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# Father Involvement, Dating Violence, and Sexual Risk Behaviors Among a National Sample of Adolescent Females

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# Abstract

This study explored the relationship between the involvement of biological fathers and the sexual risk behaviors and dating violence/victimization and/ or perpetration of adolescent girls. The data used in this cross-sectional analysis were drawn from the second wave of the public release of the National Longitudinal Study of Adolescent Health. Only adolescents who reported their biological sex as female, reported a history of being sexually active, and reported having a romantic partner in the previous 18 months were selected (N= 879). This study focused on overall positive sexual behaviors and use of contraception. Structural equation modeling (SEM) was used to best utilize capacity for dealing with latent variables and to test for possible mediation effects. The analysis demonstrated main effects of dating violence and father involvement on sexual behaviors. The more dating violence an adolescent girl experiences, the less likely she is to engage in healthy sexual behaviors. Likewise, the more involvement the biological father has in a woman's life, the more likely she is to engage in positive sexual behaviors. Perceived father involvement was associated with risky sexual behaviors among sexually experienced adolescent girls. Dating violence was directly associated with risky sexual behaviors among sexually experienced adolescent girls, particularly non-White girls. Future studies should use longitudinal models and test theoretically and empirically guided potential mediators. Future studies should also consider father figures such as step-fathers and grandfathers in addition to biological fathers, as having a father figure may be a stronger predictor of adolescent sexual behaviors than having a biological connection.

**Declaration of Conflicting Interests** 

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# Introduction

In recent years, more and more researchers have used attachment theory in empirical studies to explore and understand social behavior and its functioning within close relationships, including the role of aggression (Moretti & Obsuth, 2011). Attachment theory suggests that close relationships are internally represented throughout the life course as a relationship schema or map, stemming primarily from early parent–child relationships (Leadbeater, Banister, Ellis, & Yeung, 2008). Currently, theorists suggest that attachment occurs throughout one's life, not just in the early stages of childhood with their parents (Follingstad, Bradley, Helff, & Laughlin, 2002; Simpson, Collins, Tran, & Haydon, 2007). Specifically, attachment theory can apply to both dating and sexual relationships (Wekerle & Wolfe, 1999), as well as familial relationships (Allen, Porter, McFarland, McElhaney, & Marsh, 2007). Therefore, the need for studies that focus on the role of attachment theory in both familial and romantic relationships of adolescents who have experienced or are experiencing dating violence has become critical.

Close parental relationships can protect youth from abusive dating relationships by helping them develop a sense of self-worth to reduce the possibility of becoming involved or staying in an abusive dating relationship (Cleveland, Herrera, & Stuewig, 2003). Similarly, Howard and Wang (2003) found that adolescent girls who were satisfied with their level of affective closeness to parents were less likely to be victimized and more likely to recognize difficulties in relationships and seek help, compared with girls who had poor affective relationships. In particular, while there has been much research on the attachment of adolescent girls and their mothers, and its impact on risk behaviors (Dancy, Crittenden, & Talashek, 2006), to date, little research has focused on the impact of biological fathers on reducing risk behaviors among their daughters, particularly as it pertains to dating violence and sexual risk behaviors among this population.

#### **Correlation Between Dating Violence and Sexual Risk Behaviors**

Dating violence among teenagers is defined as physical, sexual, and/or psychological/ emotional abuse in a dating relationship (Centers for Disease Control and Prevention [CDC], 2014). This definition can also include stalking. Dating violence among adolescents in the United States has received increased attention as a significant health concern (James, West, Deters, & Armijo, 2000; Silverman, Raj, Mucci, & Hathaway, 2001). A cluster of riskrelated behaviors has been identified among adolescents who experience dating violence, specifically, sexual risk behaviors, including inconsistent condom use (Howard & Wang, 2003; Raiford, Wingood, & DiClemente, 2009), pregnancy (Silverman et al., 2001), and a high number of sexual partners (Silverman, Raj, & Clements, 2004). These associated risk behaviors have received near consensus results of the negative impact these have on adolescents. For instance, Valois, Oeltmann, Waller, and Hussey (1999) examined the relationship between the number of sexual intercourse partners and selected health risk

behaviors among public high school adolescents across race/ethnicity and gender. They found that being a victim of dating violence was significantly related to an increased number of sexual partners for Black and White girls as well as Black boys. Among all female participants, they found that sexual assault victimization was also related to an increased number of consensual sexual partners.

In addition to the noted risks addressed above, dating violence victimization is associated with sexually transmitted infections (STIs). For instance, the CDC (2008) noted that women between the ages of 15 and 24 are at highest risk of contracting STIs. Among adolescent girls tested for STIs, including HIV, approximately 1 in 3 reported being physically or sexually abused by a dating partner (Decker, Raj, & Silverman, 2005). Black girls are particularly more likely than White and Hispanic girls to have four or more sexual partners by the age of 20 and have also been shown to experience higher rates of dating violence than their counterparts (Alleyne-Green, Coleman-Cowger, & Henry, 2011; Bauer et al., 2002; Kalichman, Williams, Cherry, Belcher, & Nachimson, 1998; Roberts, Auinger, & Klein, 2005; Teitelman, Ratcliffe, Morales-Aleman, & Sullivan, 2008; Wingood, DiClemente, McCree, Harrington, & Davies, 2001).

While research has shown that parental involvement and communication can serve as a buffer to adolescent risk behaviors, the majority of these studies have focused on the role of mothers. However, to these researchers' knowledge, no study has specifically examined the effect of father involvement (contact and closeness) on sexual risk behaviors and dating violence victimization among adolescent girls. The present study expands the literature by focusing on biological father involvement.

#### Father Involvement

Historically, the study of father involvement (consistent contact—in the form of doing things such as extracurricular activities and engaging with their children, as well as sense of closeness) has not been an integral focal point in the social science literature. Within the past two decades, scholars have begun to recognize the importance of fathers in the family structure, noting the vital role that their presence plays in the healthy social and emotional development of their children (Shannon, Tamis-LeMonda, London, & Cabrera, 2002). However, little work has explored the specific role of fathers in relation to dating violence and related risk behaviors among adolescent females. In general, research suggests that children who grow up in homes without a father are more likely to be poorer than their peers from two-parent homes (Currence & Johnson, 2003). In addition, these children are at higher risk of negative life outcomes including but not limited to delinquency, school dropout, stunted emotional development, substance-abuse problems, and other associated risk behaviors (Hamer, 2001). A number of researchers have examined the impact of father absence on healthy child development, and there appears to be a consensus among researchers of the significance fathers plays on the health and well-being of their children.

For instance, in their study of father absence on early sexual initiation and teenage pregnancy among a sample of adolescent girls in the United States and New Zealand, Ellis et al. (2003) found that fathers' absence uniquely contributes to the risk of early sexual activity and pregnancy among adolescent girls. The study showed that the timing of father absence is

significantly related to the adolescent female's sexual debut and risk for teenage pregnancy. That is, the younger a girl is at the onset of her father's absence, the greater her risk of engaging in sexual activity that may lead to pregnancy (Ellis et al., 2003). Similarly, exploring the relationship between fathers and their adolescent daughters, Coley (2003) found that the behavioral problems of adolescent girls were significantly associated with their perception of their relationship with their fathers. The results of the study suggested that girls who perceived their fathers to be angry, distant, and unavailable reported higher levels of emotional and behavioral problems. An increase in emotional and behavioral problems was not associated with reports of father–daughter relationships characterized by trust, open communication, and higher levels of contact (Coley, 2003).

Therefore, it can be inferred that a correlation exists between father involvement and risk behaviors among adolescent girls, with girls who view their fathers as available and engaged likely to participate in less risk behaviors than their counterparts who do not have similar views/relationships with their fathers. Current findings on the relationship between risky sexual behaviors and teen dating violence suggest a need for additional research to explore the role of father involvement in alleviating negative behavioral sequelae among adolescent girls.

#### The Present Study

The present study explores the relationship between biological father involvement (contact and closeness) and its impact on sexual risk behaviors and dating violence victimization of adolescent girls. Based on attachment theory, the following research question guided this study:

**Research Question 1:** What is the relationship between father involvement (contact and closeness), sexual risk behaviors, and dating violence victimization among a diverse sample of adolescent girls?

**Hypothesis 1:** Girls who report closeness to and contact with their biological fathers will be less likely to be victims of dating violence, as the strength of the father–daughter relationship would not allow these girls to continue in relationships in which they are being victimized. Young women with a weak, strained, or nonexistent bond with their fathers will be less inclined to identify relationship difficulties.

**Hypothesis 2:** Girls who report closeness to and contact with their biological fathers may engage in less sexual risk behavior than young women who report no feelings of closeness and contact with their fathers.

**Hypothesis 3:** The experience of dating violence mediates the effect of biological father closeness on young women's sexual risk behaviors; for young women who have strong relationships with their fathers and experience dating violence, the experience of dating violence reduces the impact that the father–daughter relationship has on their sexual risk behavior.

# Method

#### Sample and Data

The data used in this cross-sectional analysis were drawn from the second wave of the public release of the National Longitudinal Study of Adolescent Health (Add Health; Harris, 2009). Add Health originated in the mid-1990s as part of an initiative to understand how family, school, peer, and other environmental influences affect various health outcomes for adolescents. The data used in this analysis were collected in 1996 and are weighted so as to ensure national representation. Students from 80 high schools and 52 middle schools in the United States were selected to participate in this study. Given the unequal probability of selection, weighting and stratification were used to approximate national representation of U.S. schools in relationship to region, community setting (rural-urban), size of school, type of school, and ethnic constitution of the sample. For more detailed information, see Harris et al. (2009).

To be included in this analysis, respondents needed to report their biological sex as female, report a history of being sexually active, and report having a romantic partner in the previous 18 months. The criteria reduced the analysis sample from the 4,834 total participants in the Add Health study to 879 subjects in the present study. Table 1 presents the overall demographic of this subsample. The average member of this subsample is an upcoming 11th grader, is nearly 17 years old, and had her first sexual encounter between 15 and 16 years of age. In all, 44% of the respondents reported living with their biological fathers.

### Variables

Figure 1 depicts the proposed models and variables to be tested. Variables are labeled to indicate which information was collected under the higher standard of privacy through the audio computer-assisted self-interviewing (ACASI) procedure. All questions used were developed specifically for use in the Add Health study and are not found in other existing measures.

**Dependent variable: Sexual behaviors**—Respondents were asked extensively about their contraception use. This study, rather than focusing on type of birth control used, focused on overall sexual risk behaviors and use of contraception. *Birth control during the last sexual encounter*. Respondents reported whether they had used birth control during their last sexual encounter; this was coded as a yes-no response. *Birth control in sexual encounters during the previous 18 months*: Respondents were also asked how frequently they used birth control in their sexual encounters in the previous 18 months; this question was a 5-item scale ranging from *none of the time* to *all of the time*. These variables were then recoded so that higher scores indicate higher levels of sexual risk.

**Independent variable: Biological father involvement**—Biological father involvement was measured using three related measures: frequency of communication, perceived closeness to father, and participation in joint activities.

**Father-daughter frequency of communication**—The measure of father-daughter communication was a 7-item scale based on the respondent's report of communication with her father. Respondents who knew nothing about their fathers, reported their fathers to be deceased, or who reported no contact with their fathers in the previous 12 months were coded equally as "no contact." Respondents with nonresidential fathers reported frequency of contact with a 5-item Likert-type scale response: *1 to 2 times in the past 12 months, several times over the past 12 months, once a month, once a week*, and *several times a week*. Respondents who were living with their biological fathers were assumed to be in regular communication with their fathers and are coded one value higher than the highest Likert-type scale response for nonresidential fathers.

**Perceived closeness to father**—Respondents were also asked how close they felt to their biological fathers in one question with five Likert-type scale response options: *not at all close, not very close, somewhat close, quite close,* and *extremely close.* Respondents who reported that their fathers were dead or that they knew nothing about them were originally coded as missing for in the Add Health study. They were recoded as 0, with the original responses coded from 1 to 5.

**Father-daughter activity**—Respondents were asked whether they had engaged in any of nine different types of activities with their fathers over the past 4 weeks: shopping, playing sports, going to a religious gathering, going to a movie or play, discussing dates and parties, discussing personal problems, discussing school problems, discussing grades, and working on a school project. Responses were coded "yes"/"no" and are thus an incidence score, not a frequency score. No information is available on how many times that type of activity may have occurred in the previous 4 weeks. Respondents with no fathers or father contact were coded as having engaged in no activities.

**Independent variable: Dating violence**—Respondents were asked about their relationships with their three most recent romantic partners in the previous 18 months. Indepth information about the quality of the romantic partnership and event progression in the relationship, up to and including sexual intercourse, was obtained and analyzed. This included experiencing types of dating violence. Respondents were asked whether the identified partner had ever engaged in insulting, swearing at, threatening violence toward, pushing or shoving, or throwing objects at the respondent. Replies were coded as a "yes"/"no" incidence score. The number of incidences was totaled across partners so that each violence variable had possible values from 0 to 3—a "yes"/"no" report for each of three possible partners.

#### **Analysis Strategy**

This study used structural equation modeling (SEM) to best utilize capacity for dealing with latent variables and to test for possible mediation effects. All analyses were performed using STATA 12 with complex survey weights. The analysis utilized a maximum likelihood estimation that accounted for missing variables in the existing data set (maximum likelihood missing values [MLMV]; StataCorp, 2011). The observed information matrix (OIM) was used to determine standard errors. Because race is an important covariate, this study also

utilized a group SEM model to examine differences between White and non-White participants. In addition, we examined the latent variables to assess whether they could be considered the same across groups. The analysis verified invariance of the measurement model across groups; no Wald  $\chi^2$  score was significant (the null hypothesis in this test is that the assumption of constraining the variables to be equal across groups is valid).

The models were evaluated for best fit using multiple indices meant to indicate the likelihood of replication of the covariance matrix of the observed data from the existing model. Because this analysis utilized a MLMV algorithm, the standardized root mean square residual (SRMR) index is not available for model fit assessment. Instead, this analysis utilizes the root mean square error of approximation (RMSEA < 0.05), the comparative fit index (CFI > 0.95), the Tucker–Lewis Index (TLI > 0.94), the coefficient of determination (CD: close to 1 is best), and the  $\chi^2/df$  ratio (>1) as primary fit indices. All factor loadings and coefficients are presented standardized.

# Results

#### **Establishment of Model Fit**

Zero-order Pearson correlations of all variables used in the model can be found in Table 2, as well as means and standard deviations. Because of the strong correlations between the insulting and swearing variables (r = .466) and the threatening and push/shove variables (r = .532), the decision was made to allow the error terms for these pairs of variables to covary.

Latent variables were constructed from the father involvement variables, the dating violence variables, and the sexual risk behavior variables. Factor loadings can be found next to each arrow in the measurement model for each observed variable. The factor loadings were modest (>.40), and all loadings were significant at the .001 level.

Figure 2 presents the path diagram with coefficients and factor loadings for the tested model with all races combined. The fit indices indicate that the present model is a good fit to the data (RMSEA = 0.018, CFI = 0.996, TLI = 0.995, CD = 0.876,  $\chi^2/df$  = 1.286). Figure 3 presents the same information for the group SEM analysis by race. Fit indices indicate that this model is also a good fit to the data (RMSEA = 0.031, CFI = 0.987, TLI = 0.985, CD = 0.875,  $\chi^2/df$  = 1.41).

**Hypothesis 1: Biological Father Closeness and Dating Violence**—The analysis, both for combined race and for White and non-White respondents considered separately, suggests that biological father involvement has no effect on the experience of dating violence; the quality of the father–daughter relationship does not reduce the likelihood of experiencing dating violence in romantic relationships (combined race, B = .001; non-White, B = .07; White, B = -.03) Thus, Hypothesis 1 is not supported in these analyses.

## Hypothesis 2: Biological Father Closeness and Sexual Risk Behaviors-

However, there is a significant inverse relationship between biological father involvement and sexual risk behaviors. The more involvement the biological father has in his daughter's life, the less likely she is to engage in sexual risk behaviors. This is true for the combined

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race analysis (B = -.12, p < .05) as well as for the non-White subgroup (B = -.20, p < .01). However, for White respondents, the relationship between biological father involvement and sexual risk behaviors is less strong, with only a marginal effect between the two latent constructs (B = -.09, p < .10). So Hypothesis 2 is supported overall, though with stronger evidence for non-White respondents than for White respondents.

**Hypothesis 3: Dating Violence Mediation**—As Baron and Kenny (1986) have stated in their discussion on mediating variables, for a mediation analysis to be considered appropriate, there must be an identified correlation between the independent variable being considered and the mediating variable as well as a correlation between the mediating variable and the dependent variable. In this analysis, however, there is no significant correlation between the independent variable of biological father involvement and the mediating variable of dating violence. Therefore, by definition, a mediation analysis cannot be performed and by extension Hypothesis 3 is not supported.

However, the relationship between dating violence and sexual risk behaviors is worth noting. In the combined race analysis, there is a significant relationship between dating violence and sexual risk behaviors; self-report of dating violence indicates an increased likelihood of engaging in sexual risk behaviors (B = .11, p < .05). However, when analyzed by race, this result is only present for non-White young women (B = .29, p < .001); there is no relationship between the self-reported experience of dating violence and sexual risk behaviors for young White women (B = .02, ns).

Overall, for the tested hypotheses, the effect of biological father involvement in the lives of their daughters results in lower levels of sexual risk behavior, while biological father involvement has no impact on the experience of dating violence. The benefit of biological father involvement, however, appears to be more important for young women of color than for young White women, thus affirming the decision to treat race as an important factor in the analysis.

# Discussion

Father involvement is becoming increasingly recognized as an important factor in influencing youths' attitudes and behaviors. The primary aim of the present study was to examine the effect of biological father involvement on risky sexual behaviors and dating violence among adolescent females. In the present study, perceived father involvement was directly associated with sexual behaviors among sexually experienced adolescent girls. That is, adolescent girls who perceived a positive relationship with their biological fathers, as demonstrated by feeling close to their fathers, communicating with their fathers, and engaging in activities with their fathers, were less likely to engage in risky sexual behaviors. The multigroup comparison indicated that father involvement explained sexual behavior equally well for White girls and non-White girls. These findings contribute to the meager literature on father involvement and sexual behaviors among sexually experienced girls. The findings also offer support for using attachment theory to understand adolescent risky sexual behaviors.

The observed association of father involvement with adolescent sexual behaviors supports our hypothesis that greater father involvement is associated with healthier adolescent sexual behaviors. This finding is consistent with previous research that has suggested that highquality fathering is associated with less risky sexual behavior among adolescent daughters (e.g., Coley, Votruba-Drzal, & Schindler, 2009; Ream & Savin-Williams, 2005). Furthermore, Ellis et al. (2003) found that after controlling for covariates, fathers' absence most consistently and strongly predicted early sexual activity and teen pregnancy rather than adolescent academic achievement, mental health, and other behavioral problems. Taken together, our findings and previous research suggest that adolescent risky sexual behavior intervention programs and policies should integrate fathers into programs and policies, encourage father involvement in their children's lives, and help fathers develop skills that would improve the father–child relationship (e.g., parenting style, communication).

Although we found support for our hypothesis that father involvement would be directly associated with adolescent sexual behaviors, we did not find support for our hypothesis that dating violence would mediate the relationship between father involvement and sexual behaviors. We did not find support for this mediation hypothesis because contrary to expectations, we found that father involvement was not associated with dating violence among adolescent girls. This finding contradicts much of the literature. For example, in a sample of low-income youths of color, Schnurr and Lohman (2008) found that for girls, having hostility toward their fathers increased dating violence perpetration. Other studies have also found that the father-daughter relationship is associated with dating violence perpetration (e.g., Edwards, Desai, Gidycz, & VanWynsberghe, 2009; Kaura & Allen, 2004). Researchers (Cobb-Clark & Tekin, 2011) have also noted that while adolescent boys engage in more delinquent behavior if there is no father figure in their lives, adolescent girls' behavior is largely independent of the presence (or absence) of their fathers. In their study of fathers and youth's delinquent behavior, the authors found that while daughters generally require a level of quality interaction with a father figure, sons benefit from sheer quantity of time, and respond simply to having a father or father figure around the house. Most interesting, however, is the finding that daughters appear to be *adversely* affected by contact with their nonresidential biological father. Thus, the lack of an association between father involvement and dating violence may be related to our measurement of father involvement. For example, father-daughter activity was assessed over the previous 4 weeks and did not assess frequency, intensity, or duration, which may be more strongly associated with adolescent dating violence.

We found support for our hypothesis that dating violence would be directly and positively associated with risky sexual behaviors. That is, the more dating violence an adolescent female experienced, the more likely she was to report engaging in risky sexual behaviors. This finding is consistent with the literature. For example, Silverman et al. (2004) found that after controlling for demographic and risky behaviors covariates, dating violence among sexually experienced adolescent females was associated with sexual behaviors and pregnancy. Wingood et al. (2001) examined the association between history of dating violence and sexual behaviors among a sample of sexually active adolescent Black females aged 14 to 18. Similar to our findings, they found that dating violence was associated with sexual attitudes, beliefs, norms, and behaviors. Wingood and colleagues concluded that

experiences of dating violence can lead adolescents to perceive dating violence as normal, which can affect their perceptions regarding safe sex and healthy relationships.

Multigroup comparison findings revealed that the effect of dating violence on sexual behaviors among adolescent girls differed significantly by race. Compared with the singlegroup analysis, our multigroup findings indicated that the relationship between dating violence and sexual behaviors among adolescent girls strengthened for non-White girls (from -.27 to -.64) but disappeared for White girls. Our findings are a contribution to the literature because most research in this field controls for race/ethnicity but does not consider the moderating effect of race/ethnicity. Our findings surprisingly suggest that there is no relationship between dating violence and sexual behaviors for White girls. This finding should be considered preliminary given that most studies that have focused on dating violence and sexual behaviors among girls have consisted primarily of White girls and findings have differed from the present study's finding. Nonetheless, an important take-away from our multigroup finding is its significance.

### Limitations and Strengths

Our study has some limitations. First, we relied exclusively on self-reported data, including the measure of (perceived) father involvement. Although assessing perceived father involvement in lieu of a more objective measure of father involvement might be considered a limitation, some studies have found perceived parental behavior to be a more important predictor of youth outcomes than actual parental behavior. Second, our measures of father involvement are somewhat limited. Many of the desired variables are incidence variables. As a result, we know only whether something happened. We know little about the frequency, intensity, or duration of father involvement. Future research should seek to extend our research by considering these types of variables. A third limitation is that mother-child and father-child relationships were not considered simultaneously. Fourth, our study may have omitted variables that contribute to the relationship between father involvement and adolescent sexual behaviors and dating violence, such as age, child abuse, and alcohol use. Future research should seek to more fully incorporate variables that may help explain the hypothesized relationships. A fifth limitation relates to the cross-sectional nature of the data. Using cross-sectional data limits our ability to make causal statements. In addition, because we used a cross-sectional design, we were unable to assess father involvement over time and how changes in father involvement may affect adolescent sexual behavior. Sixth, another potential limitation is the differences in the study variables' timeframes. For example, father-daughter activity was assessed over the previous 4 weeks while the dating violence and sexual behaviors variables were assessed over the previous 18 months. Seventh, given the small sample size for American Indian, Asian, and multiracial girls, we did not have adequate power to analyze racial/ethnic differences. Caution must be exercised if generalizing our findings to American Indian, Asian, and multiracial girls. Finally, it is important to acknowledge that the Add Health Wave I data are nearly 20 years old. While some researchers may consider this a limitation, the Add Health database presented us with an opportunity to use a nationally representative sample to test our study hypotheses. Still, we encourage readers to qualify these findings by context.

Despite these limitations, our study has important strengths. It used SEM to test the theoryguided hypotheses. It also adds to the scant literature on racial/ethnic differences in the relationship between father involvement and sexual risky behaviors as well as dating violence and sexual risky behaviors among sexually experienced adolescent girls.

#### Implications for Research and Intervention Programs

Perceived father involvement was associated with risky sexual behaviors among sexually experienced adolescent girls. We found dating violence to be directly associated with risky sexual behaviors among sexually experienced adolescent girls, particularly non-White girls. To identify the mechanisms linking perceived father involvement to risky sexual behaviors among adolescent girls, future studies should use longitudinal models and test theoretically and empirically guided potential mediators. Future studies should also consider father figures such as step-fathers and grandfathers in addition to biological fathers, as having a father figure may be a stronger predictor of adolescent sexual behaviors than having a biological connection. In addition, given the higher likelihood of mother involvement, future studies should examine the extent to which a positive father–daughter relationship buffers against a negative mother–daughter relationship and its effect on adolescent sexual behaviors.

Professionals should strongly consider integrating fathers into prevention programs and policies to help reduce and prevent adolescent risky sexual behaviors. Furthermore, given the consistently significant relationship between the history of dating violence and risky sexual behaviors, professionals (e.g., teachers, physicians) should strengthen their commitment to identifying girls who may be dating violence victims or perpetrators.

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## **Biographies**

**Binta Alleyne-Green** is currently an Assistant Professor at Fordham University Graduate School of Social Service. Her research focuses on the impact of relationship violence on risk behaviors among minority adolescent females. She has been the recipient of a number of funding awards including a Diversity Supplement from the National Institute of Drug Abuse (NIDA), a First Year Faculty Grant from Fordham University as well as a Faculty Research Development Award to support her research.

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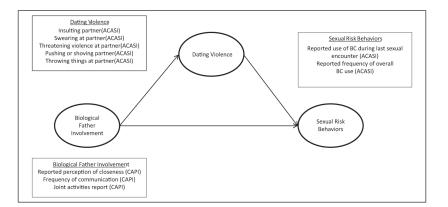
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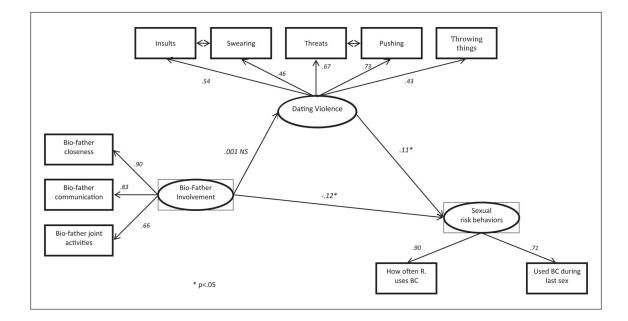
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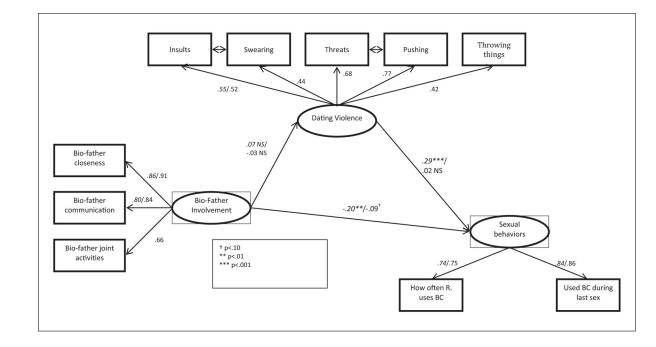
## Figure 1. Model diagram with corresponding observed variables

*Note.* ACASI = audio computer-assisted self-interviewing; CAPI = computer-assisted personal interviewing.



## Figure 2. Structural equation model, race combined

*Note.* Error terms are not shown for clarity of image. Arrows between observed variables indicate error terms allowed to covary. All factor loadings are significant in all models at p = .001. BC = birth control.



## Figure 3. Group structural equation model (White/non-White)

*Note.* Non-White female loadings and coefficients (where different) are in italics. BC = birth control.

# Table 1

## Demographic Profile of Respondents.

Descriptor	Respondent Summary (N = 879)
Average age	16.76 years ( <i>SD</i> = 1.37)
Age range	13 to 21 years
Race <sup>a</sup>	
Identified as White	589 (67%)
Identified as African American	224 (25.5%)
Identified as Latina	83 (9.44%)
Identified as American Indian	35 (3.98%)
Identified as Asian	33 (3.75%)
Identified as some other race/ethnicity	55 (6.26%)
Average grade level for prior school term	10.81 ( <i>SD</i> = 1.27)
Grade level range	Eighth grade to post-high school
Status of biological father	
Biological father lives with R	390 (44.4%)
Biological father is living but not with R	360 (41%)
R reports biological father is dead	47 (5.4%)
R knows nothing about biological father	82 (9.3%)
Sexual activity indicators	
Average age of first sexual intercourse	15.48 years (SD = 1.70)
Average number of partners in previous 18 months	3.38 ( <i>SD</i> = 3.61)

*Note.* R = respondent.

 $^{a}$ Participants were allowed to select more than one: Numbers may add up to more than 879.

Table 2

Zero-Order Correlations of All Observed Variables in Model.

	1	7	e	4	w	9	7	×	6	11
BF closeness	1.000									
BF activity	.596	1.000								
BF talking	.745	.533	1.000							
Insulting	011	600.	.019	1.000						
Swearing	012	.036	.057	.466	1.000					
Threatening	020	.004	.004	.305	.354	1.000				
Push/shove	016	600.	.035	.410	.331	.532	1.000			
Throwing things	057	009	059	.213	.151	.259	.294	1.000		
Used BC last sex	.080	.045	.058	016	011	-003	068	027	1.000	
Freq. BC use	.081	.070	.057	068	034	064	075	-054	.635	1.000
M	2.782	1.956	3.770	0.195	0.311	0.081	0.140	0.042	0.705	3.748
SD	1.680	1.992	2.481	0.410	0.508	0.272	0.359	0.200	0.456	1.387

*Note.* BF = biological father; BC = birth control.