Do Mothers’ Opinions Matter in Teens’ Sexual Activity?

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Using the Add Health data (N = 9,530 dyads), this study explores sexual socialization in the family using the theory of reasoned action by assessing how mothers’ opinions are associated with their children’s sexual behavior. Findings suggest that the more sexually liberal teens think their mothers are, the more likely the teens are to have higher numbers of sex partners. Talking about sex and having a strong connection between mothers and teens contribute to sexual norm transmission. The more talk about sex there is within the dyad, the more likely the teen is to have had sex. The stronger the connection between mothers and teens, the less likely the teen is to have had sex. Finally, for boys, verbal communication with their mothers is more important in sexual norm transmission; and for girls, having a good connection in the dyad is more important.

Keywords: adolescent; socialization; sexual activity; parenting; parent-child relationships

Teens learn about sex and sexual activity from many sources including media, peers, and the community. However, many parents would like to have some influence on their teenage children’s sexual choices. Parents want to control their children’s sexual behavior as well as protect them from the dangers of sex such as health and emotional risks (Luker, 1996). How does the family fit into the many messages teens receive? Do parents’ opinions and values matter in their teen’s choices?

Sexuality as a socially learned behavior is a dominant paradigm in theory on adolescent sexual behavior (B. C. Miller & Fox, 1987). Although not denying biosocial integrationist arguments that sex hormones and biology play an important role in sexual as well as other gendered behaviors...
(Udry, 2000), this article follows social constructionism in that sexual behavior is a learned activity shaped by social processes (Dornbusch, 1989; Irvine, 1994). Overall learning about sex and related issues throughout the life course is termed sexual socialization. Although teenagers cite friends, peers, and the media as primary sources of sexual information and influence on sex behavior (Jaccard & Dittus, 1993; Kahn, 1994; Youniss & Smollar, 1985), they also discuss sex with their parents and are aware of their parents’ opinions (Jaccard & Dittus, 1993; King & Lorusso, 1997). Each of these sources is not necessarily in competition; however, rather each acts as a reference group for teens in helping them to develop their own sexual attitudes.

Sexual socialization begins in the family and continues throughout adolescence as parents relay their ideas on sexual behavior to their children. These include sex-role learning, the direct transmission of sexual information, family interaction, family values, social control, and family structure. Each of these has an individual and cumulative impact on children’s sexual attitudes and behavior. Parents are in a unique position to discuss sex with their children because the information can be provided within the values and beliefs of the family and adjusted to the specific context of the child (Jaccard, 1998). In addition, because sexual socialization occurs during a child’s life course, parents can be influential in transmitting their sexual values through nonverbal as well as verbal communication (Darling & Hicks, 1982). It is important to note, children are not simply receptors of parents’ teachings but are actively engaged in evaluating and creating their own beliefs (Corsaro, 1997).
One approach to predicting behavior is Fishbein and Ajzen’s (Azjen & Fishbein, 1980; Fishbein & Ajzen, 1975) theory of reasoned action. This theory holds that we act according to our intentions, which are based on two factors: our attitudes and our perceived subjective social norms. Attitudes are predispositions to act based on our own negative or positive evaluations of the act and the consequences (or outcomes) of that act. Subjective norms are the social pressures to act, or how we perceive others will approve or disapprove of that act. Here, parents’ approval or disapproval of teen sex is the subjective social norm while the attitudes are teens own feelings about sex. According to the theory, both affect teens’ intentions to have sex, which primarily determines how many sex partners a teen will have. Thus, following sexual socialization, the strength of the communication and relationship between the parents and teens will alter parents’ influence on teens’ subjective social norms. This theory has been used successfully in other examinations of teen sex, such as work by Gillmore et al. (2002), Bosompra (2001), work by Jorgensen and Sonstegard (1984) and the extensive work of J. B. Jemmott, L. S. Jemmott, and colleagues (e.g., Jemmott, 1996; Jemmott, Freleicher, & Jemmott, 1992; Jemmott, Jemmott, Spears, Hewitt, & Collins-Cruz, 1992).

Despite the intuitive plausibility of these claims, the research on communication of parental sexual values and norms is not consistent (Moore, Peterson, & Furstenberg, 1986). Although many studies show that adolescents who have higher levels of communication with their parents about sexual issues are less likely to have sexual intercourse, other research finds parents have little or no influence on their teens (B. C. Miller & Moore, 1990). Much of the existing research predicting sexual intercourse is inconclusive because of limited measures of the communication process (Jaccard & Dittus, 1993) and problems with incomplete data, limited samples, neglect of parents’ and children’s attitudes on sexual behavior, and neglect of the overall communication and closeness between parents and children (B. C. Miller & Moore, 1990). In addition, the literature is atheoretical (B. C. Miller & Fox, 1987; B. C. Miller & Moore, 1990) and based on small, homogeneous samples. Finally, many of the analyses are univariate or bivariate and do not use multivariate models that can uncover nuances in the underlying process.

Drawing on the 1995 National Longitudinal Study of Adolescent Health (Add Health) data (Udry, 2003), the current study used zero-inflated negative binomial models to assess the effects of mothers’ sexual norms on their unmarried high-school-age children’s sexual behavior. These data provide information on the communication and relationship between the mother and teen, teens’ and mothers’ sexual opinions, and are
based on a large, nationally representative sample. There are two primary purposes of this article. The first goal is to examine different measures of mothers’ opinions and teens’ sexual attitudes and how well they are associated with teens’ sexual activity. The second goal is to determine if the transmission of mothers’ sexual norms, or sexual socialization, between mothers and teens is occurring.

**SEXUAL ATTITUDES AND NORMS**

Teen sexual activity, far from being a private issue, is of concern to parents, educators, public health officials, and larger society. Luker (1996) found that concerns about teens’ physical and emotional health cause many of these groups to label teen pregnancy a so-called epidemic. As a result of health concerns, the issue for many adults might not be how often the teens are having sex but, rather, the number of sex partners each teen has. Most teen girls, Luker found, in fact, are having sex in serially monogamous relationships. Correspondingly, most of the research focuses on either if teens are having sex or the number of sex partners they have had.

Existing literature on sexual norm transmission in the family explores parents’ opinions, teens’ perceptions of their parents’ opinions, and teens’ own attitudes in attempting to account for teens’ sexual behavior. In this article, *sexual liberality* is defined as approval of teenage sexual activity. The term *teen* is used here as it is not only shorter but also (*teenager*) is preferred over *adolescent* in teens’ own language and culture.

**PARENTS’ SEXUAL OPINIONS**

Although this article focuses on mothers, previous literature explores mothers’ and fathers’ opinions toward teen sex. This research traditionally assumes that parents are opposed to their teens having sex (e.g., Resnick et al., 1997). These assumptions are based on surveys that show most adults believe premarital sex among teenagers is always wrong (Michael, Gagnon, Laumann, & Kolata, 1994). However, these surveys also show that those who believe premarital sex is wrong are often confined to politically conservative and traditional-religious groups. In contrast, several other studies find that adolescents substantially underestimate their parents’ liberal opinions and that most parents, in fact, report they approve of sex before marriage (Kahn, 1994; Jaccard, Dittus, & Gordon, 1998; Newcomer & Udry, 1985). Luker (1996) argued that parents have complex
preferences as they think teens should not have sex yet, at the same time, support contraceptive and sex education programs for teens. Parents’ views on teen sex focus on control and protection because parents are most concerned about the health and emotional risks of having sex, rather than the sex act itself.

Those who examine differences in parents’ opinions as they relate to teen sexual behavior have found that although teens with liberal parents are slightly more likely to engage in sex (Dittus, Jaccard, & Gordon, 1997; Jaccard, Dittus, & Gordon, 1998), they are also considerably more likely to use contraception (Baker, Thalberg, & Morrison, 1988; B. C. Miller & Moore, 1990). Similarly, reports from the Add Health study (Resnick et al., 1997) indicate that parents who disapprove of their adolescents’ sexual activity often have children who delayed their first sexual contact yet are less likely to use effective contraception. Although a thorough examination of contraceptive use is beyond the scope of this particular article, this research shows that it is vital to take into account the direction of parents’ own sexual opinions in understanding teens’ sexual behavior and family sexual socialization.

TEENS’ PERCEPTIONS OF PARENTS’ SEXUAL OPINIONS

According to Jessor’s problem-behavior theory, parents not only influence their teens’ personality (such as values and opinions about morality) but also affect how their teens perceive support and approval for certain types of behavior (Jessor, Donovan, & Costa, 1996; Jessor & Jessor, 1977). Teens who think their parents have liberal opinions toward sex may be more prone to engage in sexual activity than those who believe their parents are disapproving of such behaviors. Using Fishbein and Azjen’s (1975; Azjen & Fishbein, 1980) terminology, parents provide one basis, along with other friends and family, for subjective social norms that the teen takes into account when deciding on a course of action.

Several researchers account for teens’ perceptions of their parents’ sexual opinions. Teens who think their parents are more conservative are less likely to be sexually experienced and more likely to use contraception consistently (Jaccard, Dittus, & Gordon, 1996; Levinson, Jaccard, & Beamer, 1995; Small & Luster, 1994). It is interesting to note, adolescents’ reports of communication with their parents and their parents’ opinions are often different from the parents’ own reports (Dittus & Jaccard, 2000; Fisher, 1986, 1989; Gecas & Seff, 1991; Jaccard, 1998; Jaccard, Dittus, & Gordon, 1998; King & Lorusso, 1997; Pick & Palos, 1995). Often, parents and children each assume much greater congruence than actu-
ally exists (Whitbeck & Gecas, 1988). As a result, some researchers argued that teens’ reports have more predictive power on teens’ behavior than their parents’ reports (Jaccard & Dittus, 2000; Jaccard et al., 1998). This follows from Thomas and Thomas’s (1928) classic concept of definition of the situation: If a situation is defined as real, then it is real in its consequences. However, following Gecas & Seff (1991), it is important to account for both mother’s and father’s reports and how liberal teens think their parents are because each is an indicator of overall sexual socialization and thus can affect teens’ sexual activity. In this article, it is argued that mothers’ own opinions and teens’ perceptions of those opinions are factors in the subjective social norms.

TEENS’ SEXUAL ATTITUDES AND INTENTIONS

In addition to parents’ opinions, it is important to consider teens’ own sexual attitudes in understanding teens’ sexual behavior. How do they think they would feel if they had sex? Pleasure? Guilt? It is surprising to note, most research has not taken into account what teens’ own motivations are for having sex when examining parents’ influences on teen sexual behavior. Teens have their own sexual standards that are fairly stable over time (DeLamater, 1981), and they engage in sex as a result of positive motivations such as physical pleasure and emotional intimacy (Levinson et al., 1995). Moral concerns are also significantly related to sexual activity (Levinson et al., 1995). Feelings of guilt, a prevalent message in U.S. culture (Fine, 1988; Reiss, 1990, 1997), indicate the power of messages teens receive that sex is morally wrong. In addition, teens’ own intentions to have sex is frequently overlooked. Does an ideal romantic relationship include sexual intercourse? According to the theory of reasoned action, intentions are what primarily affect subsequent behavior.

COMMUNICATION AND RELATIONSHIPS

How do parents’ sexual opinions turn into subjective social norms that teens use to make their sexual decisions? Sexual socialization processes. Existing research explores overall communication and sex-specific communication in adolescent-parent dyads as measures of sexual socialization; however, scholars are divided on the importance of each. Some research focuses on the timing, specific information transmitted, and frequency of conversations about sexual issues between parents and adolescents (Newcomer & Udry, 1985). This follows the notion that the higher frequency of socialization behaviors and the more involved parents
are with their child, the more the child will follow those behaviors (Stryker & Serpe, 1983). For example, if a mother talks with her teen on many different occasions about the pleasures of sex, then the teen may be more likely to be sexually active. However, Fisher (1986) found that increased communication in the dyad about specific sexual issues does not correlate with parents’ having more liberal opinions.

The overall quality of the relationship between the parent and the child is also a measure of sexual socialization (Fisher, 1987; Resnick et al., 1997; Weinstein & Thornton, 1989). The importance, these researchers argued, lies in the overall norm transmission as sexual socialization occurs during the life course of the adolescent, rather than the exact amount and timing of the direct verbal conversations. Parents’ opinions are communicated to their children through indirect, unspoken, nonverbal, and metacommunicative means in addition to direct conversation (Darling & Hicks, 1982; Fox, 1981). In other words, if the mother and teen have a good relationship and good communication skills across all aspects of life, then the teen is more likely to agree with the mother on issues of sex. These researchers found little direct communication about sex between parents and their children, yet the research shows evidence of the transmission of sexual messages. Studies that take into account direct and overall communication found that those teen-parent dyads with more communication on both measures are found to have more congruent attitudes on sexual issues (Fisher, 1986, 1987; Jaccard, Dittus et al., 1996; Weinstein & Thornton, 1989).

GENDER AND RACE

Many parents are more concerned about their daughters’ sexual activity than their sons’ (Luker, 1996). Although much of the research focused only on girls, studies on gender find differences in girls’ and boys’ attitudes toward sex compared to their parents and slight differences in parents’ effectiveness at conveying those opinions to their daughters and sons (Fisher, 1986; Pick & Palos, 1995; Raffaelli, Bogenschneider, & Flood, 1998). Fisher (1986) found that girls’ attitudes about sex were more correlated with their parents’ own reported opinions than boys’ attitudes. Correspondingly, girls are more influenced by their parents in making sexual decisions. For example, in mother-daughter dyads, talking frequently about sex is correlated with the daughter’s increased sexual experience (Fisher, 1989). However, Fisher’s studies (1986, 1999) rely on cross-sectional analysis, where the frequency of communication could be a result of this sexual experience, rather than a cause of the behavior. These
findings are not consistent as other research shows that boys are more influenced by their parents (Darling & Hicks, 1982).

Earlier in the 20th century, Blacks and men had higher rates of sexual activity before marriage; however, now these patterns are converging as the rates for Whites and women increase (Besharov & Gardiner, 1997; Luker, 1996). Parents’ and teens’ views on sex are also found to differ between Blacks and Whites (Nathanson & Becker, 1986; Shah & Zelnik, 1981). Other sociodemographic variables such as socioeconomic status (SES), family stability, and religiosity are not found to not affect parental influence on teens’ sexual activity (Shah & Zelnik, 1981).

THE CURRENT STUDY

The current study extends prior research in several ways. Much of the literature includes only one or two measures of sexual opinions and attitudes when assessing family sexual socialization. In the current research, mothers’ opinions, teens’ perceptions of mothers’ opinions, and teens’ own attitudes and intentions are included as they are each important influences of teens’ sexual behavior. Without including all of these, researchers overestimate the power of the individual measures. In addition, by including all of these, each variable and its direction are controlled for in the analyses. In the current research, the predictive power of direct talk about sex and the overall quality of the mother-teen relationship dyad are analyzed. Research using a measure of only one or the other, as has frequently been done, might not capture the norm transmission that might be occurring. Moreover, dyad connection and specific instances of sexual talk must be understood in terms of the direction of mothers’ perceived sexual opinions. Much of the existing research does not tie these variables together and makes the faulty assumption that parents hold conservative opinions toward teen sex.

There are two primary purposes of this article. The first goal is to examine different measures of mothers’ and teens’ sexual opinions and attitudes and how well they are associated with teens’ sexual activity.

**Hypothesis 1:** The more sexually liberal mothers’ report being, the greater the likelihood that teens will have had sex and will have more sex partners.

**Hypothesis 2:** The more sexually liberal teens perceive their mothers to be, the greater the likelihood that teens will have had sex and will have more sex partners.

**Hypothesis 3:** Teens will be more likely to have sex and have more sexual partners if they are motivated to have sex.
The second goal is to determine if sexual socialization, taking sexual opinions and attitudes into account, is occurring. Sexual socialization is how successfully mothers’ opinions and mothers’ perceived opinions are translated into teens’ subjective social norms.

Hypothesis 4: The more talk about sex between mothers and teens, controlling for sexual liberality, the greater the likelihood that the teens will have had sex and will have more sex partners.
Hypothesis 5: The more sexually liberal teens are and the more sexually liberal teens perceive their mothers to be, the greater the likelihood that the teens will have had sex and will have more sex partners when there is increased talk about sex.
Hypothesis 6: The stronger the dyad connection between mothers and teens, controlling for sexual liberality, the greater the likelihood that the teens will have had sex and will have more sex partners.
Hypothesis 7: The more sexually liberal teens are and the more sexually liberal teens perceive their mothers to be, the greater the likelihood that the teens will have had sex and will have more sex partners when there is a stronger dyad connection.

DATA

These analyses use data from the Add Health project. Add Health is a nationally representative, probability-based survey of adolescents in Grades 7 through 12 and their parents. A sample of 80 high schools and 52 middle schools from the United States was surveyed with unequal probability of selection. By incorporating systematic sampling methods and stratification into the study design, this sample is representative of U.S. schools with respect to region of country, urbanicity, school type, ethnicity, and school size (see Bearman, Jones, & Udry, 1997 and Resnick et al., 1997 for a more detailed description of data and research design).

These analyses are based on data collected in 1995 from the Wave 1 adolescent in-home interview and the corresponding parent interview (subsequent waves do not include parental data, thus longitudinal analyses including parents is not possible). The adolescent interviews were conducted in their homes between April and December of 1995. The teens responded to questions posed orally by an interviewer, and the data were recorded on laptop computers (CAPI). For more sensitive topics, the teens listened to prerecorded questions on headphones and entered in their responses themselves into the computer (audio-CASI). The interviews took from 1 to 2 hours. The mothers completed 40-minute interviewer-assisted written questionnaires at the same time as their adolescents were completing the CASI portions of their interviews. Of the students selected for in-
home data collection, 75.3% \((N = 20,745)\) participated in the study. From this student sample, 85.4% \((17,713)\) of students had parents who participated in the parent interviews.

The sample for this current study is 7,908 dyads. It includes never-married boys and girls ages 15 to 18 years who are in school and their mothers.\(^1\) Mothers were interviewed by Add Health (and included in this sample) in all cases possible where there was a resident biological mother, stepmother, or female guardian. Thus, there are significantly more so-called mother figures than father figures interviewed in the parent questionnaire \((93\% \text{ mothers and } 7\% \text{ fathers interviewed across entire Add Health data set})\). The restriction to mothers in these analyses has important substantive advantages because communication about personal matters, including sex, between parents and their male and female children is more likely to occur with mothers than fathers (Youniss & Smollar, 1985), and mothers tend to be more familiar with their adolescents’ lives and health status (Bearman et al., 1997).\(^2\)

To give an indication of the SES of the participants, it is helpful to explore mothers’ education and family income. Not all of the mothers responded to these two questions in the sample used in the current analyses. Of the 7,865 mothers responding to the education question \((N = 7,908)\), the average schooling is high school graduate. This is nearly identical to the average education in the full Add Health sample. Of the 6,954 mothers responding to the family income question, the average income is U.S. $47,882. This is about $2,000 more than in the full Add Health sample.

MEASURES

**Dependent variable.** The dependent variable is the number of teen sex partners. Teens responded to the question: “With how many people, in total, including romantic relationship partners, have you ever had a sexual relationship? (If you don’t remember exactly, please estimate the number of these people).” Teens offered responses from 0 to 900; however, those 19 cases reporting 51 or more sexual partners were dropped (if they were instead recoded to 50, the distribution would be weighted incorrectly at 50 partners). This results in a less drawn-out distribution and a more realistic count.

**Independent variables.** Mothers’ sexual opinions were measured by their responses to the statement: “You disapprove of [your teen] having
sexual intercourse at this time in his or her life.” Response categories followed a 5-point Likert-type scale (strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree) where a higher score indicates greater disapproval of sex. The coding on this variable was reversed to capture a scale on approval, rather than disapproval as originally written. Thus in the current analyses, a higher value indicates increased sexual liberality.

Teens’ perceptions of mothers’ sexual opinions were measured by teens’ responses to the question: “Regardless of whether you have done these things or not, how would your mother feel about your having sex at this time in your life?” Response categories and reverse recodings are the same as for the measure of mothers’ opinions, where higher values indicate greater sexual liberality.

Prior studies included only a variable for whether parents approve of their teens having intercourse at all regardless of teens’ commitment to that partner (Small & Luster, 1994). In supplementary analyses, tests were run if mothers’ approval of a so-called special partner is a significant dimension of their liberal opinions. However, this variable was not significantly related to number of teen partners. Similarly, the corresponding variable for mothers’ perceived approval to have sex with someone special was also not significant. It is interesting to note, supplementary analyses comparing the models in this article with and without these special partner variables show that the special partner variables are not significantly related to number of sex partners, and the coefficients for the rest of the variables in the model are generally unchanged.

Two measures of each teen’s sexual attitude are included in the analyses. According to the theory of reasoned actions, attitudes are, in large part, based on the teens’ evaluations of the outcomes of the behavior, or how they would feel if they had sex. The pleasure variable measured teens’ responses to the question: “If you had sexual intercourse, it would give you a great deal of pleasure.” The not guilty variable measured teens’ responses to the question: “If you had sexual intercourse, afterward, you would feel guilty.” Responses were recoded to reverse the scale so a higher value indicates greater sexual liberality. These two measures are based on the same 5-point Likert-type scale given above.

Finally, teens’ sexual intentions is a dichotomous variable measuring if teens “would have sex” if they had the chance in “an ideal romantic relationship.” This is an important measure of sexual intention often left out of research. According to reasoned action theory, attitudes and subjective so-
cial norms affect intention, which then affects the actual behavior. In the models presented here, attitudes and intentions are each explored for their independent relationships to behavior (following criticisms of the model; Trafimow & Finlay, 2001). The correlation coefficient between a teen reporting having sex and if they would have sex was .44. Although high, this is lower than would be expected in a true following of the theory of reasoned action, where intentions solely determine behavior.

To assess the quality of the connection between the mother and her teen, two Likert-type variables (same scale and response categories as above) were combined. The questions asked teens: “Overall, you are satisfied with your relationship with your mother” and “You are satisfied with the way your mother and you communicate with each other.” These questions were similar to those asked in other research. To substantially simplify the interpretation of the interaction terms in an already complex set of models, this variable was coded as dichotomous where 1 indicates there is a strong connection in the dyad and 0 indicates there is a weak connection. The two variables were first multiplied together and then dichotomized (1 to 9 = 0, 10 to 25 = 1), thus the variable distinguishes the double positives from all others. The data for each variable indicate that teens tend to rate their satisfaction with communication and relationship approximately the same (correlation coefficient was .78). Supplementary analyses on the models analyzed in this article showed that the results are the same if this variable is coded as dichotomous (acknowledging increased measurement error) or if it maintains the full range of values.

The talk about sex variable was based on mothers’ responses to the question, “How much have you talked to [your teen] about sex?” Available response options were the following: not at all, somewhat, a moderate amount, and a great deal. As with the previous variable, to ease interpretation of the interaction terms, this variable was recoded as dichotomous where 1 indicates the mother has spoken with her adolescent a moderate amount or a great deal about sex (1 and 2 on the Likert-type scale were coded 0; 3 and 4 were coded 1). In addition, as above, supplementary analyses indicate no change in the models when this variable is run as a dichotomous variable or with the full range of values.

Most of the concepts are assessed with single-item indicators, a limitation of the available data. However, the measures in this article are similar to other research, which enhances the possibility of comparison. The sociodemographic variables of sex, age, and race were used as controls. The control variable for age was added because older teens have had more opportunity to have sex than younger teens.
ANALYSIS PLAN

Much of the existing research uses categorical (Levinson et al., 1995; Luster & Small, 1994) or dichotomous (Jaccard et al., 1996, 1998; Pick & Palos, 1995; Small & Luster, 1994) measures of the dependent outcome—number of sex partners. However, a count is the most substantively sensible way of measuring number of sex partners (Fisher, 1987, 1989), and regression models for count outcomes can be used effectively. The zero-inflated negative binomial (ZINB) model (Long, 1997) is used in this article. This model is designed for dependent count variables with a large number of zeros, which are present in this sample as 69% (5,450) of teens report zero sex partners.

The fundamental characteristic of the ZINB model is that it assumes the zeros are generated in two ways: first, as a binary where the zeros will always be zero. For example, a sterile couple will not have biological children regardless of what happens. Second, as a count where the zeros could move up and be a 1 or 2, and so on. For example, a couple might be voluntarily childless but get pregnant unintentionally. In these analyses, this assumption can be thought of in terms of two reasons why teens report no sex partners (i.e., the zeros). First, zeros are generated by those teens who will always have a zero because they have chosen not to have sex (the always zeros). Second, the unlucky zeros are those teens who are a zero because they have not had the opportunity to have sex but would have a non-zero count if a suitable partner came along; and they, in colloquial terms, “got lucky.” Distinguishing between these two types of zeros is a benefit of using the ZINB models.

Accordingly, the model can be thought of as two distinct models, although they are simultaneously estimated. First, a binary logit model estimating the effect of the independent variables on the always zeros compared to all others. Second, the negative binomial count model includes the unlucky zeros and those teens who have had sex. The negative binomial is used rather than the Poisson regression model because the negative binomial accounts for overdispersion in the dependent variable, which is present in the current sample according to the likelihood ratio test ($p > \chi^2 = 0.00$). This model has a theoretical benefit in that the theory of reasoned action may apply to virgins and nonvirgins differently. One criticism holds that the theory does not take past action into account or behaviors that are not entirely in the control of the actors (that may require abilities, skills, and/or social cooperation, such as sex; Liska, 1984). For example, being a nonvirgin may make a teen more likely to have more partners regardless of subjective social norms.
These analyses incorporate the primary sampling units (clusters) and probability weights of each observation as constructed by the Add Health data team. Accounting for clustering provides good estimates of standard errors, valid\(p\) values and confidence intervals. Accounting for probability weights allows the estimates and the standard errors to be approximately unbiased.

**RESULTS**

Table 1 displays descriptive statistics on the sample. On average, mothers were more sexually conservative than sexually liberal (mean of 1.80 on a 5-point scale). The mean is a bit higher for teens’ perceptions of their mothers’ liberalality (1.87) indicating that teens believe their mothers are slightly more liberal than their mothers themselves report. The correlation coefficient between these two variables is .25, indicating that there is relatively little congruency. Teens have much more liberal attitudes than their mothers as most think sex would be or is pleasurable and would not feel guilty if they had sex. Just more than one half of teens would have sex in an ideal relationship. Most teens reported that they have a strong dyad connection with their mothers. Most mothers report that they talk a great deal with their teen about sex.

In Table 2, the means and standard errors are listed separately for those teens reporting no sex partners (virgins) and those teens reporting one or more sex partners (nonvirgins). In this sample, 69% of the teens (5,450) reported having no sex partners. Of those who have had at least one partner, the average number of partners is five. The median number of partners is three with 50% of nonvirgin teens reporting one, two, or three sex partners. Only 17% of nonvirgin teens report only one partner.

In comparing the means between the two samples, for virgin teens, mothers’ reported sexual opinions and mothers’ perceived opinions are slightly more conservative than for nonvirgins. Similarly, virgin teens are slightly more conservative in their own sexual attitudes than nonvirgin teens, although it is important to note, for both groups, teens on average have liberal attitudes toward sex. Although both groups report strong dyad connections, virgins report slightly stronger numbers than nonvirgins. Mothers of virgins reported slightly less talk about sex than mothers of nonvirgins; however, both report high amounts of talk on average. In the current study, only a very weak correlation of \(-.04\) was calculated between mothers’ increased liberalality and increased talk about sex.
Following the two purposes of this article and the hypotheses described above, Table 3 displays estimates from the three ZINB models of analysis. In the first model, Hypotheses 1, 2, and 3 are explored: How are mothers’ opinions and teens’ attitudes related to teens’ sexual activity? The analyses show that the more sexually liberal teens are and the more sexu-
ally liberal teens think their mothers are, the more likely the teens are to not be a virgin and to have had more sex partners, controlling for all other variables. This supports Hypotheses 2 and 3.

Contrary to Hypothesis 1, mothers’ reported opinions are not significantly related to their teens’ sexual activity. In recalling the low correlation between mothers’ liberalality and teens’ perceptions of their liberalality (.25), this nonsignificance is not surprising as the two variables are measuring quite different things. It could be argued that those parents who think their kids are having sex might be more sexually liberal than those parents who think their kids are not having sex. Parents’ opinions might change to fit with what they know of their teens’ behavior and their definition of the situation. In this sample, the correlation between if mothers think their teens have had sex and mothers’ reported sexual opinions was

### Table 2

**Descriptive Statistics By Number of Sex Partners**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Teens Reporting No Sex Partners</th>
<th>Teens Reporting One or More Sex Partners</th>
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<td>Sex partners</td>
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<tr>
<td>Mother’s sexual opinions</td>
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</tbody>
</table>
| Mother’s liberality 
  (a,b) | 1.71 .04                       | 2.01 .04                                | —7.51***                        |
| Mother’s perceived liberality  
  (a) | 1.71 .02                       | 2.21 .03                                | —22.26***                       |
| Teen’s sexual attitudes   |                                 |                                        |                                 |
| Pleasure (a)              | 3.29 .03                       | 3.67 .03                                | —16.66***                       |
| Not guilty (a)            | 2.74 .04                       | 3.46 .04                                | —26.42***                       |
| Teen’s sexual intentions  | 0.45 .01                       | 0.80 .01                                | —34.44***                       |
| Sexual socialization      |                                 |                                        |                                 |
| Dyad connection           | 0.86 .01                       | 0.81 .01                                | 4.92***                         |
| Talk about sex (b)        | 0.70 .01                       | 0.78 .01                                | —6.78***                        |

NOTE: Descriptive statistics include weighted means and standard errors on dependent and independent variables. From Add Health (1995), N = 7,908 mother-teen dyads. The t test is a two-sample two-tailed t test of the hypothesis that the mean of the virgin variable equals the mean of the nonvirgin variable. The test is done within the sample, and the data are treated as unpaired with unequal variances.

a. Response options for these variables are on a 5-point Likert-type scale: strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree.

b. Variable from the parent interview. Unlabeled variables are from the adolescent in-home interview.

\*p < .05. **p < .01. ***p < .001 for two-tailed tests.
<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logit of</td>
<td>Logit of</td>
<td>Logit of</td>
</tr>
<tr>
<td></td>
<td>Being Always</td>
<td>Being Always</td>
<td>Being Always</td>
</tr>
<tr>
<td></td>
<td>NB of Expected</td>
<td>NB of Expected</td>
<td>NB of Expected</td>
</tr>
<tr>
<td></td>
<td>Partners</td>
<td>Partners</td>
<td>Partners</td>
</tr>
<tr>
<td>Teen’s demographics</td>
<td></td>
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<tr>
<td>Female</td>
<td>0.89</td>
<td>0.95</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>(–1.13)</td>
<td>(–0.61)</td>
<td>(–0.63)</td>
</tr>
<tr>
<td>Age</td>
<td>0.85**</td>
<td>1.01</td>
<td>0.85**</td>
</tr>
<tr>
<td></td>
<td>(–3.33)</td>
<td>(0.15)</td>
<td>(–3.34)</td>
</tr>
<tr>
<td>Black^a</td>
<td>0.73*</td>
<td>1.48***</td>
<td>0.74*</td>
</tr>
<tr>
<td></td>
<td>(–2.53)</td>
<td>(4.58)</td>
<td>(–2.35)</td>
</tr>
<tr>
<td>Latino^b</td>
<td>1.15</td>
<td>0.94</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>(0.67)</td>
<td>(–0.41)</td>
<td>(0.45)</td>
</tr>
<tr>
<td>Asian^c</td>
<td>1.96*</td>
<td>0.87</td>
<td>1.90*</td>
</tr>
<tr>
<td></td>
<td>(2.26)</td>
<td>(–0.79)</td>
<td>(2.12)</td>
</tr>
<tr>
<td>Native American^d</td>
<td>0.90</td>
<td>1.44</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>(–0.45)</td>
<td>(1.88)</td>
<td>(–0.49)</td>
</tr>
<tr>
<td>Other^d</td>
<td>1.12</td>
<td>1.06</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td>(0.55)</td>
<td>(0.38)</td>
<td>(0.64)</td>
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<tr>
<td>Mother’s sexual opinions</td>
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<tr>
<td>Mother’s liberality</td>
<td>0.94</td>
<td>1.03</td>
<td>0.94</td>
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<td></td>
<td>(–1.31)</td>
<td>(0.92)</td>
<td>(–1.44)</td>
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<tr>
<td>Mother’s perceived liberality</td>
<td>0.74***</td>
<td>1.13**</td>
<td>0.74***</td>
</tr>
<tr>
<td></td>
<td>(–4.86)</td>
<td>(2.97)</td>
<td>(–4.79)</td>
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<tr>
<td>Teen’s sexual attitudes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasure</td>
<td>0.87**</td>
<td>1.14***</td>
<td>0.88*</td>
</tr>
<tr>
<td></td>
<td>(–2.68)</td>
<td>(3.57)</td>
<td>(–2.42)</td>
</tr>
<tr>
<td>Not guilty</td>
<td>0.76***</td>
<td>1.08*</td>
<td>0.76**</td>
</tr>
<tr>
<td></td>
<td>(–6.22)</td>
<td>(2.27)</td>
<td>(–6.08)</td>
</tr>
<tr>
<td>Teen’s sexual intentions</td>
<td>0.33***</td>
<td>1.33***</td>
<td>0.34***</td>
</tr>
<tr>
<td></td>
<td>(–10.29)</td>
<td>(3.53)</td>
<td>(–10.17)</td>
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<tr>
<td>Sexual socialization</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Talk about sex</td>
<td>0.74**</td>
<td>1.01</td>
<td>0.51*</td>
</tr>
<tr>
<td></td>
<td>(–2.78)</td>
<td>(0.09)</td>
<td>(–2.50)</td>
</tr>
<tr>
<td>Talk about Sex × Mother’s Perceived Liberality</td>
<td>1.21</td>
<td>(1.60)</td>
<td>0.90</td>
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</table>
### TABLE 3 (continued)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Logit of Being Always Zero</td>
<td>NB of Expected Number Of Partners</td>
<td>Logit of Being Always Zero</td>
</tr>
<tr>
<td>Dyad connection</td>
<td>1.41* (2.12)</td>
<td>0.85* (–2.01)</td>
<td>1.04 (0.13)</td>
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<tr>
<td>Dyad Connection × Mother’s Perceived Liberality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>5.86 (0.89)</td>
<td>0 (0.40)</td>
<td>6.25 (0.94)</td>
</tr>
<tr>
<td>α</td>
<td>97</td>
<td>97</td>
<td>95</td>
</tr>
<tr>
<td>~2lnL (full model)</td>
<td>–11250962.77</td>
<td>–11225991.82</td>
<td>–11215599.03</td>
</tr>
</tbody>
</table>

NOTE: z-scores in parentheses are z tests of β or λ. All analyses performed on weighted data. From Add Health (1995), N = 7,908 mother-teen dyads. Zero-inflated negative binomial exp(β) (logit on always zeros) and exp(λ) (negative binomial on number of sex partners) are the exponents of the unstandardized coefficients (or factor score).

a. The omitted category is White. Interpreting the Models: The logit estimates the probability that a teen will be always zero. For example, a factor score of .74 indicates that for a unit increase in the independent variable, the odds of being an always zero decreases by a factor of .74, holding all other variables constant. The negative binomial (NB) count models estimate the number of teen sexual partners. For example, a factor score of 1.13 indicates that for a unit increase in the independent variable, the expected number of teen sex partners increases by a factor of 1.13, holding all other variables constant.

*p < .05. **p < .01. ***p < .001 for two-tailed tests.
weak at .22. In supplementary analyses, if mothers think their teens have had sex, the teen is indeed significantly more likely to have had sex and to have had more sex partners. At the same time, the correlation between if mothers think their teens have had sex and if the teen indeed had sex is .54. This is a strong correlation; however, only just more than one half of mothers accurately were able to identify their teens’ virgin status.7 However, in supplementary analyses with all three models run on teens’ sexual intentions as the dependent variable rather than teen sexual partners (using logit regressions), findings were the same as in Table 3 save one important exception. In each of the three models, mothers’ liberality (mothers’ sexual opinions) was significant at the \( p < .01 \) level, showing a factor score of 1.13. Thus, the more sexually liberal mothers report being, the more likely her teen was to think that an ideal romantic relationship includes sex. However, given the findings reported above, not all teens were acting on these intentions. Mothers’ opinions were not significantly related to teens’ actual behaviors. Contrary to the theory of reasoned action, these findings show that intentions do not primarily determine behavior; however, as is shown below, intentions are one factor that is associated with behavior, along with attitudes and subjective social norms.

SEXUAL SOCIALIZATION

In Models 2 and 3, the second purpose of this article and the corresponding Hypotheses 4 through 7 are explored: Taking into account sexual liberality, is sexual socialization occurring? The main effects are presented in Model 2, and the interactions are added in Model 3. As shown in Table 3, factor scores on the variables from Model 1 are primarily unchanged with the addition of variables in Models 2 and 3.

Results show that supporting Hypothesis 4, the more talk there is about sex in the dyad, the more likely the teen is to have had sex, controlling for all other variables. Although mothers’ perceived liberalty was controlled for in these models, it is important to account for the direction of mothers’ perceived opinions when examining this finding. If mothers are more sexually liberal, does their increased talk about sex result in an increased likelihood that their teens will have had sex? In Model 3, the interaction term is added to test this effect. It is surprising to note, it is not shown to be significant, contrary to Hypothesis 5. Thus, talking about sex is associated with an increase in the number of teen sexual partners regardless of the direction of mothers’ perceived opinions.
The effects of dyad connection on teens’ sexual activity was also explored in Models 2 and 3. The main effect is significant in the logit and count models, supporting Hypothesis 6. The stronger the dyad connection between the mother and the teen, the more likely the teen is to be a virgin or to have had fewer sexual partners. As with the previous variable, Model 3 adds an interaction term to see if this connection has the same effect taking into account the direction of mothers’ perceived sexual opinions. Again, although mothers’ perceived liberality is controlled for in the models, the interaction is shown to not be significant, contrary to Hypothesis 7.

In sum, the amount of talk about sex issues and the overall quality of the dyad connection are found to be associated with the number of teen sex partners. Given that both of these are significant in Model 2, the relationship between each of these indicators of sexual socialization is explored. For example, are having a good dyad connection and talking a lot about sex associated with the number of teen sex partners? The data say no. Supplementary analyses testing the effects of interactions of these two dummy variables were found not to be significant nor to change the factor scores for the rest of the variables.

DEMOGRAPHIC CONTROL VARIABLES

In the models, measures of sociodemographics were included as control variables. In the logit model, older teens have a greater probability of not being virgins. This makes intuitive sense as older teens have had more time to have sex than younger teens. Black teens are more likely to have had sex and to have had increased numbers of partners compared to White teens. Asians are more likely than Whites to be virgins. Each of these findings on race differences were consistent across all three models and controlling for all other variables, including those on sexual attitudes. The finding for Blacks, particularly, provides support for Kaplan’s (1997) argument that African Americans do not simply have more liberal attitudes but are having sex at higher rates for a variety of other cultural and social reasons.

In supplementary analyses, running the models with only the demographic variables on number of teen sexual partners showed similar patterns in the dependent variable shown in Table 3 with the exception of gender. Girls had fewer sex partners compared to boys. When the other independent variables were taken into account in Table 3, this effect was reduced to nonsignificance. The other sociodemographic control variables were not found to be significantly related to teen sexual activity, when examining only the demographic variables.
To further explore gender and race differences, supplementary models were run on all three ZINB models with interaction terms for gender and race on all variables. For example, although the main effect of gender was not significantly related to the number of sex partners in Table 3, it may be that there are differences in the effects of the variables, or differences in gender by different racial groups. When the models were run interacting all independent variables with gender, two of the interaction terms showed a significant difference. First, in the three count models, Black girls were expected to have between 45% (Model 1) and 47% (Model 3) fewer sex partners than Black boys, controlling for all other variables. Second, also across all three count models, Black girls who think they would feel not guilty about having sex will have between 13% (Model 2) and 14% (Models 1 and 3) fewer sex partners than Black boys, controlling for all other variables. Interaction terms for the other races and gender were not found to be significant, nor were any of the substantive independent variables. It is interesting to note, the effects of mothers’ liberality, mothers’ perceived liberal, and norm transmission were the same for boys and for girls.

To further explore race differences, each model was run interacting all independent variables with Blacks (N = 1,603). White remained the omitted category. Across all three models, Black girls were expected to have between 40% (Model 1) and 44% (Model 3) fewer sex partners than Black girls, compared to White girls and White boys. In addition, older Blacks had between 27% (Model 3) and 31% (Model 1) more sex partners than younger Blacks, compared to older and younger Whites. None of the other interaction terms with the variable Blacks showed significance. Thus, in general, the processes of attitudes and norm transmission were the same for Whites and Blacks; however, the number of sex partners was different.

**DISCUSSION**

This current research found that sexual socialization was occurring between mothers and their high-school-age teens. First, teens’ perceptions of their mothers’ liberal were associated with teens’ sexual behavior, supporting the theory of reasoned action. The more liberal teens think their mothers’ sexual opinions are, the more likely they are to have had sex and the more sexual partners they are likely to have, controlling for all other variables. Consistent with much of the prior research, adolescent perceptions, rather than parents’ actual opinions were sufficient in predicting effects on sexual behavior. In this sample, the correlation between
mothers’ reported opinions and teens’ perceptions of those opinions is fairly low, even taking into account the strength of the dyad connection and the amount of talk about sex. Although causality cannot be determined, when teens make their sexual decisions, they do seem to be taking into account what they think their mothers believe. However, if mothers want their actual sexual opinions to be taken into account when teens make sexual decisions, which are more conservative than teens’ perceptions of those opinions, mothers need to find more effective ways of communicating them to their teens. Mothers’ opinions was associated with teens’ intentions to have sex but not with teens’ actual behaviors.

Second, teens’ sexual attitudes and intentions are significantly related to their sexual behavior. If a teen believes that sex will be physically pleasurable and that it is an important part of an ideal romantic relationship, that teen is more likely to have engaged in sexual relations, controlling for all other variables. Those who have less guilt associated with having sex are also more likely to have engaged in sexual relations. This indicates that guilt, which often stems from negative attitudes about sex learned from parental and cultural sources, is a powerful variable limiting a teen’s sexual activity. It is surprising to note, past research on family processes and teen sexual behavior has not taken into account teens’ sexual attitudes, and the current analyses indicate that they are important influences on sexual behavior, supporting the theory of reasoned action.

Third, talking about sex and having a strong dyad connection were associated with teen sexual activity. This shows how mothers can increase their influence on teens’ subjective social norms. Both of these contribute to sexual norm transmission from mothers to their teens. The more talk there is about sex within the dyad, the more likely the teen is to have had sex, holding all other variables constant. The stronger the dyad connection, the less likely the teen was to have had sex. In supplementary analyses, the processes of norm transmission and the effects of sexual attitudes and opinions are the same for boys compared to girls and for Blacks compared to Whites.

It is interesting to note, and contrary to initial hypotheses, the direction of mothers’ perceived opinions interacting with measures of norm transmission was not significantly related to teen sexual activity. Perhaps, for example, the more liberal a mother was, the more sex partners a teen might have if the dyad connection were strong and there was lots of talk about sex. However, even though the models control for mothers’ perceived liberalism, this effect was not supported by the data as shown in the interaction terms.
Future research needs to take into account broader contextual and sociohistorical influences on children and their parents. Children are not raised by parents alone but are also affected by a larger social context only partially under the parents’ design and control. Large, intricate data sets such as Add Health can be useful in such explorations; however, longitudinal, cross-generational data sets that include sociocontextual measures need to be utilized (Add Health is longitudinal for only the teen respondents, not their parents). Longitudinal data sets can also track parental opinions over time, as some researchers have argued that adolescents are influencing their parents’ opinions rather than vice versa (Smith, 1983) and that this impact increases with age (R. B. Miller & Glass, 1989; Stryker & Serpe, 1983). Similarly, longitudinal data can add to our understanding of causality in the transmission of norms. Perhaps, rather than teens being socialized by parents, parents are changing their opinions toward sex because of their teens’ sexual behavior.

In sum, mothers matter in their high-school-age teens’ sexual attitudes and behavior. The findings support the theory of reasoned action as applied to teen sexual behavior. Results indicate that sexual socialization is achieved in the family setting as teens use mothers as a reference group in making their sexual choices. Teens take into account their perceptions of their mothers’ sexual opinions, and no matter if those norms are sexually liberal or conservative, children are getting the message and often acting accordingly.

NOTES

1. After defining the sample, all cases with missing observations were dropped. Missing observations on any variable resulted in a deletion of the entire dyad (6% or 497 cases dropped from 8,405 total). Logit regressions of the demographic variables on the missing data found that Blacks and Latinos are more likely to have missing data than Whites. None of the other demographic variables was found to be related to the missing data. Cases with missing data did not differ from cases without number of sex partners. Even with the deletion of these missing observations, the sample is unique in its size (N = 7,908 dyads) and breadth, characteristics that other samples have lacked. This results in an unmatched diversity of teen respondents and their mothers in data sets used for exploring issues of sexuality and parent-child relations.

2. Although reducing the sample size by a further 24% because of missing data or male respondent on the parents’ questionnaire, including mothers in this research strengthens the analyses by allowing for the inclusion of more variables of interest (see Table 1), incorporating the strengths of the Add Health study design, and allowing mothers’ responses to be controlled for regardless of variable significance. Supplementary analyses show no major differ-
ences in the models when limiting the sample to available mother-teen dyads compared to a larger sample using only teens.

3. In supplementary analyses, other motivational measures were not found to load on the same factor as the three measures used. Measures available in Add Health that were tested include gaining respect from friends, gaining respect from sexual partners, having sex because it would be relaxing, having sex to feel less lonely, and having sex because it might make a teen feel more attractive.

4. In t-tests of the means within the sample, all means are found to be significantly different. Supplementary analyses on the weighted data (which includes out-of-sample predictions) indicate the same results.

5. Before discussing each model, it is useful to talk briefly about the meaning of the estimates. For each ZINB model, there are two columns. The first column presents the exponent of logit coefficients (factor scores) for the outcome “always zeros” versus the possibility of having one or more partners. For example, in Model 1 the effect of mothers’ perceived liberality is significant in the logit and negative binomial models. In the logit model, the exponential of the coefficient is .74, which indicates that for a unit increase in perceived liberality, the odds of always having no partners decreases by a factor of .74, holding all other variables constant.

The second column presents the exponent of coefficients, or factor scores, from the negative binomial portion of the model for the count outcomes ranging from “unlucky zeros” through those teens who report 50 sex partners. These numbers indicate the factor increase in the mean number of partners. For example, the exponential of the coefficient on the same variable discussed above is 1.13, which indicates that for a unit increase in mothers’ perceived liberality, the expected number of teen sexual partners increases by a factor of 1.13, holding all other variables constant. Thus, the more liberal teens think their mothers are, the more likely they are to not be an always zero and the more likely they are to have higher counts of sex partners. Although sometimes confusing to the reader, the ZINB model is structured to predict zeros in the logit model and counts in the negative binomial model. The reader is cautioned to note that the factor scores thus report opposite directions in the logit and the negative binomial columns. The factor changes can be converted to percentage changes by subtracting 1 from the factor score, taking the absolute value, and multiplying by 100.

6. In supplementary analyses, models including and omitting this variable showed no changes in the factor scores on the other variables. Even with its nonsignificance, by retaining this variable in all the models, mothers’ own reported attitudes continue to be controlled for.

7. This finding highlights a difficulty in working with a cross-sectional versus longitudinal data set. Although we can determine correlation, there is no way of determining causality.

8. Although the focus of this article is on number of sex partners, a related question is if this sexual socialization process held for other teen sexual decisions. Supplementary analyses were conducted using measures of birth control use of those teens who have had sex as the dependent variable and measures of mothers’ and teens’ opinions on birth control as independent variables. Unfortunately, there were problems in the comparability of the measures. For example, the best measure of mothers’ own reported opinions on their teens’ use of birth control is if they have recommended a specific method of birth control to their teens. This is a behavior, not an opinion. Measures of teen motivations are also not directly comparable. In addition, the dependent variables available are (a) teens use of birth control at first intercourse and (g) teens use of birth control at most recent intercourse. In these supplementary
analyses, both were used individually as well as combined in a composite measure. The three models were run on these dependent variables even with these limitations.

In the findings on birth control use among teens who have had sex, teens’ own feelings about using birth control is significantly related to use of birth control in their first and their most recent sexual encounters. However, teens’ perceptions of their mothers’ opinions on birth control and if the mothers have recommended a birth control method to their teen are each not significantly related to teen birth control use.

Why might mothers matter in the sex partner models but not in the birth control models? In bivariate analyses, those mothers who approve of sex are very likely to also recommend a method of birth control (correlation = .69). Teens also believe, in general, that if their mothers are liberal about sex, they will be liberal about birth control (correlation = .40). The correlations between the measure of mothers’ opinions and teens’ perceptions of mothers’ opinions on the sex measures (in the main models) and on the birth control measures are the same (correlation is about 0.25). So teens are equally as accurate and in the dark about their mothers’ actual opinions on sex and birth control.

Thus, given these supplementary analyses, there are three likely explanations. First, that the dependent measures of birth control use at first intercourse and birth control use at most recent intercourse are not sufficient. A better measure might be average birth control use. Second, that the measures for birth control and sex are not directly comparable, and thus the sex partner model is not translatable to birth control with this data set. Or third, the process of sexual socialization in birth control use is different than with number of sexual partners. Future research might explore this further.

REFERENCES


