, a reduction in the number of sexual partners, and an increase in condom use among African American youth.

Past research has identified other negative outcomes associated with adolescents' early initiation of sex and unprotected sexual intercourse. These outcomes include psychological and social problems such as depression (Meier, 2007), attempted suicide (Rector, Johnson, and

Noyes, 2003), decreased self-esteem (Beaman, Whitbeck, and Simons, 1992), and relationship instability (Martin, 1996; Rudolph, 2002).

Several national surveys show that a large proportion of teens are sexually active and are engaging in risky sexual acts. In 2007, the United States Centers for Disease Control and Prevention conducted a national school-based survey among students in grades 9-12. The survey, *Youth Risk Behavior Surveillance System,* showed that many adolescents in the United States are becoming sexual activity at early ages and with multiple partners. Among high school students, 47.8% reported having had sexual intercourse. Of those students who had sexual intercourse, 16.3 % of Black students, 8.2% of Hispanic students, and 4.4 % of White students reported having had sexual intercourse before age 13. Nearly 15% of these students reported having had sexual intercourse with four or more partners (Center for Disease Control, 2007). A study by the Kaiser Family Foundation (2008) found nearly identical rates of high school students reported having had sexual intercourse. These statistics suggest a generation at risk and illustrates an urgency to find ways to slow this rate of adolescent risky sexual behavior. Disregard for this evidence, especially in the African American community, could lead to growing health disparities associated with HIV/AIDS and other sexually transmitted infections and mental health.

Research has identified several family factors that influence adolescent sexual behaviors. A few of these include parental practices such as support, monitoring, discipline, communication, and family cohesion (Brewster, Cooksey, Guilkey, and Rindfuss, 1998; Miller, Norton, Curtis, Hill, Schvaneveldt, and Young, 1997; Simons Wu, Lin, Gordon, and Conger, 2000). Luster and Small (1994) found supportive and involved parents to have adolescents who engaged in less sexual behavior. A majority of research also indicates that parental monitoring

of adolescent activities delay their sexual debut (Capaldi, Crosby, and Stoolmiller, 1996; Danziger, 1995). Corporal punishment is another type of parenting practice found, specifically in African American communities, to reduce adolescent negative outcomes (Simons, Simons, and Wallace, 2004). A study by Simons, Johnson, and Conger (1994) examined the consequences of corporal punishment and parental support and involvement and found that the latter predicted negative adolescent outcomes. Corporal punishment had no detrimental impact on adolescent maladaptive behavior once the effect of parental involvement was removed. In addition, parent-adolescent communication was found to decrease adolescents' sexual activity (Meschke and Silbereisen, 1997). Miller, Benson, and Galbraith (2001) concluded that family cohesion reduces adolescent risky sexual behaviors. These studies indicate the salience of family factors on reducing adolescent negative outcomes.

In recent years, there has been talk of religious and morally based explanations for adolescent psychological problems (Smith, 2003), delinquency (Regnerus, 2003, Simons, et al 2004; Wills, Yaeger, and Sandy, 2003), negative family attitudes and values (Brody, Stoneman, and Flor, 1996), and risky sexual behavior (Lammers, Ireland, Resnick, & Blum, 2000; Meier, 2003; Murry, 1994; Simons, Burt, and Peterson, *in press*). Current interest in faith-based initiatives and organizations to tackle the negative outcomes associated with adolescent sex suggest the need for more empirical studies to examine the role of religiosity on adolescent risky sexual behaviors. This study extends earlier research on the bivariate relationship between religiosity and adolescent sexual behavior by examining the extent to which parental religiosity influences adolescent risky sexual behavior. Past investigations have failed to analyze the various mechanisms through which parental religious influence occurs. This study explores these mechanisms and hypothesizes both direct and indirect relationships. It is possible that the

effect of religiosity on risky sexual behavior is indirect through its effect on quality of parenting, parent-adolescent sex communication, adolescent religiosity, and or peer group affiliation. This effect may also vary by gender, therefore this study will examine potential gender differences. Research has focused primarily on an aggregate of males and females without exploring possible variations between genders (Lammers et al., 2000; Regnerus, 2003). This study will examine this issue.

The majority of extant research on the influence of religion focuses on European Americans (Koenig, McCullough, and Larson, 2001) with few exceptions (e.g., Ball, Armistead, and Austin, 2003; Simons, Simons, and Conger, 2004). This research will fill the cultural gaps in the current literature by examining African Americans, a population often understudied in the area of the influence of religion on adolescent sexual behaviors. Surprisingly, research has failed to explore this link in African American families even though African Americans tend to have higher rates of religious involvement compared to other ethnicities (Christian and Barbarin, 2001; Constantine, Lewis, Conner, and Sanchez, 2000; Taylor, Mattis, and Chatters, 1999). Elkind (1999) found that involvement in religious activities tend to have different meanings and outcomes for adolescents from different racial and ethnic backgrounds. Therefore examining religiosity in diverse samples may not help to identify the role religion plays in the lives of African American youth.

Religion is especially powerful for African Americans and has been found to be a protective factor against negative family outcomes (Brody, Stoneman, and McCrary, 1994; Jessor, Turbin, and Costa, 1998; Simons et al, 2004; Wallace and Forman, 1998) and for this reason we test its effects on a sample of African American adolescents and their primary caregivers. Additionally, many studies have assessed the influence of religion by using a single

measure to represent religiosity (Lam, 2002; Yeung, 2004) whereas this study measures religion by using a multiple-item scale which takes into account religious involvement and commitment.

CHAPTER 2

LITERATURE REVIEW

Risky sexual behavior on the part of adolescents signals a serious and pressing social problem because of its connection to sexually transmitted infections and adolescent pregnancy. This problem is even more salient among minority youth given that they are disproportionately at risk for such outcomes associated with early and unprotected sexual activity (O'Donnell, Myint-U, O'Donnell, and Stueve, 2003). For this reason, finding potential protective factors will prevent repeated exposure to these risk behaviors.

One protective factor identified in the research literature for African Americans is religion (Brody et al., 1994; Jessor et al., 1998; Zaleski and Schiaffino, 2000;). Many studies have established a negative relationship between religion and adolescent sex (McCree, Wingood, DiClemente, Davies, and Harrington, 2003; Meirer, 2003; Rostosky, Wilcox, Wright, and Randall, 2004; Sinha, Cnaan, and Gelles, 2007; Steinman and Zimmerman, 2004) but few have focused on an African American sample. This study examines this population in order to reduce and or eliminate the numerous negative outcomes associated with their risky sexual behaviors.

Influence of Religion on Adolescents' Values

Religion emphasizes self-control and moral virtues which are grounded in historical traditions and narratives (Smith, 2003) that stress living in accord with moral directives and commitments (e.g. honesty, responsibility, and respect for authority and ones' body) (Pinquart and Silbereisen, 2004). It positively and constructively influences the lives of many adolescents (Regnerus and Smith, 2005). It is believed that adolescents with higher levels of religious commitment will be more apt to align their behaviors with the moral teachings stressed through religion. One common religious teaching is that people should not have sex outside of marriage

(Regnerus, 2007) thus engaging in sexual activity before marriage would be considered morally unacceptable.

Religion influences the perceptions, attitudes, and beliefs adolescents may have about premarital sex and contraception, thus resulting in conservative sexual attitudes, delayed sexual intercourse, and fewer sexual partners (Regnerus, 2005; Rostosky, Regnerus, and Wright, 2003; Simons et al., in press). Research consistently shows adolescent religion (e.g. attendance, prayer, affiliation, participation) to be linked to their sexual attitudes and behaviors (Rostosky et al., 2004). Along with this viewpoint, Thornton and Camburn (1989) noted that adolescents who hold strong religious beliefs and pray have less permissive attitudes about sex and report less sexual activity (Meirer, 2003; Resnick, Bearman, Blum, Bauman, Harris, Jones, Tabor, Beuhring, Sieving, Shew, Ireland, Bearinger, and Udry, 1997; Whitbeck, Yoder, and Hoyt, 1999). Other studies have also found associations between religiosity and the number of adolescent sexual partners (Brewster et al., 1998; Lammers et al., 2000; Rostosky et al., 2004; Whitehead, Wilcox, and Rostosky, 2001). This accumulated research provides ample empirical evidence that religion influences sex attitudes and behaviors in the lives of adolescents.

Studies have also linked adolescents' own religiosity to other prosocial outcomes. For example, a recent study by Simons, Simons, Lin and Conger (2004) found that religious adolescents are more likely than their less religious counterparts to indicate that activities such as drinking alcohol, shoplifting, and engaging in sex are morally wrong. Further, religious measures such as church attendance and importance of religious faith have been inversely related to delinquency, drug and alcohol use (Donahue, 1995; Pawlak and Defronzo, 1993; Wallace and Williams, 1997).

Religious beliefs can serve to directly deter or reduce adolescents from engaging in risky behaviors (McCree et al., 2003; Sinha, Cnaan, and Gelles, 2007). This study explores the various risky sexual behaviors among adolescents such as early sex debut, frequency of sexual intercourse, and non-condom use. Much of the research has focused primarily on the influence religion has on adolescent sexual behavior and not specific risky sexual behaviors. Furthermore, the literature shows inconsistencies in whether religion is associated with different forms of risky sexual behavior (e.g., early sex debut, frequency of sex, and non-condom use) for males and females. Therefore it can be suggested that religion may have a different effect based on gender.

Parents' Transmission of Religious Values to Adolescents

Past research indicates the impact adolescents' religious beliefs and affiliations may have on their attitudes and behaviors, however, limited analyses explores the influence of parents and their religious beliefs on adolescents' risky sexual behavior. Adolescents often develop their religious beliefs and moral standards within their family context and then those values to guide their lives (Moore, 2006). Although adolescents are influenced by many contexts, parents remain the primary agent of socialization (Lytch, 2004; Simons et al., 2004). One way this process may occur is through the transmission of religious values. Parents use religion to teach values and social control and support to their children (Regnerus, 2003) through both direct and indirect transmission of conduct standards. Myers (1996) found parental religiosity to be the strongest and most reliable influence. Similarly, Smith, Faris, and Lundquist (2003) reported parents' religiosity to have a significant impact on their adolescents' religious attachment. This is primarily the case because of the impact of religion on the quality of parenting (Simons, Chao, Conger, and Elder, 2001; Simons, Simons, & Conger, 2004). Gunnoe, Hetherington, & Reiss's (1999) study results indicated that religiosity was predictive of an authoritative parenting style.

Authoritative parents demand age-appropriate behaviors from their children while providing warm and support which fosters their children's autonomy. As a result, these children develop warm and loving relationship with their parents making them more likely to take on the same values of their parents, regardless of what those values are. For that reason it is the quality of parenting that accounts for much of the influence of religion on adolescent risky sexual behavior. Therefore children with religious parents but a poor relationship with those parents are probably not influenced by their parents in terms of how their values are shaped. Thus it is only if the child is close to their religious parents that they take on their values.

Additionally, Brody et al. (1996) found greater parental religiosity to be associated with family processes such as more family cohesion and less interparental conflict, and youth academic and socioemotional competence. They posit that a family's religious group encourages the establishment of adolescents conventional values and behaviors, therefore decreasing the likelihood of deviance and increasing the likelihood of prosocial behaviors. A study by Whitbeck et al. (1999) found that high levels of maternal religious beliefs and attendance to be associated with less adolescent sexual behaviors, over and above adolescent religiosity. Several studies (Demuth and Brown, 2004; Florsheim, Tolan, and Gorman-Smith, 1996; Simons, Simons, Burt, Drummund, Stewart, Brody, Gibbons, and Cutrona, 2006; Simons, Lin, and Gordon, 1998; Simons and Conger, 2007; Simons et al., 2004) on adolescent delinquency have also shown parenting behaviors (e.g., parental support and monitoring, consistent discipline, value transmission, use of inductive reasoning to explain rules) to explain more variance in delinquency than any other single factor. In accordance with these findings, I expect that parental religiosity will influence quality of parenting which will in turn be negatively associated with participation in risky sexual behaviors.

Influence of Parenting Practices

Several parenting practices have been found to be important determinants of whether an adolescent engages in risky sexual behavior. A review of the literature shows a wide range of these practices. A recent study by Snider, Clements, and Vazsonyi (2004) of religiosity and parental practices found that parents who were perceived by their adolescent to have high levels of religiosity were perceived as more likely to demonstrate effective parenting practices such as communication, closeness, and monitoring. This study examines the most highlighted parenting practices in the current research literature: warmth, support, monitoring, inductive reasoning, consistent discipline, hostility, and positive reinforcement (Bean, Barber, and Crane, 2006; Dittus, Miller, Kotchick, and Forehand, 2004; Meschke, Bartholomae, and Zentall, 2000).

Past research has shown religious socialization to more likely occur in warm and close families (Ozorak, 1989). According to Beaman and his colleagues (1992) religious parents are more likely to engage in such parental practices as warmth and support. Parental support is defined as the level of acceptance and warmth a parent expresses toward his or her child and is believed to be essential to the normal development of adolescents (Gunnoe et al., 1999). The finding by Luster and Small (1994) supports this view, they reported that for adolescents who perceived their parents to be supportive and involved, and who were more satisfied in their relationship with their parents, they tended to engage in less sexual behavior.

Parental support has also been found to be positively associated with stress appraisals (Schmeelk-Cone and Zimmerman, 2003), racial/ethnic identity attitudes (Caldwell, Zimmerman, Bernat, Sellers, and Notaro, 2002; Steinberg and Morris, 2001), self-esteem (DuBois and Tevendale, 1999; Scholte, Van Lieshout, and Van Aken, 2001), family cohesion (Brody, Stoneman, and Flor, 1996), less sexual activity (Luster & Small, 1994), and negatively

associated with discrimination (Simons et al., 2006), adolescent depressive symptoms, and delinquency (Caldwell et al., 1998; Johnson and Kliewer, 1999; Sholte et al., 2001; Simons and Conger, 2007; Simons, Simons, Chen, Brody, and Lin, 2007; Stice, Ragan and Randall, 2004;). These studies illustrate the importance of parental warmth and support, especially in adolescence when sex becomes a central issue.

It may also be the case that warm parenting is not related to sexual behaviors. Rather, warm parenting increases the likelihood adolescents will adopt their parents' values whether liberal or conservative. Studies have found teens with liberal parents to be more likely to engage in sex (Dittus, Jaccard, and Gordon, 1997; Jaccard, Dittus, and Gordon, 1998). Resnick et al. (1997) reported, however, that parents who disapprove of their adolescents' sexual activities often have children who delayed their first sexual contact but are less likely to use effective contraception. This study tests parental religiosity to examine whether the indirect effects of parental practices such as warmth and monitoring are associated with risky adolescent sex. It is hypothesized that parental religiosity is negatively related to early initiation of sex and the number of adolescent sexual partners but positively related to non-condom use.

Another important parental practice is monitoring. Parental monitoring of social activities has been associated with conduct problems (Simons et al., 2006; Stanton and Feigleman, 2000) and better overall psychosocial adjustment among adolescents (Baumrind, 1991; Meschke and Silbereisen, 1997), which is an important predictor of delayed onset of sexual activity (Tubman, Windle, and Windle, 1996) and less frequent sexual behavior (Romer, Black, Ricardo, Feigelman, Kaljee, Galbraith, and Nesbit, 1994). Studies have reported an association between parental monitoring and supervision and lower levels of sexual behavior (French and Dishion, 2003; Resnick et al., 1997; Small and Luster, 1994). Rosenthal, Von

Ranson, Cotton, Biro, Mills, and Succop (2000) examined predictors of sexual initiation and found that for adolescent girls whose families had moral-religious emphasis and provided more direct monitoring, the adolescents experienced sexual initiation at older ages. Parental supervision was also found to lower adolescent risk of pregnancy. Furthermore, Rodgers (1999) examined sexually active adolescent and found that those who were not closely monitored by their parents were more likely than adolescents who were to demonstrate high-risk sexual behaviors. The lack of parental monitoring has been found to be associated with unprotected sex among adolescents who are already sexually experienced (Li, Stanton, and Feigelman, 2000) and other risk behaviors (e.g., drug use and drug trafficking). Consistent with these findings, a study on the sexual activity of African American female adolescents concluded that adolescents who perceived infrequent parental monitoring were more likely than their counterparts who received higher levels of monitoring, to acquire an STI (Crosby, DiClemente, Wingood, Lang, and Harrington, 2003). These findings indicate that both support and high levels of parental monitoring serve as protective factors against risk behaviors in adolescents.

A study on mother-child connectedness and sexual debut concluded that dyadic connectedness and a clear communication of disapproval about sexual activity to be associated with delayed sexual debut (Sieving, McNeely, and Blum, 2000). Consistent with this finding, supportive mothers were found more likely to initiate discussions on sex issues and provide birth control information than nonsupportive mothers (Neer and Warren, 1988). Brody and Flor's (1998) study indicated that a greater level of maternal religiosity was associated with an increase in parent-adolescent relationship quality and more maternal school involvement.

In addition, parenting practices such as inductive reasoning and consistent discipline have been found to reduce adolescents' risky behaviors (Blueston and Tamis-LeMonda, 1999; Palmer

and Hollin, 2001; Simons et al., 1998). Findings reported by Gordis, Margolin, and John (2001) found that high levels of parental hostility placed children at risk for negative behavioral outcomes. Parents' use of positive reinforcement was also found to encourage prosocial behaviors in their children (Simons et al., 1998).

Parents who provide warmth, support, monitoring, inductive reasoning, consistent discipline, positive reinforcement, and low levels of hostility, reduce the likelihood that their adolescent will engage in risky sexual behavior (e.g. early sexual debut, multiple partners, non-condom use). Therefore, parental religiosity may indirectly reduce the likelihood of risky sexual behaviors by increasing quality of parenting.

Parent-Adolescent Discussions of Sex

Parent-adolescent communication and discussions about sex are critical in predicting adolescent sexual behavior. Whitaker and Miller (2000) found adolescents to prefer their parents as a source of information over their peers. Adolescents who talk to their parents about sex were likely to initiate sexual intercourse later than their peers whose parents do not discuss sex with them (Clawson and Reese-Weber, 2003; Dilorio, Kelley, and Hockenberry-Eaton, 1999). Adolescents that discuss sex with their parents were also more likely to use condoms and contraception (Jaccard and Dittus, 2000; Miller, Levin, Whitaker, Xu, 1998). Lack of communication, however, between parents and adolescents often result in adolescent misunderstandings of their parents' attitudes about sex (Jaccard, Dittus, and Gordon, 1998). Religious parents have more frequent conversations about sex with their adolescent who may result in a later sexual debut for their adolescent (Regnerus and Smith, 2005). Contrary to the findings stated above, McNeely, Shew, and Beuhring (2002) reported that parent-child conversations about sex were not associated with sexual debut which was inconsistent with other

research studies that found associations between parent-child communication about sex and birth control on risky sexual behaviors. This study will further examine this association as to why McNeely, Shew, and Beuhring (2002) revealed different results from the other studies.

The more adolescents are satisfied in their relationship with their parents, the more extensive their conversations (Jaccard et al., 2000). Parents' frequency of conversations about sex and birth control with their adolescent is often associated with their own attitudes and beliefs about sex (Jordan, Price, and Fitzgerald, 2000). The frequency of communication about sex has also been found to be related to parental religiosity (Regnerus, 2005). A recent study by Regnerus (2005) showed evidence that mothers who state that their religious beliefs are very important to them were found to talk more about sex with their adolescent. These mothers may have firm beliefs about adolescent sex and more certain about what to say. It is believed that their strong religious beliefs give them a heightened sense of duty to educate their adolescent on moral and ethical issues, especially those issues involving sex (Dilorio et al., 2000). According to Fox and Inazu (1980), parent-adolescent communication about sex is more common in religious families and contains more topics at earlier ages than parents of less religious families. This study will also explore whether this effect may be different for males and females.

Influence of Peers

A basic assumption during adolescence is that close friends become increasingly important as reference points in guiding behaviors. Friends the same age will be central models in a number of areas, precisely because they are regarded as equals and share similar life circumstances **(**Simons et al., 2004; Simons et al., 1998**)**. Research shows that peers impact adolescent risky sexual behavior as well. Jaccard, Blanton, and Dodge (2005) found peers to be one of the most powerful and consistent predictors of adolescent sexual behavior. Adolescents'

intentions to engage in sex is strongly influence by their social context in which peers play a key role in the creation of a sense of normative behavior (Kinsman, Romer, Furstenberg, and Schwarz, 1998).

Research on the effect of peer groups, conventional and nonconventional, on adolescent behaviors has been well established. Conventional peers have been found to be associated with a decrease in risk behaviors (Perkins, Luster, Villarruel, and Small, 1998; Simons et al., 2004). Simons et al. (2004) found religiosity to increase the likelihood that an adolescent will endorse conventional moral beliefs and decrease the likelihood that they will have unconventional peers and engage in deviant behaviors including delinquency and sexual activity (Christopher, Johnson, and Roosa, 1993; Whitbeck, Yoder, Hoyt, and Conger, 1999).

Religion has also been found to affect adolescent friendship choices (Wallace and Williams, 1997). Bahr, Hawks, and Wang (1993) suggests that religion pushes adolescents to "conform" to social and legal norms and may influence them to associate with peers who hold similar religious values and standards. Participation in religious activities was found to reduce the risk of early sexual debut when adolescents reported that their peers attended the same church. On the other hand, minimal participation in religious activities along side no peer church attendance had no effect on the age of sexual debut (Mott, Fondell, Hu, Jones, and Menaghan, 1996). These findings show that unconventional or delinquent peers are associated with deviant behaviors, thus involvement in a social network that endorses conventional moral values like abstaining from sex, decreases the likelihood of having sexually active peers. Therefore, this study hypothesizes the effect of religiosity on risky sexual behavior will be mediated in part by affiliation with conventional peers.

Parents play a role in their adolescents' selection of peers as well. Simons et al. (2001) found a child's friendship choice to be influenced by parental practices and or family processes. Religious parents foster social context such as church and religious activities for their adolescents to find a network of friends who share similar beliefs, values, and behaviors. Involved parents and those who monitor their children are more attentive in making sure their child affiliates with a conventional peer group, and are able, over time, to develop relationships with the parents of their child's peers (Smith, 2003).

Therefore, it is expected that adolescents who have conservative views would be more likely to associate with peers who share similar values than those who do not. Thus religious adolescents are at lower risk for engaging in risky sexual behaviors than non-religious adolescents because they are less likely to share the same social network.

African Americans and Religion

The level of religious involvement varies across ethnicities (Smith, Denton, Faris, and Regnerus, 2002) and research shows that African Americans tend to have higher rates of religious participation compared to other ethnicities (Christian and Barbarin, 2001; Constantine et al., 2000; Sinha et al., 2007; Smith et al., 2002; Taylor, Mattis, and Chatters, 1999). Findings reported by Johnson and Kliewer (1999) and Weaver, Samford, Morgan, Lichton, Larson, and Garbarino (2000) showed African Americans to be more likely than European Americans to attend church regularly and consider religion important in their lives. African-American adolescents are significantly more involved in and influenced by religion than their Caucasian and Latino counterparts (Arnett, 2004; Smith et al., 2002; Wallace and Williams, 1997). McCree et al. (2003) noted "one of the most pervasive influences among African Americans is religion." One aspect of religion for African Americans is the church they attend. The church contributes

to cohesion in the African American community (Wiley, Warren, and Montanelli, 2002). It gives moral guidance, political leadership, and is the core of the community (Taylor and Chatters, 1991) for both parents and adolescents. Religious affiliation and involvement in church activities are believed to be helpful in changing the negative consequences of stress through the promotion of positive outcomes (Griffith, Young, and Smith, 1984).

Throughout the literature, studies have shown the significance of the church as well as the community, which are both interrelated, in examining African American children and adolescents (Bennett, 2006; Brody, Ge, Conger, Gibbons, Murry, Gerrard, and Simons, 2001; Simons et al., 2004). However, Bearman and Bruchner (2001) found religiosity to delay sexual initiation in Whites, Latinos, and Asian American adolescents, but to have no effect among African Americans. A study of African American females found that 57 % of early initiators of sex reported attending church regularly (Murry, 1994). These studies illustrate ambiguity in the research literature on African American adolescents therefore this study attempts to clear these inconsistencies.

In addition to the small number of studies on the influence of religion on African American adolescents' sexual behaviors, there has been even less empirical research to illustrate the various mechanisms whereby parental religious beliefs influence these risky sexual behaviors (Manlove, Terry-Humen, Ikramullah, and Moore, 2006). Simons et al. (2004) examined two avenues whereby parental religiosity influences the likelihood that adolescents will engage in delinquent behavior but has not explored its effects on risky adolescent sexual behavior. This study focuses on the extent to which parental religiosity influences adolescent risky sexual behaviors, specifically in African American families.

Understanding the specific mechanisms whereby parental religiosity influences adolescent's participation in risky sexual behavior has implications for both policy and practice. The information provided in this study will help parents, social services agencies, policy makers, community member, and churches combat the issue of risky adolescent sexual behavior and its negative impact, specifically among African American adolescents.

Theoretical Perspective

The theoretical perspective for this paper is the Social Control Theory. The most prominent social control theorist, Travis Hirschi, whose landmark book *Causes of Delinquency* (1969) sparked a lot of interest, making the Social Control Theory among the most dominate theories on deviance and delinquency (Jensen, 2003; Simons et al., 2004; Stitt and Giacopassi, 1992). Although this theory has traditionally been used to examine delinquent behavior, this study uses an extension of its application to explain the influence of religion as a social control through parental religiosity's effect on adolescent risky sexual behavior.

Most Western societies view adolescent sexual behavior as deviations from normal behaviors because premarital sex is against the doctrine of many of their religious perspectives (Meier, 2003). Additionally, research has found such risky sexual behaviors among adolescents be associated with several other negative behaviors such as substance abuse (Kowalski-Jones and Mott, 1998), suicide (Rector et al., 2001), violence and depression (Hallfors, Waller, Ford, and Halpern, 2004).

Social Control Theory posits that people's relationships, commitments, values, norms, and beliefs encourage them not to break the law or any moral codes. The belief is that if individuals internalize the society's laws and moral codes and feel tied to them, they then have a stake in the wider community, thus reducing the likelihood of committing deviant acts (Hirschi

1969; Sampson and Laub 1993). Families, schools, communities, and religion promote conventional behaviors that use such social control to socialize their members to adapt to the group's norms and values. One value imparted from a religious perspective is the view that sex is reserved for marriage and should occur in the context of a loving, committed relationship (Simons et al., 2004) thus any violations of this principle is considered immoral.

This theory assumes that any deviation from laws or moral codes results when an individual's bond to society is weak or broken (Hirschi, 1969). Hirschi comprises these bonds into four different elements: (a) *attachment* to parents, peers, teachers, schools, and religious institutions; (b) *commitment* to conventional goals; (c) *involvement* in conventional activities; and (d) *belief* in a system of common norms and values (Greenberg, 1999; Huebner and Betts, 2002; Simons et al., 2004). According to Hirschi's (1969) model, attachment is defined as the warmth and closeness one holds for those they care about. In this case, adolescents who have high affection and respect for their parents religious values as well as their own values, will be less likely to engage in risky sex because they want to avoid harm or incur disapproval from their significant others. Hirschi posits that the most significant influence is a child's attachment to his or her parent. Involvement refers to the amount of time spent participating in conventional activities (Anderson, Holmes, and Ostresh, 2002). In this case, adolescents who spend a larger amount of time participating in religious activities and following religious directives have less time to engage in risky sex behaviors. This theory can be used to explain how parental religiosity—through the transmission of religious values to the adolescent and parent-adolescent relationships expressed through warmth, support, monitoring, and etc., which in turn increase the frequency of discussions about sex—creates a social influence that discourages risky sexual behavior. The more involved the adolescent is in conventional activities and values and the

greater attachment to parents, the less likely he or she is to violate religious rules (e.g. no premarital sex, etc.). Commitment is defined as an individual's investment in a conventional activity. To this end, religious adolescents will be in support of religious teaching and conventional values and participate regularly in such conventional activities. Lastly, belief is defined as an individual's strong belief in the validity of social values and norms shared by society. As a result, religious adolescents will not engage in risky sexual behavior by follow the religious teachings that suggest no premarital sex.

The social control perspective guides the hypothesized path model (below) of the mechanisms through which parental religiosity influences adolescents' risky sexual behavior.

Hypothesized Model

A fully recursive path model (see Figure 1) was hypothesized to examine the effects of parental religiosity on their adolescents' risky sexual behavior. The model indicates both direct and indirect effects. A direct effect is hypothesized between parental religiosity and adolescent risky sexual behavior. Parental religiosity is expected to reduce the likelihood that an adolescent will engage risky sexual behavior.

Parental religiosity is also hypothesized to indirectly affect risky sex outcomes through several paths. First, religious parents are expected to be more likely to provide higher quality parenting which is measured by warm/supportive parenting, monitoring, inductive reasoning, consistent discipline, positive reinforcement, and low levels of hostility (Snider et al., 2004). Quality of parenting is, in turn, expected to be directly associated with lower participation in risky sexual behavior. Further, quality of parenting is expected to be related to risky sex indirectly through increased discussions about sex with the adolescent as well as increase the likelihood that the adolescent has a conventional peer group. Parental religiosity is expected to

be positively related to adolescent religiosity which, in turn, is expected to be associated with lower levels of risky sexual behavior. Further, adolescent religiosity is expected to result in a more conventional peer group which will be negatively associated with risky sexual behavior. Parental religiosity is not expected to be associated with a more conventional peer group directly; however, it is expected to indirectly influence adolescent risky sexual behavior through quality of parenting and the adolescents' religiosity. Research has found religion to have more of an effect on the sexual behaviors of females (Rostosky et al., 2003). Therefore, it is posited that the hypothesized paths may be more evident for females and yield different results therefore the model is separated by gender.

CHAPTER 3

METHODS

Participants

The Family and Community Health Study (FACHS) is a multisite study of neighborhood and family effects on the health and development of African American children. The 867 African American children and their primary caregivers were recruited from small towns and cities in Iowa and Georgia. The project includes 4 Waves of data, this study used Wave 3 in which target adolescents were between 15 and 16 years old to predict adolescent risky sexual outcomes in Wave 4 in which target adolescents were between 18 and 19 years old.

The families were recruited by telephone and 67% of the eligible families completed the interviews. Each family in the initial wave of data included a child who was 10 to 12 years old at the time of recruitment. Interviews were completed by the target child, his/her primary caregiver, and a secondary caregiver when one was present in the home. Caregivers received $100 and the target child received $70 for participating in the study.

Block groups, taken from 1990 census data, identified neighborhoods in Iowa and Georgia where the percentage of African American families were high enough for economically practical recruitment and in which 10 to 100 percent of families with children live below the poverty line. Two hundred fifty-nine blocks (115 in Georgia and 144 in Iowa) were identified and the families were recruited from them. The families with at least one fifth grade child were randomly selected from rosters. There were no significant gender differences in the socioeconomic status of the primary caregivers, parental religiosity, and the families per capital income. The per capital income for both males and females was $8,600.

Procedures

Each family was visited at their homes twice for 2 hours each. The first home visit focused on the informed consent for both the primary caregiver and the target child. Each home visit contained a self-report questionnaire administered in an interview format to the primary caregiver, the child, and a secondary caregiver if applicable. The interviews were conducted privately between one participant and one researcher, with no other family members present. Laptop computers were used and the questions appeared in sequence on the screen, which both the interviewer and participant could see. The interviewer read the question aloud and entered the participant's response using the computer keypad.

Measures

The measures were chosen to assess neighborhood and family effects on the health and development of African American families (Simons, Lin, Gordon, Brody, Murry, and Conger, 2002). The measures of parent and adolescent religiosity, parental practices, discussion of sex, and conversional peer groups were collected at Wave 3 to predict adolescent risky sexual behavior at Wave 4.

Parent Religiosity. The primary caregiver reported on his/her religious involvement and degree of religious commitment. The scale consisted of 16-items involving questions such as "How important are religious or spiritual beliefs in your day-to-day life?" and "How religious would you say you are?" The number of response categories varied by item. All items were coded so that high scores indicated more religiosity. Cronbach's alpha for this scale was .82.

Adolescent Religiosity. Adolescents were asked similar questions as their parents involving their religious involvement and degree of religious commitment. The scale consisted of 5-items.

The number of response categories varied by item. All items were coded so that high scores indicated more religiosity. Cronbach's alpha for the 5-item scale was .69.

Parental Practices. Past research has demonstrated that the items for each of the scales have high reliability and validity. These items were adapted from the Iowa Youth and Families Project (IYFP) (Conger and Elder, 1994) and was shown to correlate with observer ratings and child reports (Conger, Conger, Elder, Lorenz, Simons, and Whitbeck, 1992; Simons, 1996). Prior to data collection, focus groups were established to provide feedback on the each of the items to ensure that they were meaningful to African American parents and illustrated what they deemed as important factors of effective parenting.

Adolescents and parents rated parents' behaviors on questions involving warmth (e.g. "How often did your parent help you do something that was important to you?"), hostility (e.g. "How often did your parent threaten to hurt you physically?"), monitoring (e.g. "How often do you know what your child is doing after school?"), inductive reasoning (e.g. "How often do you ask what your child thinks before making decisions that affect him/her?"), consistent discipline ("How often would your child be disciplined at home if you knew he/she broke a school rule?"), and positive reinforcement ("When your child has done something you like or approve of, how often do you let him/her know you are pleased about it?"). All items were coded so that high scores indicated more of the parental practice, expect for hostility in which a high score indicated less hostility. Cronbach's alpha for the 28-item scale was .80.

Conventional Peers' Attitudes and Behaviors. Adolescents reported their affiliation with conventional peers. A 4-item scale assessed what their friends think and do. The scale consisted of questions such as "How many of your close friends have had sex?," "How many of your close friends have had sex without using a condom?", "How many of your close friends have gotten

pregnant or gotten a girl pregnant?", and "How many of your friends think having sex is OK for kids your age?" All items were coded so that high scores indicated more conventional peer behaviors. Cronbach's alpha for the scale was .63.

Early Initiation of Sex. The early initiation of sex scale consisted of one question that asked the respondents "How old were you when you first had sex?" The item was reverse coded from positive to negative to show that higher scores represent earlier sex and low scores represent later sex.

Frequency of Sex. The sex frequency scale consisted of 3 questions that asked the respondents "With how many people have you had sex?," "In the last 3 months, about how many times have you had sex with a male/female?," and "How many different males/females have you had sexual intercourse with during the last 3 months?" The items were standardized and then summed together to represent the sex frequency scale. The items were coded so that high scores indicated more sexual activity. Cronbach's alpha for the scale was .52.

Non-Condom Use. The non-condom use scale consisted on two questions that asked "When you have sex, how often do you use a condom?" and "In the last 3 months, how many times have you had sex without using a condom (rubber)?" The two items were standardized and summed together to represent the non-condom use category. The items were coded so that high scores indicated more non-condom use. Cronbach's alpha for the scale was .66.

Adolescent Risky Sexual Behavior. Adolescents reported on their risky sexual behaviors. An aggregate score of the three categories listed above were calculated to represent risky sexual behavior. The items were coded so that high scores represented more risky behavior. Cronbach's alpha for the scale was .53.

Parents' Discussion of Sex. This construct measured the extent to which adolescents report how often their parents discussed sex with them. The 4-item scale included questions such as "How often has your parent talked to you about sex?" and "How often has your parent talked to you about the dangers of STDs?" The items were coded so that high scores indicated more discussions of sex. Cronbach's alpha for the 4-item scale was .89.

CHAPTER 4

RESULTS

The final sample included 612 adolescents (277 boys, 335 girls) and their primary caregivers. Approximately 98% of the parents in this study reported religious or spiritual beliefs in their day-to-day life to be important. This is consistent with earlier research that contends that African Americans have high levels of religious commitment and involvement (Sinha et al., 2007; Smith et al., 2002).

Adolescents who had not had sex were excluded from the analysis because this study examined the risky sexual behaviors of multiple sexual partners, early age at first sex, and non condom use. About 81 % of adolescents reported having had more than two sexual partners (91.5% of males and 72.5% of females). Similarly, 39.5% of adolescents reported having had sex before age 15. Of those, 47.8% were males and 32.6% were females. Furthermore, 57.9% of adolescents indicated never using a condom. Nearly 70% of males and 51.2% of females reported never using a condom. These statistics are consistent with prior research on the high rates of sexual behavior among African American adolescents (CDC, 2007; Kaiser Family Foundation, 2008) which signals the salience of identifying protective factors that may reduce or eliminate such risky sexual behaviors.

Table 1 presents the means, standard deviations, and correlation matrix for the study constructs. The coefficients above the diagonal are for males and those below are the coefficients for females. The pattern of significant associations is mostly consistent with the hypothesized model but suggests gender differences. Parental religious commitment is correlated with parental practices and adolescent religiosity for both males and females. Parental practices were associated with early initiation of sex, frequency of sex, and non-condom use in

females. However, they were not associated with any of the risky sexual behaviors in males. Parental practices were also associated with discussion of sex in both genders and conventional peers among females and not males. Discussion of sex was related to non-condom use among females and none of the risky sexual behaviors among males. Parental religious commitment was related to frequency of sex among females and none of the risky sexual behaviors among males. For adolescent religiosity, frequency of sex, early initiation, and non-condom use was associated among females but only frequency of sex was associated with adolescent religiosity in males. Furthermore, discussion of sex was related to frequency of sex and condom use in females but none of the risky sexual behaviors in males. These associations illustrate significant gender differences. Interestingly, conventional peers were associated with all of the risky sexual behaviors in both males and females.

No relationship was found between parental religiosity all of the adolescent risky sexual behaviors (e.g. early initiation of sex, frequency of sex, and non-condom use) for males or females which suggest that the influence of parents' religiosity on the three adolescent risky sexual behaviors may be indirect through the variables stated above.

TABLE 1 HERE

Structural equation modeling (SEM) analysis was undertaken using the MPlus statistical program, Version 5.2, to test the causal relationships between model variables (Muthen and Muthen, 2004). The data was found to be nonnormal (skewness was >2) therefore the method of bootstrapping was used to correct the standard errors (Hancock and Nevitt, 1999; Nevitt and Hancock, 2001; Simons et al., 2007). Analysis was performed separately for males and females on the three adolescent risky sexual behaviors (e.g. early initiation of sex, frequency or sex, and

non-condom use) to examine whether the various mechanisms of influence affect males and females differently.

The model fit was evaluated using chi-square test in which a nonsignificant test indicates a model that fits the data well. In addition, the comparative fit index (CFI) was used. CFI compares the hypothesized model over the null model to identify if there was any improvement. CFI varies from 0 to 1; a close to 1 CFI indicates a very good fit and values above .90 represent an acceptable fit (Bentler, 1990). We also used the RMSEA as an index of fit in which it corrects for model's complexity. RMSEA values less than .05 indicate a good fit (Steiger, 1990) and RMSEA greater than .08 represent errors in approximation (Byrune, 2001; Hu and Bentler, 1999). All the factor loadings for constructs with multiple indicators were in an acceptable range, and the chi-square, comparative fit index (CFI), and RMSEA indicated a reasonable fit of the data for each model.

The SEM models yield interesting gender differences in the various mechanisms through which parents religious commitment impacts early initiation of sex, frequency of sex, and non-condom use.

Early Initiation of Sex

Figure 2 shows the results for males. Figure 3 shows the results for females. For males, a direct influence between parental religiosity and early initiation of sex was not found. However, as hypothesized, indirect influences were found between parental religiosity and early initiation of sex through adolescent religiosity and a conventional peer group. The results indicate that parental religiosity increases adolescent religiosity (.21) which in turn increases the likelihood of the adolescent associating with conventional peers (.06). Having a conventional peer group was negatively associated with an early sexual debut (-.37). In addition, the positive

association between parent and adolescent religiosity (.21) decreased early sexual debut (-.08). Contrary to expectations, the relationship between parental religiosity and conventional peers approaches significance resulting in a negative association (-.04). This finding is not consistent with extant research. For example, Smith (2003) that found religious parents to foster their child's social context thus influencing their networks of friends.

For females, there was not a direct influence between parental religiosity and early initiation of sex. However, several indirect influences were found. Parental religiosity was found to be positively associated with the quality of parenting (.27) which in turn was negatively associated with an early sex debut (-.03). In addition, quality of parenting increased adolescents' association with conventional peers (.04) thus decreasing an early sex debut (-.25). Parental religiosity was also found to increase adolescent religiosity (.22) which in turn was negatively related to an early sexual debut (-.09). Adolescent religiosity was also positively related to conventional peer group associations (.05). Conventional peer group was negatively related to an early sexual debut (-.25).

Frequency of Sex

The results for males are presented in Figure 4. The results for females are presented in Figure 5. For males, the figure shows that parental religiosity does not directly predict adolescents' frequency of sex. However, the results indicate that the influence of parental religiosity is linked to frequency of sex indirectly through its effects on adolescents' religiosity and a conventional peer group. Parental religiosity increases adolescent religiosity (.21) which in turn increases the likelihood of the adolescent affiliating with conventional peers (.06) thus decreasing the frequency of sex (-.15). The association between parental religiosity and conventional peers approaches significance resulting in a negative relationship (-.03). This is not

consistent with the recent Smith (2003) article stated above. Additionally, conventional peers were negatively associated with males' frequency of sex. The only model variable directly influencing males' sexual frequency was their peer group.

The pattern was different for females. Although parental religiosity was not found to be directly associated with adolescents' frequency of sex, parental religiosity was indirectly associated with frequency of sex through several mechanisms. First, parental religiosity was found to be positively associated with the quality of parenting (.28) which in turn was negatively associated with frequency of sex (-.02). Quality of parenting was also associated with conventional peers (.04) which decreased females' frequency of sex (-.11). In addition, parental religiosity increased adolescent religiosity (.22) which was found to be negatively associated with frequency of sex (-.05). Lastly, adolescent religiosity increases the association with conventional peers (.06).

Non-Condom Use

The results for males are presented in Figure 6 and the results for females are presented in Figure 7. Figure 6 indicates that parental religiosity does not directly predict adolescents' non-condom use. However, the results indicate that the influence of parental religiosity is linked to non-condom use indirectly through its effects on adolescents' religiosity and a conventional peer group. Parental religiosity was found to increase adolescent religiosity (.21) which in turn increased the likelihood of the adolescent associating with conventional peers (.06). Conventional peers were found to decrease non-condom use (-.14).

Figure 7 illustrates a different pattern for females. Although parental religiosity was not found to be directly associated with adolescents' non-condom use, parental religiosity was indirectly associated with non-condom use through several mechanisms. Parental religiosity

through its increase in quality of parenting (.28), increased adolescents' association with conventional peers (.04) thus decreasing non-condom use (-.17). Parental religiosity increased adolescent religiosity (.22) resulting in a moderate ($p < .10$) decrease in non-condom use (-.06). Lastly, parental religiosity increases adolescent religiosity (.22) which in turn increases the association with conventional peers (.06) resulting in a decrease in non-condom use (-.17).

Risky Sexual Behavior

One of the hypotheses in this study was that parental religiosity would be related to less condom use which is why the outcome variables of the three risky sex behaviors (e.g., early initiation of sex, frequency of sex, and non-condom use) were analyzed separately. However, the results revealed this not to be the case. In fact, the evidence showed parental religiosity to be related to less risky sexual behavior regardless of the risky sex outcome. Therefore, an aggregate measure of the three risky sexual behaviors listed above was constructed to create a risky sexual behavior measure.

Figure 8 shows the results for males. Figure 9 shows the results for females. For males, a direct influence between parental religiosity and risky sexual behavior was not found. However indirect influences were found between parental religiosity and risky sexual behavior through adolescent religiosity and association with a conventional peer group. Parental religiosity increases adolescent religiosity (.21) which in turn increases the likelihood of the adolescent associating with conventional peers (.06) thus decreasing males' risky sexual behaviors (-.58). Peer group is the only model variable to directly influence males' risky sexual behaviors. Inconsistent with our hypothesis, the relationship between parental religiosity and conventional peers approaches significance resulting in a negative association (-.03). This result

was not consistent with Smith's (2003) finding that religious parents foster their child's social context thus influencing their networks of friends.

For females, there was not a direct influence between parental religiosity and risky sexual behavior. However, several indirect influences were found. Parental religiosity was positively related to quality of parenting (.28) which in turn had a moderate ($p < .10$) negative association with risky sexual behaviors (-.04). In addition, parental religiosity increased quality of parenting which in turn was positively associated with conventional peers (.04) thus decreasing females' risky sexual behaviors (-.58). Parental religiosity also increases adolescent religiosity (.22) which was negatively associated with risky sexual behaviors (-.21). Lastly, adolescent religiosity increases the association with conventional peers (.06).

CHAPTER 5

DISCUSSION

This study examined underlying associations in order to clarify the processes that link parental religiosity to adolescent risky sexual behavior (e.g. early initiation of sex, frequency of sex, and non-condom use). Findings indicate, as hypothesized, that parental religiosity influences adolescent risky sexual behavior through various mechanisms and act as a protective factor against such deleterious behaviors among African American adolescents. Although the models do not illustrate direct influences between parental religiosity and early initiation of sex, frequency of sex, non-condom use, and or the aggregate of these three risky sexual behaviors, several mediating influences were shown to reduce these risky sexual behaviors. The findings suggest that parents' religious commitment, through mediating mechanisms such as adolescent religiosity, conventional peer group affiliation, and quality of parenting serve as a social control that operates to reduce adolescent engagement in risky sexual behavior.

Findings from the present study suggest that religious parents encourage religious commitment among their adolescents. As a result, religious adolescents are less likely to engage in early sex, have multiple partners, and have high incidences of non-condom use. Past research has shown that religious adolescents are more likely to view engaging in these types of risky sexual behavior as morally wrong (Regnerus, 2007; Simons et al., 2004). Furthermore, an adolescents' religious commitment, as encouraged by their parent, will discourage unconventional peer group affiliation. To that end, this study found that through the social control of religion, religious adolescents tended to affiliate with peers who share similar conventional values such as not having sex. This social network then decreases the likelihood of the adolescent engaging in risky sexual behavior.

Religious parents were also found to display high levels of warmth, support, monitoring, inductive reasoning, consistent discipline, positive reinforcement, and a low level of hostility. These parenting practices, in turn, increased adolescents' affiliation with conventional peers and decreased the likelihood of them engaging in risky sexual behavior. These findings are consistent with a study by Snider et al. (2004) that found highly religious parents to be more likely to demonstrate effective parenting practices such as communication, warmth, and monitoring. Similarly, a study of adolescent girls, whose families were highly religious and provided more direct monitoring, found the adolescents to experience sexual initiation at older ages (Ranson et al., 2000).

In addition, the results suggest that African American adolescents' sexual behaviors should be examined separately by gender. This finding is consistent with results reported by McCree et al. (2003) in their study of religiosity and sexual health among African American females. The authors hypothesized that parental religiosity will impact male and female sexual health differently. The models in this study yield similar results and show gender differences. Males were indirectly influenced by parental religiosity through their own religious commitment and social network on all four risky sexual behavior measures including the aggregate of the three measures. Thus, it may be posited that quality of parenting and discussions of sex are not important influences on males whereas their own religious commitment and the peer group they associate with may be. Results indicated that males' religious commitment and peer group affiliation influences their age at first sex, frequency of sex, non-condom use, and the aggregate of the three risk behaviors. To this end, quality of parenting and whether or not a parent discusses sex with their male adolescent has less influence than peers when examining risky sexual behavior among African American males.

For females, the findings suggest that parenting practices, adolescent religiosity, discussions of sex, and conventional peer group affiliations are all relevant variables that deter or reduce the likelihood of the adolescent engaging in risky sexual behavior. Therefore, it can be concluded that African American females' age at first sex, frequency of sex, non-condom use, and the aggregate of these three risky behaviors are impacted through many avenues of influence. The avenues of influence are fewer for male adolescents thus as hypothesized, the results illustrated that the various mechanisms have more influence on females than males.

Interestingly, the results indicate that the underlying influence for both males and females in this study were conventional peer group affiliations. Peer group was the most strongly related variable to each of the outcomes for both genders. The findings suggest that peers are important influences on the risky sexual behaviors of African American adolescents. Peers play critical roles in guiding and shaping adolescents' risk activities (Maxwell, 2002; Simons et al., 2004). A recent study by Wallace, Miller, and Forehand (2008) on African American adolescents concluded that peers shaped adolescents' sexual attitudes and behaviors. To this end and consistent with Kinsman et al. (1998), it is posited that peers create a sense of normative behavior in which engaging in early sex, having a high number of sexual partners, and not using condoms may be supported or rejected by peers thus becoming a peer group norm if supported.

As a result of this study's findings, prevention and intervention programs should encourage parents to be involved in monitoring their child's peer groups. As stated above, peers have a powerful influence on adolescents' attitudes and behaviors, therefore parents need to be observant of their child's friends and peer groups. In addition, these programs should recognize the impact peers have on adolescents' decisions to engage in risky sexual behavior and consider peers to be a central component in their preventative intervention curriculum. This will allow

adolescents and their peers to receive the same messages about risky sexual behavior thus reinforcing the lessons to each other. It may be that for African American adolescents, individual attitudes and behaviors about risky sexual behavior are superseded by peer group norms.

The identification of these once hidden mechanisms through which parental religiosity influences adolescents risky sexual behavior based on gender provides support for the development of gender-specific prevention and intervention programs that diffuse messages about safe sex to males and females separately. Given that males were found to have fewer avenues of influence whereby parental religiosity decrease their risky sexual behavior, programs should aim at targeting those specific avenues in order to reduce male risk behaviors.

In addition, this study's findings yield important implications for constructing faith-based risky sex prevention programs that highlight the role of religion and how it may have varying effects on males and females. Other studies support this suggestion that faith-based prevention programs may be more effective than sex education programs in educating African American adolescents about their risky sexual behaviors (McCree et al., 2003; Rubin, Billingsley, and Caldwell, 1994) thus in turn deterring or reducing such behaviors.

Future research should begin to include data from adolescents' close friends in order to understand how various aspects of friendships relate to sexual attitudes and behaviors. Researchers should also explore same-sex versus cross-sex friendships and the different contexts through which these friendships are formed. Recognizing the structure of these relationships and how adolescents make friendship choices are important factors in examine how such influence transpires. Additionally, more studies should focus on the influence of peers norms rather than individual attitudes and behaviors alone.

Despite the many strengths, this study has limitations. First, our sample is limited to African American families. To a certain extent, this focus is needed given the high rate of STIs and unwanted pregnancies in the African American community. However, the results may not be generalizable to other ethnicities. Secondly, our sample included only sexually experienced adolescents because we examined adolescent risky sexual behaviors thus no inferences can be made about sexually inexperienced adolescents.

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APPENDIX A: STUDY QUESTIONS

Wave 3- Primary Caregiver Interview		
Parental Religiosity= .823 N= 16		
Religious participation		
G3B3002	Are you an official member of a church or other place of worship?	
G3B3003	How many church clubs or organizations do you belong to or participate in?	
G3B3004	Besides regular service(s), how often do you take part in other activities at your place of worship?	
G3B3005	Do you hold any positions or offices in your church or place of worship?	
G3B0313	How often in the past month did you... Attend church services?	
G3B0314	How often in the past month did you...Attend social events with other members of your church?	
G3B0315	How often in the past month did you...Lead a religious service?	
G3B0316	How often in the past month did you...Teach Sunday school or a class on religion?	
G3B0317	How often in the past month did you...Attend a class or discussion group on religion?	
Religious commitment		
G4B3006	How often do you read religious books or other religious materials?	
G4B3007	How often do you watch or listen to religious programs on TV or radio?	
G4B3008	How often do you pray?	
G4B3009	How often do you do the following…Ask someone to pray for you?	
G4B3010	How religious would you say you are?	
G4B0311	In general, how important are religious or spiritual beliefs in your day-to-day life? Are they...	
G4B0312	When you have problems or difficulties in your family, work, or personal life, how often do you seek spiritual comfort and support? Is it...	

Parenting Scale= .802 N= 28		
Warmth + Monitoring + Inductive Reasoning + Consistent Discipline + Hostility + Positive Reinforcement		
G3E0231	During the past 12 months when you and your parent have spent time talking or doing things together, how often did your parent… Help you do something that was important to you?	
G3B0233	During the past 12 months, how often did your parent… Let you know he/she really cares about you?	
G3B0235	During the past 12 months, how often did your parent… Listen carefully to your point of view?	
G3B0237	During the past 12 months, how often did your parent… Act supportive and understanding toward you?	
G3B0240	During the past 12 months, how often did your parent… Act loving and affectionate toward you?	
G3B0242	During the past 12 months, how often did your parent… Have a good laugh with you about something that was funny?	
G3B0245	During the past 12 months, how often did your parent… Let you know that he/she appreciates you, your ideas or the things you do?	
G3B0249	During the past 12 months, how often did your parent… Tell you he/she loves you?	

G3B0252	During the past 12 months, how often did your parent… Understand the way you feel about things?	
G3B0009	How often do you know what [name] does after school? Is it…	
G3B0010	How often do you know where [name] is and what he/she is doing? Is it…	
G3B0011	How often do you know how well [name] is doing in school? Is it…	
G3B0012	How often do you know if [name] does something wrong? Is it…	
G3B0013	How often can [name] do whatever he/she wants after school without you knowing what he/she is doing? Is it…	
G3B0028	How often do you ask [name] what he/she thinks before deciding on family matters that involve him/her? Is it…	
G3B0029	How often do you give reasons to [name] for you decisions? Is it…	
G3B0030	How often do you ask [name] what he/she thinks before making decisions that affect him/her? Is it…	
G3B0031	When [name] doesn't know why you make certain rules, how often do you explain the reason? Is it…	
G3B0032	How often do you discipline [name] by reasoning, explaining, or talking to him/her? Is it…	
G3B0014	How often would [name] be disciplined at home if you knew he/she broke a school rule? Is it…	
G3B0015	How often do you give up when ask [name] to do something and he/she doesn't do it? Is it…	
G3B0016	When you tell [name] to stop doing something and he/she doesn't stop, how often do you discipline him/her? Is it…	
G3E0238	During the past 12 months, how often did your [PC RELATIONSHIP]...Threaten to hurt you physically? Was it...	
G3E0244	During the past 12 months, how often did your [PC RELATIONSHIP]...Slap or hit you with [HIS/HER] hands? Was it...	
G3E0246	During the past 12 months, how often did your [PC RELATIONSHIP]...Strike you with an object? Was it...	
G3E0248	During the past 12 months, how often did your [PC RELATIONSHIP]...Throw things at you? Was it...	
G3B0033	When [TARGET NAME] has done something you like or approve of, how often do you let [HIM/HER] know you are pleased about it? Is it...	
G3B0034	How often do you give [TARGET NAME] a reward like money or something else [HE/SHE] would like when [HE/SHE] gets good grades, does [HIS/HER] chores, or something like that? Is it...	

Wave 3- Target Interview (TI)		
Religion/Church Category= .688 N= 5		
G3E0114	In general, how important are religious or spiritual beliefs in your day-to-day life?	
G3E0115	How often in the past month did you...Attend church services?	
G3E0116	How often in the past month did you...Attend social events at your church?	
G3E0118	How often in the past month did you...Attend Sunday School, a class, or discussion group on religion?	
Discussion about Sex (with Parent)= .889 N= 4		
G3E0308	In the past year, how often has your [PC relationship] talked to you about… Sexual behavior? Was it…	

G3E0309	In the past year, how often has your [PC relationship] talked to you about… The dangers of sexually transmitted diseases ("crabs," gonorrhea, Chlamydia, herpes)? Was it…	
G3E0310	In the past year, how often has your [PC RELATIONSHIP] talked to you about...Issues related to birth control? Was it...	
G3E0311	In the past year, how often has your [PC RELATIONSHIP] talked to you about...The problems of AIDS? Was it...	

Wave 4- Target Risky Sexual Behavior= .526 N= 6		
Frequency= .519 N= 3		
G4T3108	With how many people have you had sex?	
G4T4109	In the last 3 months, about how many times have you had sex with a [Male/Female]?	
G4T4190	How many different [Male/Female]s have you had sexual intercourse with during the last 3 months?	
Early Initiation of Sex		
G4T4098	How old were you when you first had sex with a [MALE/FEMALE].	
Condom use= .660 N= 2		
G4T3099	When you have sex, how often do you use a condom?	
G4T3110	In the last 3 months, how many times have you had sex without using a condom (rubber)?	
Risky Sexual Behavior (aggregate of all 3)= .529 N=6		

Wave 3- Target Conventional Peer Group= .629 N=4		
G3T3017	During the past 12 months, how many of your close friends have had sex without using a condom? Is it...	
G3T0110	During the past 12 months, how many of your close friends have...Had sex? Is it...	
G3F0111	During the past 12 months, how many of your close friends have...Gotten pregnant or gotten a girl pregnant? Is it...	
G3F0149	How many of your friends think having sex is OK for kids your age?	

Table 1. Correlation Matrix for All Indicators by Gender

	1	2	3	4	5	6	7	8	9	Mean	Std. Dev.
1. Parental Practices	—	.188*	.145*	.343*	-0.028	-0.079	0.003	-0.054	0.089	82.49	8.08
2. Parental Religiosity	.174*	—	.351*	0.028	-0.053	-0.057	0.015	-0.028	-0.035	35.68	5.81
3. Adolescent Religiosity	0.066	.361*	—	0.118	-0.069	-.159*	-0.076	-0.112	0.102	9.99	3.42
4. Discussions of Sex	.297*	0.077	.127*	—	-0.048	-0.023	-0.026	-0.015	0.006	10.00	3.97
5. Early Initiation of Sex	0.164*	-0.039	-0.176*	-0.048	—	.329*	.219*	.608*	-0.257*	-15.16	2.24
6. Frequency of Sex	-0.182*	-0.158*	-0.206*	-0.082	.319*	—	.158*	.673*	-0.145*	0.65	1.66
7. Condom Use	-0.116*	-0.069	-0.166*	-0.154*	.264*	.165*	—	.723*	-0.161*	-0.27	1.48
8. Risky Sexual Behavior	-0.196*	-0.128*	-0.254*	-0.142*	.528*	.616*	.765*	—	-0.258*	0.43	3.64
9. Conventional Peers	.224*	0.032	.127*	-0.004	-0.237*	-0.184*	-0.159*	-0.268*	—	6.84	1.58
Mean	81.88	35.45	10.28	11.33	-15.9	-0.54	0.22	-0.36	6.7152		
Std. Dev.	9.41	6.04	3.61	3.85	1.96	1.23	1.85	3.93	1.51		

*Note: Correlations above the diagonal are for males (N= 277), whereas those below the diagonal are for females (N= 335); *p≤.05*

Figure 1: The Influence of Parental Religiosity on Adolescent Risky Sexual Behavior

Hypothesized Model

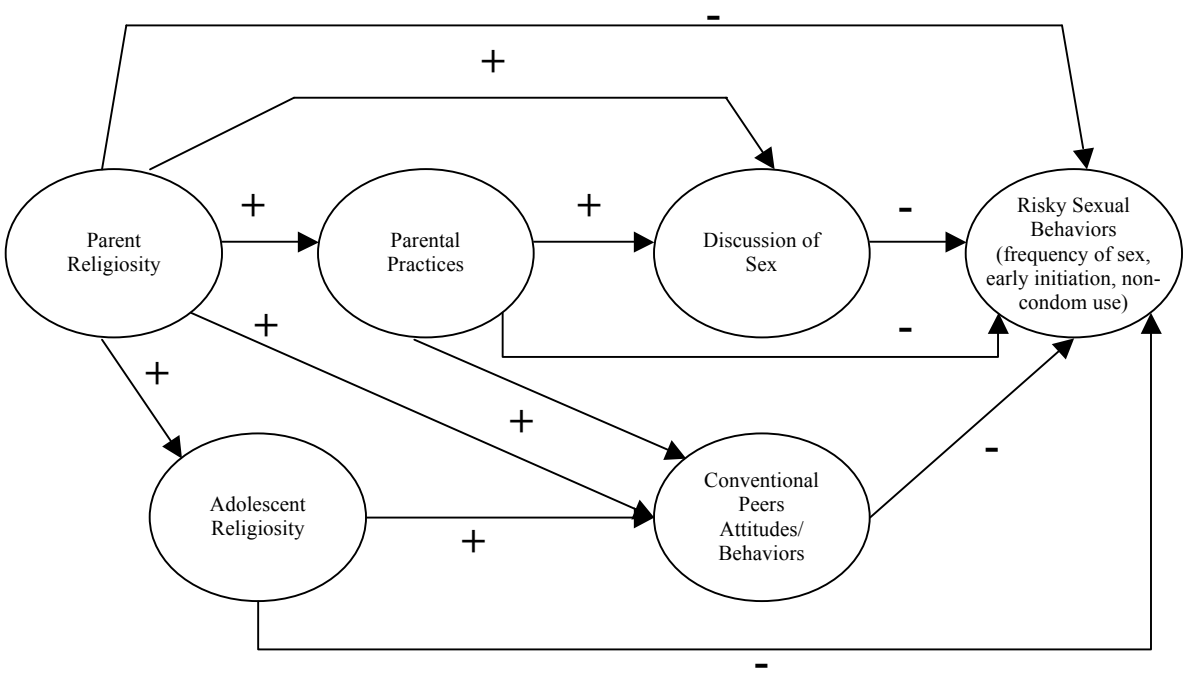
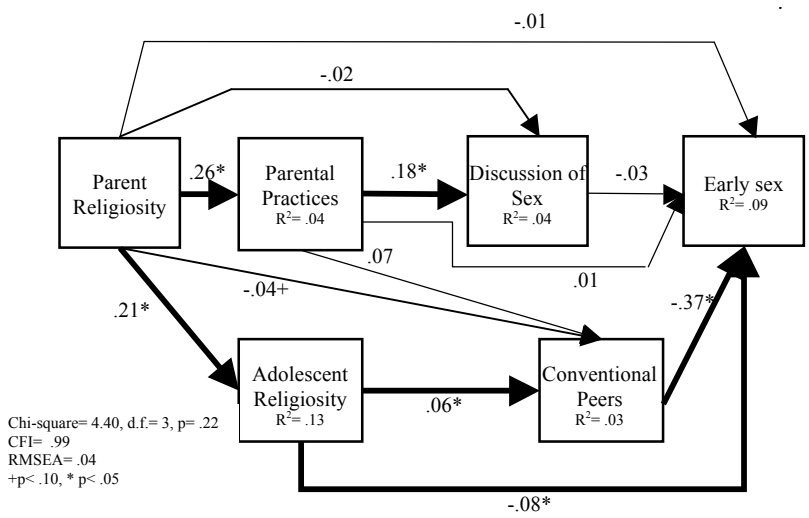
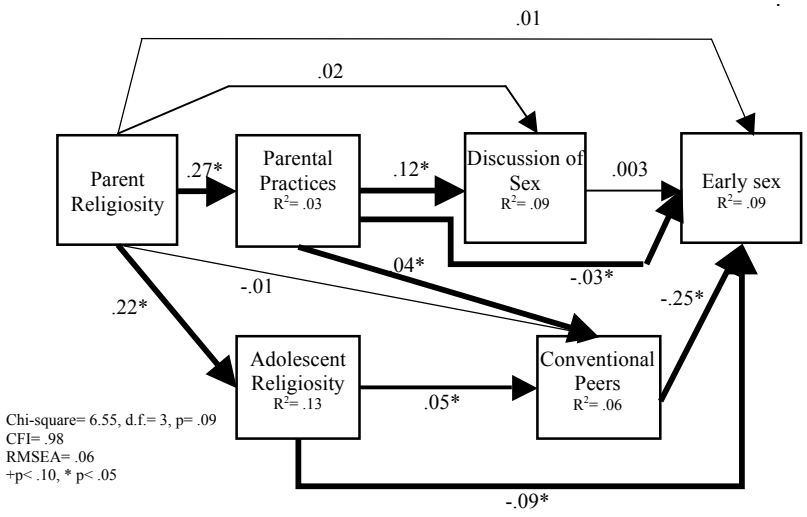


Figure 2. Males' early initiation of sexual intercourse.



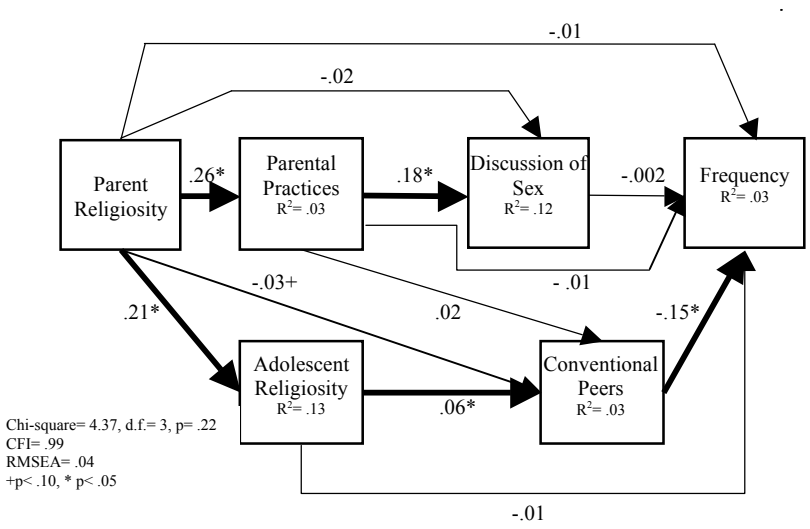
NOTE: Bold lines indicate paths significant at p≤ .05.

Figure 3. Females' early initiation of sexual intercourse.



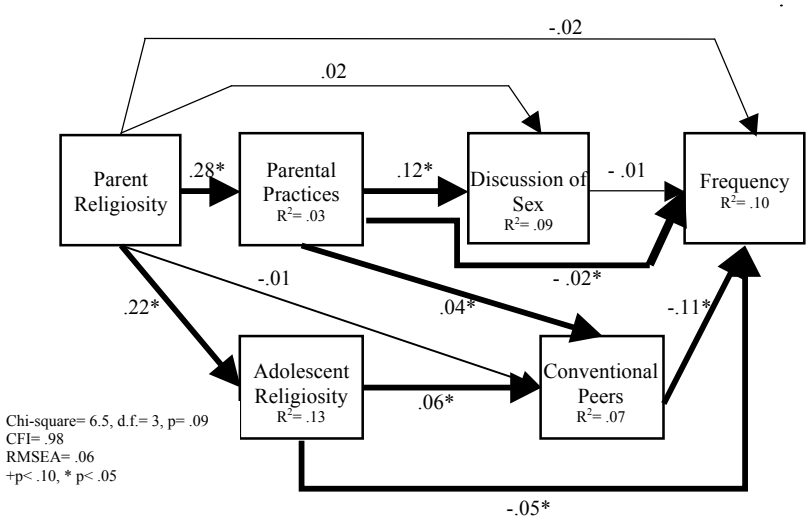
NOTE: Bold lines indicate paths significant at p≤ .05.

Figure 4. Males' frequency of sexual intercourse.



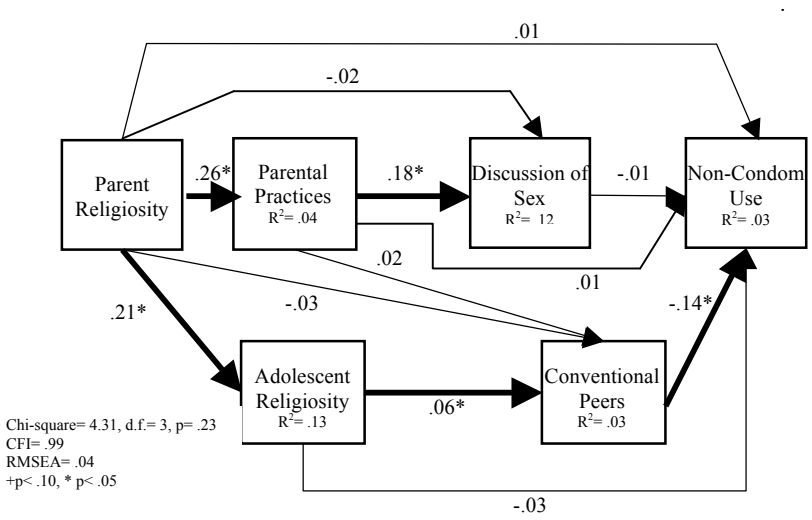
NOTE: Bold lines indicate paths significant at p≤ .05.

Figure 5. Females' frequency of sexual intercourse.



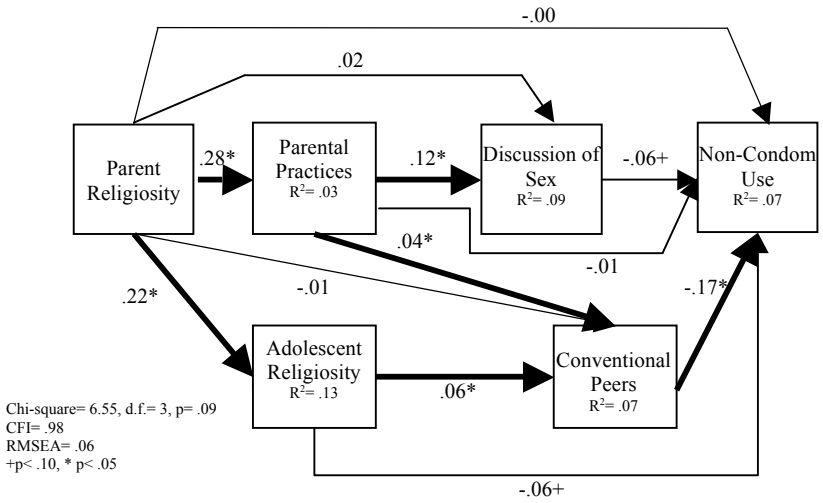
NOTE: Bold lines indicate paths significant at p≤ .05.

Figure 6. Males' condom use.



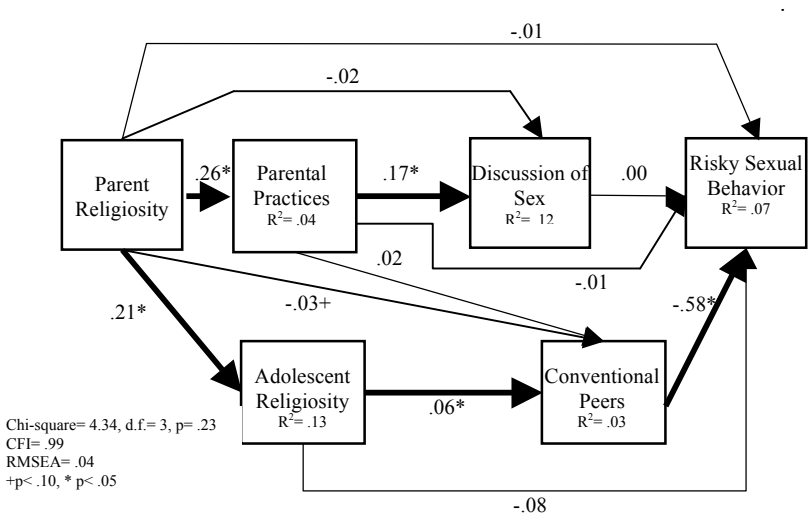
NOTE: Bold lines indicate paths significant at p≤.10.

Figure 7. Females' condom use.



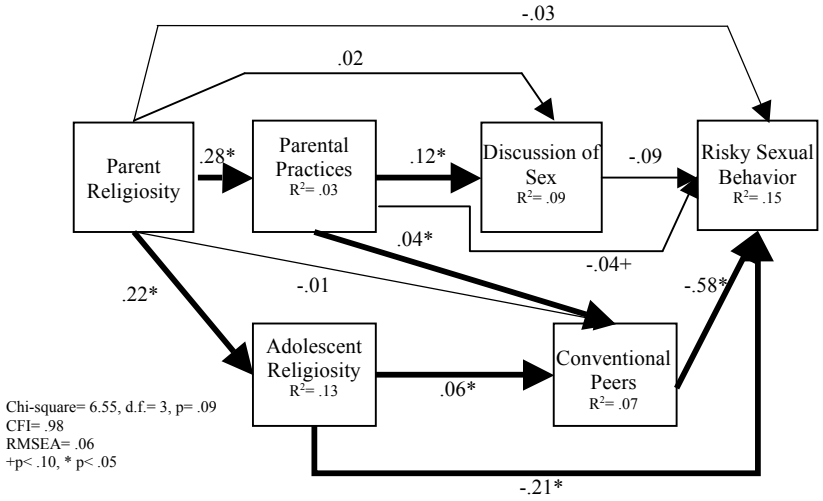
NOTE: Bold lines indicate paths significant at p≤ .05.

Figure 8. Males' risky sexual behavior.



NOTE: Bold lines indicate paths significant at p≤ .05.

Figure 9. Females' risky sexual behavior.



NOTE: Bold lines indicate paths significant at p≤ .05.

Table 2. Significance of the Indirect Effects for Males and Females (*N= 612*)

	Predictors	Mediators	Outcomes	Significance
Males' early initiation of sex	Parent religiosity	Parent practices	Discussion of sex	0.009
	Parent religiosity	Adolescent religiosity	Conventional peers	0.061
	Adolescent religiosity	Conventional peers	Early sex	0.092
Females' early initiation of sex	Parent religiosity	Parent practices	Early sex	0.058
	Parent religiosity	Adolescent religiosity	Early sex	0.008
	Parent practices	Conventional peers	Early sex	0.003
	Adolescent religiosity	Conventional peers	Early sex	0.076
	Parent religiosity	Parent practices	Discussion of sex	0.005
	Parent religiosity	Adolescent religiosity	Conventional peers	0.038
	Parent religiosity	Parent practices	Conventional peers	0.006
Males' freq of sexual intercourse	Parent religiosity	Parent practices	Discussion of sex	0.009
	Parent religiosity	Adolescent religiosity	Conventional peers	0.065
	Adolescent religiosity	Conventional peers	Frequency of sex	---
Females' freq of sexual intercourse	Parental religiosity	Parent practices	Frequency of sex	0.100
	Parental religiosity	Adolescent religiosity	Frequency of sex	0.010
	Parent practices	Discussion of sex	Frequency of sex	---
	Parent practices	Conventional peers	Frequency of sex	0.043
	Adolescent religiosity	Conventional peers	Frequency of sex	---
	Parent religiosity	Parent practices	Discussion of sex	0.005
	Parent religiosity	Adolescent religiosity	Conventional peers	0.035
	Parent religiosity	Parent practices	Conventional peers	0.006
Males' condom use	Parent religiosity	Parent practices	Discussion of sex	0.008
	Parent religiosity	Adolescent religiosity	Conventional peers	0.066
	Adolescent religiosity	Conventional peers	Condom use	---
Females' condom use	Parent practices	Discussion of sex	Condom use	0.077
	Parent practices	Conventional peers	Condom use	0.068
	Adolescent religiosity	Conventional peers	Condom use	---
	Parent religiosity	Parent practices	Condom use	---
	Parent religiosity	Adolescent religiosity	Condom use	0.086
	Parent religiosity	Parent practices	Discussion of sex	0.005
	Parent religiosity	Adolescent religiosity	Conventional peers	0.037
	Parent religiosity	Parent practices	Conventional peers	0.006
Males' risky sexual behavior	Parent religiosity	Parent practices	Risky sexual behavior	---
	Parent religiosity	Adolescent religiosity	Risky sexual behavior	---
	Parent practices	Discussion of sex	Risky sexual behavior	---
	Parent practices	Conventional peers	Risky sexual behavior	---
	Adolescent religiosity	Conventional peers	Risky sexual behavior	0.091
	Parent religiosity	Parent practices	Discussion of sex	0.009
	Parent religiosity	Adolescent religiosity	Conventional peers	0.065
	Parent religiosity	Parent practices	Conventional peers	---
Females' risky sexual behavior	Parent religiosity	Parent practices	Risky sexual behavior	---
	Parent religiosity	Adolescent religiosity	Risky sexual behavior	0.004
	Parent practices	Discussion of sex	Risky sexual behavior	---
	Parent practices	Conventional peers	Risky sexual behavior	0.007
	Adolescent religiosity	Conventional peers	Risky sexual behavior	0.069
	Parent religiosity	Parent practices	Discussion of sex	0.004
	Parent religiosity	Adolescent religiosity	Conventional peers	0.034
	Parent religiosity	Parent practices	Conventional peers	0.006