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PARENTING AND ADOLESCENTS' SEXUAL INITIATION

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Abstract

This study draws on social control and social learning theories to examine the role of dating-specific attitudes and practices as predictors of adolescents' sexual initiation. We include attention to the adolescent's reaction to control attempts as a further means of assessing family dynamics (i.e., frequency of dating disagreements). The study uses longitudinal data from 697 adolescents who were not sexually active at the first interview as well as separate interviews with parents. In models that include all parenting variables, parental caring, parents' preferences that the child should delay sex, and the frequency of dating disagreements are significant predictors of initiation of teen sexual activity.

Keywords

adolescent dating; parenting; sexual debut

Stages of childhood and adolescence involve distinct challenges. As such, parenting differs across developmental periods. For example, parents face new challenges as teens spend time with current or potential dating partners. How parents handle dating is critical because teens' first sexual experiences most often occur in dating relationships (Manning, Giordano, & Longmore, 2006). Because parents are a countervailing force to peers who are more likely to approve of sex (Dittus, Miller, Kotchick, & Forehand, 2004), we assess parenting practices, which may deter youths' early sexual initiation.

Employing data from the Toledo Adolescent Relationships Study (TARS), we include parenting measures associated with adolescents' compliance and measures specific to dating and sexuality. We use longitudinal data from 697 adolescents who were not sexually active at the first interview and separate parent interviews. Drawing on social control and social learning frameworks, along with caring and monitoring, we assess dating-specific "independence-giving" (e.g., Bulcroft, Carmody, & Bulcroft, 1998) as a measure of *social control*, and parents' attitudes and early sexual history as indices of *social learning* processes. We also assess *communication dynamics* as indexed by discussions of sexual issues and the frequency of dating disagreements. Adolescents' characteristics also influence the likelihood of sexual initiation, and the impact of parenting; thus, we explore how high risk personal characteristics might moderate the influence of parenting on sexual debut. Analyses also include demographic characteristics, which influence sexual debut, and may interact with parenting in affecting adolescents' sexual debut.

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BACKGROUND

Social Control Framework The Importance of Caring and Monitoring

According to social control theories, parents inhibit adolescents' behavior by (a) expressing care; and (b) constraining involvement in particular activities through control strategies.

Parental caring reflects that youths matter, and is commonly measured as praising, hugging, and encouraging the child. Adolescents who feel cared for likely internalize parental values; as such, parental caring provides the foundational bedrock for compliance. Parental caring is associated with delayed sexual activity (e.g., Davis & Friel, 2001; Pearson, Muller, & Frisco, 2006), reflecting that teens need support while striving for independence from parents (Hair, Moore, Garrett, Ling, & Cleveland, 2008).

Parental control refers to behavioral constraints, and often is measured as monitoring. Compared with caring, controlling behavior is more complicated because effects are not uniformly positive, and adolescents often resist control attempts leading to conflict, which may exacerbate the behaviors that parents are trying to control. Yet, *monitoring* influences whether interaction with current or potential romantic partners occur, and commonly is assessed by asking whether children stay home alone, need to tell parents where they are, and/or have curfews. Evidence in support of monitoring is found in longitudinal studies, with monitoring predicting lower odds of adolescents' sexual initiation (Longmore, Manning, & Giordano, 2001; Sieverding, Adler, Witt, & Ellen, 2005). Thus monitoring works by limiting opportunities in which youths are outside of parental purview.

Yet, monitoring involves parents checking up *and* setting limits on behavior. We distinguish between (a) behavioral monitoring; and (b) limiting adolescents' independent dating choices. *Limiting adolescents' independent choices* versus independence-giving is a key parental struggle. It is appropriate for parents to encourage adolescents to make independent decisions in various life domains. Yet dating is a domain in which greater independence may be problematic because it is associated with availability of a sex partner. Parents may attempt to control teens' exposure to dating by limiting independent choices, such as whom and how often to date. What is the likely effect of limiting dating choices at a time and in a domain that teens are pushing for greater autonomy? Brehm and Brehm's (1981) reactance theory suggests that individuals react negatively to controlling tactics; thus, we argue that limiting independent choices, which allow for some choice, albeit limited, will likely result in compliance. Given the focused nature of limiting adolescents' independent dating choices, it is expected to have a stronger effect on delaying sexual initiation than parental caring or monitoring.

Social Learning Processes: The Importance of Parental Attitudes and Behavior

Parents' attitudes regarding premarital sexual behavior and the appropriate age at which to have sex may foster a social environment that influences adolescents' sexual behavior. Compared with behavioral monitoring and limiting choices, this is more indirect in that the objective is, not to control or limit behavior, but for the adolescent to internalize the parent's perspective on dating and sexual activity. Davis and Friel (2001) found positive relationships between maternal attitudes toward sex and adolescents' sexual activity; similarly, adolescents engaged in sexual activities at earlier ages when they perceived parental approval of premarital sex and birth control (Jaccard & Dittus, 2000). Thus, studies have demonstrated the inhibitory influence of conservative parental attitudes and beliefs about adolescent sexual activity.

We emphasize that parents' premarital sexual attitudes are likely imbued with views on the nature of opposite sex relationships including stereotypes and cynicism. Even in discussions of safe sex and abstinence, Lefkowitz et al. (2003) found that parents' and adolescents'

conversations shifted to topics such as love, dating, romance, and opposite sex relationships. Parents may reveal commonly-held, but stereotypical, beliefs that boys are only interested in girls for sex, or girls are too sexually aggressive. We examine whether parents' views of the nature of opposite sex relations, gender trust/mistrust, and suspicion or cynicism, have an inhibitory effect on adolescents' sexual initiation. We move beyond prior work by more explicitly focusing on the content of views regarding adolescents' opposite sex relationships.

A more specific indicator of conservative versus permissive attitudes is the age that parents believe it is appropriate for their child to have sex. It is possible to hold permissive attitudes regarding adolescent sexuality, but, nevertheless, hold more conservative attitudes when it comes to one's own adolescent. Net of whether parents hold conservative attitudes about adolescent romantic relationships, we expect that parents who report an older appropriate age for first sexual intercourse will influence their child to delay sexual activity. Because this attitude provides a behavioral script for compliance (i.e., do not have sex while in high school), it likely will be a more effective deterrent than generally phrased conservative/cynical attitudes.

Parents' own history likely influences adolescents' sexual initiation to the extent that there is parental acceptance of comparable behavior. That is, parents who had early sex may be less critical of teens engaging in earlier sexual activity; conversely, such parents may more vigilantly discourage early sexual activity. The weight of the evidence, however, supports the former position (Rucibwa, Modeste, Montgomery, & Fox, 2003). As such, we expect that parents' age at first sexual intercourse is positively associated with adolescents' sexual onset.

Communication Dynamics: Sexual Communication and Dating Disagreements

Sexual communication refers to parents' and adolescents' discussions of contraception, abstinence, or sexually transmitted infections. However, results are mixed. For example, Davis and Friel's (2001) and Resnick et al.'s (1997) cross-sectional analyses of the National Longitudinal Study of Adolescent Health (Add Health) found that maternal communication about sex is associated with earlier sexual initiation for both adolescent girls and boys. Conversely, Pearson et al. (2006) report that mother and daughter communication about sexual risk decreased the odds of daughters' sexual debut. Reviewing predictors of adolescents' intended sexual behavior, Buhi and Goodson (2007) report a range of incongruent findings but, nevertheless, concluded that greater parental communication is related to greater sexual activity.

Lefkowitz et al. (2000), however, provide clarity to these disparate findings by emphasizing that observed findings may differ depending on who is reporting on the sexual communication. They found that parents primarily talked and youths listened. Consequently, parents believe conversations about sex have occurred whereas youths may not. Additionally, sexual communication is most effective as a deterrent when it occurs prior to adolescents' sexual initiation (Meschke, Zweig, Barber, & Eccles, 2000). We examine sexual communication from the adolescent's perspective on sexual debut twelve months later.

Frequency of dating disagreements is associated with one of the central parental tasks, which is to control and guide youths' behavior. However, if parents and youths engage in hostile, confrontational, or disagreeable interactions, teens are at risk of engaging in problematic behaviors including sexual activity. Certainly, disagreements are a common form of communication as teens try to assert independence. The frequency of dating disagreements likely reflects disconnections between parental rules and adolescents' desires to comply, and in cross-sectional studies dating rules affect the quality of relationship with

parents (Madsen, 2008). Quatman et al. (2001) and Dowdy and Kliwer (1998) found that adolescents who dated, when compared with non-daters, reported more conflict with parents. However, it is not clear whether the increased frequency of conflicts necessarily were about dating, and whether disagreements influenced adolescents' sexual initiation net of other known correlates including dating itself.

CURRENT INVESTIGATION

Building on the social control framework, we examine how parental caring, monitoring, and limiting dating choices affect adolescent sexual debut. Drawing on the social learning framework, we evaluate whether parents' attitudes and own sexual history affect adolescent sexual debut. We also assess how communication processes as indexed by communication about sex and frequency of dating disagreements affect sexual debut. We expect that greater caring and monitoring, limiting independent dating choices, parents' conservative attitudes, parents' later sexual initiation, greater perceived communication about sex, and fewer dating disagreements will be associated with lower odds of adolescent sexual initiation.

The analyses also include *personal characteristics* found in previous studies to be related to sexual initiation. Teens who are more religious were less likely to have had sexual intercourse (Davis & Friel, 2001). Individuals with dating partners, and those dating for a longer duration, were more likely to initiate sexual activity (Manning et al., 2006). Additional personal and social characteristics associated with adolescent sexual activity include: academic grades, alcohol use, depressive symptoms, and whether friends are sexually active (Buhi & Goodson, 2007). We expect that these factors independently affect adolescents' sexual debut. Further, social control, social learning, and communication processes may differ by such characteristics and are examined.

Demographic characteristics are important in their own right, and may moderate the effects of parenting in predicting adolescents' sexual debut. Parenting may affect sexual debut differently in differing family structures. For example, adolescents from single-parent families were more likely to report early sexual activity compared to adolescents from two-parent families (Davis & Friel, 2001; Santelli, Lowry, Brener, & Robin, 2000). Consistent with the social control perspective, divorced or single parents provided less monitoring of adolescents; consistent with the social learning perspective, divorced or single parents reported more permissive attitudes and communicated greater acceptance of premarital sexual behavior (e.g., Davis & Friel, 2001; Resnick et al., 1997). We evaluate whether parenting differs by family structure.

Gender, age, race/ethnicity, and social class background are also correlates of sexual initiation. Studies have found that boys' sexual initiation occurs, on average, at age 17, and girls' sexual initiation occurs, on average, at age 17.6 (Alan Guttmacher Institute, 2004). Older adolescents were more likely than younger adolescents to be sexually experienced (Santelli et al., 2000). Based on data from the Youth Risk Behavior Surveillance System (YRBSS, 2002), Dittus et al. (2004) reported that Black youths (63%) were more likely to have initiated sexual intercourse relative to White (43%) and Hispanic youths (48%). Higher rates of sexual initiation were also associated with disadvantaged background and parents' educational level (Buhi & Goodson, 2007). These findings suggest the necessity of including demographic characteristics in our analyses.

We contribute to the body of literature on parenting and adolescents' sexual activity by including well known and dating specific measures of social control, social learning, and communication processes. Most parenting studies using the social control framework focus on monitoring, and do not examine independence-giving regarding dating. Studies using a social learning framework typically emphasize permissive versus conservative attitudes, and

do not ask parents the age in which sexual activity is appropriate for their child. Examining parents' own age at first sexual intercourse, often examined in demographic research, typically is not examined along side other important socialization pathways. Whereas studies have examined communication processes about sexual issues, and have elicited topics in which parents and youths disagree, most have not assessed the frequency of dating disagreements. We include contextual effects, which may moderate the relationship between parenting practices and adolescents' sexual debut. Lastly, many prior studies are based on cross-sectional data and this is a noted limitation in recent reviews (e.g., Buhi & Goodson, 2007; Guilamo-Ramos & Bouris, 2007) of studies examining the influence of parents on adolescents' sexual activity. Using longitudinal data allows us to more clearly specify the relationship between parenting practices and adolescent sexual initiation.

DATA AND METHOD

Data

The Toledo Adolescent Relationships Study (TARS) sample ($N = 1,321$) was drawn from the year 2000 enrollment records of all youths registered for the seventh, ninth, and eleventh grades in Lucas County, Ohio. The sample universe encompassed records elicited from 62 schools across seven school districts. All schools complied with requests for these data, as this information is legally available under Ohio's freedom of information act. The stratified, random sample, devised by the National Opinion Research Center, includes oversamples of Black and Hispanic adolescents. Unlike school-based studies, school attendance was not a requirement for sample inclusion and interviews were conducted in the respondent's home using preloaded laptops to administer the interview to maintain privacy. Parents and adolescents were interviewed in separate rooms. The first wave of data collection included the parent's interview. The second wave, from which we derived the dependent variable, sexual initiation, was conducted in 2002, one year after the initial data collection. Based on Census data, the socio-demographic characteristics of Lucas County closely parallel those of the nation in terms of race (13% in Toledo and 12% in the U.S. are Black); education (80% in Toledo and 84% in the U.S. are high school graduates); median income (\$50,046 in Toledo and \$50,287 in the U.S.); and marital status (73.5% in Toledo and 75.9% in the U.S. are married couple families).

The sample was limited to respondents who were virgins at wave 1 ($n = 894$), and who were re-interviewed at wave 2 ($n = 803$). Ninety percent of this analytic sample was interviewed at both intervals. Comparing wave 1 and wave 2 respondents, differences in gender, age, race, and family structure were not statistically significant.

The parent respondents included 698 mother/step-mothers, 83 dad/step-dads, 21 female relatives, and 1 male relative. Initial multivariate models included a dummy variable reflecting whether the parental respondent was the mother (yes/no). Because it was not significant, we present the more parsimonious models, which do not include this variable. The parents' mean age and standard deviation were 41.7 and 6.8, respectively.

Regarding race and ethnicity, 69.1 percent of respondents identified as White; 19.4 percent as Black, 9.0 percent as Hispanic, and 2.5 percent as "other" racial/ethnic background. Youths were between the ages of 12 and 19 at the time of the first interview.

Missing Data

As with most social science research, there are missing data in our sample. The majority of missing data were from parent-rated items. The parent questionnaire was a paper survey, and more items were skipped than in the adolescent questionnaire, which was completed on the computer. If listwise deletion is used in our analyses, we lose 106 cases (13% of the

sample). Analyses were performed to determine if those 106 cases differ from the 697 cases that remain in the sample. There were significant differences in family structure, with the dropped cases more likely to come from a single-parent family. Multiple imputation was used to handle the missing data problem. Multiple imputation, performed in SAS, involves missing values being imputed based on the other values in the data set.

Dependent Variable Measured at Wave 2

Having had sexual intercourse was measured by asking respondents: “Have you ever had sexual intercourse (sometimes this is called ‘making love,’ ‘having sex,’ or ‘going all the way’)?” Responses were yes or no.

Social Control Parenting Practices Measured at Wave 1

Parental caring was measured by asking the extent to which adolescents agreed with the following: (a) “My parents often ask about what I am doing in school;” (b) “My parents give me the right amount of affection;” (c) “My parents trust me;” (d) “I’m closer to my parents than a lot of kids my age;” and (e) “I feel close to my parents.” Responses ranged from (1) *strongly disagree* to (5) *strongly agree*. Scores were calculated as the mean of the items, multiplied by five. The mean score was 20. Cronbach’s alpha was .75.

Monitoring was measured by asking parents how often the following statements were true: (a) “When my child is away from home, she/he is supposed to let me know where she/he is;” (b) “I call to check if my child is where she/he said she/he would be;” (c) “I ask who my child is going out with;” (d) “My child has to be home at a specific time on the weekends;” (e) “I ask where my child is going;” and (f) “I wait up for my child to get home at night.” Responses ranged from (1) *none of the time* to (4) *all of the time*. Scores were calculated as the mean of the items, multiplied by six. The range was 8–24 and the mean was 21.1. Cronbach’s alpha was .62.

Limits on independent dating decisions was measured by asking adolescents: “How often do your parents let you make your own decisions about: (a) your social life; (b) who you can date; and (c) how often you can date?” Responses ranged from (1) *very often* to (5) *never* with higher scores reflecting limits on dating decision-making. Scores were calculated as the mean of the items, multiplied by three. The range was 3–15 and the mean was 7. Cronbach’s alpha was .83.

Social Learning Parenting Practices Measured at Wave 1

Parents’ conservative dating attitudes were measured by asking: “To what extent do you agree or disagree with the following statements:” (a) “boys are only after one thing;” (b) “girls are too aggressive nowadays;” (c) “I think some children have too much freedom to be around the opposite sex;” (d) “boys and girls play emotional games with each other;” (e) “I think some parents allow their children too much freedom to date;” (f) “it’s better not to get too serious about one boy/girl in high school;” and (g) “nowadays girls are too boy crazy.” Responses ranged from (1) *strongly disagree* to (5) *strongly agree*. Scores were calculated as the mean of the items, multiplied by seven. The range was 7–30 and the mean is 21.3. Cronbach’s alpha was .71.

Preferred age for their child to have first sex was measured by asking parents: “What is the appropriate age for your child to start having sex?” Responses ranged from 15 to 35 years old, and the mean was 21.4. Because responses tended to be bimodal, and to be consistent with our interest in whether parents approve of their child having sex during the high school years, we classified responses as “18 years or younger” (22.3%) and “19 years or older” (77.7%).

Parent's age at first sex was measured by asking: "At what age did you first have sexual intercourse?" Responses ranged from 10 or younger to 32 and the mean was 17.6 years.

Dynamics of Parent-Child Communication at Wave 1

Sexual communication was measured from adolescents' responses to the following prompt and subsequent statement: "Tell me how much you agree or disagree with the following statements. My parents sometimes talk to me about: (a) sex; (b) birth control; and (c) waiting to have sex until I am married." Responses ranged from (1) *strongly disagree* to (5) *strongly agree*. Scores were calculated as the mean of the items, multiplied by three. The range was 3–15 and the mean was 9.1. Cronbach's alpha was .76.

Frequency of dating disagreements was measured by asking adolescents: "How often do you and your parents have disagreements or arguments about your dating?" Responses included (1) *never*, (2) *hardly ever*, (3) *several times a year*, (4) *twice a month*, (5) *once a week*, and (6) *two or more times a week*. The range was 1–6 and the mean was 1.7.

Adolescents' Personal Characteristics Measured at Wave 1

Religiosity was measured by asking: "How important is religion in your life?" Responses ranged from (1) *not at all important* to (5) *very important*. The mean was 3.4. *Currently dating* was measured by asking the adolescent: "Is there someone you are currently dating – that is a girl/guy that you like and who likes you back?" and "How long have you been together?" Respondents who answered they were currently dating and had been together for over a year were classified as (1) *currently dating for over 1 year*. Respondents who answered they were currently dating and had been together for less than 1 year were classified as (2) *currently dating for less than 1 year*. All others were classified as (0) *not currently dating*. Dummy variables were created for the purposes of multivariate analyses with not currently dating as the contrast category. *Grades* were measured by asking: "What grades did you get in school this year?" Responses ranged from (1) *mostly A's* to (9) *mostly F's*. The mean was 3.5. *Alcohol frequency* was measured by asking: "In the past 12 months, how often have you drunk alcohol?" Responses ranged from (1) *never* to (9) *more than once a day*. The mean was 1.6. *Depressive symptoms* was a seven-item version of the Center for Epidemiological Studies' depressive symptoms scale (CES-D). This measure asked respondents how often each of the following was true during the past seven days: (a) "you felt you just couldn't get going;" (b) "you felt that you could not shake off the blues;" (c) "you had trouble keeping your mind on what you were doing;" (d) "you felt lonely;" (e) "you felt sad;" (f) "you had trouble getting to sleep or staying asleep;" and (g) "you felt that everything was an effort." Responses ranged from *never* to *everyday*. The scale score was calculated as the mean of the items, multiplied by seven. Cronbach's alpha was .77. The mean was 15.7, and the range was 7 to 50. *Friends had sex* was measured by asking: "How many of your friends do you think have had sex?" Responses ranged from (1) *none* to (6) *all of them*. The mean was 2.1.

Adolescents' Demographic Characteristics Measured at Wave 1

Family structure was measured by asking: "During the past 12 months, who were you living with most of the time?" Adolescents who lived with only one biological parent were coded 1. Those who lived with both biological parents were coded as 2. Adolescents who lived with one biological parent and parent's spouse or partner were coded as 3 to reflect a step-family. Respondents who did not fall into one of these categories were coded as 4 "other" (e.g., living with grandparents or other relatives, foster care, etc.). For multivariate analyses, dummy variables were created with "two biological parents" as the contrast category.

Gender was self-reported. Fifty-four percent of respondents were female and nearly 46 percent were male. *Age* was calculated from the adolescent's date of birth and the date of the interview. The mean age of respondents was 14.7. *Race/ethnicity* was classified as: White, Black, Hispanic, and other race/ethnicity. White was the contrast category in the multivariate analyses. *Mother's education* was measured from the parent's questionnaire completed primarily by mothers. If the father answered the questionnaire and was married or cohabiting we asked: "How far did your partner go in school?" Otherwise, we asked: "How far did you go in school?" (Responses reflected the educational level of 705 biological mothers, 9 adoptive mothers, 4 foster mothers, 14 step-mothers, 2 fathers' partners, 21 female relatives, 44 biological fathers, 2 step-fathers, 1 mother's partner, and 1 male relative. Responses were coded 1 if the parent had less than a high school education, 2 if the parent had a high school education, and 3 if the parent had more than high school education. Dummy variables were created for the multivariate analyses with high school as the contrast category. *Percent neighborhood poverty* was a census variable for the teen's residential block group, which was determined by address. It reflected the percent of neighborhood population living below the poverty level.

Analytic Strategy

We used logistic regression to predict the likelihood of having sex one year later among youths who were virgins at time 1. Table 1 includes percentages and means, and addresses which variables influence sexual debut at the bivariate level. In Table 2, model 1 includes the parenting variables (i.e., parental caring, monitoring, limiting independent dating choices, parents' conservative attitudes, parents' preferred age for their child to have sex, parents' own age at first sex, sexual communication, and dating disagreements). Model 2 includes personal and demographic characteristics (i.e., adolescent's religiosity, dating status and duration, grades, alcohol frequency, depressive symptoms, belief that friends had sex, gender, age, race, family structure, mother's education, and percent of neighborhood poverty) to determine if the effects of parenting remain significant net of these known correlates of adolescents' sexual initiation.

We used a Chow test to determine whether models should be run separately for boys and girls. We examined interactions between personal characteristics associated with high risk behaviors (low religiosity, dating status, low grades, alcohol frequency, depressive symptoms, and belief that friends had sex) and parenting variables. Interactions were also examined between demographic indicators (age, race, mother's education, family structure, and neighborhood poverty) and parenting variables. The variables in all interactions were centered to control for multicollinearity. Blocks of interactions were tested separately (e.g., gender interactions, race interactions, family structure interactions, etc.).

RESULTS

Descriptive Analyses

In Table 1, of the total sample ($n = 803$), 26.5 percent ($n = 213$) of the adolescents reported that they had first sexual intercourse between the time of the first and second interviews. At the bivariate level, the social control correlates associated significantly with adolescents' first sexual intercourse included perceptions of parental caring, and limits on independent dating decisions. Adolescents who perceived greater parental caring were less likely to initiate sexual intercourse. Adolescents who made fewer independent decisions regarding dating were less likely to initiate sexual intercourse. Parents' monitoring of adolescents' behavior, at the bivariate level, however, was not associated with first sexual intercourse.

Regarding the social learning processes, parents' reports of a younger age as being appropriate for their child to have first sex and parents' own younger age at first sex were significantly associated with adolescents initiating sex between interview waves. Parents' conservative attitudes toward dating were not related to adolescents' sexual initiation at the bivariate level.

Adolescents' perceptions that parents communicate about sexual issues did not distinguish between youths who did and did not report first sexual intercourse between the interview waves. Greater frequency of dating disagreements, however, was associated with adolescents' sexual intercourse.

Regarding personal characteristics, a larger proportion of those who initiated sex reported currently dating at wave 1 (59.1%) as compared to those who did not have sex between the interview waves (24.2%). Those who initiated sex also reported receiving lower grades in school, drinking alcohol more often, and having more friends who have had sex. The associations between religiosity and sexual initiation and depressive symptoms and sexual initiation were not statistically significant at the bivariate level.

Demographic correlates associated with adolescents' initiating sex between the two interviews included family structure, age, race/ethnicity, mother's education, and the percentage of neighborhood poverty. Compared to those who did not have sex between the interview waves, a larger proportion of those who did live in single-parent families (25.4% as compared to 19.7%). The mean age for those who initiated sex was 15.4 whereas the mean age for those who did not was 14.4. A larger proportion of those who reported first sexual intercourse between the interview waves were Black (28.2% as compared to 16.3%) and Hispanic (11.7% as compared to 8.0%), had mothers who reported lower education (high school) (70.0% as compared to 62.8%), and a smaller proportion of those who had sex had mothers who attended college (19.9% as compared to 28.6%). Finally, adolescents who reported having first sexual intercourse were more likely to live in neighborhoods with higher percentages of poverty. The association between gender and sexual initiation was not statistically significant. Thus, as other studies have shown, social disadvantage including family structure, parents who were less educated, and poverty influenced adolescents' sexual debut.

Multivariate Analyses

Table 2 shows the coefficient estimates and odds ratios for the logistic regression of having had sexual intercourse between interviews for youths who were virgins at wave 1. In general, the multivariate findings mirrored the bivariate findings. The first model includes parenting indicators, and the second model adds personal and demographic correlates.

Model 1 shows that parental caring was associated negatively with adolescents' sexual initiation, net of the other correlates. Consistent with expectations, limiting adolescents' independent dating decisions was associated negatively with sexual initiation. Those youths who had less dating autonomy were less likely to initiate first sex. As in the bivariate model monitoring was not related significantly to adolescents' sexual initiation in the multivariate model.

Consistent with social learning processes, Model 1 also shows that the parent's preferred age for their child to have sex was related significantly to adolescents' sexual initiation. Adolescents whose parents wanted them to be over 18 when they first have sex had lower odds of having had sex. Additionally, the parents' own age at first sex was related to adolescents' sexual initiation. However, as reported at the bivariate level, parents'

conservative attitudes were not related statistically to adolescents' sexual initiation net of the other parenting correlates.

Regarding communication dynamics, greater frequency of disagreements about dating positively affected adolescents' sexual initiation. Mirroring the bivariate results, sexual communication was not significantly associated with adolescents' sexual initiation, net of the other parenting variables.

Model 2 includes the influence of the personal and demographic correlates in addition to the parenting practices. Parental caring continued to be negatively associated with adolescents' sexual initiation. Limiting adolescents' independent dating decisions was no longer statistically significant in Model 2. The addition of age to the model explained the effect of limiting dating decisions. Older adolescents made more independent dating decisions, and older adolescents were more likely to initiate sex.

Of the social learning measures, only the parent's preferred age for their child to have first sex remained significantly related to having sex between interview waves. The effect actually increased. Parents' own age at first sex was no longer significantly related to adolescents' initiating sex. Additional analyses (available from authors) revealed that race, currently dating, and grades each separately reduced the effect of parents' own history to non-significance. Parents who had first sex at younger ages were more likely to be Black or Hispanic, have children who are dating, and have children who are getting lower grades in school.

The final set of parenting indicators are communication processes. Parental communication about sex was not associated with adolescents initiating sex between interview waves. The effect of disagreements about dating was reduced slightly in Model 2, but remained statistically related to adolescents initiating sex. Teens who disagreed more often with parents had greater odds of having first sex between the interview waves. Additional analyses (available from authors) found that having more friends who were sexually active and currently dating both reduced the effect size of disagreements about dating. Adolescents who reported more friends having sex and adolescents who were currently in a relationship that lasted over a year were more likely to report having more disagreements about dating with parents and were more likely to report initiating sex.

Personal characteristics associated with sexual initiation included dating. Adolescents who reported that they were currently dating at wave 1, regardless of relationship duration, had higher odds of having sex as compared to adolescents who were not dating. Adolescents with lower grades in school were more likely to have sex. Finally, adolescents who reported more friends who have had sex had higher odds of initiating sexual activity. Regarding demographic characteristics, age and race/ethnicity were associated with initiating sex. Older adolescents had higher odds of having experienced first sexual intercourse. Black and Hispanic youths also had higher odds of having first sex compared to White youths.

We next examined whether the same model predicted sexual initiation for both boys and girls. We performed a chow test to determine if the model should be run separately for male and female respondents (Chow, 1960). The chow test indicated that separate models were not warranted ($\chi^2_{(25)} = 22.59, p > .05$), suggesting that the covariates, including parenting processes, operated in a similar manner for male and female adolescents. Interactions were tested between the demographic indicators (age, race, mother's education, family structure, and neighborhood poverty) and the parenting variables. None of the interactions with the demographic variables were significant, indicating that the effects of the parenting practices on adolescent sexual onset did not vary by gender, age, race, mother's education, family structure, and neighborhood poverty. We also tested interactions between the personal

characteristics (religiosity, dating status, low grades, alcohol frequency, depressive symptoms, and belief that friends had sex) and the parenting variables. Net of main effects, only the interaction between parents' age at first sex and adolescents' reported depressive symptoms was significant; this suggested that the effect of parents' prior behavior (i.e., early age of first sex) had a greater effect for youths reporting depressive symptoms (results available from authors). Overall, the effects of the parenting processes did not differ according to teens' demographic or personal characteristics.

DISCUSSION

During adolescence, parents encounter challenges as teens begin dating. We assessed whether the manner in which parents interact and communicate about dating and sexual issues is associated with delaying adolescents' sexual initiation. We used longitudinal data and only examined cases in which adolescents were not sexually active at wave 1. Thus, it is clear that the predictor variables were measured prior to sexual activity – unlike many cross-sectional studies. Parenting practices examined were those that likely influence behavioral compliance.

The importance of bonds of attachment and monitoring of youths' behavior is well established. Consistent with prior studies, parental caring was associated with a lower likelihood of teens' sexual initiation over a twelve month interval. Based on earlier work (e.g., Longmore et al., 2001), we were uncertain whether parental caring would remain significant net of monitoring and independence-giving. We find that parental caring mattered with respect to delaying adolescents' sexual onset net of frequency of dating disagreements, frequency of sexual communication, demographic background, religiosity, dating itself, monitoring, and independence-giving. This suggested that parental caring was important in reflecting the parents' understanding that youths need continual support while striving for autonomy.

We examined two control measures, limiting adolescents' dating choices and monitoring behavior. Limiting dating choices was negatively associated with sexual initiation, net of other parenting practices. As expected, its effect on delaying sexual initiation was stronger than that of monitoring. However, it was not significant with the inclusion of the high risk personal and demographic correlates. Limiting teens' independent dating decisions became non-significant in Model 2, due to the addition of age. Older adolescents made more independent dating decisions, and older adolescents were more likely to initiate sex. As youths get older it is appropriate for parents to encourage independent decisions in various domains, and dating is one such domain.

We expected that monitoring would negatively influence adolescents' sexual debut; but, we found that monitoring was not significant net of other parenting practices. However, with the inclusion of personal and demographic correlates, monitoring approached significance, but the effect was positive – not negative as anticipated. Our explanation is found in supplemental analyses. Age and monitoring were negatively related; thus age suppressed the effect of monitoring because older youths were less likely to be monitored, as well as more likely to have had sex. Moreover, frequency of dating disagreements mediated the relationship between monitoring and sexual initiation: greater monitoring was associated with frequency of disagreements, which significantly predicted sexual initiation. These findings reflect the complexity of control techniques as a means to enforce compliance, and specifically in this case, to delay adolescents' sexual onset. Monitoring is less suitable as youths become older, although it is effective in delaying sexual onset. However, it is also associated with greater frequency of dating disagreements, which is associated with adolescents' sexual initiation. We reiterate that compared with caring, controlling behavior

is complicated because adolescents may resist such attempts leading to disagreements, which exacerbate the probability of the behavior that parents are trying to control.

Practices such as parental caring and monitoring, however, do not complete the roster of ways in which parents influence children. In addition to social control dynamics, we draw from social learning theories, which suggest that parents influence children through their own prior behavior and the expression of attitudes. We found that parents' early sexual debut influenced adolescents' sexual debut, a finding noted in demographic studies. Additional analyses revealed, however, that parents who had early sex were likely to come from more disadvantaged backgrounds. At first glance, it might appear that parenting, itself, is overshadowed by parents' socioeconomic background. However, we see the picture as more hopeful regarding the influence of parenting practices. Parents' belief that their child should be older than eighteen to have sex significantly predicted whether youths engaged in first sexual intercourse. Additionally, because this attitude provided a behavioral script for compliance, it is a more effective deterrent than generally phrased conservative attitudes. We argued that parents act as a countervailing force relative to peers who were more likely to encourage sexual activity, and results support this view. Parents' belief that their child should be at least 18 years old to be sexually active was a stronger predictor than whether adolescents believe that friends are sexually active. This underscores that parents are in a unique position to shape adolescents' early sexual activity.

Regarding parent-child communication, dating disagreements, but not parental communication about sex, were associated with increased odds of sexual initiation, net of other family process variables. The effect of dating disagreements was reduced slightly in Model 2, which included personal and demographic correlates of sexual debut. Supplementary analyses found that adolescents who reported more friends having sex and adolescents who were currently in a relationship that lasted over a year reported more disagreements about dating with parents and were more likely to report initiating sex. We suggest two possible explanations for why dating disagreements might increase the odds of teens' sexual initiation. First, the frequency of arguments about dating may reflect parents' heightened awareness that dating provides a sex partner potentially. Thus, parents may be trying to 'head it off' before sexual initiation actually occurs. In a sense this is a selection argument. Parents are fighting with youth whom they think are heading in a certain direction, and having friends who may be sexually active as well as dating for a long duration gives parents more cause to worry and ultimately fight with teens. A second interpretation is the rebellion argument: the stress associated with the frequency of fighting about dating might result in rebellion. Thus the earlier discord might lead to the behavior that parents are trying to control and delay. It is likely a combination of both arguments. It would be useful for future studies to examine both of these processes.

Study limitations point to a number of directions for future research. Buhi and Goodson (2007) note in an extensive review of adolescent sexual behavior that time home alone is a stable predictor of sexual debut. This is one item in our six-item monitoring scale; thus it will be important to disentangle whether time home alone distinctly influences adolescents' sexual initiation net of the variables examined here including other aspects of monitoring. Second, examining whether, and how, beliefs about the appropriate age for sex is conveyed to children will broaden our understanding of this family dynamic. Lefkowitz and colleagues (2000) have made initial steps by focusing on whether mothers' communication style might be altered experimentally to increase their comfort in discussing sex and AIDS, and to act less judgmentally. This line of research could be extended to include interventions that might enhance mothers' skills in conveying views about the appropriate age for sexual activity in similarly less judgmental ways. Third, we know the frequency with which parents and adolescents argue about dating, and we have some evidence connecting dating

disagreements with teens' beliefs that friends are sexually active and longer dating relationships, but it would be useful to know additional topics that cause disagreements as well as the intensity of the conflicts.

Regarding the frequency of sexual communication, it may be useful to distinguish between conversations about morality as opposed to sex and birth control (e.g., Regnerus, 2005). Additionally, although religiosity is not associated with sexual debut, future research should emphasize multidimensional measures of religiosity (e.g., Lefkowitz, Gillen, Shearer, & Boone, 2004), which may have a greater likelihood of association with sexual activity.

Developing interventions to delay teens' sexual activity may be enhanced by understanding how parenting influences dating. We demonstrate that several parenting practices associated with dating influence sexual initiation, net of other significant predictors. Moreover, although some studies pit social control against social learning, it is important to look at these processes in tandem with communication because all likely underlie adolescents' compliance with parental desires. An integrated approach better captures the 'push and pull' of adolescence as parents attempt to guide youths' dating behavior and youths try to gain greater independence.

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REFERENCES

- Alan Guttmacher Institute. U.S. Teenage Pregnancy Statistics. New York: Alan Guttmacher Institute; 2004.
- Brehm, SS.; Brehm, JW. Psychological Reactance: A Theory of Freedom and Control. New York: Academic Press; 1981.
- Buhi ER, Goodson P. Predictors of adolescent sexual behavior and intention: A theory-guided systematic review. *Journal of Adolescent Health*. 2007; 40:4–21. [PubMed: 17185201]
- Bulcroft RA, Carmody DC, Bulcroft KA. Family structure and patterns of independence-giving to adolescents: Variations by age, race, and gender of child. *Journal of Family Issues*. 1998; 19(4): 404–435.
- Chow G. Tests of equality between sets of coefficients in two linear regressions. *Econometrica*. 1960; 28:591–605.
- Davis EC, Friel LV. Adolescent sexuality: Disentangling the effects of family structure and family context. *Journal of Marriage and the Family*. 2001; 63:669–681.
- Dittus PJ, Miller KS, Kotchick BA, Forehand R. Why parents matter!: The conceptual basis for a community-based HIV prevention program for the parents of African American youth. *Journal of Child and Family Studies*. 2004; 13(1):5–20.
- Dowdy BB, Kliever W. Dating, parent-adolescent conflict, and behavioral autonomy. *Journal of Youth and Adolescence*. 1998; 27(4):473–492.
- Guilamo-Ramos, V.; Bouris, A. Future directions for research on parent-adolescent interventions; What's It Going To Take? Extending the Research Base to Improve Teen Pregnancy Prevention; Bethesda, MD. 2007 March 8. Paper presented at the
- Hair EC, Moore KA, Garrett SB, Ling T, Cleveland K. The continued importance of quality parent-adolescent relationships during late adolescence. *Journal of Research on Adolescence*. 2008; 18:187–199.
- Jaccard J, Dittus PJ. Adolescent perceptions of maternal approval of birth control and sexual risk behavior. *American Journal of Public Health*. 2000; 90:1426–1430. [PubMed: 10983201]

- Lefkowitz ES, Gillen MM, Shearer CL, Boone TL. Religiosity, sexual behaviors, and sexual attitudes during emerging adulthood. *The Journal of Sex Research*. 2004; 41(2):150–159.
- Lefkowitz ES, Romo LF, Corona R, Kit-fong Au T, Sigman M. How Latino American and European American adolescents discuss conflicts, sexuality, and AIDS with their mothers. *Developmental Psychology*. 2000; 36(3):315–325. [PubMed: 10830976]
- Longmore MA, Manning WD, Giordano PC. Preadolescent parenting strategies and teens' dating and sexual initiation: A longitudinal analysis. *Journal of Marriage and the Family*. 2001; 63:322–335.
- Madsen SD. Parents' management of adolescents' romantic relationships through dating rules: Gender variations and correlates of relationship qualities. *Journal of Youth and Adolescence*. 2008; 37:1044–1058.
- Manning WD, Giordano PC, Longmore MA. Hooking-up: The relationship contexts of “nonrelationship” sex. *Journal of Adolescent Research*. 2006; 21(5):459–483.
- Meschke LL, Zweig JM, Barber BL, Eccles JS. Demographic, biological, psychological, and social predictors of the timing of first intercourse. *Journal of Research on Adolescence*. 2000; 10(3):315–338.
- Pearson J, Muller C, Frisco ML. Parental involvement, family structure, and adolescent sexual decision making. *Sociological Perspectives*. 2006; 49(1):67–90.
- Quatman T, Sampson K, Robinson C, Watson CM. Academic, motivational and emotional correlated of adolescent dating. *Genetic, Social, and General Psychology Monographs*. 2001; 127(2):211–234.
- Regnerus MD. Talking about sex: religion and patterns of parent-child communication about sex and contraception. *The Sociological Quarterly*. 2005; 46(79–105)
- Resnick MD, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, et al. Protecting adolescents from harm. Findings from the National Longitudinal Study of Adolescent Health. *Journal of the American Medical Association*. 1997; 278:823–832. [PubMed: 9293990]
- Rucibwa NK, Modeste N, Montgomery S, Fox CA. Exploring family factors and sexual behaviors in a group of African American and Hispanic adolescent males. *American Journal of Health Behaviors*. 2003; 27:63–74.
- Santelli JS, Lowry R, Brener ND, Robin L. The association of sexual behaviors with socioeconomic status, family structure, and race/ethnicity among US adolescents. *American Journal of Public Health*. 2000; 90:1582–1588. [PubMed: 11029992]
- Sieverding JA, Adler N, Witt S, Ellen J. The influence of monitoring on adolescent sexual initiation. *Archives of Pediatric and Adolescent Medicine*. 2005; 159:724–729.

Table 1

Means and Percentages for the Total Sample and Adolescents Who Experienced First Sex between Interview Waves

	<u>Total Sample</u>		<u>Had Sex Between Interviews</u>	
	Mean/Frequency	(S.D.)	yes (26.5%)	no (73.5%)
<i>Social Control Processes</i>				
Caring	20.0	(3.1)	19.3***	20.3
Monitoring	21.1	(2.5)	21.0	21.1
Limits on Independent Dating Decisions	7.0	(3.4)	6.7*	7.2
<i>Social Learning Processes</i>				
Age Parent had Sex	17.6	(3.1)	17.1**	17.8
Parent's Conservative Dating Attitudes	21.3	(3.4)	21.3	21.3
Parent's Preferred Age for Teen Sex				
18 or Younger	22.3%		29.1%**	19.8%
19 or Older	77.7%		70.9%	80.2%
<i>Dynamics of Parent-Child Communication</i>				
Communications about Sex	9.1	(2.9)	9.1	9.1
Frequency of Dating Disagreements	1.7	(1.1)	2.1***	1.6
<i>Social/Personal Characteristics</i>				
Religiosity	3.4	(1.2)	3.3	3.4
Dating Status at Wave 1				
Currently Dating for More than 1 Year	5.0%		9.3%***	3.4%
Currently Dating for Less than 1 Year	28.5%		49.8%	20.8%
Not Currently Dating	66.5%		40.9%	75.8%
Low Grades	3.5	(2.0)	4.1***	3.3
Alcohol Frequency	1.6	(1.2)	2.0***	1.5
Depressive Symptoms	15.7	(7.6)	16.1	15.6
Friends had Sex	2.1	(1.4)	3.0***	1.8
<i>Demographic Characteristics</i>				
Family Structure				
Two-Biological	58.2%		48.3%**	61.7%
Single-Parent	21.2%		25.4%	19.7%
Step/Cohab-step	17.4%		20.2%	16.4%
Other Family	3.2%		6.1%	2.2%
Gender				
Female	53.7%		55.9%	52.9%
Male	46.3%		44.1%	47.1%
Age	14.7	(1.6)	15.4***	14.4
Race				
White	69.1%		57.8%***	73.2%
Black	19.4%		28.2%	16.3%

	<u>Total Sample</u>		<u>Had Sex Between Interviews</u>	
	Mean/Frequency	(S.D.)	yes (26.5%)	no (73.5%)
Hispanic	9.0%		11.7%	8.0%
Other Race	2.5%		2.3%	2.5%
Mother's Education				
Less than High School	9.1%		10.4% *	8.6%
High School Graduate	64.7%		70.0%	62.8%
College Graduate	26.2%		19.6%	28.6%
Percent Neighborhood Poverty	13.2	(13.6)	16.1 ***	12.1

Source: Toledo Adolescent Relationships Study

*
 $p < .05$

**
 $p < .01$

 $p < .001$

Table 2

Coefficient Estimates and Odds Ratios for the Logistic Regression of Having Had Sexual Intercourse between Waves for Virgins at Time 1 ($N = 803$)

	Model 1		Model 2	
	<i>b</i>	<i>e^b</i>	<i>b</i>	<i>e^b</i>
<i>Social Control Processes</i>				
Monitoring	-0.01	0.99	0.08	1.08
Caring	-0.10***	0.90	-0.09*	0.91
Limits on independent dating decisions	-0.07**		-0.05	
<i>Social Learning Processes</i>				
Age Parent had Sex	-0.07*	0.93	-0.03	0.97
Parent's Conservative Dating Attitudes	-0.01	0.99	-0.01	0.99
Child Should be Over 18 to Have Sex	-0.56**	0.57	-0.65**	0.52
<i>Dynamics of Parent-Child Communication</i>				
Communications about Sex	0.03	1.03	-0.01	0.99
Frequency of Dating Disagreements	0.38***	1.46	0.29**	1.34
<i>Social/Personal Characteristics</i>				
Religiosity			-0.03	0.97
Dating Status				
Currently Dating - More than 1 Year			1.19**	3.29
Currently Dating - Less than 1 Year			1.45***	4.26
(Not Currently Dating)				
Low Grades			0.20***	1.22
Alcohol Frequency			0.15	1.16
Depressive Symptoms			-0.02	0.98
Friends had Sex			0.32***	1.38
<i>Demographic Characteristics</i>				
Family Structure				
(Two-Biological)				
Single-Parent			0.38	1.46
Step/Cohab-step			0.44	1.55
Other Family			0.93	2.53
Gender				
Female			-0.12	0.89
(Male)				
Age			0.34***	1.40
Race				
(White)				
Black			0.93**	2.53
Hispanic			0.88*	2.41

	Model 1		Model 2	
	<i>b</i>	<i>e^b</i>	<i>b</i>	<i>e^b</i>
Other Race			1.19	3.29
Mother's Education				
Less than High School			-0.53	0.59
College Graduate			-0.22	0.80
(High School Graduate)				
Percent Neighborhood Poverty			-0.01	0.99
Mean likelihood ratio χ^2	60.81***		255.35***	
N	803.00		803.00	

Note. Omitted Category in Parentheses. Source: Toledo Adolescent Relationships Study

*
 $p < .05$

**
 $p < .01$

 $p < .001$