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Adolescents' religious discordance with mothers: Is there a connection to sexual risk behavior during emerging adulthood?

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Introduction

In recent decades researchers have documented the protective influence of religion on a variety of health outcomes (Rew & Wong, 2006; Van Dyke & Elias, 2007), including adolescent sexual risk-taking (e.g., Lefkowitz, Gillen, Shearer, & Boone, 2004; Nonnemaker, McNeely, & Blum, 2003). While family relationships are key to shaping both teen religiosity (Regnerus, 2003) and sexual risk-taking behavior (Majumdar, 2006), the role of family religiosity in shaping adolescents' and young adults' sexual risk-taking behavior remains underexplored. Emerging adulthood represents a critical life period for the exploration of relationships and intimacy (Arnett, 2000, 2007), and is characterized by high levels of risk-taking as compared to other life stages (CDC, 2009). However, little research has investigated the potential preventive role of family religiosity for this group and the processes that shape this influence. This study investigated the longitudinal role of shared family religiosity in influencing sexual risk-taking behavior within an emerging adult sample.

Although sexual behavior becomes more normative as adolescents transition into emerging adulthood (Michael, Gagnon, Laumann, & Kolata, 1995), the negative consequences of *risky* sexual behaviors remain a concern well into adulthood. Having multiple sexual partners has been linked to negative adolescent and early adult outcomes, such as drug and alcohol use and failure to use birth control (Kuortti & Kosunen, 2009), and can jeopardize educational attainment (Fergusson & Woodward, 2000), while unprotected sex puts individuals at risk for negative health outcomes such as HIV infections and sexually transmitted diseases (STDs) (CDC, 2009). While both adolescents and emerging adults show high rates of sexually transmitted infections (CDC, 2010), in contrast to rates for adolescents there has been no recent decline in rates of unplanned pregnancies among young adults (NIH: PA-09-014, 2009). The growing understanding of emerging adulthood as a period of exploration of relationships and physical intimacy (Arnett, 2000, 2007) makes this topic an important area of investigation for sexual risk-taking behavior.

Nonnemaker and colleagues (2003) suggest that religiosity is a protective factor theorized to reduce risk-taking behaviors through mechanisms such as social support (Ellison and Levin, 1998), self-regulation (McCullough & Willoughby, 2009), and social control (Rohrbaugh & Jessor, 1975). Empirical studies have found associations between delayed initiation of

sexual intercourse and indicators of religiosity such as importance of religion (Holder et al., 2000; Lefkowitz et al., 2004), frequency of prayer (Nonnemaker et al., 2003), and attendance at religious services (Lefkowitz et al., 2004; Sinha, Cnaan, & Gelles, 2007). A study of Latino adolescents found that both religious service attendance and the importance accorded to religion were associated with delayed sexual initiation as well as with fewer lifetime sexual partners (Edwards, Fehring, Jarrett, & Haglund, 2008). Using data from the National Longitudinal Study of Adolescent Health (Add Health), a review of research concluded that religiosity predicted delay in onset of intercourse, particularly for White females (Rostosky, Wilcox, Comer Wright, & Randall, 2004). Specifically, findings supported protective roles for prayer and for a composite of indicators of religiosity, which included elements of religious importance, prayer, and attendance.

However, not all studies find links between religiosity and sexual risk-taking. In a recent review of longitudinal research on the predictors of adolescent sexual intercourse, Zimmer-Gembeck and Helfand (2008) reported weak and inconsistent associations between religiosity and sexual behavior. The studies in which religious attitudes predicted delayed age of first sexual intercourse have showed small effects, and only then for girls (Meier, 2003; Miller et al., 1997). In Rostosky and colleagues' review of studies of religiosity and adolescent sexual behavior, the authors identified protective effects of the influence of religious attendance on White girls' sexual debut. Fewer studies have assessed the protective influence of combinations of religiosity factors on sexual behavior. Those reported showed inconsistent findings depending on adolescents' age, gender, and racial background (Rostosky et al., 2004). Given these findings, it is clear that large-scale studies are needed to examine which elements of religiosity are protective against sexual risk-taking.

The role of family relationships may be a key to the protective nature of religiosity. Early family relationships help determine how children see themselves and their ability to build healthy relationships (Bowlby, 1979). Despite growing peer influence, family remains a key support in promoting affective and behavioral competencies critical to healthy development and relationships during adolescence and adulthood (Markiewicz, Lawford, Doyle, & Haggart, 2006; Paradis et al., 2011). Empirical research has identified links between positive family relationships and reduced risk-taking behavior. Studies using Add Health data specifically link both parent connectedness (Henrich, Brookmeyer, Shrier, & Shahar, 2006) and family involvement (Majumdar, 2006) to reduced adolescent engagement in risky sexual activities, such as never using a condom and early onset of sexual activity. Family relationships also provide an important social context for the development of adolescent religiosity (Regnerus, 2003) and help to provide the foundation for adolescents' religious development (King & Roeser, 2009).

Social Control Theory provides one lens through which to examine the role of family relationships and religiosity in risk-taking behavior. This theory was developed decades ago to explain delinquency (Hirschi, 1969) and has since been applied to sexual behavior (e.g., Siebenbruner, Zimmer-Gembeck, & Egeland, 2007). Hirschi suggested that ties with societal institutions, such as church and family, restrain individuals from engaging in deviant behavior by encouraging oversight of youth and providing models for healthy behavior. Social interactions, particularly those with family, help children to internalize shared moral norms for behavior (Coleman, 1988). Regnerus (2003) found that parent religiosity protected against adolescent delinquency, particularly for girls, and suggests that this protective effect may in part reflect the intergenerational transmission of parental religious beliefs and values. In the realm of adolescent sexuality, institutional and family interactions can help shape adolescents' values and attitudes consistent with delayed sexual activity (Zimmer-Gembeck and Helfand, 2008). For example, Kaye and colleagues (2009) found that family transmission of positive values reduced adolescents' likelihood of risky

sex. A further study using social control theory found links between parent religiosity and adolescent sexual behavior (Landor, Simons, Simons, Brode, & Gibbons, 2011).

However, the influence of family religiosity may not be straightforward. Family religious concordance — the extent to which adolescents agree or disagree with their families on matters of religion — represents an emerging area of family research that may contribute to understanding the circumstances under which religiosity is protective. Initial exploration of religious concordance suggests that the intergenerational transmission of religiosity within families is not always a smooth, straightforward process (Regnerus, 2003). Rather, Pearce and Haynie (2004) suggest that children do not always share their parents' religious beliefs, values, and practices, which may reduce the potentially protective effects of religiosity. Parallel to dynamics in marital relationships (Myers, 2006), parental religiosity may be protective for children who share the religiosity of their parents, but may induce conflict and therefore increase risk-taking behaviors for those who do not share their parents' religious beliefs. Consistent with Myers' contention, Bartowski, Xu, and Levin (2008) found that family religious discussions can positively influence child development, although family arguments about religion can have a negative effect. In a more direct assessment of religious concordance, Pearce and Axinn (1998) found that parents and children who endorsed similar levels of religious importance (either high or low) reported better relationship quality than those with differing levels. In a follow-up study of parent/teen religious concordance using the Add Health data, Pearce and Haynie (2004) found the lowest rates of delinquency among adolescents with high levels of maternal religious concordance when *both* the adolescent and the mother were highly religious (assessed by frequency of religious service attendance and importance of religion). Adolescents with a poor match in adolescent/mother religiosity showed the highest risk of delinquency. In contrast, Kim and colleagues found that parents' religious importance and church attendance were most strongly protective for children's psychological health when children identified themselves as lower than their parents on these dimensions of religiosity (Kim, McCullough, & Cicchetti, 2009). Further attention to the direction of difference may help to clarify the nature of these associations.

In a recent study of religious concordance and teen-parent relationship quality, Stokes and Regnerus (2009) explored both *whether* adolescents and their parents in the Add Health dataset were similar or dissimilar in religiosity, as well as *in which direction* any dissimilarity occurred. The authors found that teens who were more religious than their parents reported higher quality parental relationships than those who were less religious than their parents. This finding is consistent with Mahoney's (2005) contention that adolescents with low religiosity paired with highly religious mothers may incur a unique risk by rejecting family religious values and beliefs, which often serve to curtail adolescent sexual activity. More recently, Noonan, Tracy, and Grossman (2012) found similar patterns when they examined discordance and direction of difference in Add Health teens' and mothers' relationships. Their findings showed higher levels of mother/teen relationship quality in profiles of concordant pairs (in which teen and mother pairs were highly religious) than in discordant profiles. However, their findings also indicated that discordance may not necessarily compromise relationship quality, as one partially discordant mother/teen profile showed high levels of relationship quality.

Despite the complexities inherent in examining concordance, there is evidence that discordance can generate risky behavior, and that those behaviors may extend into adulthood, as family connections continue to provide a base from which individuals approach adult relationships. While prior studies have examined the association of religious discordance with family relationships and adolescent delinquency, its longitudinal association with emerging adults' sexual risk-taking has not been explored.

Current Study

In this paper, we use data from the Add Health Study to examine the *level* and *direction* of adolescent/mother religious discordance with sexual risk-taking six to seven years later. To cover a broad spectrum of religiosity that includes both public and private elements (Nonnemaker et al., 2003), we include three key domains of religiosity that have been associated with sexual outcomes in the literature: religious importance, frequency of prayer, and attendance at religious services. The focus on mothers is consistent with research findings identifying them as primary religious figures in many homes (Boyatzis, Dollahite, & Marks, 2006); it is also the case that the majority of parental participants in ADD Health are mothers. Due to gender differences in religiosity, sexual risk-taking, and associations between these two constructs (Landor et al., 2011; Rostosky et al., 2004) we conducted analyses for male and female emerging adults separately, in addition to analyses that used the overall sample. Social Control Theory would suggest that parents' religious beliefs and values would most strongly influence their children when they are shared by both parents and children. In contrast, when parents and teens differ on religiosity, parents' beliefs and values would provide less effective inhibitive influences on emerging adult sexual risk-taking behaviors. This could be particularly true for teens who report lower levels of religiosity than their parents, and who may actively reject their parents' religious values and beliefs, negating their protective influence. Therefore, we propose two hypotheses related to adolescent/mother religious discordance and young adult sexual risk-taking. The first relates to *level of discordance*: teens reporting higher levels of discordance with mothers concerning the importance of religion, frequency of prayer, and attendance at religious services would report more sexual risk-taking behaviors in emerging adulthood than those reporting the same levels of religiosity. The second hypothesis relates to *direction of discordance*: teens reporting lower importance of religion, frequency of prayer, and attendance at religious services than their mothers would report more sexual risk-taking behaviors in emerging adulthood than those reporting the same levels of religiosity.

Methodology

Sample

We use data from Waves I and III in-home interviews of the Add Health survey (Harris et al., 2009), a longitudinal study of the characteristics, behavior, and environments of adolescents and their health and achievement in adulthood. The Add Health sample is nationally representative of U.S. adolescents who were in grades 7–12 during the 1994–95 school year. Wave III data were collected via in-home interviews approximately six years later for 15,197 youth (73% of the original in-home sample), when participants were between 18 and 26 years old. The Wave III response rate was 77.4%; attrition analyses revealed minimal effects of the pattern of non-response on sample representativeness (Chantala, Kalsbeek, & Andraca, 2004). The current analysis was approved by Wellesley College's Institutional Review Board.

Among adolescents in the core sample, 12,184 records included mothers' religiosity data at Wave I. Of these, 7,004 were re-interviewed at Wave III. Four other sampling details are important to note. First, the analysis samples used here in the different models varied depending on the particular subsample on which the analysis was based (e.g., only unmarried respondents were used in the analysis predicting unprotected sex). Second, missing data were also an issue in the operationalization of the number of concurrent partners, as described later. Third, following the procedure used by Stokes and Regnerus (2009), we included an absolute measure of maternal religiosity as a control variable for each of the religious concordance variables of interest: religious importance, frequency of prayer, and service attendance. Consistent with these authors' procedure, we did not include

adolescents' absolute levels of religiosity, due to high levels of collinearity between teens' with mothers' reports of religiosity and our primary focus on concordance between mothers and adolescents religiosity.

Measures

Demographic variables—Demographic variables were drawn from information at Wave I and included *sex*, *age*, *race/ethnicity* (“check all that apply” drawing from both at-home and in-school surveys), *mother’s education* (0 ‘did not go to school’, 1 ‘eighth grade or less’, 2 ‘did not graduate high school’, 3 ‘high school graduate or equivalent’, 4 ‘some college’, 5 ‘college graduate’, 6 ‘post-graduate’; if mother’s report was missing, her adolescent’s report was used), *family type* (constructed from household roster information supplied by the adolescent and consisting of the following categories of parent/parental figures in the home: ‘No parent figures in household’, ‘One biological parent in household’, ‘Two non-biological parents in household’, ‘One biological and one non-biological parent in household (e.g., stepparent)’, ‘Two biological parents in household’, ‘One non-biological parent in household’), *urbanicity* (provided in the Add Health contextual dataset), and *geographical region* (strata variable in the sampling design: West, Midwest, Northeast, South the states upon which this variable was based are not defined in the Add Health documentation).

Mothers’ religiosity—Mothers’ reports of religious importance, frequency of prayer, and frequency of church attendance were also included as control variables (see below for a detailed description of each).

Religious concordance—In Add Health, adolescents and mothers who actively claimed no religion were not asked questions related to importance, prayer, and attendance questions. To maintain these participants in the analytic sample, we followed the procedure used by Pearce and Haynie (2004), assigning a “0” value on these variables for individuals reporting no religious affiliation. *Religious importance* was assessed by mothers’ and adolescents’ reports of how important religion is to them (very unimportant, fairly unimportant, fairly important, and very important). *Frequency of prayer* was assessed by asking mothers and adolescents “How often do you pray?” (never, less than once a month, at least once a month, at least once a week, and at least once a day). Frequency of service attendance was assessed by asking mothers and adolescents, “How often did you attend religious services in the past 12 months?” (never, less than once a month, less than once a week, and once a week or more). *Religious importance*, *frequency of prayer*, and *service attendance* variables were coded into the following categories: mother was 2 or more points higher than adolescent, mother was 1 point higher than adolescent, mother and adolescent are equal, adolescent was 1 point higher than parent, and adolescent was 2 or more points higher than mother.

Sexual behavior in emerging adulthood—Information on the sexual relationships of emerging adults came from relationship-level data collected at Wave III. Respondents were asked to identify all romantic and/or sexual relationship partners since the summer of 1995, including relationships that began prior to that time if the relationship continued at least until June 1995. Respondents were instructed to count each partner only once and to include all relationships regardless of their duration. For each sexual relationship, individuals were asked to provide information about the first (or only) and most recent sexual encounter of various types (vaginal, anal, oral; given, received). For this study, we focus on sexual relationships that the respondent actively identified as a *casual sex partner* and those for which there was at least one instance in the past 12 months of *unprotected sex* (not using a condom during oral, vaginal, and/or anal sex with same- and/or opposite-sex partners). The total number of *recent concurrent sexual relationships* was established for each young adult. For this study, we defined “concurrent” as sexual relationships active during the same month

in at least 1 of the previous 12 months. When the dates of sexual activity were not provided, this variable could not be calculated. For each of these dependent variables, a dichotomous variable was constructed: none versus at least one casual sex partner, none versus at least one relationship in which there was unprotected sex, and none or only one sex partner in a single month versus at least one month in which the respondent reported more than one sexual partner.

Study hypotheses were tested using logistic regression models, using the Mplus statistical software (Version 5.0; Muthén & Muthén, 1998–2007).

Results

The sample was 55% female, with an average age of 15 for adolescents at time one, ranging from 11–21 years old. Participants were 55% White, 20% Black, 16% Hispanic, 6% Asian, and 2% Native American. The average level for maternal education was “some college,” and ranged from “did not go to school” to reporting “post-graduate” education (see Table 1). Fifty-nine percent of families reported households with two biological parents, 28% reported single-parent households, 10% reported parent and step-parent households, and 1% reported adoptive or foster parent households.

Results of the logistic regression analyses predicting sexual risk showed partial support for study hypotheses (see Tables 2–4).

Frequency of prayer—Adolescents whose mothers prayed much more frequently than they did were at greater risk for having *concurrent sex partners* in emerging adulthood ($B=0.31$, $SE=0.14$, $p<.05$, Odds Ratio=1.36). This means that adolescents whose mothers prayed much more frequently than they did were at a 36% greater risk than those adolescents who reported the same frequency of prayer as their mothers. The exploratory gendered models suggest that this effect operates for females ($B=0.52$, $SE=0.18$, $p<.01$, Odds Ratio=1.68), but not for males ($B=0.09$, $SE=0.20$, ns , Odds Ratio=1.09) (see Table 2). While discordance in prayer did not predict *casual sex* for the overall sample, the follow-up models suggest that female (but not male) adolescents whose mothers prayed much more frequently were at greater risk than those with the same frequency of prayer ($B=0.43$, $SE=0.19$, $p<.05$, Odds Ratio=1.54) (see Table 3).

Adolescents who prayed slightly more frequently than their mothers were more likely than adolescents reporting the same frequency of prayer to have had *unprotected sex* in emerging adulthood ($B=0.18$, $SE=0.09$, $p<.05$). This odds ratio of 1.20 represents a 20% greater likelihood. Exploratory results by sex show that these effects appear to occur in the same direction.

Importance of religion—In contrast to hypothesized findings concerning the negative effects of discordance and the direction of discordance, results showed that adolescents who rated the importance of religion higher than their mothers reported a lower degree of *unprotected sex* in emerging adulthood than those with the same level of religiosity. Adolescents who rated religiosity as much more important (2 or more points) than their mothers were less likely than those who rated religiosity as equally important as their mothers to report *unprotected sex* in emerging adulthood ($B=-0.56$, $SE=0.28$, $p<.05$) (see Table 4). This effect is associated with an odds ratio of 0.57. In other words, adolescents for whom religion was much more salient than their mothers were only 57% as likely to report *unprotected sex* in emerging adulthood as adolescents whose religious importance matched with that reported by their mothers. The effects of this association show a consistent pattern, with increasing risk with greater discordance toward greater maternal importance. In other words, the effect is strongest for adolescents who rate religion as *much* more important than

their mothers' ratings, with weaker findings in the same direction for adolescents who rate religion as *slightly* more important than their mothers' ratings.

Similarly, adolescents who reported slightly higher religious importance than their mothers were less likely to report *concurrent sex partners* as emerging adults, as compared to adolescents reporting the same religious importance as their mothers ($B=-0.49$, $SE=0.20$, $p<.05$, Odds Ratio=.61), showing similar levels for males and females (see Table 2). However, a larger effect for a 2-point difference (as shown for unprotected sex) was not found.

Service attendance—Discordance in service attendance was not significantly associated with emerging adult sexual risk-taking behavior.

Discussion

We investigated longitudinal associations between adolescent/mother religious discordance (in prayer, importance, and service attendance) and emerging adults' sexual risk-taking. Our findings provide partial support for social control theory and for the two hypotheses we presented: a level-of-discordance hypothesis and a direction-of-discordance hypothesis. We provided some evidence that higher levels of adolescent/mother religious discordance were related to increased emerging adult sexual risk-taking, but this occurred primarily when mothers reported higher levels of religiosity than their children. This finding is consistent with the second hypothesis, which predicted that teens reporting lower religiosity than their mothers would report more sexual risk-taking behaviors in emerging adulthood. However, our finding that teens who reported higher religious importance than their mothers were less likely to engage in risky sexual behaviors was contrary to both our level-of-discordance and our direction-of-discordance hypotheses.

Findings for increased emerging adult sexual risk-taking when mothers reported higher levels of prayer than their children, particularly at higher levels of discordance, suggest that conflict regarding highly inconsistent levels of prayer may interrupt the internalization of shared moral norms for behavior that can protect adolescents from risk-taking behavior (Mahoney, 2005). It may be that the protective effects of religious beliefs and values only operate when *both* teens and parents share high levels of prayer, consistent with Pearce and Haynie's (2004) finding for the lowest levels of teen delinquency when *both* the adolescent and the mother were highly religious. In the current study, negative effects of religiosity for sexual risk-taking were only found for discordance in prayer, which is a less studied area of religious concordance -- one that to our knowledge is only explored in the context of couples' prayer for their partner (e.g., Fincham, Beach, Lambert, Stillman, & Braithwaite, 2008). Prayer may operate differently than other religiosity variables, providing visible evidence of either closeness or rifts in family religiosity, with the potential to generate family conflict, especially when an adolescent is perceived to reject a parent's religious beliefs (Mahoney, 2005). The effects of prayer discordance on unprotected sex are clearly interpretable, with significant negative effects for high levels of prayer discordance and a consistent pattern of effects. However, our findings for significant protective effects of lower levels of prayer discordance on sex with concurrent partners are more difficult to understand, because they do not fit the pattern of increasing levels of sexual risk as the level of discordance increases. Therefore this second finding should be treated with caution.

It is important to note that sexual risk for teens who prayed less than their mothers was particularly evident for female emerging adults. Previous studies of religious concordance have not found sex differences in religiosity effects (e.g., Pearce & Haynie, 2004; Stokes & Regnerus, 2009). However, the stronger influence of religiosity on sexual risk among

females than males is consistent with two studies that found protective effects of religious attitudes for delayed first sex, but only for girls (Meier, 2003; Miller et al., 1997). An additional study found protective effects of religiosity against delinquent behavior for girls, but not boys (Regnerus, 2003). This research suggests that religiosity may be particularly protective for girls, but does not address whether religious conflict may engender more risk for girls, as found in the current study. One way to understand this heightened risk for young women who experience parental conflict is through the gender intensification hypothesis, which suggests that as girls reach adolescence, they experience more pressure to conform to traditional gender roles, with increased socialization towards interpersonal connectedness (Bakan, 1966; Helgeson, 1994). These expectations may leave adolescent girls more vulnerable than boys to family conflict (Davies & Lindsay, 2001; DeCoster & Kort-Butler, 2006), which can negatively influence their health outcomes (e.g., Davies & Lindsay, 2004; Kort-Butler, 2009). Such conflict may also negatively shape their risk-taking behaviors. While we know of no studies that investigate sex differences in the effect of family conflict on sexual risk behavior, research indicates that girls who experience family conflict are more likely than boys to report substance abuse as adolescents (Kelly et al., 2011; Skeer et al., 2011). To the extent that religious discord reflects broader patterns of family conflict, religious disagreements may be particularly salient for adolescent girls' and young women's development and health behaviors. Research is needed to explore whether religious conflicts show similar gendered patterns with regard to other types of family conflict, and whether the influence is similarly gendered for risky sexual behavior.

The finding that adolescents who prayed slightly more frequently than their mothers were more likely to have had unprotected sex in young adulthood is inconsistent with results showing protective effects for adolescents who report higher levels of religiosity than their mothers. However, it is consistent with negative effects of prayer discordance. As suggested above, prayer may operate in different ways than other religiosity variables, with tensions arising from differences in this highly visible form of religiosity. In this case, perhaps *difference*, rather than *direction*, is the primary driver of its behavioral influence.

Findings that teens with higher levels of religious importance than their mothers were less likely to engage in risky sexual behaviors appear to be inconsistent with social control theory, as these teens show reduced sexual risk behavior even though they may not benefit from their parents' passing on of religious beliefs and values, given that their parents subscribe to lower levels of religiosity. These results echo Stokes and Regnerus' (2009) finding that teens who are more religious than their parents report higher quality of parental relationships than those who are less religious than their parents, suggesting that the *direction* of discordance may be more important than the *level* of this difference. The authors suggest that rather than experiencing high tensions as a result of religiosity differences, teens who are more religious than their parents may follow religious dictates that promote family harmony or parental obedience, therefore engendering reduced levels of relationship conflict. These findings also suggest that rather than contradicting social control theory, this protective socialization process may be operating outside the family, such as through peers or religious organizations (Coleman, 1988; Stark & Bainbridge, 1996). If this is the case, religious adolescents may engage more positively with their less religious parents as a result of these external socializing influences. These findings were only evident for *religious importance*, which is identified as a core indicator of shared religiosity, traditionally tied to values and beliefs that discourage sexual risk-taking behaviors (Zimmer-Gembeck and Helfand, 2008).

Arnett (2000) identifies emerging adulthood as a time of questioning worldviews learned from family with no immediate clarity of a new set of values and beliefs and few ties to institutions that may have been primary influences during childhood (Arnett, 2007).

However, Arnett (2001) also proposes that the quality of family relationships during adolescence helps to shape individuals' adjustment during emerging adulthood. Similarly, a family systems approach suggests that both individuation and ongoing family of origin connection are critical during emerging adulthood (Bowen, 1978). Research evidence supports this contention, with studies tying parent-teen closeness to emerging adult outcomes such as well-being (Crespo, Kielpikowski, Pryor, & Jose, 2011) and adjustment (Fosco, Caruthers, & Dishion, 2012). The current results provide support for the importance of family relationships during emerging adulthood within the realm of religiosity, indicating that even in a developmental period marked by distance from childhood values and institutions, concordance in religious experience with a parent during adolescence remains a meaningful influence.

This study is limited by the truncated distribution of the number of young adults who engage in risky sexual behaviors; many respondents reported "none" or only one sex partnership. Thus, the prevalence of risky sexual behaviors among young adults is low, especially when assessed within a single 12-month period. Therefore, the statistical power of these hypothesis tests was also quite low, despite the large sample size. However, the presence of effects of religious discordance across a six-year period is notable. Information on paternal religiosity and father-teen relationships would strengthen this study, but was largely missing from the Add Health dataset. The wide age range of the sample also makes it difficult to tie conclusions to a specific age group. While the use of a large, national sample provided an opportunity to investigate family differences in religiosity, more in-depth information about the role of religiosity in adolescent/mother interactions would enrich our understanding of these issues.

A longitudinal qualitative investigation could help to explain trajectories of parent/child religious discordance through adolescence. One qualitative study, of married parents from different religious backgrounds, demonstrated the lasting effects of parent/child religious discordance, as participants described ongoing emotional distance and distress due to inter-generational religious differences between themselves and their own parents (Marks, 2005). It would be interesting to explore whether and how the *direction* and *level* of these religious differences influenced the level of conflict or lasting distress regarding this issues. Further, qualitative work could help to tease apart different aspects of religiosity, particularly prayer and religious importance, which may operate differently in their process of shaping health outcomes (e.g., Nonnemaker et al., 2003) and which may also vary by sex. This research could include investigation of what aspects of religiosity mismatch can be problematic. Similarly, if there are protective aspects for teens who are more religious than their parents, particularly for religious importance, what elements of this mismatch can be protective? Are there protective elements of these family relationships (such as openness to other family members' perspectives) that can support teen and emerging adult health when adolescents and parents experience religious discordance in other domains? Future research would also benefit from investigation of relationship quality as a mediator of teen/parent religious discordance and sexual risk-taking behavior and the role of sex in shaping this association.

This study extends prior investigations of religiosity and health by examining the impact of religious discordance on emerging adults' sexual risk-taking outcomes. It provides further evidence for the complexity of this relationship and explores a new way in which shared and unshared family religious practice and beliefs support or impede the health of emerging adults. It supports the relevance of religious discordance across adolescence and into emerging adulthood, despite the expected distancing from family and other religious institutions during this life stage. These findings also suggest practical implications. Whereas shared prayer may be protective in families, the potential for religious differences to generate conflict suggests the importance of thoughtfully addressing family differences in

religiosity. This study suggests that adolescents who pray less than their parents are at particular risk for future sexual risk-taking behavior and may benefit from greater parental understanding and support regarding their teens' religious identity and experience (or lack thereof), especially when it does not mirror their own beliefs and practices.

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Table 1

Descriptive statistics for demographic and analysis variables.

	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean or %</i>	<i>SD</i>
Female	7004	0	1	55%	
Age	7004	11	21	15.26	1.71
Hispanic	7004	0	1	16%	
White	7004	0	1	55%	
Black	7004	0	1	20%	
Native American	7004	0	1	2%	
Asian	7004	0	1	6%	
Mother's education	7001	0	6	3.57	1.30
Single parent	7004	0	1	28%	
Adopted/foster parents	7004	0	1	1%	
Step-parent and parent	7004	0	1	10%	
Two biological parents	7004	0	1	59%	
Urban	6977	0	1	52%	
West	7004	0	1	23%	
Midwest	7004	0	1	27%	
South	7004	0	1	37%	
Northeast	7004	0	1	13%	
Frequency of church attendance - Mother Wave I	6988	0	3	2.01	0.58
Importance of religion - Mother Wave I	6981	0	3	2.67	0.58
Frequency of prayer - Mother Wave I	6981	0	4	3.51	0.96
Mother attends religious services considerably more than adolescent	6978	0	1	5%	
Mother attends religious services slightly more than adolescent	6978	0	1	16%	
Adolescent attends religious services slightly more than mother	6978	0	1	56%	
Adolescent attends religious services considerably more than mother	6978	0	1	16%	
Mother rates religion as much more important than adolescent	6978	0	1	7%	
Mother rates religion as slightly more important than adolescent	6996	0	1	5%	
Adolescent rates religion as slightly more important than mother	6996	0	1	28%	
Adolescent rates religion as much more important than mother	6996	0	1	58%	

	<i>N</i>	Min	Max	Mean or %	<i>SD</i>
Mother prays much more frequently than adolescent	6996	0	1	8%	
Mother prays slightly more frequently than adolescent	6996	0	1	1%	
Adolescent prays slightly more frequently than mother	6975	0	1	18%	
Adolescent prays much more frequently than mother	6975	0	1	21%	
Unprotected sex (unmarried only)	5751	0	1	37%	
Casual sex	6880	0	1	12%	
Concurrent sex partners	4317	0	1	16%	

Note. *SD* = Standard Deviation.

Table 2

Results of logistic regression analysis predicting concurrent partners in the past 12 months.

	Concurrent Sex Partners					
	All N=4281		Females N=2360		Males N=1921	
	B	SE	B	SE	B	SE
Intercept	-1.24	0.55 *	-0.23	0.74	-2.21	0.79 **
Female	0.12	0.09				
Age	0.00	0.03	-0.06	0.04	0.06	0.04
Hispanic	0.04	0.17	-0.10	0.25	0.21	0.24
Black	0.47	0.11 ***	0.51	0.14 ***	0.43	0.19 *
American Indian	0.54	0.26 *	0.47	0.32	0.67	0.37
Asian	0.06	0.34	-0.11	0.57	0.31	0.41
Mother's education	0.03	0.04	-0.02	0.05	0.07	0.06
Single parent family	0.10	0.10	0.07	0.13	0.14	0.17
Adopted or foster family	-0.59	0.53	-2.03	0.82 *	-0.25	0.56
Stepfamily	0.02	0.15	0.10	0.19	-0.04	0.24
Urban	0.00	0.00	0.00	0.00	-0.12	0.15
West	-0.49	0.15 **	-0.52	0.21 *	-0.45	0.23
Midwest	-0.17	0.11	-0.18	0.15	-0.14	0.18
Northeast	-0.21	0.15	-0.27	0.19	-0.12	0.23
Frequency of church attendance - Mother Wave I	-0.02	0.06	0.10	0.08	-0.13	0.09
Importance of religion - Mother Wave I	-0.26	0.11 *	-0.24	0.15	-0.26	0.17
Frequency of prayer - Mother Wave I	-0.03	0.07	-0.09	0.08	0.04	0.10
Mother attends religious services considerably more than adolescent	0.04	0.23	0.03	0.27	0.01	0.38
Mother attends religious services slightly more than adolescent	0.14	0.12	0.06	0.17	0.20	0.19
Adolescent attends religious services slightly more than mother	0.10	0.13	0.16	0.17	0.05	0.20
Adolescent attends religious services considerably more than mother	0.16	0.18	0.28	0.23	0.01	0.31
Mother rates religion as much more important than adolescent	0.15	0.22	0.31	0.27	0.04	0.34
Mother rates religion as slightly more important than adolescent	0.08	0.11	0.09	0.15	0.07	0.18
Adolescent rates religion as slightly more important than mother	-0.49	0.20 *	-0.48	0.26	-0.46	0.30

	Concurrent Sex Partners					
	All N=4281		Females N=2360		Males N=1921	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Adolescent rates religion as much more important than mother	-0.86	0.49	-1.00	0.63	-0.59	0.77
Mother prays much more frequently than adolescent	0.31	0.14 *	0.52	0.18 **	0.09	0.20
Mother prays slightly more frequently than adolescent	-0.06	0.13	0.10	0.16	-0.25	0.20
Adolescent prays slightly more frequently than mother	0.15	0.18	0.25	0.21	-0.01	0.31
Adolescent prays much more frequently than mother	0.19	0.24	0.17	0.30	0.28	0.39

* $p < .05$
 ** $p < .01$
 *** $p < .001$

Note. *SE* = Standard Error. *B* = Standardized Beta

Comparison categories are as follows: male, white, two biological parents, at least partially rural, South, and equal reports of parent and adolescent religiosity.

Table 3

Results of logistic regression analysis predicting at least one instance of the respondent identifying a casual sex partner in the past 12 months.

	Casual Sex					
	All N=6812		Females N=3755		Males N=3057	
	B	SE	B	SE	B	SE
Intercept	-0.88	0.54	-0.88	0.82	-1.05	0.72
Female	-0.26	0.09 **				
Age	-0.06	0.03 *	-0.09	0.04 *	-0.04	0.04
Hispanic	-0.15	0.15	0.05	0.21	-0.34	0.21
Black	0.03	0.12	0.13	0.17	-0.05	0.18
American Indian	0.05	0.31	0.44	0.38	-0.20	0.45
Asian	-0.29	0.26	-0.43	0.40	-0.18	0.34
Mother's education	0.11	0.03 **	0.10	0.05 *	0.09	0.05 *
Single parent family	-0.08	0.11	0.00	0.15	-0.16	0.16
Adopted or foster family	-0.40	0.51	-0.83	0.71	-0.25	0.63
Stepfamily	-0.06	0.15	0.03	0.22	-0.09	0.20
Urban	0.00	0.00	0.00	0.00	0.00	0.00
West	-0.15	0.13	-0.33	0.19	0.02	0.19
Midwest	-0.09	0.11	-0.28	0.16	0.09	0.15
Northeast	-0.03	0.13	-0.15	0.19	0.06	0.19
Frequency of church attendance - Mother Wave I	-0.10	0.06	0.01	0.10	-0.19	0.08 *
Importance of religion - Mother Wave I	-0.01	0.10	0.03	0.16	-0.04	0.13
Frequency of prayer - Mother Wave I	-0.09	0.06	-0.15	0.09	-0.04	0.09
Mother attends religious services considerably more than adolescent	0.13	0.22	0.16	0.30	0.09	0.32
Mother attends religious services slightly more than adolescent	-0.04	0.13	-0.22	0.19	0.10	0.17
Adolescent attends religious services slightly more than mother	-0.05	0.13	-0.26	0.19	0.11	0.16
Adolescent attends religious services considerably more than mother	-0.25	0.20	-0.09	0.26	-0.48	0.30
Mother rates religion as much more important than adolescent	0.26	0.19	0.34	0.29	0.23	0.25
Mother rates religion as slightly more important than adolescent	0.18	0.11	0.15	0.16	0.20	0.15
Adolescent rates religion as slightly more important than mother	-0.05	0.18	0.11	0.25	-0.19	0.26

	Casual Sex					
	All N=6812		Females N=3755		Males N=3057	
	B	SE	B	SE	B	SE
Adolescent rates religion as much more important than mother	-0.06	0.43	0.52	0.55	-0.71	0.68
Mother prays much more frequently than adolescent	0.12	0.13	0.43	0.19 *	-0.10	0.17
Mother prays slightly more frequently than adolescent	-0.17	0.12	-0.11	0.18	-0.25	0.16
Adolescent prays slightly more frequently than mother	0.20	0.17	0.35	0.24	0.05	0.25
Adolescent prays much more frequently than mother	-0.12	0.24	-0.17	0.35	0.02	0.34

* $p < .05$
 ** $p < .01$
 *** $p < .001$

Note. SE = Standard Error. B = Unstandardized Beta

Comparison categories are as follows: male, white, two biological parent, at least partially rural, South, and equal reports of parent and adolescent religiosity.

Results of logistic regression analysis predicting at least one sex partners with whom the respondent reported at least one instance of unprotected sex in the past 12 months.

Table 4

	Unprotected Sex (Unmarried only)					
	All N=5701		Females N=3028		Males N=2673	
	B	SE	B	SE	B	SE
Intercept	-0.88	0.26 ***	-1.04	0.49 *	-1.1	0.29 ***
Female	-0.67	0.05 ***				
Age	0.02	0.01	0.00	0.03	0.03	0.02
Hispanic	-0.03	0.07	0.01	0.14	-0.02	0.08
Black	-0.24	0.07 ***	-0.02	0.11	-0.38	0.09 ***
American Indian	-0.23	0.16	0.08	0.24	-0.32	0.20
Asian	-0.09	0.13	0.25	0.18	-0.33	0.16 *
Mother's education	0.01	0.02	-0.09	0.03 **	0.06	0.02 **
Single parent family	0.04	0.05	0.18	0.09 *	-0.03	0.06
Adopted or foster family	0.37	0.11 **	0.48	0.31	0.36	0.12 **
Stepfamily	0.10	0.07	0.18	0.13	0.06	0.08
Urban	0.00	0.00	0.00	0.00	0.00	0.00
West	-0.05	0.07	-0.11	0.13	0.00	0.08
Midwest	0.06	0.05	0.00	0.10	0.11	0.06
Northeast	0.00	0.06	-0.11	0.12	0.06	0.07
Frequency of church attendance - Mother report	-0.03	0.03	-0.10	0.06	0.01	0.03
Importance of religion - Mother report	-0.01	0.06	0.13	0.11	-0.08	0.07
Frequency of prayer - Mother report	-0.01	0.03	-0.06	0.06	0.01	0.04
Mother attends religious services considerably more than adolescent	0.10	0.10	0.17	0.19	0.07	0.12
Mother attends religious services slightly more than adolescent	0.06	0.06	-0.10	0.12	0.10	0.07
Adolescent attends religious services slightly more than mother	-0.03	0.06	-0.23	0.12	0.06	0.07
Adolescent attends religious services considerably more than mother	0.03	0.10	0.13	0.15	-0.08	0.13
Mother rates religion as much more important than adolescent	0.06	0.09	0.17	0.17	0.03	0.11
Mother rates religion as slightly more important than adolescent	0.02	0.05	-0.09	0.10	0.06	0.06

	Unprotected Sex (Unmarried only)					
	All N=5701		Females N=3028		Males N=2673	
	B	SE	B	SE	B	SE
Adolescent rates religion as slightly more important than mother	−0.03	0.09	0.01	0.17	−0.03	0.10
Adolescent rates religion as much more important than mother	−0.56	0.28 *	−0.29	0.45	−0.69	0.36
Mother prays much more frequently than adolescent	0.00	0.07	0.19	0.12	−0.07	0.07
Mother prays slightly more frequently than adolescent	0.02	0.06	0.09	0.11	−0.04	0.06
Adolescent prays slightly more frequently than mother	0.18	0.09 *	0.23	0.15	0.12	0.10
Adolescent prays much more frequently than mother	0.02	0.12	−0.07	0.22	0.08	0.14

* $p < .05$
** $p < .01$
*** $p < .001$

Note. SE = Standard Error. B = Standardized Beta

Comparison categories are as follows: male, white, two biological parent, at least partially rural, South, and equal reports of parent and adolescent religiosity.