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**Maternal History of Childhood Sexual Abuse and Adolescent Sexual
Risk Behaviors: Partial Mechanisms of Intergenerational Effects**

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Maternal History of Childhood Sexual Abuse and Adolescent Sexual Risk Behaviors:
Potential Mechanisms of Intergenerational Effects

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Abstract

Almost a quarter of women experience some kind of childhood sexual abuse (CSA). Although CSA is associated with subsequent difficulties in women's sexual well-being and parenting, few studies have examined whether maternal CSA history impacts how parents navigate the sexual development of their children. Using a cross-sectional sample of 194 low-income adolescents girls (Mean age = 15.4), the goal of this study was to: 1) test whether maternal CSA is predictive of adolescent sexual risk behaviors (SRBs), and 2) identify parenting/family characteristics (sexual communication, sexual beliefs, parental monitoring and autonomy granting, and mother-daughter relationship quality) that may mediate this relationship. Maternal CSA history was not directly related to adolescent SRBs, but was predictive of a number of parenting/family characteristics related to SRBs. In families with maternal CSA, daughters reported more frequent and less embarrassing communication, endorsed more open beliefs about sex, perceived more of their peers as sexually active, and felt more autonomy in making decisions about dating. Mothers with a CSA history perceived their daughters as more embarrassed talking about sex and reported less monitoring of their daughters activities. Maternal CSA history was indirectly related to SRBs through several of these characteristics. Although the magnitude of most effects was small, these differences may become more pronounced as girls grow older and engage in a broader range of sexual activity. The findings suggest that maternal CSA may have intergenerational effects on sexual development that should be considered in interventions aimed at promoting adolescent sexual health.

Introduction

Approximately 22% of women experience some kind of sexual abuse by the age of 17 (Frias, Brassard, & Shaver, 2014; U.S. Department of Health and Human Services, 2011). Experiencing childhood sexual abuse (CSA) increases the likelihood for a range of negative outcomes, including psychiatric disorders, physical illness, and relationship problems (Cavanaugh & Classen, 2009; Fergusson, McLeod & Horwood, 2013; Meston, Rellini, & Heiman, 2006). Although less studied, CSA may also impact later parenting practices (Jaffe, Cranston, & Shadlow, 2012; Selmann & Write, 2013). As a result, a mother's history of CSA may have implications for subsequent generations.

One important aspect of parenting that may be affected by CSA history is how parents navigate the sexual development of their children. For example, CSA may impact how parents talk about sexuality, their beliefs about sex and gender, and the rules and expectations they have regarding normative relationships and sexual behavior. Across a number of studies, these aspects of parenting (e.g., sexual communication, parental values, household rules) have been linked to variability in adolescent sexual risk behaviors (SRB); however, few studies have examined the link between maternal CSA histories, these parenting factors and adolescent sexual risk behavior. The goal of the present study is to: 1) examine if maternal CSA history is associated with sexual risk behaviors within a sample of low-income teenage girls; and 2) identify parenting factors that may act as mediating mechanisms between maternal CSA and adolescent SRB.

Adolescent sexual behaviors are influenced by a number of factors, including biological differences (e.g., early puberty), individual characteristics (e.g., impulsivity), family factors (e.g., parent-child relationship quality), peer factors (e.g., peer risk behaviors), and the broader

sociocultural context (e.g., policies about birth control). Although multiple factors shape adolescent health, the family (microsystem) is a primary context contributing to individual variations in adolescent development (Bronfenbrenner, 1986). Although Bronfenbrenner's bioecological model does not directly address sexual development, other ecological models have highlighted the ongoing importance of the family on sexual behaviors throughout the teenage years, such as the risk and resiliency framework (Jordahl & Lohman, 2009) or Jaccard's conceptual framework around sexual communication (Jaccard, Dodge & Dittus, 2002). Consistent with these theories, research in this area has demonstrated at least four ways in which parents may influence their adolescents' sexual behaviors: parent-adolescent communication about sex, parental values about gender and sex, parental monitoring and autonomy granting, and general parent-child relationship quality. Drawing from this literature, Cavanaugh and Classen (2009) proposed a theoretical model to highlight how a mother's CSA history may indirectly increase her daughter's sexual health risk through these four domains of parenting. To date, however, there have been few empirical tests of these possible pathways. The goal of this study is to examine these four domains (mother-daughter sexual communication, beliefs about sexuality, parental monitoring/autonomy granting, and mother-daughter relationship quality) as possible mechanisms linking maternal CSA with adolescent SRB (see Figure 1). Below is an overview of the literature on: a) how maternal CSA relates to each of these factors and b) how these factors contribute to or mitigate adolescent sexual risk.

Parent-child Sexual Communication

Parent-adolescent communication about sexual values, beliefs, and knowledge is associated with later sexual initiation and fewer sexual risk behaviors (DiIorio, Plahar, Belcher, 2003; Hutchinson, 2002). There are a number of factors that influence the effectiveness of these

discussions, including the frequency, the style of communication and the parent's feelings of embarrassment. The literature on how the frequency of sexual communication relates to sexual activity has been mixed and may depend on who the reporter is (parent or child). Studies often find low correlations between mother and daughter reports (Guilamo-Ramos, Jaccard, Dittus & Collins, 2008). Adolescents who report discussing sex more often with their parents are less likely to initiate sex, while mother's report has been associated with adolescents being more likely to initiate sex (Pearson, Muller & Frisco, 2006). Additionally, the nature of conversations is important. Discussions of sexuality are most helpful in reducing risk when parents are open and knowledgeable about sexuality (DiIorio et al., 2003; Jerman & Constatine, 2010). It is also important for parents to feel comfortable about communication since mothers who report feeling embarrassed or uncomfortable are less likely to discuss sex with their children (DiIorio et al., 2003; Guilamo-Ramos et al., 2008).

The extent to which maternal CSA may influence maternal-adolescent communication has not been well studied in the empirical literature. Mothers with a history of CSA report difficulty with certain aspects of parenting, such as feeling less self-efficacy about their parenting (Jaffe et al., 2012). Additionally, it may be particularly difficult for these mothers to talk to their daughters about sexuality (Cavanaugh & Classen, 2009). Qualitative research has demonstrated that discussing sexuality--and specifically promoting autonomy, healthy views of sexuality and one's self as a sexual being--may be hindered in mothers with a CSA history by their focus on protecting their child from sexual assault (Wright, Fopma-loy, Oberle, 2012). Mothers also report avoiding discussions about sexuality due to fear of disclosure or fear of being triggered by the experience (Wright et al., 2012). Although sexual communication may be difficult, other findings indicate that women with a child abuse history are more likely to talk to their daughters

about sex (DiIorio et al., 2003). Despite some inconsistency in the findings, the limited research in this area suggests that a history of CSA may impact mother-child sexual communication.

Beliefs about Sexuality

Communication is one method of conveying beliefs about sexuality between parent and child. However, beliefs and values are passed to children in other ways as well, such as through sharing religious beliefs or modeling. Both maternal and adolescent beliefs about sexuality may influence adolescent SRB. Research has shown that maternal disapproval of premarital sex and adolescent perceptions of maternal opposition to sex are associated with a lower likelihood of teens having sex within the next year (Dittus & Jaccard, 2000; Usher-Seriki, Bynum, & Callands, 2008). Similarly, when mothers hold less permissive attitudes around sexuality, their adolescents report fewer SRBs and less anticipated future sexual activity (Rose et al., 2005). Additionally, strong parental religious beliefs are associated with the use of contraception at the first sexual experience (Manlove, Terry-Humen, Ikramullah & Moore, 2006). When adolescents report high religiosity, they are less likely to have an early sexual initiation (sex before age 14; Kagesten & Blum, 2015). Correspondingly, adolescents with conservative rather than liberal attitudes around sex are half as likely to experience early sex (Kagesten & Blum, 2015). Adolescent's positive beliefs about sexuality are also associated with SRBs. For example, adolescents' positive beliefs or expectations about sex, such as sex being a way of expressing love towards your partner, are associated with increased sexual behaviors. Relatedly, adolescents who report more love for their partners use condoms less frequently (Aguiar & Camargo, 2014). As these studies demonstrate, both mother and daughter beliefs about sexuality predict adolescent sexual risk.

The findings in the literature are limited and mixed around the potential influence of CSA on maternal and adolescent beliefs about sexuality. Women with a history of CSA report more negative affect (such as anger or fear) around topics of sexuality, as well as less romantic sexual self-schemas (Meston et al., 2006). These more negative experiences with sex may interfere with their beliefs about sexuality, since they seem to interpret information related to sexuality differently from those without a history of CSA. For example, in a writing task focusing on sexuality, women with a history of CSA used more negative and less positive emotion words when describing sexual acts (Lorenz & Meston, 2012). Conversely, other studies suggest that women with a CSA history may have more liberal or permissive sexual attitudes (Randolph & Mosack, 2006). Again, although the literature in this area is limited, existing studies suggest that women with a CSA history may have different attitudes and beliefs about sexuality and gender than women without a CSA history, and that these beliefs may in turn influence adolescent sexual behavior.

Parental Monitoring and Autonomy Granting

Parenting monitoring is conceptualized as the parents' knowledge, awareness of, or attention to their child's whereabouts and activities (Dishion & McMahon, 1998). The impact of parental monitoring on adolescent SRB has been well studied. Parents who monitor their children more have children who engage in the less risky sexual activity (Rose et al., 2005) and a later sexual debut (Kalina et al., 2013). In longitudinal research, less parental monitoring is predictive of an adolescent testing positive for a sexually transmitted disease one year later and not using any form of contraception during subsequent intercourse occasions (DiClemente et al., 2001). Furthermore, parental monitoring was found to mediate the relationship between parent psychopathology and recent sexual activity for teen girls (Hadley et al., 2011). For mothers with

current psychological symptoms (e.g. depressive symptoms), parental monitoring may be difficult, in turn leaving adolescents more opportunity to engage in risky behaviors. Directly related to parental monitoring is parental autonomy granting. Autonomy granting or inhibiting is similar to monitoring in that it reflects parental involvement; however autonomy granting is conceptualized as who sets the limits and how much independence or autonomy the adolescent is given. Specifically, autonomy granting is often measured through how much choice parents give their children, and through the encouragement of decision-making and self-expression (Lanza, Huang, Murphy & Hser, 2012; Silk, Morris, Kanaya, & Steinberg, 2003). Adolescents who report greater autonomy around decision-making report more SRBs than adolescents who report moderate or low levels of autonomy (Lanza et al., 2012; Moilanen, 2015). Together, these results indicate that less parental monitoring and higher levels of autonomy are similarly associated with higher sexual risk.

Again the literature is sparse in investigating the influence of maternal CSA on parental monitoring and autonomy granting. Qualitative interviews have found that some mothers with a history of CSA report less trust in the outside world and a desire to monitor their daughters to protect them from being sexually assaulted (Wright et al., 2012). Other mothers who have experienced sexual victimization report less parental monitoring (Testa, Hoffman, Livingston, 2011). In addition, the types of psychological problems associated with CSA (e.g., depression, PTSD) may impede monitoring ability (Hadley et al., 2011) and influence how mothers navigate their children's autonomy (Allbaugh, Wright, & Seltmann, 2014). For example, maternal depression has been linked to being more disengaged from their children (Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Additionally, mothers with a history of CSA have been found to take a more permissive approach to parenting, possibly due to lacking confidence in parenting

(DiLillo & Damashek, 2003). Although the literature is mixed, there is evidence to suggest that CSA impacts monitoring behaviors and autonomy granting, which in turn have been shown to impact adolescent SRBs.

Relationship Quality

Parent-child relationship quality has also been associated with adolescent's sexual behavior, with higher quality relationships associated with fewer SRBs (Deptula, Henry & Schoeny, 2010). This relationship may vary by gender. In a study by Rose and colleagues (2005), girls who reported negative parental relationships were 28 times more likely than boys to have initiated sex, whereas girls who reported positive parental relationships were less likely than boys to have initiated sex. Looking more specifically at mother-daughter relationships, adolescents who reported worse relationships with their mothers also reported earlier first sexual activity, engaging in intercourse by the age of 15 years old (Price & Hyde, 2011). In contrast, adolescents who report being satisfied with their relationship with their mothers had lower odds of engaging in sexual intercourse or becoming pregnant within the following year (Dittus & Jaccard, 2000). Similarly, in a sample of African American girls receiving outpatient mental health treatment, maternal attachment was related to lower likelihood of adolescent girls ever having sex and of sexually active teens reporting inconsistent condom use (Donenberg, Emerson & Mackesy-Amiti, 2011).

A history of maternal CSA may influence parent-child relationship quality. Mothers who have experienced victimization report significantly lower mother-daughter relationship quality (Claridge, Lettenberger-Klein, Farineau, Wojciak, & McWey, 2014). These mothers may experience greater negativity and less positivity in the relationships with their children. Although other forms of childhood adversity and sociodemographic characteristics need to be

considered, mothers with a CSA history scored significantly lower on warmth and higher on psychological aggression than mothers without a CSA history (Barrett, 2009). Similarly, children of mothers who have experience CSA are more likely to be insecurely attached compared to the children of mothers with no such history (Kwako, Noll, Putnam & Trickett, 2010). These findings indicate that maternal CSA may influence mother-daughter relationship quality, which in turn plays an important role in adolescents' sexual behaviors.

Current Study

The goal of this study is to clarify the relationships between maternal CSA, mother-daughter sexual communication, beliefs about sexuality, parental monitoring and autonomy granting, parent-child relationship quality, and adolescent SRB. This study aims to empirically test aspects of a conceptual model introduced by Cavanaugh and Classen (2009) on ways that maternal CSA may impact offspring sexual risk. The following questions will be addressed: 1) Do mothers with and without a history of childhood sexual abuse (CSA) differ in (a) parent-daughter sexual communication frequency and comfort (b) beliefs and values regarding sex and gender (c) parental monitoring or (d) relationship quality? 2) If so, do these differences predict differences in adolescent daughter's sexual risk behaviors? Answering these questions can inform family and parent-adolescent interventions aimed at decreasing the sexual risk behavior among adolescents.

Methods

Participants

This study included 194 adolescent girls and their mother or primary female caretaker (92% biological mother). These dyads participated in an NIH-funded study evaluating health

disparities among adolescent girls in a mid-sized, low-income city in the Northeast. The girls were on average 15.4 years old ($SD = 1.05$; Range = 13-17). The mothers were on average 41.5 years old ($SD = 8.03$; Range = 21-66). Fifty-one percent of the adolescents were Latina, 27% African-American, 20% non-Hispanic White, and 2% Asian/ Middle Eastern. Eighty-seven percent of the sample qualified for free or reduced school lunch. Twenty-two percent of mothers did not complete high school, 67% had a high school degree, and 11% completed a bachelor's degree.

Procedures

Families were recruited from schools, health centers, community agencies, YWCA, local media outlets and through word-of-mouth. Adolescents and parents separately participated in a semi-structured audio taped interview and then completed multiple self-report measures using Audio Computer-Assisted Self-Interview (ACASI). Then, mothers and daughters participated in a videotaped interaction task. The majority of these interviews were conducted in English, with 20% conducted in Spanish. All measures were translated, back-translated and piloted following methods recommended by the World Health Organization. Additionally, mothers and daughters participated in a ten-minute videotaped dyadic interaction task. The University of Connecticut Institutional Review Board approved study procedures and participants were compensated with \$40 each for their time.

Measures

Demographic. Mothers filled in a demographic form including information about maternal education, marital status, the daughter's receipt of free/ reduced school lunch, and the family's eligibility for public assistance for housing and food insecurity for the family. These

items were used to identify socioeconomic differences between families. Mothers and daughters also reported all the racial/ ethnic groups with which they identified.

Maternal History of Sexual Abuse. Mothers' exposure to potentially traumatizing events was assessed through eighteen items, asking if mothers had experienced nine potentially traumatizing events, such as natural disaster, serious accident, physical assault or sexual assault. Following these questions they were specifically asked to think back to their childhood, before the age of eighteen. They were asked three additional yes/no items which were created for the study, including if anyone ever did something sexual to them that was unwanted, forced or against their will. For clarity in terminology this question will be termed CSA, however this variable does not constitute legal definitions of CSA, since it more broadly inquired about unwanted sexual experiences perpetrated by anyone. Although collecting retrospective statements of CSA experiences may be limited (e.g., possible mood effects on memory or recall bias), this measure has shown reliability (Fergusson, Horwood, & Boden, 2011), validity (Widom, 1997), and predictive utility concerning mental health outcomes (Kendler & Aggen, 2014).

Adolescent Sexual Risk Behavior. Adolescents were asked five yes/no questions about sexual activity from the Student Health Questionnaire (Coyle, Kirby, Marin, Gomez, & Gregorich, 2004) and six yes/no questions about sexual activity and substance use from the CDC Youth Risk Behavior Surveillance System (YRBS; Eaton et al. 2010). Sexual items asked whether the adolescent had yet engaged in specific acts (e.g. vaginal sex) and about sexual history (e.g., number of partners). For the current purposes, a count of nine potentially risky sexual activities (e.g., performed oral sex, sex without protection, sex with more than one partner) was computed, with higher scores reflecting more sexual activity.

Mother-Daughter Sexual Communication. Mothers and adolescents answered parallel items about communication in seven areas (dating, sex, alcohol/ drug use, schoolwork, college, future career and eating habits; adapted from Ennett, Bauman, Foshee, Pemberton, & Hicks, 2001). Participants indicated the frequency on a four-point Likert scale, ranging from 1 (never) to 4 (very frequently), and the emotional valence of these conversations on a five-point scale, ranging from 1 (very negative) to 5 (very positive). This study focused on only the responses about sexual topics. Participants were also asked how embarrassed they would feel talking about sex to their mother or daughter and how embarrassed the other person would feel in these conversations. These embarrassment questions were on a five-point scale, ranging from 1 (not at all) to 5 (very much), and modified from the Scale for the Comparison of the Sexual Attitudes of Adolescents and Their Parents (Fisher & Hall, 1988).

Beliefs about Sexuality. Mothers' opinions about sex were assessed using nine items and daughters' opinions were assessed using 10 items, adapted from the Scale for the Comparison of the Sexual Attitudes of Adolescents and Their Parents (Fisher & Hall, 1988). The items addressed the perceived appropriate age for sexual intercourse, religious beliefs related to sexuality, and potential reasons to engage or not engage in sex (e.g. being in love, getting a reputation). Items were adjusted to include more up to date language. This study utilized items addressing reasons to have sex, such as being in love or being curious about sex, and daughter's report that parents would be upset if they found out she was sexually active. Additionally, a composite was constructed of reasons not to have sex, it combined four items, including being too young for sex, needing to be married to have sex, having sex may lead to a bad reputation, and it is against their religion to have sex. The Cronbach's alpha reliability for the mother's composite was .52, while the alpha for the daughter's composite was .68. Four

additional questions were created for the study to assess perceived community/peer norms.

Mothers and daughters were asked to give an age estimate of when they thought males and females first engaged in sex in their neighborhood and the ideal age to have a child. In addition, adolescents were asked to give a percentage estimate on how many girls in the community their same age have had sex on a five point pictorial scale (reflecting 0-20%, 21-40%, etc.).

Parental Monitoring. Mothers were asked to report on their awareness about their daughter's lives through six Likert-type questions from the Parental Supervision and Monitoring measure ("Keeping Tabs," Kerr & Stattin, 2000). Responses ranged from 1 (nothing) to 5 (everything). These questions covered various domains of the adolescent's lives, such as friends, problems at school and how free time is spent. Cronbach's alpha reliability for mothers was .78. Daughters also responded to the same questions, about their mothers' awareness of these domains ($\alpha = .80$).

Parental Inhibiting Autonomy (Self-report). Mothers and daughters were asked 8 parallel questions, created for the study, about decision-making in several areas (i.e. romantic relationships, involvement with boys, weekend activities, clothes). This project focused on one item: how are decisions made about dating/ romantic interests. Responses were given on a five point Likert scale (1= parent decides, 3= decide together, 5= adolescent decides).

Inhibiting Autonomy (Observed). Parent-Adolescent Interaction Task (PAIT; Chaplin, 2010) was administered with small modifications for this study. During these 10-minute interactions, participants discussed the rules in the house related to eating, appearance, dating and the use of free time. Videotapes were coded on a 1-5 scale for a number of themes, such as the mother's inhibition of their daughter's autonomy. The inhibiting autonomy 5-point scale ranged from 1 (not at all) to 5 (mainly characteristic). After extensive training, coding was

completed by four blind, undergraduate coders. Reliability was good based on the ICC for inhibiting autonomy at .59, $p < .01$.

Relationship Quality (Daughter Self-report). Adolescents reported on the frequency of their mothers' hostility (8 items) and warmth (9 items) using The Parental Warmth, Support and Hostility scale, which evaluate the affective tone of the relationship. This scale was originally a subset of the Quality of Parental Relationships Inventory (Conger, Ge, Elder, Lorenz, & Simons, 1994), which was adapted for more appropriate language by the NICHD SECCYD (<https://www.nichd.nih.gov/research/supported/Pages/seccyd.aspx>). The adolescents in this study responded to questions (such as how often does your mother let you know she really cares about you or how often does your mother shout or yell at you because she is mad at you?) on a four-point Likert scale, ranging from 1 (never) to 4 (all the time). The Chronbach's alphas for the Warmth and Hostility subscales were .92 and .81, respectively.

Relationship Quality (Observed). Parent-Adolescent Interaction Task (PAIT; Chaplin, 2010) was administered as described above. Videotapes were coded on a 1-5 scale for a number of themes. The dyad was specifically rated on their relationship quality. This 5-point scale ranged from 1: negative relationship quality (i.e. conflicted, uninvolved, or unhappy) to 5: positive (i.e. satisfying, communicative, warm). After extensive training, coding was completed by four blind, undergraduate coders. Reliability was good with ICC at .84, $p < .01$.

Data Analytic Plan

Data normality testing was conducted on all variables by examining skew and kurtosis and by using graphical approaches (i.e. histograms). Correlation analyses were used to determine if any demographic covariates (e.g., race/ethnicity) should be used. Multivariate Analysis of Covariance (MANCOVA) was used to test for potential group differences between

women with and without a history of CSA for the four domains of potential mediators: sexual communication, beliefs about sexuality, parental monitoring and autonomy granting, and parent-child relationship quality. Follow up univariate comparisons, such as independent sample t-tests or chi-square tests will be run on the significant relationship. Analyses controlled for significant demographic covariates from preliminary analysis.

Following these analyses, tests of mediation/indirect effects were run, including variables that were related to both CSA history and SRBs in these initial analyses. Following recommendations by Hayes (2013) tests of mediation/indirect effects used bootstrapping methods to calculate confidence intervals for statistical significance followed by Sobel tests.

Power Analysis

The sample size was selected to be sufficient for detecting group differences. Specifically, to test for group differences and to detect a medium effect size ($d = .05$) with alpha set at .05, a sample size of 45 participants per group will offer sufficient power ($1-\beta = .80$). Based on existing prevalence rates, it is expected that about 25% of women will report CSA (about 45 women). A sample size of 200 can detect a small effect in correlation analysis ($r=.2$; Cohen, 1992).

Results

Preliminary analyses examined the group differences between women with a history of CSA and women without CSA history on a number of demographic variables (see Table 1). CSA status was not significantly related to race/ethnicity, whether the biological father of the adolescent lived in the home, mother's education status or if the family qualified for free or reduced school lunch. Thus, these variables were not used as covariates in subsequent analyses.

The first set of analyses tested whether adolescents in the two maternal CSA groups differed on sexual risk behaviors. The percent of girls reporting they were sexually active did not differ significantly by maternal CSA history (32% in CSA group, 24% in the non-CSA group, $\chi^2(1, n = 185) = 1.32, p = .25$). In addition, the mean scores on the sexual risk behavior of the adolescents did not differ by group ($t(184) = -1.56, p = .12$, Cohen's $d = .25$). In families with CSA history girls reported slightly more risky behavior (mean = 1.77, SD = 2.3) compared to girls from families without a CSA history (mean = 1.25, SD = 2.07), although this difference was not statistically significant.

Although there was not a direct relationship between maternal CSA history and adolescent SRB in this sample, it is possible that maternal CSA may still have an indirect effect via different parenting characteristics. As a preliminary test of this possibility, analyses were run to examine the relationships between a) CSA history and parenting variables (sexual communication, beliefs about sexuality, parental monitoring and relationship quality variables) and b) parenting variables and adolescent SRB. Results are presented below.

Relationship between CSA History and Family Characteristics

Sexual Communication Variables. As shown in Table 3, there were some group differences between women with and without CSA history on the communication variables. There was a significant difference in the daughters' report of the frequency of communication about sex ($t(182) = -2.56, p < .05$), where mothers with a CSA history were seen as speaking about sex more frequently with their daughters (mean = 2.63, SD = 1.02), than mothers from the non-CSA group (mean = 2.25, SD = .95). There were also group differences in perceived embarrassment in discussing sexual topics. Daughters from the CSA group reported their mothers would be significantly less embarrassed to discuss sex with them ($t(174) = 2.53, p$

< .05). Additionally, there was a trend on daughter's report of embarrassment ($t(183) = 1.96, p = .056$), where daughters from the CSA group reported slightly less embarrassment (mean = 2.97, SD = 1.61) than daughters from the non- CSA group (mean = 3.42, SD = 1.45). There was also a trend on mother's report of daughter's embarrassment ($t(183) = -1.96, p = .056$), where daughters from the CSA group reported slightly more embarrassment (mean = 2.83, SD = 1.38) than daughters from the non- CSA group (mean = 2.43, SD = 1.32).

Beliefs about Sexuality. As shown in Table 4, there were maternal CSA group differences in beliefs about sexuality. Most of these differences were evident in measures reflecting daughters' beliefs rather than mothers' beliefs. Specifically, there was a significant difference in the daughters' belief that her parents would be upset if they found out she was sexually active ($t(179) = 3.71, p < .001$). Adolescents from the CSA group reported their mothers would be significantly less upset (mean = 3.65, SD = 1.40), than teens from the no CSA group (mean = 4.37, SD = 1.15). Daughters' reports that they would have sex if they were in love were also significantly different between CSA and non- CSA groups ($t(180) = -2.49, p < .05$). Teens from the CSA group were more likely to report that they would have sex if they were in love (mean = 2.82, SD = 1.59) than teens from the non- CSA group (mean = 2.25, SD = 1.43). Group differences were also significant in adolescents' reports of the number of female peers having had sex ($t(182) = -2.97, p < .01$); adolescents from the CSA group reported more of their female peers have had sex (mean = 3.88, SD = 1.02) compared to teens from the non- CSA group (mean = 3.35, SD = 1.25). Similar results were found regarding the number of male peers who have had sex ($t(182) = -2.62, p < .01$), where girls from the CSA group reported more of their male peers have also had sex (mean = 4.22, SD = .88) compared to the non- CSA group (mean = 3.76, SD = 1.29). Lastly, there was a trend for group differences between the daughters'

report on the composite of reasons not to have sex ($t(183) = 1.72, p = .09$). Adolescents from the CSA group reported fewer reasons for not having sex.

Parental Monitoring/ Autonomy Granting. Table 5 presents t-tests between CSA history and parental monitoring. Only mother's report of monitoring was significantly different between the groups ($t(184) = 2.06, p < .05$), where mothers with a CSA history reported significantly less monitoring (mean = 3.08, SD = .51) than mothers without a CSA history (mean = 3.25, SD = .52). Daughter's report of autonomy around dating was also significantly different between the groups ($t(178) = -2.08, p < .05$). Daughters from families with a CSA history reported significantly more autonomy (mean = 3.97, SD = 1.28) than girls from families with no such history (mean = 3.53, SD = 1.42).

Relationship Quality. When comparing groups on relationship quality between mother and daughter (see Table 6), there was a trend on daughter's reports of maternal hostility ($t(183) = -1.92, p = .056$), where daughters from the CSA group reported slightly more hostility (mean = 1.77, SD = .54) than daughters from the non- CSA group (mean = 1.63, SD = .46). There was no difference in the observed relationship quality measure.

Family Characteristics and Adolescent Sexual Risk

The second step to identifying potential indirect effects between CSA history and adolescent SRB was to determine how the above family characteristics relate to adolescent SRB. These findings are presented below.

Sexual Communication Variables. Table 7 shows the correlations between sexual communication variables and the daughters' SRBs. Only the mothers' report of communication frequency was significantly correlated with adolescent SRB ($r = .185, p < .05$).

Beliefs about Sexuality. A number of beliefs about sexuality (Table 8) from both mothers' and daughters' reports were significantly correlated with adolescent SRB, including daughters' report that their mothers would be upset if they were sexually active ($r = -.288, p < .001$), reasons not to have sex from mothers' reports ($r = -.185, p < .05$) and daughters' ($r = -.355, p < .001$). Daughters' reports that they would have sex if they were in love were also significantly correlated with their sexual risk behavior ($r = .508, p < .001$). Both mothers' ($r = -.187, p < .001$) and daughters' ($r = -.153, p < .05$) views of the average age boys start having sex, but not girls, were significantly correlated with the daughters' SRB. Both the number of girls and boys who have had sex, from the daughters' perspective, were significantly correlated with their SRB (girls: $r = .239, p < .001$; boys: $r = .237, p < .001$).

Parental Monitoring/ Autonomy Granting. Neither of the parental monitoring variables was significantly correlated with adolescent SRB (see Table 9). However, the autonomy variables were all significantly correlated with adolescent SRB: mother's report of autonomy around dating ($r = .181, p < .05$), daughter's report of autonomy around dating ($r = .293, p < .001$), and the inhibiting autonomy video coding variable ($r = .171, p < .05$). Across these measures, more daughter autonomy was associated with more SRBs.

Relationship Quality. The daughters' report of maternal hostility was the only relationship quality variable significantly correlated with adolescent SRB ($r = .173, p < .05$), represented by Table 10.

Results from Tests of Indirect Effects

Given the pattern of relationships presented in Tables 3 through 10, the following variables met criteria (correlated with CSA and SRB) to be tested for indirect effects: whether their parents would be upset if they found out they were sexually active, the number of peers

who have had sex (a mean of the number of girls and the number of boys who have had sex), whether the daughter believes she would have sex if she was in love, and the autonomy the daughter has around dating. Using the process macro from SPSS, these variables were tested with bootstrapping methods and the Sobel test to determine whether the magnitude of indirect effects was statistically significant. As shown in Table 11 all bootstrapped indirect effects were significant, but the total and direct effects were not (i.e. maternal CSA history was associated with increased SRBs via indirect paths but not a direct path). These results indicate that compared to daughters of mothers without a CSA history the daughters of mothers with CSA reported that their mothers would be less upset if they found out they were having sex, that they would have sex if they were in love, that they were granted more autonomy in making decisions about romantic relationships and dating, and that more of their peers were having sex. All of these four behaviors in turn were associated with increased sexual risk behaviors.

Discussion

As proposed by Cavanaugh and Classen (2009), there are a number of potential mechanisms through which maternal CSA may have intergenerational effects on adolescent SRBs. Consistent with this possibility, we found that maternal CSA was related to several variables that have been linked to SRBs in other literature. These findings suggest that maternal CSA history may impact important aspects of the family context that are related to adolescent sexual behaviors. Although there was no direct relationship between maternal CSA and adolescent SRB in this study, findings from this study suggest that CSA may indirectly relate to SRB through certain parent and adolescent characteristics.

CSA history was associated with a number of differences in both mothers and daughters. Regarding sexual communication, differences were most apparent from the daughter's perspective. Daughters from families with a CSA history reported more frequently talking about sexuality and that they and their mother would be less embarrassed. Although some studies have suggested that sexual communication may be difficult for mothers with a history of CSA, findings from this study are consistent with other research suggesting these mothers are more likely to talk to their daughters about sex (e.g., DiIorio et al., 2003). These mothers may feel that communication about sex is the best way to protect their children from the experiences they had, or from a world that is seen as more potentially dangerous. Interestingly, these differences in communication were only from the daughter's perspective. Thus, mothers with CSA history may be talking about sex more than mothers without a CSA history without necessarily realizing they are more frequently engaging in these conversations. It is also possible that these mothers have conversations about sex that are more direct or clear in topic; as a result, these conversations may be better remembered as actually being about sex by their daughters. Based on mean scores, there was greater agreement between mothers and daughters in the frequency of communication about sex in dyads in which the mother experienced CSA. While it is normative for mothers to report more sexual communication than their daughters (Hadley et al., 2009), these findings suggest that mothers with CSA history may actually be more accurate whereas mothers without a CSA history may be overestimating how frequently they engage in these conversations.

The daughters of mothers with CSA also reported feeling less embarrassment and perceiving less embarrassment in their mothers when talking about sex. Although most mothers report some discomfort with sexual conversations with their children, increased frequency of

conversation may contribute to less embarrassment for both mother and daughter over time in these dyads. Mother's reports of their daughter's embarrassment also suggest greater accuracy for families with a history of CSA, unlike mothers without a CSA history, who saw their daughters as significantly less embarrassed. Perhaps because these mothers view their daughters as less embarrassed than they actually are, they may be less in tune with how their daughters are feeling about this sensitive topic, which may in turn reduce the potential effectiveness of these discussions.

Daughters from families with a history of CSA also reported more autonomy around dating, than teens whose mothers do not have a history of CSA. Similarly, mothers with a history of CSA reported less monitoring, as has been found elsewhere (Testa et al., 2011). By talking about sexuality more frequently and being given more autonomy around dating decisions, adolescents from families with a history of CSA may be more open to sex and possibly more aware of sexual expectations or experiences of others because they have more freedom. This may also be the reason that adolescents from the maternal CSA group believed more of their peers had had sex and that their parents would be less upset if they found out the teen is sexually active.

Maternal experience of CSA was mostly associated with parenting characteristics as reported by the daughter, with the exception of maternal report of monitoring. Some literature does suggest that individuals who have experienced trauma, such as CSA, may have a more difficult time monitoring because of long-lasting psychopathology (e.g., depression, PTSD; Hadley et al., 2011), however it is also possible that these families have a greater openness to their teenagers normative development. Although conceptually monitoring is thought of as tracking and surveillance, the widely used monitoring measure included in this study largely

reflects the mother's perceptions about how much she knows about her child's activities and how much the child discloses to their parents (Stattin & Kerr, 2000). The lower monitoring scores for mothers with a CSA history may indicate they know less about their daughter's activities, however their scores are also more in line with what daughters report. These mothers may not be less watchful or surveillant of their children, but instead may be better at recognizing what they do not know. Perhaps their childhood experience of CSA has made them more cognizant that there are things parents do not know about their children.

Of the four domains (communication, beliefs, monitoring/autonomy, relationship quality) examined, beliefs and autonomy/monitoring variables were the most strongly correlated with SRBs at the bivariate level. Those that were negatively related to adolescent SRB included: both mother and daughter's reasons not to have sex, their expectations for the average age that boys have sex, and the daughter's belief that their parents would be upset if they found out she is sexually active. These findings are in line with existing work, which has demonstrated that conservative attitudes around sex and maternal disapproval of premarital sex are associated with lower levels of adolescent SRB (Dittus & Jaccard, 2000; Kagesten & Blum, 2015; Usher-Seriki et al., 2008).

A number of beliefs around sexuality were positively related to adolescent SRB at the bivariate level, including the mother's reports of communication frequency, the daughter's reports that they would have sex if they were in love, their beliefs that more of their peers have had sex, their reports of their mother's hostility, and both mother and daughter's reports of autonomy around dating. The observed mother's inhibition of the daughter's autonomy also related to SRB in the expected direction. The adolescents from the CSA group seem to have more open views on sexuality that are associated with more SRB. Additionally more autonomy

around dating was related to more SRB, which supports previous findings linking autonomy and sexual risk taking (Lanza et al., 2013). Although these findings may suggest that these adolescents are at higher risk for SRBs, it may also be possible that they are participating in more sexual exploration in an environment that is more accepting of sexuality. Past research on adolescent sexuality has often conceptualized sex as sexual risk rather than normative sexual behaviors. A number of the variables this study found relating to SRB (having more autonomy around dating, believing your parents would not be upset, and being in love when having sex) may not always equate to risky sexual behavior. As highlighted by other researchers in this area (Tiefer, 1996), it is important that researchers not pathologize normative sexuality.

The four chosen domains were expected to relate to SRB given the body of literature, however many variables were not related. In this study, there was a low endorsement of sexual experiences and SRBs. The young age of this population may contribute to the lack of sexual experience, but it may also be possible that the adolescents are endorsing normative sexual exploration, without necessarily participating in higher risk behaviors (e.g. multiple partners, no contraception). If this is the case, it may be that these family characteristics will become more predictive when the adolescents are older and engaging in a wider variety of sexual experiences.

Within this sample, there was no direct relation between maternal CSA and adolescent SRB, contrary to the initial hypothesis. Based on effect sizes, adolescents in the maternal CSA group were engaging in more sexual behaviors; however this difference did not meet statistical significance. In general, the sample reported relatively few SRBs. Again, given the low rate of SRBs, there may not have been sufficient variability to detect group differences. As these girls age, differences in SRBs associated with maternal CSA history may become more evident. Although here was no significant direct effect, we found that mother's history of CSA had an

indirect effect on adolescent's SRB through the adolescent's beliefs (that their mothers would be less upset if they found out they were having sex, that they would have sex if they were in love, and that more of their peers were having sex) and their perceived autonomy around dating. As these teens get older and become more sexually experienced, these potential mechanisms of influence may become increasingly important factors in addressing sexual risk among adolescents in families with a maternal CSA history. Another reason for the lack of direct effect may be because CSA has a varied impact on individuals. Women who experienced CSA may be functioning well or may have ongoing difficulties. Plausibly, some of the effects of CSA may be in opposite directions, for example, women with depression symptoms may withdraw and be less aware. Conversely, women with PTSD may become hypervigilant. These differing reactions to CSA may cause some women to over-monitor, while others under-monitor. The heterogeneity of women with CSA history may obscure or mask potential effects of these experiences. Although CSA is conceptualized as a risk factor, it is also possible that this experience makes mothers with a history of CSA try to nurture a more open environment around sexuality, also potentially helping them be more in tune with their daughters. Additionally, if the family environment of the mothers with a history of CSA is relatively more accepting of sexuality, the daughters may also be more open and willing to report SRBs. The findings suggest that adolescent's from families with a history of CSA may have different beliefs about sexuality and more autonomy around their dating, which in turn influences the sexual behaviors they take part in.

Limitations and Strengths

There were a number of study limitations and strengths that may have influenced these results. CSA history and adolescent SRB were collected retrospectively through self-report

measures. Although studies have demonstrated these methods are valid and reliable, they are not without limitations and biases. Additional reports may help us better discern the specific mechanisms through which CSA influences mothers and their children. As another measurement issue, the composite reasons not to have sex had a low Chronbach's alpha; however, findings did not differ when looking at items individually. Similarly, because this study was not designed to specifically look at this topic, many of the measures were brief. Assessing things like the content of sexual conversations or multiple areas of autonomy granting are important for future studies. Additionally, this study did not take into consideration mental health factors that may be important to consider (i.e. depression); however, several other studies have shown that relations between childhood abuse and parenting outcomes exist beyond maternal depression symptoms (Banyard, Williams, & Siegel, 2003; Pazdera, McWey, Mullis, & Carbonell, 2013). Follow up analyses of significant CSA group differences also remained after controlling for maternal depressive symptoms. This study was cross-sectional, which limits our ability to assess temporal precedence. Especially when considering SRB, we cannot be sure if the parents began talking to their daughters more after the daughters have initiated sex or before. Finally, adolescents in this study were in the earlier stages of adolescence (e.g., 9th and 10th grade), and as a result there was limited variability in sexual activity. The majority of girls were not yet sexual active. Although there was a low base rate of SRB, follow up analyses in which SRBs were log-transformed or dichotomized did not change the overall pattern of results. Plausibly, CSA history may be more strongly linked to sexual risk behavior in a group of adolescents showing more variability in risk (e.g., an older population).

Despite these limitations, this study also had several strengths, including the use of mother and daughter report, ACASI reports of sexual risk behaviors, and observational data

about the relationship. The study also extended the literature by examining a wide variety of parenting characteristics: communication, beliefs, monitoring or autonomy granting, and relationship quality within these dyads. Finally, this study focused on a higher risk population (i.e., low-income adolescents, primarily Latina) who are disproportionately impacted by negative sexual health outcomes (e.g., unplanned pregnancy, HIV); research focusing on risk in these young women is particularly important.

Clinical Implications

Although the field is well aware of the need for intervention immediately after a traumatic event, we less often discuss the specific intergenerational mechanisms through which risk can transfer. There are many family-based interventions aimed at increasing sexual communication and promoting sexual health, such as “Growing Together,” which provide workshops for mothers and daughters to learn about reproductive health (Ramo, Bravo, & Tschann, 2014). However, this program and others do not explicitly consider maternal factors, such as their lifetime sexual experiences. Our findings suggest that maternal history of CSA may influence certain parenting characteristics (i.e. adolescent beliefs, autonomy), which may be related to more SRB or representative of normative sexual exploration in this younger sample. Understanding normative sexual development may be more difficult for some mothers with a history of CSA (DiLillo & Damashek, 2003). These mothers may benefit from interventions that enhance their understanding of sexual developmental norms (Cross, 2001) and take into account their own experiences with sexuality. Our findings also indicate more sexual communication and potentially families with a history of CSA who encourage a more accepting, comfortable environment to discuss sexuality. For example, programs such as Growing Together, who may work with families with a history of CSA, could harness the strengths these dyads have in

communicating about sexuality frequently without embarrassment. More broadly, interventions that incorporate family members and consider potential intergenerational effects on adolescent sexual health may provide the best outcomes.

Conclusions

A distressing number of women experience childhood sexual abuse. The goal of this study was to understand how these experiences might impact the sexual development of these women's teenage daughters. We found that women with a CSA history did differ from those without this history, particularly from the daughter's perspective. Although CSA was not directly related to sexual risk behavior, our findings suggest there are several indirect paths between CSA and adolescent sexual risk behaviors. These differences may become more important as girls enter an age where more sexual behavior, including riskier behaviors, occurs. Findings from this study, and research on the lasting impact of maternal CSA, can provide important direction for clinical interventions aimed at promoting healthy sexual development for low-income adolescent girls.

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Table 1. Demographic Information on Women with CSA History and No CSA History

	CSA History N= 69	No CSA History N =117	χ^2 or t-value	p
Race			.213	0.89
Hispanic (N=109)	37 %	63 %		
White (N=37)	35 %	65 %		
African American (N=40)	40 %	60 %		
Bio Father in the Home			.238	0.63
Yes (N=67)	34 %	66 %		
No (N=116)	38 %	62 %		
Two Partner Household			3.62	0.06
Yes (N=92)	43 %	57 %		
No (N =91)	29 %	71 %		
Mother HS grad			.905	0.64
Less than HS (N=38)	32 %	68 %		
Only HS (N=127)	39 %	61 %		
College (N=21)	33 %	67 %		
Free/ Reduced Lunch			1.70	0.43
Full Price (N=25)	40 %	60 %		
Reduced (N=39)	28 %	72 %		
Free (N=119)	40 %	60 %		

Note. CSA = Childhood Sexual Abuse; Bio = Biological; HS = High School.

Table 2. Variable Descriptives

Variable	M (SD)	Range
Communication Frequency M	2.77 (.88)	1 - 4
Communication Tone M	4.06 (.93)	1 - 5
Embarrassed Self M	1.55 (1.01)	1 - 5
Daughter Would be Embarrassed M	2.58 (1.35)	1 - 5
Communication Frequency D	2.39 (1.00)	1 - 4
Communication Tone D	3.39 (1.17)	1 - 5
Embarrassed Self D	3.27 (1.52)	1 - 5
Mother Would be Embarrassed D	2.08 (1.34)	1 - 5
Parents Upset D	4.08 (1.31)	1 - 5
Reasons no sex M	3.87 (.78)	1 - 5
Reasons no sex D	3.18 (.82)	1 - 5
Curious about sex D	2.37 (1.34)	1 - 5
In love D	2.45 (1.50)	1 - 5
Norms age sex girls M	14.17 (2.45)	10 - 21
Norms age sex boys M	13.74 (2.37)	10 - 21
Norms age sex girls D	14.25 (1.89)	10 - 21
Norms age sex boys D	13.72 (1.99)	10 - 21
# girls had sex D	3.57 (1.18)	1 - 5
# boys had sex D	3.95 (1.16)	1 - 5
Monitoring M	3.19 (.53)	1 - 4
Monitoring D	2.93 (.66)	1 - 4
Autonomy Dating M	2.72 (1.11)	1 - 5
Autonomy Dating D	3.69 (1.40)	1 - 5
IA Video Coding	2.02 (.81)	1 - 5
Maternal Warmth D	3.18 (.71)	1 - 4
Maternal Hostility D	1.69 (.50)	1 - 4
RQ Video Coding	3.49 (.81)	1 - 5

Note. M = Mother report; D = Daughter report; Parents Upset = Daughters' report that parents would be upset if they found out she was sexually active; Reasons no sex = Composite of reasons not to have sex; In Love = Would have sex if they were in love; IA Video Coding = Inhibiting Autonomy Rating from Video Coding; RQ = Relationship Quality.

Table 3. Relationship between CSA History and Sexual Communication Variables

Communication Variables	CSA History M (SD)	No CSA History M (SD)	t- value, p
Communication Frequency M	2.77 (.91)	2.81 (.86)	.329, .74
Communication Tone M	3.92 (.98)	4.11 (.89)	1.29, .20
Communication Frequency D	2.63 (1.02)	2.25 (.95)	-2.56, .01*
Communication Tone D	3.51 (1.18)	3.31 (1.17)	-.989, .32
Embarrassed Self D	2.97 (1.61)	3.42 (1.45)	1.96, .06 ⁺
Mother Would be Embarrassed D	1.77 (1.17)	2.30 (1.42)	2.53, .01*
Embarrassed Self M	1.49 (.87)	1.53 (1.01)	.286, .78
Daughter Would be Embarrassed M	2.83 (1.38)	2.43 (1.32)	-1.96, .06 ⁺

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; CSA = Childhood Sexual Abuse; M = Mother report; D = Daughter report.

Table 4. Relationship between CSA History and Beliefs about Sexuality

Beliefs	CSA History M (SD)	No CSA History M (SD)	t- value, p
Parents Upset D	3.65 (1.40)	4.37 (1.15)	3.71, .00**
Reasons no sex M	3.84 (.70)	3.89 (.82)	.359, .72
Reasons no sex D	3.04 (.82)	3.26 (.82)	1.72, .09 ⁺
Curious about sex D	2.42 (1.40)	2.35 (1.30)	-.354, .72
In love D	2.82 (1.59)	2.25 (1.43)	-2.49, .01*
Norms age sex girls M	14.2 (2.62)	14.2 (2.38)	-.112, .91
Norms age sex boys M	13.6 (2.48)	13.86 (2.34)	.713, .48
Norms age sex girls D	14.1 (1.65)	14.3 (1.97)	.625, .53
Norms age sex boys D	13.6 (1.71)	13.77 (2.08)	.682, .50
# girls had sex D	3.88 (1.02)	3.35 (1.25)	-2.97, .003*
# boys had sex D	4.22 (.88)	3.76 (1.29)	-2.62, .01*

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; CSA = Childhood Sexual Abuse; M = Mother report; D = Daughter report; Parents Upset = Daughters' report that parents would be upset if they found out she was sexually active; Reasons no sex = Composite of reasons not to have sex; In Love = Would have sex if they were in love.

Table 5. Relationship between CSA History and Parental Monitoring/ Autonomy

Parental Monitoring	CSA History M (SD)	No CSA History M (SD)	t- value, p
Monitoring M	3.08 (.51)	3.25 (.52)	2.06, .04*
Monitoring D	2.90 (.69)	2.95 (.65)	.458, .65
Autonomy Dating M	2.77 (1.05)	2.65 (1.14)	-.689, .49
Autonomy Dating D	3.97 (1.28)	3.53 (1.42)	-2.08, .04*
IA Video Coding	1.97 (.73)	2.07 (.85)	.701, .48

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; CSA = Childhood Sexual Abuse; M = Mother report; D = Daughter report; IA Video Coding = Inhibiting Autonomy Rating from Video Coding.

Table 6. Relationship between CSA History and Relationship Quality

Relationship Quality	CSA History M (SD)	No CSA History M (SD)	t- value, p
Maternal Warmth D	3.26 (.69)	3.16 (.72)	-.959, .34
Maternal Hostility D	1.77 (.54)	1.63 (.46)	-1.92, .06 ⁺
RQ Video Coding	3.40 (.77)	3.56 (.83)	1.15, .25

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; CSA = Childhood Sexual Abuse; M = Mother report; D = Daughter report; RQ Video Coding = Relationship Quality Rating from Video Coding.

Table 7. Correlations among Sexual Communication Variables and Adolescent Sexual Risk

Communication Variables	Sexual Risk Behavior D
Communication Frequency M	.185*
Communication Tone M	-.100
Communication Frequency D	.079
Communication Tone D	-.076
Embarrassed D	.000
Mother Would be Embarrassed D	.072
Embarrassed M	-.076
Daughter Would be Embarrassed M	-.039

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; M = Mother Report; D = Daughter Report; Embarrassed = Embarrassed Discussing Sexuality; Parents Upset = Daughters' report that parents would be upset if they found out she was sexually active.

Table 8. Correlations among Beliefs about Sexuality and Adolescent Sexual Risk

Beliefs Variables	Sexual Risk Behavior D
Parents Upset D	-.288**
Reasons no sex M	-.185*
Reasons no sex D	-.355**
Curious about sex D	.022
In love	.508**
Norms age sex girls M	-.114
Norms age sex boys M	-.187**
Norms age sex girls D	-.127
Norms age sex boys D	-.153*
# girls had sex D	.239**
# boys had sex D	.237**

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; M = Mother Report; D = Daughter Report; Reasons no sex = Composite of reasons not to have sex; In Love = Would have sex if they were in love.

Table 9. Correlations among Parental Monitoring/ Autonomy Variables and Adolescent Sexual Risk

Parental Monitoring Variables	Sexual Risk Behavior D
Monitoring M	-.106
Monitoring D	-.075
Autonomy Dating M	.181*
Autonomy Dating D	.293**
IA Video Coding	-.171*

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; M = Mother Report; D = Daughter Report; IA Video Coding = Inhibiting Autonomy Rating from Video Coding.

Table 10. Correlations among Relationship Quality Variables and Adolescent Sexual Risk

Relationship Quality Variables	Sexual Risk Behavior D
Maternal Warmth D	-.138
Maternal Hostility D	.173*
RQ Video Coding	-.05

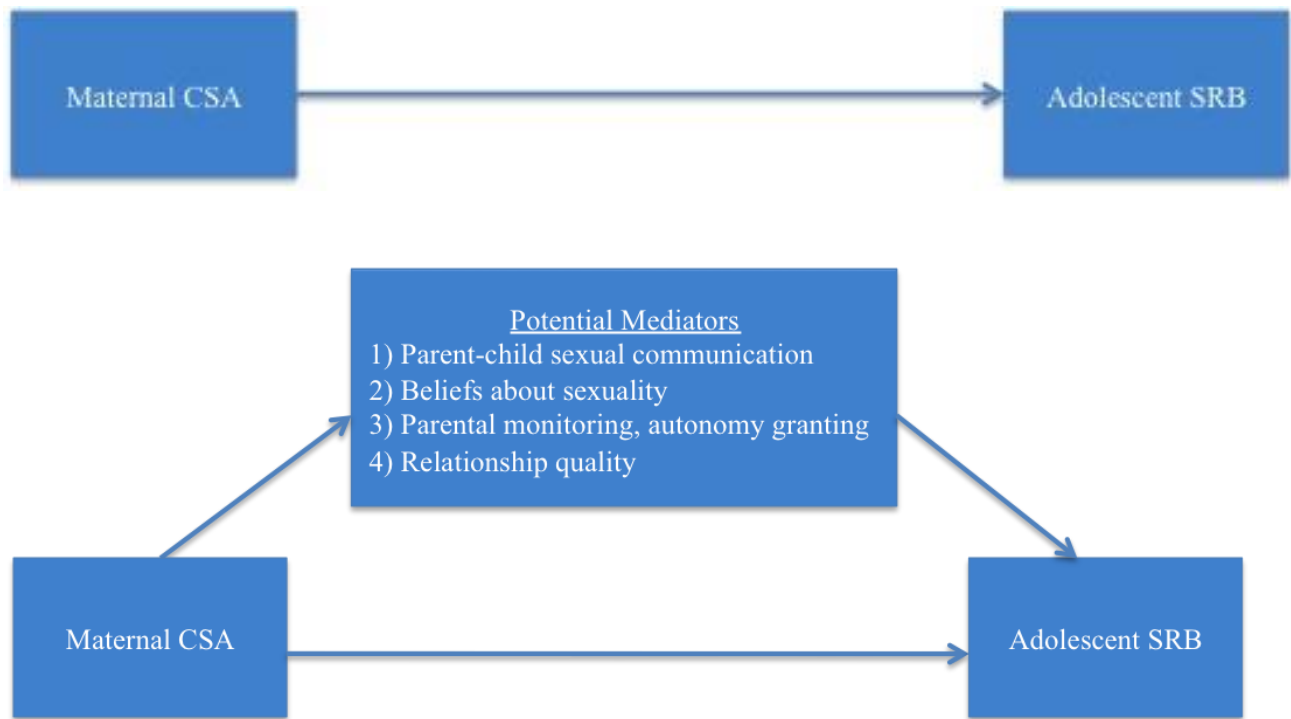
Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; M = Mother Report; D = Daughter Report; RQ Video Coding = Relationship Quality Rating from Video Coding.

Table 11. Bootstrapped Indirect Effects between Maternal CSA and Adolescent Sexual Risk

Intermediate Variables	Total	Direct	Indirect
Parents Upset D	.59 [-.08, 1.25]	.23 [-.43, .89]	.36 [.13, .72]*
Norms # peers had sex D	.53 [-.13, 1.18]	.29 [-.36, .94]	.24 [.08, .47]*
In Love D	.56 [-.10, 1.22]	.15 [-.44, .74]	.41 [.10, .81]*
Autonomy Dating D	.54 [-.15, 1.22]	.34 [-.35, 1.0]	.20 [.03, .46]*

Note. ⁺ = $p < .1$; * = $p < .05$; ** $p < .001$; All effects significant based on the Sobel Test. CSA = Childhood Sexual Abuse; M = Mother Report; D = Daughter Report; Parents Upset = Daughters' report that parents would be upset if they found out she was sexually active; Norms # peers had sex = Mean of # girls had sex and # boys had sex; In Love = Would have sex if they were in love.

Figure 1.



Note: CSA = Childhood Sexual Abuse; SRB = Sexual Risk Behavior.