

Social–Ecological Predictors of Sexual Risk Behavior Among Young Adults

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Most studies on sexual behavior outcomes are restricted to adolescents. However, rates of sexually transmitted diseases (STDs) are highest among young adults. This study examined social–ecological predictors in adolescence that predict risky sexual behavior in young adulthood. Using longitudinal data, logistic regression was used to determine social–ecological factors that predict early sexual debut and a high number of lifetime sexual partners among 3,109 young adults. Risk-taking was associated with early sexual debut and a high number of lifetime sexual partners. Father–child connectedness decreased the odds of early sexual debut and a high number of lifetime sexual. School connectedness also decreased the odds of early sexual debut and a high number of lifetime sexual. There was no relationship between mother–child connectedness and the risky sexual behavior. The influence of childhood factors may encompass young adulthood. Personality traits could be used by programs aimed at preventing STD–related behaviors to characterize those at higher risk for risky sexual behavior. These programs also could be more effective by developing approaches that foster parent–child connectedness and by gaining a greater understanding of the mechanisms through which school connectedness protects against risky sexual behavior, which could decrease the prevalence of risky sexual behaviors, and subsequently lower the rates of STDs among young adults.

Keywords: *social–ecological, young adults, longitudinal, sexual behavior*

Introduction

Sexually transmitted diseases (STDs) continue to be a public health problem in the United States. According to the Centers for Disease Control and Prevention (CDC, 2016a), there are about 20 million new cases of STDs each year. Adolescents and young adults are disproportionately affected by STDs. Compared with older adults, sexually active adolescents aged 15–19 years and young adults aged 20–24 years are at higher risk of acquiring STDs (CDC, 2017). Further, even though they make up just over one quarter of the sexually active population, youth ages 15–24 account for about half of all new STD cases (CDC, 2016a).

STDs are an important public health issue, not only because of their high prevalence, but also because they frequently go undetected. If untreated, they can lead to adverse health outcomes such as chronic pelvic pain, ectopic pregnancy, and infertility. One STD, human papillomavirus, is the primary cause of several cancers, including those of the cervix, anus, and penis (Lowy & Schiller,

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2012). Further, some STDs cause lesions (e.g., syphilis and herpes) or inflammation (e.g., gonorrhea and chlamydia) in the genital region, which increase the likelihood of both acquiring and transmitting HIV (Pathela, Braunstein, Blank, & Schillinger, 2013; Peterman, Newman, Maddox, Schmitt, & Shiver, 2014). Aside from the negative health effects of STDs, direct medical costs associated with STD diagnosis and treatment can be substantial (CDC, 2017).

In efforts to reduce risky sexual behaviors that may lead to STDs, the goal of prevention programs is to encourage adolescents to adopt healthy lifelong attitudes and behaviors, and to provide them with skills that help them engage in behaviors that reduce their risk for STDs. There is evidence that preventive interventions that target not only risk factors, but also protective factors, can have an impact on STD-related behaviors (Botvin & Griffin, 2014). Protective factors encompass individual-level factors, for example, positive attitudes about condom use and positive peer norms (Armstrong, Steiner, Jayne, & Beltran, 2016); interpersonal factors, such as quality relationships with family (Kao & Carter, 2013); and broader environmental contexts, such as school, workplace and neighborhood environments, that are conducive to good health (East, 2013). A greater understanding of risk and protective factors of STD-related behaviors is crucial as research of such factors can inform programs aimed at preventing these behaviors. Therefore, the purpose of the present research was to examine the relationship between individual, interpersonal and community factors in adolescence, and risky sexual behavior in young adulthood.

The Social–Ecological Model

The social–ecological model (SEM; DiClemente, Salazar, Crosby, & Rosenthal, 2005) is a theory-based framework for understanding the multifaceted and interactive effects of personal and environmental factors that determine behavior. It hinges on evidence that no single factor can explain why some people or groups are more likely than others to engage in certain behaviors. From the SEM perspective, behavior can be influenced by factors at several levels: the individual, relationship, community, organizational and societal levels. The individual level includes biological and personal history factors; the relationship level pertains to close relationships such as family and peers; the community level refers to settings such as schools, workplaces, and neighborhoods; the organizational level includes organizations or social institutions with rules and regulations for operations that affect how, or how well healthcare services are provided to an individual or group; and the societal level represents broader structural and social factors, for example laws, policies, economic systems, cultural norms and the media. According to the SEM, individual behavioral choices, including those related to sexual behavior, are greatly influenced by one's personal characteristics, the social influence of others, and neighborhood and societal characteristics. While the individual is responsible for engaging in a healthy lifestyle, the social environment (e.g., community norms, values, regulations and policies) greatly impact individual behavior. The SEM recognizes the relationships between the individual and his or her social and physical environment and that these relationships underlie health outcomes (DiClemente, Crosby, & Kegler, 2002). This makes the model a suitable framework for inquiries of sexual behavior among young people.

Individual-Level Factors

Factors at the individual level of the SEM encompass individuals' demographic characteristics, including age, gender, education and income; behaviors, for example, substance use; and knowledge, awareness, attitudes, beliefs, and perceptions. These influence the likelihood of engaging in risky sexual behaviors. For example, men are more likely than women to report multiple sexual partners (Kann et al., 2014; Vasilenko & Lanza, 2014), whereas women are less likely to report not using condoms for protection (Calsyn et al., 2013). Psychosocial factors, that is, factors that capture the

psychological and social context in which the individual functions, have also been studied, and two variables that have received attention among adolescents are self-esteem and risk-taking. Self-esteem refers to confidence in one's own worth or abilities. Results regarding the relationship between the level of self-esteem and the probability of engaging in high-risk sexual behaviors are conflicting, with authors reporting associations that are negative (Ganczak, Czubińska, Korzeń, & Szych, 2017), positive (Unis, Johansson, & Sällström, 2015) and null (Rivers et al., 2013). Risk-taking can be defined as engaging in behaviors that are high in subjective desirability or excitement but that carry the potential for injury or loss (Geier, Terwilliger, Teslovich, Velanova, & Luna, 2010). It has been argued that risk-taking individuals may exhibit an oversensitivity to reward and an undersensitivity to punishment, which may lead to engaging in risky behavior (Weafer, Milich, & Fillmore, 2011). While some researchers have found that risk-taking declines between adolescence and adulthood (Qu, Galvan, Fuligni, Lieberman, & Telzer, 2015), some have demonstrated results to the contrary. For example, in a study examining age-based differences in individual decision-making characteristics in 12- to 90-year-olds, it was found that adolescents were more averse to clearly stated risks compared to young and midlife adults (Tymula et al., 2013).

Relationship-Level Factors

Personal relationships such as with family, friends, intimate partners and peers may influence youth's sexual behavior. Research among high school students reveals that young people with perceptions that their peers approve of and engage in sexual activity are more likely to engage in sexual activity themselves (Doornwaard, Ter Bogt, Reitz, & Van Den Eijnden, 2015). Similarly, in a meta-analysis of 58 studies conducted in 15 countries, van de Bongardt, Reitz, Sandfort, and Deković (2015) showed that adolescents were more likely to be sexually active themselves if they felt that their peers were more sexually active, more approving of having sex, and exerted more pressure on them to be sexually active. Research further suggests that positive parent-child relationships and interactions may also be important in understanding risky sexual behaviors among adolescents. For example, having a high-quality mother-child relationship has been associated with later sexual debut (Nogueira Avelar e Silva, van de Bongardt, van de Looij-Jansen, Wijtzes, & Raat, 2016). There is relatively little in the literature on parent-son connectedness and sexual behavior. However, findings from the study by Nogueira Avelar e Silva et al. (2016) indicated that a positive mother-child relationship was associated with delayed sexual debut among girls but not boys, while with fathers, there was no association among girls or boys. The literature also reveals that greater levels of parent-child communication about sex have been associated with a lower likelihood of risky behaviors, more consistent condom use, and greater intentions to use condoms in the future (A. L. Harris, Sutherland, & Hutchinson, 2013).

Community Factors

Community contexts in which social relationships occur also impact sexual behavior. Contributing factors at this level include levels of unemployment, population density, mobility, the existence of local drug or gun trade, and neighborhood environments. Neighborhoods with high rates of violence, hunger or substance use tend to have poor sexual health outcomes among youth (Ford & Browning, 2014), while advantaged neighborhoods, for example, those with less concentrated poverty, low unemployment rates, and low crime have been found to be protective against risky sexual behaviors (Carlson, McNulty, Bellair, & Watts, 2014). An important community factor is school connectedness, which is the belief by students that adults in the school community care about students' learning and about them as individuals. The literature provides evidence that a sense of connectedness to one's school is a key protective factor against a range of risky behaviors among youth. Adolescents who feel connected to their school are less likely to engage in health-compromising activities, including risky sexual behaviors (Langille et al., 2014; Shneyderman & Schwartz, 2013).

Purpose of Study

Research on the social–ecological predictors of risky sexual behaviors has largely been restricted to school-going adolescents; therefore, less is known about the influence of these factors on young people beyond high school ages. Examining outcomes in young adulthood is important from an intervention and prevention standpoint, given that this population is the one most affected by STDs (Braxton et al., 2018).

Using the SEM as a framework, I sought to answer the question, what social–ecological factors in adolescence predict risky sexual behaviors in young adulthood? Based on the extant literature, it was hypothesized that (a) higher levels of self-esteem in adolescence would decrease the likelihood of early sexual debut and decrease the likelihood of a high number of sexual partners in young adulthood, (b) higher levels of risk-taking in adolescence would increase the likelihood of early sexual debut and increase the likelihood of a high number of sexual partners in young adulthood, (c) higher levels of mother–child connectedness in adolescence would decrease the likelihood of early sexual debut and decrease the likelihood of a high number of sexual partners in young adulthood, (d) higher levels of father–child connectedness in adolescence would decrease the likelihood of early sexual debut and decrease the likelihood of a high number of sexual partners in young adulthood, and (e) higher levels of school connectedness in adolescence would decrease the likelihood of early sexual debut and decrease the likelihood of a high number of sexual partners in young adulthood.

Method

Data and Participants

The present study was a secondary analysis of data from the National Longitudinal Study on Adolescent Health (Add Health; K. M. Harris et al., 2009). Add Health is a comprehensive, nationally representative, survey that launched in 1994 and has followed adolescents into adulthood for over two decades. Eighty U.S. high schools and their corresponding middle schools were selected with a probability proportional to size. Approximately 90,000 students in Grades 7–12 completed in-school questionnaires, of which a sample of 20,475 adolescents completed a Wave I home interview. A parent, usually the resident mother, also completed a 30-minute interviewer-assisted interview at Wave I. Adolescents interviewed in Wave I (1994–1995) were subsequently reinterviewed in 1996 (Wave II), 2001–2002 (Wave III), and 2007–2008 (Wave IV). A fifth wave of data collection has been underway since 2016. The study includes data on respondents' social, economic, psychological and physical well-being, their family, neighborhood, community, school, friendships, peer groups, and romantic relationships. Add Health provides unique opportunities to study how social environments and behaviors in adolescence are linked to health outcomes in young adulthood. The current study used data from Waves II and III. The sample comprised Add Health youth who had data for both Waves II and III ($n = 3,844$), were younger than 19 years in Wave II ($n = 3,643$), and reported having been sexually active in Wave III ($n = 3,109$).

Measures

Outcome Variables

Two outcome variables were examined, both assessed at Wave III of the Add Health study. The first outcome was early sexual debut. Participants were asked how old they were the first time they had vaginal intercourse, which was defined as when a man inserts his penis in to a woman's vagina. Add Health did not include questions about oral or anal sex at Wave III. For the present study, responses

were dichotomized (≥ 15 years = 0, < 15 years = 1; Madkour et al., 2014). The second outcome was lifetime number of sexual partners. Participants reported on the number of sexual partners with whom they had ever had vaginal sexual intercourse. The CDC's National Survey of Family Growth (CDC, 2016b) reported that the median number of sexual partners was six for men and four for women. Based on that information, a variable was created for lifetime number of sexual partners, coded for men as 0 (six or fewer, i.e., low number of partners) or 1 (more than six, i.e., high number of partners) and for women as 0 (four or fewer, i.e., low number of partners) or 1 (more than four, i.e., high number of partners).

Predictor Variables

Previous studies have included variables at only one and up to five levels of the SEM (Dyson, Mobley, Harris, & Randolph, 2018; Mehtälä, Sääkslahti, Inkinen, & Poskiparta, 2014; Ritchwood, Traylor, Howell, Church, & Bolland, 2014). The independent variables used in the present study were measured at Wave II of Add Health and were selected to represent the individual, relationship and community levels of the SEM. Wave II of Add Health does not have data that could represent predictors at the organizational or societal level of the SEM.

Individual Level

Variables assessed at this level were self-esteem and risk-taking. To measure self-esteem, six items were used. Participants were asked how much they agreed with the following statements: "You have a lot of good qualities," "You have a lot to be proud of," "You like yourself just the way you are," "You feel like you are doing everything just about right," "You feel socially accepted," and "You feel loved and wanted." Responses to the items were measured on a 5-point Likert scale. Variables that were inconsistent in terms of the direction of the response logic were recoded so that high values indicated high levels. A total score was calculated by averaging the scores on the six items ($\alpha = 0.85$), where higher scores indicated higher levels of self-esteem. To measure risk-taking, participants indicated how much they agreed with the statement, "You like to take risks." Response categories ranged from 1 (*strongly agree*) to 5 (*strongly disagree*). The responses were reverse coded so that high values indicated high levels of risk-taking.

Relationship Level

Variables assessed at this level were mother-child connectedness and father-child connectedness. Mother-child connectedness was assessed using four items. Adolescents reported on how close they felt to their mother or mother figure, if the mother or mother figure was warm and loving toward them, if they were satisfied with the way they communicated with their mother or mother figure, and if they were satisfied with the relationship with their mother or mother figure overall. Responses to the items were measured on a 5-point Likert scale. Variables that were inconsistent in terms of the direction of the response logic were recoded so that high values indicated high levels and a total score was calculated by averaging the scores on the four items ($\alpha = 0.85$), where higher scores meant higher levels of mother-child connectedness. A parallel measure was constructed for father-child connectedness ($\alpha = 0.89$).

Community Level

For this level, a score was created to assess school connectedness. Participants were asked how much they agreed with the following six items: "You feel that your teachers care about you," "You feel close to people at your school," "You feel like you are part of your school," "You are happy to be at your school," "Teachers at your school treat students fairly," and "You feel safe in your school." Responses to the items were measured on a 5-point Likert scale. Where necessary, variables were recoded so

that high values indicated high levels of school connectedness. The six items were averaged to create a total score ($\alpha = 0.78$), where higher scores meant higher levels of school connectedness.

Control Variables

A literature review identified sociodemographic variables that were considered as potential confounders in the present study. Parental socioeconomic status (SES; Sanchez et al., 2013) was measured using parental education attainment and total household income. The data for these measures were drawn from Add Health's Wave I, when the measures were assessed. Responding parents (predominantly mothers) were asked about their highest educational attainment. For the present study, their responses were coded 1 (*less than high school*), 2 (*high school graduate*), 3 (*some college*), 4 (*college graduate*), 5 (*postgraduate*). Parents also reported how much total income, before taxes, the family received from all sources. For the present study, responses were coded 1 ($\$0-20,000$), 2 ($\$21,000-40,000$), 3 ($\$41,000-60,000$), 4 ($\$61,000-80,000$), 5 ($\$81,000+$). A score was created for parental SES by summing the created parental educational attainment and household income variables (Christensen, Schieve, Devine, & Drews-Botsch, 2014). Family structure, that is, whether the adolescent lived in a single- or two-parent household (Carlsund, Eriksson, Löfstedt, & Sellström, 2013), was also controlled for using information from Wave I. The control variable at Wave II was participant age, while at Wave III, participant age, SES, and marital history were controlled (Astone et al., 2013). Like parental SES, a score was created by summing educational attainment (1 = *less than high school*, 2 = *high school graduate*, 3 = *some college*, 4 = *college graduate or higher*) and current household income (1 = $\$0-20,999$, 2 = $\$21,000-30,999$, 3 = $\$31,000-50,999$, 4 = $\$51,000+$). The analysis also controlled for participant gender and race (Pflieger, Cook, Niccolai, & Connell, 2013).

Statistical Analysis

Descriptive statistics were ascertained to characterize the sample. Logistic regression was used to assess associations between predictors in adolescence and outcomes in young adulthood. Variables that were significant in the bivariate analysis were included as covariates in logistic regression analyses. The associations were estimated in terms of odds ratios (ORs) with 95% confidence intervals (CIs). The multivariable logistic regression was checked for model fit and multicollinearity. Data were analyzed using SPSS Version 24.

Results

Sample Characteristics

Demographic characteristics of the study sample are presented in Table 1. Women comprised 51.8% of the sample. Whites, African Americans, and Hispanics made up 69.5%, 14.2%, and 12.1% of the sample, respectively. Those who identified as "other," mostly Asians, Native Americans, and Pacific Islanders, comprised 4.2% of the sample. The mean age was 15.6 ($SD = 1.48$) at Wave II and 21.3 ($SD = 1.47$) at Wave III. Over a third of participants (38.8%) reported having some college, while 11.7% had a college education or higher. Most of the participants reported not ever being married (82.8%). Regarding sexual behavior, 34.3% of participants had an early sexual debut (<15 years) while 36.0% had a high number of sexual partners.

Table 1. Demographic Characteristics of the Study Sample at Waves II and III

Variable	<i>n</i>	Weighted %	<i>M (SD)</i>
Gender			
Male	1,415	48.24	
Female	1,694	51.79	
Race/ethnicity			
White	1,937	69.53	
African American	678	14.23	
Hispanic	345	12.06	
Other	149	4.18	
Wave II			
Age			15.59 (1.48)
Self-esteem			4.21 (0.58)
Risk-taking			3.54 (1.05)
Mother-child connectedness			4.26 (0.72)
Father-child connectedness			4.00 (0.86)
School-child connectedness			3.66 (0.74)
Wave III			
Age			21.33 (1.47)
Highest level of education			
Less than high school	425	15.51	
High school	1,016	33.89	
Some college	1,266	38.79	
College degree or higher	400	11.73	
Marital history			
Ever married	532	17.11	
Never married	2,574	82.82	
Early sexual debut (<15 years)			
No	2,023	65.06	
Yes	1,070	34.34	
Number of lifetime sexual partners			
Low	1,859	61.09	
High	1,161	36.02	

Predictors of Risky Sexual Behaviors

The results of the logistic regression are presented in Table 2. At the individual level, contrary to what was expected, self-esteem was associated with neither sexual debut nor number of lifetime sexual partners. However, as hypothesized, scoring higher on risk-taking was associated with early sexual debut, albeit modestly ($OR = 1.11$; 95% CI [1.01, 1.24]), and with a high number of lifetime sexual partners ($OR = 1.19$; 95% CI [1.08, 1.32]). At the relationship level, mother-child connectedness was not associated with either early sexual debut or number of sexual partners. The hypothesis that higher levels of father-child connectedness would decrease the likelihood of early sexual debut and decrease the likelihood of a high number of lifetime sexual partners was confirmed. Adolescents who reported feeling connected to their father or father figure at Wave II were less likely at Wave III to report early sexual debut ($OR = 0.79$; 95% CI [0.69, 0.90]) and less likely to have a high number of lifetime sexual partners ($OR = 0.87$; 95% CI [0.76, 0.99]). At the community level, as expected, higher levels of school connectedness at Wave II predicted decreased odds of early sexual

debut ($OR = 0.75$; 96% CI [0.65, 0.88]) and of a high number of lifetime sexual partners ($OR = 0.86$; 95% CI [0.74, 0.99]) at Wave III.

Table 2. Predictors of Early Sexual Debut Sexual and Lifetime Number of Sexual Partners

Variable	Early Sexual Debut		Lifetime Number of Sexual Partners	
	OR [95% CI]	<i>p</i>	OR [95% CI]	<i>p</i>
Individual level				
Self-esteem	1.11 [0.90, 1.37]	.318	1.06 [0.87, 1.30]	.583
Risk-taking	1.12 [1.01, 1.24]	.031*	1.19 [1.08, 1.32]	.0001*
Relationship level				
Mother connectedness	0.99 [0.84, 1.17]	.909	0.95 [0.81, 1.11]	.511
Father connectedness	0.79 [0.69, 0.90]	.000*	0.87 [0.76, 0.99]	.029*
Community level				
School connectedness	0.75 [0.65, 0.88]	.000*	0.86 [0.74, 0.99]	.040*

Note. OR = odds ratio; CI = confidence interval.

* $p < .05$.

Discussion

The present study examined social–ecological factors in adolescence that predict risky sexual behaviors in young adulthood. The SEM was used to select variables at the individual, relationship and community levels. Three of the five hypotheses were confirmed.

At the individual level, no relationship was found between self-esteem and risky sexual behaviors, which is consistent with some of the literature (Rivers et al., 2013). As pointed out at the outset, findings regarding self-esteem and risky sexual behavior are conflicting, with positive, negative and null associations reported (Ganczak et al., 2017; Unis et al., 2015). A possible explanation for null findings may be the use of global as opposed to facet-specific self-esteem. The former refers to an individual's overall feeling of self-worth, while the latter refers to an individual's self-worth in relation to a behavior or performance (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995). Facet-specific measures are considered better predictors of behaviors than global measures (Goodson, Buhi, & Dunsmore, 2006). Nevertheless, significant findings have been reported using global self-esteem, even from studies using Add Health data (e.g., Favara, 2013). Clearly, the relationship between self-esteem and sexual behavior is not simple and straightforward. It is possible that high self-esteem may foster sexual experimentation (Baumeister, Campbell, Krueger, & Vohs, 2003), but on the other hand, individuals with low self-esteem might engage in risky sexual behavior while attempting to alleviate feelings of low self-worth through sexual activity (Chaney & Burns-Wortham, 2015). Risk-takers were more likely to have both early sexual debut and high number of lifetime sexual partners. Previous research has shown an association between risk-taking and sensation seeking, a personality trait that leads individuals to seek out novel and intense sensations and experiences. In seeking out exciting experiences, high sensation seekers may take risks without regard for their potential adverse consequences (Zuckerman & Kuhlman, 2008). Therefore, youth with a sensation-seeking personality may generally be less concerned with the consequences of engaging in risky sexual behavior.

While findings from some studies have shown mother–child connectedness to be associated with risky sexual behaviors (A. L. Harris et al., 2013; Samari & Seltzer, 2016), others, like in the present study, have not (Sterrett et al., 2014). Consistent with the present study, positive relationships

between father–child connectedness and risky sexual behaviors have been reported, particularly among women (DelPriore, Schlomer, & Ellis, 2017). The mixed findings in studies of parent–child relationships and sexual behavior suggest that the relationship between these variables is complex, and the present study sheds little light on the topic. There may be an array of complex family factors that contribute to the sexual behavior of young people. Or perhaps young people may have different relationships with each of their parents. There is need for more empirical research to provide more insight into how different parent–child dyads (i.e., mother–daughter, mother–son, father–son, and father–daughter) and other parenting practices (e.g., parental involvement, control, and monitoring, and parenting style) interact with each other and influence adolescents’ sexual behavior (van de Bongardt et al., 2017).

At the community level, the finding that school connectedness predicted later sexual debut is in line with reports that a feeling of connectedness to the school protects against various risky behaviors among adolescents (Langille et al., 2014; Shneyderman & Schwartz, 2013). The findings of the present study provide evidence that the protective influence of this bond may extend beyond adolescence, into young adulthood. It has been theorized that young people who receive empathy, praise and attention experience social support and a sense of belonging and are also more receptive to regulation by those to whom they feel connected (Hawkins & Weis, 1985). Therefore, feeling connected to one’s school, especially to the teachers, would likely decrease the probability of engaging in risky behaviors because teachers do not approve of them. The stronger the bond students feel with their teachers, the more likely they are to abide by their teachers’ rules and standards, because engaging in risky behaviors would earn teachers’ disapproval.

Limitations of this study need to be considered. First, although age of sexual debut was assessed, caution should be used when drawing conclusions about its role as an outcome variable because some participants may have become sexually active before young adulthood, when the outcomes were assessed. Second, only one item was used to assess risk-taking, therefore the reliability of the measure was unestablished. Third, measurement bias may be an issue if there were inaccuracies in the survey responses, particularly due to respondents answering untruthfully, especially regarding sensitive questions. Fourth, the present study included only those who had ever had vaginal intercourse, as Add Health in Wave III (data collected 2001–2002), did not include questions about any other type of sexual activity aside from vaginal intercourse. Therefore, no data could be obtained on those who had had anal or oral sex. Further, this study did not consider possibilities of reciprocal relationships, that is, early sexual debut may weaken the quality of relationships with both one’s mother and father.

In addition, because this study used two waves of data over the period 1996–2002, results may not be generalizable to different time periods. However, even though Add Health has collected a fourth wave of data, when participants were aged 24 to 32, the focus of the present study was examining STD-related sexual behavior outcomes among younger (emerging) young adults, the population among whom the prevalence of STDs is highest. Plus, given that currently, 50% of STD infections occur among those aged 15–24 (CDC, 2016a), data on factors associated with risky sexual behaviors, although not very recent, may still be relevant. Despite the limitations, the study’s strengths include the use of a large national dataset with rich information about youth behavior, and the use of a longitudinal design, from which temporal relationships can be inferred. Further, this study adds to the literature by longitudinally assessing sexual behavior outcomes in young adulthood.

Conclusion

Social–ecological factors in childhood play an important role as predictors of risky sexual behaviors among young adults. The findings of the present study demonstrate that the influence of childhood factors may encompass young adulthood and have implications for programs aimed at preventing STD-related behaviors. Undoubtedly, personality traits such as a propensity for risk-taking are n difficult to modify. However, it may be important to take them into consideration when developing programs that target STD-related behaviors, as they could be useful in identifying youth who are at risk for engaging in risky sexual behaviors. Notwithstanding the intricacy of parent–child relationships regarding sexual behavior, parents are in a crucial position to be the best line of defense vis-à-vis protecting young people against risky behavior. Public health initiatives would do well to exploit this point and develop approaches that foster high levels of parent–child connectedness. This may help to delay early sexual activity and protect not only adolescents, but young adults against risky sexual behaviors. Given that school connectedness may guard against risky health behaviors, this makes it a key factor for preventive programs. However, a greater understanding of the mechanisms through which school connectedness protects against risky sexual behaviors is essential. By focusing on these mechanisms, intervention programs can work with schools to increase school connectedness, which may lower the prevalence of risky sexual behaviors, and subsequently STDs, even beyond adolescence.

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