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Risk and Protective Factors for Sexual and Dating Violence Victimization: A Longitudinal, Prospective Study of Latino and African American Adolescents

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Abstract

Teen dating violence and sexual victimization are serious public health concerns. Although research has highlighted the correlates and consequences of such abuse, little is known about early antecedents. The current study sought to identify the risk and protective factors evident in early adolescence that are associated with sexual and dating violence victimization in late adolescence. The sample involved 236 (52% female) low-income Latino (69%) and African American (31%) youth, their older sisters, and their mothers who were studied when youth were, on average, ages 13 and 18 years. The results indicated that early indicators of a risky lifestyle (e.g., getting drunk, having sex) and having deviant friends and siblings were associated with a higher likelihood of subsequent victimization. Mothers' early strictness, monitoring, and conservative sexual attitudes predicted a lower likelihood of subsequent assault and served as significant buffers given specific risks, particularly for girls and Latinos. The findings suggest that behavior and social network patterns established relatively early in life increase one's vulnerability to victimization later in life, as well as point to aspects of parenting that serve a protective function against such outcomes.

Keywords

date rape; risk behaviors; sexual victimization; siblings; teen dating violence

Introduction

National data indicate that in 2013, 10.3% of high school students were physically victimized by a dating partner and 14.4% of high school girls experienced some form of sexual violence (Kann et al., 2014). Forty percent of young adults report experiencing at

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least one physically violent or nonconsensual sexual act by a dating partner over their lifetime (Halpern, Spriggs, Martin, & Kupper, 2009). Sexual violence (any nonconsensual sexual act, completed or attempted; Centers for Disease Control and Prevention, 2014) and dating violence (any controlling, abusive, or aggressive behavior in a romantic relationship; Wekerle & Wolfe, 1999) have serious adverse consequences, including clinical depression, acute stress disorder, suicidality, physical somatization (headaches, stomach aches), self-injury, and unhealthy weight and body image issues (Nahapetyan, Orpinas, Song, & Holland, 2014; Silverman, Raj, Mucci, & Hathaway, 2001; Watkins et al., 2014). For these reasons, physical and sexual violence within adolescent dating relationships have emerged as significant public health concerns (CDC, 2014).

While recent research has shed light on the correlates and outcomes of victimization, less is known about early antecedents, particularly from a protective vantage point. Indeed, most studies of dating violence have used a cross-sectional design (Vagi et al., 2013), which limits the understanding of contributing factors given that one cannot conclude whether health-compromising behaviors contributed to or resulted from the abuse. Studies that have examined victimization using a longitudinal, prospective design have found that dating violence victimization is preceded by a history of drug and alcohol use, depression, a young age at first sex, and parents' marital abuse (Brooks-Russell, Foshee & Ennett, 2013; Chiodo et al., 2012; Foshee, Benefield, Ennett, Bauman, & Suchindran, 2004; Halpern et al., 2009; Maas, Fleming, Herrenkohl, & Catalano, 2010; Makin-Byrd et al., 2013; Raiford, Wingood, & DiClemente, 2007). Only one study of which we are aware examined early risks for sexual victimization (date rape, forced intercourse), with findings indicating that earlier depression and a friend's victimization predicted girls' subsequent sexual victimization (Foshee et al. 2004).

Much of the research conducted on this topic has involved largely White middle-class samples (a notable exception is Raiford et al., 2007), which is an important gap because rates of dating and sexual violence are higher for youth of color (Halpern et al., 2009; O'Leary, Slep, Avery-Leaf, & Cascardi, 2008), and some suspect might have unique predisposing risk factors (Hokoda, Galvan, Malcarne, Castaneda, & Ulloa, 2007; Ulloa, Jaycox, Marshall, & Collins, 2004). For example, in 2013, the national prevalence of forced sexual intercourse was higher among Hispanic (12.2%) and Black (11.5%) female high school students than among white (9.1%) female students (Kann et al., 2014). Results using a large state-wide school sample showed that rates of rape and dating violence victimization were twice as high among Mexican American girls (17%) than African American girls (7.8%) (Ackard & Neumark-Sztainer, 2002). Regarding racial/ethnic-specific predictors of victimization, studies have rarely analyzed predictors separately by race/ethnicity, although one study found no difference in predictors of dating violence victimization for Black or White high school students (Kaestle & Halpern, 2005). The findings on gender-specific predictors of victimization are also not definitive. Foshee and colleagues (2004, 2015) identified several factors that predicted serious physical and sexual violence victimization for both males and females (having been hit by a parent or adult, having a friend who was a victim), as well as several gender-specific predictors: low self-esteem, alcohol use, and fighting with a peer for boys; and living in a single-parent home, low parental education, and being anxious and depressed for girls. However, others have reported a history of alcohol

use predicting girls' subsequent dating violence victimization, and a history of externalizing behaviors predicting boys' dating violence victimization (Mass et al., 2010).

The field has also been criticized for having a limited understanding of early protective factors that can guard against subsequent abuse and for lacking a strong theoretical base (Vagi et al., 2013). The current study sought to address these gaps by identifying the risk and protective factors for sexual and, separately, dating violence victimization among urban, low-income Latino and African American youth. We used data from a longitudinal, prospective study wherein youth were studied initially at approximately 13 years of age and followed up at roughly 18 years of age. The risky lifestyles theory of victimization served to identify risks for victimization, and social control theory served to identify protective factors. These theories are briefly described below.

The Risky Lifestyles Theory of Victimization

The risky lifestyles theory of victimization (Hindelang, Gottfredson, & Garofalo, 1978) states that individuals who engage in high-risk behaviors (e.g., alcohol, drug use) are at increased risk of victimization because their risky behaviors impair their judgment to perceive potential threats, cause physical impairment to effectively ward off attacks, and place them in the presence of potential offenders. Engaging in high-risk behaviors in the presence of others is thought to increase one's likelihood of victimization because one appears to be or is assumed to be impaired and, thus, vulnerable to assault (Meadows, 2001). Adolescents would be particularly vulnerable in this case because most of their alcohol and drug use occurs with friends or peers (Osgood et al., 2013). Engaging in sexual activity is also thought to be a risk factor for victimization because it places teens in settings where there is a lack of adult or parental supervision (Gover, 2004). In addition, having deviant friends and acquaintances would increase one's risk of victimization due to deviant others serving as potential perpetrators of abuse, as well as encouraging youth to engage in compromising behaviors (Scaramella, Conger, Spoth, & Simons, 2002). Similarly, having an older sibling who is involved in risk behaviors could increase one's likelihood of victimization given that a deviant sibling could potentially involve youth in high risk behaviors as well as introduce them to deviant others who could be potential perpetrators (Buist, 2010). Several studies show that spending a lot of time with a high-risk sibling increases younger siblings' problematic behavior (Rende et al., 2005). For example, younger siblings' alcohol and substance use are higher when they share friends with and are close to an older sibling who engages in these types of behaviors (Whiteman, Jensen & Maggs, 2014). Moreover, simply spending a lot of time with an older sibling has been known to accelerate younger siblings' engaging in more adult-like behavior, such as drinking alcohol and having sex (Samek & Rueter, 2011). The current study examines all three conditions as risks for victimization, that is, spending a lot of time with an older sibling, having an older sibling who engages in risk behaviors, and spending a lot of time with an older sibling who engages in risk behaviors.

Social Control Theory and Protective and Buffering Effects

Hirschi's social control theory (Hirschi, 2008) contends that extensive social controls, such as diligent parental supervision and involved parenting, prevent youth from engaging in

risky behaviors and consorting with violent-prone peers. Such protective mechanisms redirect youth away from potential perpetrators and divert them from engaging in behaviors that make them vulnerable to assault. Others have suggested that parents' attitudinal conventionality also represents a social control, wherein parents' conservative attitudes set a standard of what constitutes allowable and tolerated behavior in their children (Jessor, 1998). Indeed, attentive parental monitoring has been linked with adolescents' lesser likelihood of dating violence victimization (Brooks-Russell et al., 2013; Chapple, 2003; Foshee et al., 2004), and the presence of two adult parental figures in the home, presumably an index of parental monitoring and supervision, has also been associated with young adult women's reduced likelihood of sexual (East, Chien, Adams, Hokoda, & Maier, 2010) and dating violence victimization (Gover, 2004; Halpern et al., 2009).

Given evidence that these social controls protect youth from dating and sexual violence, it would seem important to determine whether these factors, if present early in life, can protect youth from experiencing victimization later in life. Previous research on protective factors have tested both main protective effects as well as buffering effects (Loukas, Suizzo, & Prelow, 2007). Main protective effects, as their name implies, are factors associated with a lower likelihood of an adverse event (Masten & Garmezy, 1985). In contrast, buffering effects involve protective factors that are associated with a lower likelihood of an adverse event *in the presence of a risk factor* (Roosa, 2000). In this case, protective factors interact with risk factors to buffer or offset their impact and thus moderate risk effects. The current study sought to identify both main protective factors (or parenting factors associated with a lower likelihood of youth victimization), as well as interactive-buffering effects (or parenting factors that in interaction with risk factors are associated with a lower likelihood of youth victimization).

The Current Study

The current study builds upon previous research by examining the risk and protective factors present during early adolescence that are associated with victimization at late adolescence. We studied non-white, low-income, urban youth and examined as outcomes both sexual victimization (defined as a forced sexual act, forced intercourse, or date rape) and dating violence victimization (defined as being hit, slapped, or punched so hard by a partner it left a mark or bruise). Based on the risky lifestyles theory of victimization, we hypothesized that engaging in high-risk behaviors during early adolescence (drug and alcohol use, sexual behavior, partying, fighting), having friends and an older sister who engage in risky behaviors, and spending a lot of time with an older sister will be associated with a greater likelihood of sexual and dating violence victimization by late adolescence. Secondly, we expected that sharing a lot of activities with a high-risk older sister at age 13 will be associated with a higher likelihood of youth's victimization by age 18. Based on social control theory, we hypothesized that early indicators of social control (mothers' knowledge of youth's whereabouts, mothers' strictness and conservative attitudes, and living in a two-adult household) will be associated with youth's lower likelihood of future victimization. Finally, we expected that these aspects of social control will serve buffering function given the risky behaviors of youth, their friends, and an older sister. Examining these issues among Latino and African American boys and girls allows us to determine whether various risks,

protective factors, and buffering effects are particularly relevant for Latinos or African Americans, as well as for boys or girls.

Method

Participants

The participants for this study derived from an original sample of 321 early adolescent Latino (66%) and African American (34%) youth who were studied during early adolescence (Time 1; M age = 13.6 years; SD = 1.7). The primary variables of interest (dating and sexual victimization) were assessed at Time 2 only. At the second study time point, which was 5 years after Time 1, 236 youth participated, or 74% of the original sample. These youth form the core sample of the current study, and include 122 girls (52%), 114 boys; and 163 Mexican-American Latinos (69%) and 73 African Americans (31%). At Time 2, participants were an average age of 18.4 years. The individuals who participated at Time 2 did not differ from those who did not on background characteristics (e.g., age, race/ethnicity, family income, family's receipt of governmental financial assistance, or parents' ages, educational levels, or marital status), nor on any of the Time 1 study variables. It cannot be determined whether those who participated during late adolescence differed from those who did not on victimization experiences because victimization was assessed at Time 2 only.

Of the 236 youth who participated at late adolescence, 191 of their mothers (81%) and 228 of their older sisters (97%) participated at Time 1. Youth whose mothers and older sisters participated did not differ on any of the Time 1 study variables from youth whose mothers and older sisters did not participate. Youth's mothers were an average of 39 years old (SD = 4.90), had an average of a 10th grade education, and 53% were married or living with a steady adult partner at Time 1. Youth's families' had a total annual income of \$16,100, with 63% of families currently receiving some form of governmental financial assistance. Older sisters were 17 years old (SD = 1.34) at Time 1, were an average of 3.5 years older than the youth participant, and 46% of older sisters had had a child as a teen.

Youth participants were recruited from high schools, health clinics, and community clinics in one large county in southern California. All youth at these sites were approached by a bilingual Spanish-speaking Latina female research staff person and asked whether they were eligible for the study, and if so, whether they wanted to participate. Youth were eligible for the study if they were: a) between 11 and 15 years of age, b) either Latino or African American, and c) living with their mother and a biologically-related older sister. The overall research study was designed to examine the concordance of problem behaviors among children within a family; thus, eligible participants were required to have at least one older sister. Ninety percent of all eligible individuals invited to participate did so (10% declined).

Procedure

Youth, their older sisters, and their mothers were visited in their homes by two Latina female research assistants who were bilingual in English and Spanish at both Times 1 and 2. The participants completed a short interview and a self-administered questionnaire in a room

separate from each other and from the rest of the household to provide as much privacy as possible. The study questionnaire had a 3rd-grade reading level and took approximately 45 minutes to complete. The questions about victimization were on youth's questionnaire at Time 2 only, which they completed on their own with the interviewer nearby to answer any questions (about wording or directions) if necessary. All youth and their mothers were informed that if a child under the age of 18 years reported past abuse which had not been previously reported to the authorities, a report would be filed with Child Protective Services and they would be referred to counseling or a domestic violence center if appropriate. In addition, because the study was conducted by investigators from a nearby Medical Center, immediate consultation and/or counseling by a trained social worker were available if necessary. Youth, their sisters, and their mothers received \$20 each for completion of the questionnaire at both study time points, and were assured that their questionnaire would be stripped of any personal identifiers and that the storage and use of their data would be completely confidential. This study's procedures were approved by the Human Research Protections Program at the first author's university.

Measures

Victimization by Late Adolescence

Sexual victimization: Youth responded to the following three questions on the questionnaire: "Has anyone ever forced you to do something sexual (like perform a sexual act) against your will?"; "Has anyone ever forced you to have sexual intercourse against your will?" and "Have you ever been date raped?" Response options were "no" (coded as 0) and "yes" (1). If a youth reported experiencing any form of sexual victimization, he or she received a score of 1; if they had never experienced any form of sexual victimization, they received a score of 0. If a youth indicated that they had experienced that event, they were asked at what age it happened. Two female participants indicated a sexual victimization incident prior to their age at Time 1; these two participants were deleted from all further analyses.

Dating violence victimization: Youth responded to the question on the study questionnaire: "Has a date, or boyfriend (or, for boys, a girl friend), or ex-boyfriend (ex-girlfriend), or husband (wife) ever hit, slapped or punched you so hard that it left a mark or bruise?" Response options were "no" (coded as 0) and "yes" (1). If a youth reported experiencing any of these forms of dating violence, he or she received a score of 1; if they had never experienced any of these forms of dating violence, they received a score of 0. If a youth indicated that they had experienced any of these events, they were asked at what age it happened. No participant indicated an incidence of dating violence prior to their age at Time 1.

Early Adolescent Risk Factors

Youth's risky behaviors: Youth responded to six items that asked whether, over the last six months, he or she had: "been drunk," "smoked marijuana," "gone to a party where teens were drinking alcohol," "gone to a party where teens were having sex (somewhere in the

house),” “had sex (sexual intercourse),” and “hit someone or got into a fistfight.” Response options were 1 = *yes*, and 0 = *no*.

Shared activities with older sister: Youth responded to two items that form the companionship scale from the Sibling Relationship Questionnaire (SRQ; Furman & Buhrmester, 1985; e.g., “How much do you and your sister go places and do things together?”) in addition to 9 items that asked how often they did specific activities with their older sister (e.g., go to the movies, play sports together). Response options were: 1 = “*usually do separately*,” 2 = “*sometimes do together*” and 3 = “*usually do together*.” The internal reliability of these 11 items was .86; thus, these items were averaged to indicate the level of shared activities with an older sister.

Perception of friends’ risky behaviors: Youth responded to four questions about how many of their friends engaged in the following risky behaviors: “Over the last six months, how many of your friends have “gotten drunk,” “used marijuana,” “had sexual intercourse,” and “hit someone or got into a fistfight?” Response options were: 0 = “*none of my friends*,” 1 = “*some (one or two) of my friends*,” 2 = “*about half of my friends*,” 3 = “*most of my friends*,” and 4 = “*all of my friends*.”

Older sisters’ risky behaviors: Older sisters responded to questions about whether, over the last six months, they had: “smoked marijuana,” “hit someone or got into a fistfight,” and whether they had had a baby as a teen (19 years of age). Response options were 1 = *yes*, and 0 = *no*.

Protective Factors at Early Adolescence

Mothers’ knowledge of youth’s whereabouts: Mothers responded to five questions (based on items devised by Brown, Mounts, Lamborn, & Steinberg, 1993) about how much they knew, for example, who their child’s friends were, where their child is after school, and how their child spends his or her free time. Response options ranged from 1 (“*don’t know at all*”) to 4 (“*know a lot*”). The Cronbach alpha of the items was .82; thus all items were averaged to form one score of mothers’ knowledge of their child’s whereabouts.

Mothers’ strictness: Mothers responded to four items that asked how strict they were “with this child in general,” “about who, when or how often this child can date,” “about when this child is expected home on week nights,” and “about this child getting his or her homework done” (Miller, McCoy, Olson, & Wallace, 1986). Response options ranged from 1 (“*not strict at all*”) to 5 (“*very strict*”). The Cronbach alpha of these items was .72; thus all items were averaged to form one score of mothers’ strictness.

Mothers’ conservative attitudes about teenage sex: Mothers responded to five questions (based on items devised by Miller, Norton, Fan & Christopher, 1998) that asked how much they agreed with various statements about teenagers having sexual relations (e.g., “Having sexual intercourse should be treated as just a normal and expected part of teenage dating relationships,” “It is all right for teenagers to have sexual intercourse before marriage if they are in love”). Response options ranged from 1 (“*disagree*”) to 5 (“*agree*”). Scores were

reversed so that high scores indicate conservative attitudes about teenage sex. The Cronbach alpha of these items was .73; thus all items were averaged to form one score of mothers' conservative attitudes about teenage sexual relations.

Two-adult household: Mothers indicated whether they were currently married or living with a steady partner (coded as 1), or whether they were divorced, widowed, or single (never married) (coded as 0).

Analytic Strategy

The goal of data analysis was to determine whether and to what extent factors present during early adolescence are associated with experiencing sexual or dating violence victimization at late adolescence. Accordingly, we first computed univariate logistic regressions on both forms of youth's victimization at Time 2 using the Time 1 risk and protective factors in a main effects model. To determine whether certain risk or protective factors were stronger for boys or girls, and separately, Latino or African American youth, we computed multivariate logistic regressions using interactive scores of risk or protective factor $\times$ youth gender and, separately, risk or protective factor $\times$ youth race/ethnicity. We also computed a multivariate model which simultaneously considered all risk factors, youth gender, and race/ethnicity as main effect predictors. To determine whether youth who shared a lot of activities with a high-risk older sister had a greater likelihood of victimization, we computed interaction scores of shared activities with the older sister and the older sister's risk behavior. To identify buffering effects, we computed multivariate logistic regressions that included the main effects of each risk and protective factor, and an interactive term (the risk factor in interaction with the protective factor; Roosa, 2000). All interaction analyses were executed based on conventions outlined by Aiken and West (1991), whereby each risk and protective factor score was centered (computed as the deviation from the mean), and interactions were calculated as the product of the centered variables. To determine if specific buffering effects were stronger for boys or girls, and separately, Latino or African American youth, we computed three-way interactions for the variables found to be involved in a significant two-way interaction (e.g., youth risk $\times$ protective factor $\times$ youth gender). (The slope values of all interaction effects are not shown, but can be obtained from the authors upon request.)

Regression analyses (described below) indicated that an older age was associated with a higher likelihood of dating violence. To simplify analyses and reduce the number of substantive predictors, youth age was entered as a covariate in all analyses predicting dating violence. Initial results also indicated that neither form of victimization was related to family income, mothers' educational level, nor older sisters' age; thus, these variables are not considered further.

Results

Table 1 presents the mean scores or percentages and score ranges of all study variables. Of the 236 youth who participated at Time 2, 7.6% reported sexual victimization and 7.6% reported dating violence victimization. Sexual victimization and dating violence victimization were only marginally correlated ($r = .11$, $p = .09$), with only three individuals experiencing both forms of victimization.

Main Risk and Protective Effects

Table 2 shows the results of analyses that address the first hypothesis (that engaging in high-risk behaviors and having friends and an older sibling who engage in risky behaviors will be associated with a higher likelihood of victimization). The odds ratio and 95% confidence interval for each risk are shown. The results indicated that significant age 13 risks for future sexual victimization were: being female, having been drunk, perceiving many friends who have been drunk, and frequent shared activities with an older sister. The significant early adolescent risks for dating violence victimization were: being female, being older, youth's risky behaviors (used marijuana, gone to parties where there was alcohol, and separately, where teens were having sex, and had sex), perceiving many friends who engaged in risk behaviors (used marijuana, were sexually active), and having an older sister who engaged in risk behaviors (used marijuana and had a baby as a teen).

The analyses addressing the second hypothesis (that sharing a lot of activities with a high-risk older sister at age 13 will be associated with victimization by age 18) indicated only one significant interaction: sharing many activities with an older sister who reported fighting in the last six months was associated with a greater likelihood of youth's subsequent dating violence victimization (OR = 5.81, $p < .05$; CI: 1.14 – 29.56). This risk was particularly pronounced for girls (OR = 6.92, $p < .05$) and Latinos (OR = 6.16, $p < .05$).

The results of analyses addressing the third hypothesis (that mothers' high knowledge, high strictness, conservative attitudes, and a 2-adult household will be associated with a lower likelihood of victimization) indicated that mothers' strictness and conservative attitudes about teenage sex when youth were age 13 were associated with a significantly lower likelihood of subsequent sexual victimization (Table 2). Mothers' extensive knowledge of their child's whereabouts during early adolescence and mothers' conservative attitudes about teenage sex were associated with a lower likelihood of youth's future dating violence.

The analysis of interactions between youth's gender and their race/ethnicity and risk, and separately, protective factors indicated only one significant interaction: youth gender $\times$ shared activities with an older sister had a risk ratio of 0.002 ($p < .05$) for sexual victimization. The analysis of this interaction indicated that boys who shared many activities with their older sister during early adolescence had a significantly higher risk of sexual victimization by age 18 than boys who shared few activities with an older sister (OR = 7.31, [95% CI: 1.21- 44.16], $p < .05$). There was no relation between shared activities with an older sister and sexual victimization for girls.

Multivariate Models

Prior to computing the multivariate model, we checked for multicollinearity among the predictors. The intercorrelations indicated that 'gone to party where alcohol used' and 'gone to party where teens having sex' were highly correlated; thus these variables were combined to indicate gone to party where either teens were drinking alcohol or teens were having sex (coded as 1 = yes, 0 = no). An initial multivariate model indicated that the predictor, 'number of friends who used marijuana,' had a variance inflation factor (VIF) of 2.86 for

both outcomes and, thus, this variable was deleted from the models. The remaining VIFs were all < 2.17 , indicating that multicollinearity was not a concern (Allison, 1999).

The results of the multivariate model for sexual victimization indicated being female ($OR = 12.52, p < .05$), being drunk by age 13 ($OR = 5.32, p < .01$), and older sister fighting ($OR = 8.93, p < .05$) were significant predictors. The model for sexual victimization had a total correct rate of .92, indicating that the full set of predictors correctly predicted 92% of sexual victimizations. The multivariate model for dating violence indicated the following significant risks: being female ($OR = 6.25, p < .05$), sharing a lot of activities with an older sister ($OR = 6.08, p < .05$), and marginally, youth having had intercourse ($OR = 5.71, p < .06$), and having an older sister who used marijuana ($OR = 3.65, p < .10$). The total correct rate of all predictors was .90, indicating that the model correctly predicted 90% of dating violence victimizations.

Buffering Effects

The results that address the fourth hypothesis (that indicators of parental control will protect youth from victimization given youth's high-risk behaviors, friends, and siblings) are shown in Table 3. Only the significant risk $\times$ protective factor interactions are shown. The results indicated that mothers' high strictness was associated with youth's lower likelihood of sexual victimization given youth being drunk, youth going to parties where teens having sex, and youth fighting, as well as an older sister's fighting and an older sister being a teen parent. Figure 1 shows the buffering effect of mothers' strictness on youth's sexual victimization given whether the youth had ever been drunk. Based on estimates obtained in the regression, among those who had ever been drunk, zero percent experienced sexual victimization if their mothers were above the median in strictness, whereas 14.3% had experienced sexual victimization if their mothers were below the median in strictness. The corresponding sexual victimization percentages for those who had never been drunk were 4.7% given mothers high strictness and 2% given mothers' low strictness. Thus, when youth engage in problematic behaviors, mothers' strict parenting is particularly protective. Table 3 also shows that mothers' extensive knowledge about their child's whereabouts during early adolescence was associated with a lower likelihood of dating violence given an older sister's fighting, and marginally, when the older sister was a teen parent. Mothers' conservative sexual attitudes also had a buffering effect on youth's subsequent dating violence when youth reported having been drunk during early adolescence. No buffering effects were found for two-parent households or given the risk factor of having many high-risk friends.

To examine whether these buffering effects were particularly pronounced for boys or girls and, separately, Latino or African American youth, three-way interactions were tested for the significant buffering effects described above. The results indicated several significant three-way interactions, all favoring girls and Latinos (Table 3). For example, mothers' early strictness was a significant buffer against subsequent sexual victimization for girls, and separately Latinos, when youth had been drunk during early adolescence and had engaged in fighting during early adolescence (effects for girls and Latinos shown in far-right column, Table 3). All effects for African American youth and boys were not significant.

Discussion

Teen dating violence and sexual victimization affect roughly one in 10 high school students (Kann et al., 2014) and are associated with many mental and physical health problems (Watkins et al., 2014). Little is known about factors predictive of subsequent abuse (Vagi et al., 2013), and few studies have identified protective factors that might guard against victimization (CDC, 2014). The current study used longitudinal data of low-income Latino and African American boys and girls to prospectively identify the risk and protective factors that predict later sexual and dating violence victimization.

The study findings indicate that involvement in high-risk behaviors during early adolescence is associated with a greater likelihood of sexual and dating violence victimization by late adolescence. The results are consistent with the risky lifestyles theory of victimization, such that early engagement in behaviors that compromise youth's ability to perceive or react to potential threats (being drunk, using marijuana, having sex) put them at risk of being victimized. The results also indicate that having many friends who engage in high-risk behaviors (being drunk, using marijuana, having sex) and having a high-risk older sister (one who uses marijuana, is a teen parent) were also associated with a greater likelihood of subsequent victimization. This occurs possibly because these high-risk others encourage youth to engage in compromising behaviors that then elevate their vulnerability to abuse. Such high-risk others might also expose youth to potential perpetrators. For example, sharing a lot of activities with an older sister who engaged in fighting was found to predict youth's subsequent dating violence victimization. In this case, spending a lot of time with a violent-prone sister could expose youth to the sister's deviant friends, who then serve as potential offenders. It is also possible that youth learn to tolerate different forms of violence as a result of spending time with a violent-prone sister, which could increase their role as victim (Taylor, Sullivan, & Farrell, 2015; Ulloa et al., 2004). As a whole, study findings suggest that early indicators of a risky lifestyle, that is, already engaging in risk behaviors and having high-risk siblings and friends during early adolescence is associated with a greater likelihood of later victimization. These findings are important because they indicate that behavior and social network patterns established relatively early in life increase one's vulnerability to assault later in life.

It is interesting, in terms of abuse-specific risks, that being drunk (by youth and their friends) predicted future sexual victimization, whereas marijuana use by youth, friends, and older sisters was associated with later dating violence victimization. Rarely have risks for both forms of abuse been analyzed in one study (an exception includes Foshee et al., 2004). The current findings might reflect a pattern whereby certain substances portend a specific form of victimization. However, further study is needed to corroborate the current set of results.

The current findings also shed light on early protective factors. Consistent with social control theory, indicators of social control (mothers' knowledge of their child's whereabouts, high strictness, and conservative sexual attitudes) were associated with youth's lower likelihood of victimization. These indicators of social control also served a buffering function, whereby they were associated with a lower likelihood of victimization given

specific early adolescent risk behaviors (fighting, being drunk). All buffering effects were especially pronounced for Latinos and girls, suggesting that mothers' diligent parenting and conservative attitudes are particularly important for protecting against victimization for high-risk girls and Latinos. Mothers' vigilant parenting and conservative attitudes also were protective given an older sisters' risk behavior (i.e., fighting, being a teen parent), but were not protective in the presence of high-risk friends. Mothers' attentive parenting, then, appears to be a protective factor given certain youth and older sister risks, but is not effective at protecting against risks outside the family. Perhaps mothers' parenting does not buffer against the presence of high-risk friends because mothers are unaware of their children's friends' risky behaviors and therefore mothers do not modify their protective efforts accordingly.

It is noteworthy that, for both the protective main effects (Table 2) and the buffering interaction effects (Table 3), mothers' high *knowledge* of their child's whereabouts was associated with youth's lower likelihood of *dating violence* (see too Foshee et al., 2004), whereas mothers' *strictness* was associated with youth's lower likelihood of *sexual* victimization. Parental monitoring (or parents' knowledge of their child's whereabouts) has been discussed as including aspects of the parent-child relationship, such as closeness, trust, and the adolescent's truthfulness and willingness to reveal their whereabouts to their parent (Crouter, Bumpus, Davis & McHale, 2005). In contrast, this study's measure of mothers' strictness captured the extent to which mothers actively reigned in and restricted their child's behaviors. It is interesting that within the current sample, mothers' strictness was significantly negatively correlated with youth having been drunk, and having been drunk was significantly related to youth's subsequent sexual victimization. Collectively, this suggests that by actively restricting youth's early alcohol use, mothers might be reducing the likelihood that their child becomes vulnerable to the types of sexual victimization studied here (forced sex, date rape). In all, the current findings indicate that different aspects of mothers' parenting protect against different forms of victimization. It would seem important for future studies to corroborate these results given the unique protective effects associated with these aspects of parenting.

The results also indicated that African American and Latino youth reported equivalent levels of victimization, and that this study's risk factors were not uniquely associated with elevated victimization rates for either Latinos or African Americans. However, as stated above, mothers' vigilant parenting and conservative sexual attitudes had significant protective effects for Latino youth, but not for African American youth (Table 3). To understand this trend, we looked at potential differences between Latina and African American mothers' parenting and found that African American mothers had significantly higher ratings of strictness and monitoring than Latina mothers ($p < .01$); yet more African American youth reported being sexually active during early adolescence than Latino youth (24% vs. 13%, $p < .05$), and African American youth reported having more sexually active friends during early adolescence than Latino youth ($p < .05$). Taken together, this suggests that Latina mothers may need to do less reigning in of their child given their child's less risky behavior (relative to African Americans). Then, in the event that Latino youth do act out and engage in risky behaviors, Latina mothers' more vigilant monitoring and strictness can serve a

significant protective function, whereas African American mothers were already operating “on high alert.” Although the protective effects of parents’ monitoring have been found in individual studies of African American youth (Richards, Miller, O’Donnell, Wasserman & Colder, 2002) and Latino youth (Killoren & Deutsch, 2014), racial/ethnic differences in parenting’s protective effects within samples are generally less often studied and the current results warrant further study.

This study’s limitations should be considered when interpreting its findings. Foremost among these was that victimization was assessed by youth self-report, which given the sensitive nature of the forms of victimization studied here, suggests the possibility that youth might have underreported victimization experiences. Recent CDC data indicate that only 21% of female and 5.6% of male victims of dating violence report the abuse to authorities (CDC, 2014). Under-reporting might have occurred in the current study and possibly affected results. Also, because victimization was not measured at the study’s initial time point, we do not know whether victimization was related to study dropout between the two study time points. Youth who had been victimized might have been more likely to drop out prior to follow-up. Or perhaps such individuals were more likely to continue because this study was conducted by psychologists and pediatricians at a well-known university and victims might have remained in the study in an attempt to receive counseling. In either event, selective subject loss at follow-up is a consideration when interpreting study findings.

Although the rates of victimization are in line with other studies of this kind (Chiodo et al., 2012; Foshee et al., 2004), the relatively small percentage of participants who reported victimization limited the statistical power to test for associated risk and protective factors. A larger sample would have likely yielded higher victimization rates and thereby allowed for more robust statistical tests.

The current analyses are also limited by focusing only on the risk behaviors of older sisters. Certainly, older brothers can pose risks to their younger siblings, perhaps even more so for younger sisters, that is by exposing younger sisters to the older male friends of the older brother. Given several studies that show that older brothers can influence younger siblings’ alcohol use and delinquency (Rende et al., 2005; Whiteman et al., 2014) and thereby possibly increase youth’s susceptibility to victimization, there is a need to examine the role of older brothers in youth’s victimization in future research.

The strengths of the current study are its focus on both sexual and dating violence victimization, its multi-ethnic sample involving both boys and girls allowing for within-sample racial/ethnic and gender comparisons, and its use of mother-ratings of protective factors, which allows for the study of buffering effects. Perhaps most importantly, this study’s longitudinal prospective design, coupled with the fact that individuals who had been victimized at baseline were eliminated, allows us to be confident that the risk factors identified here preceded victimization and did not result from it. That said, however, it is still possible that both risk behaviors and victimization resulted from a third factor, such as child maltreatment (Vagi et al., 2013). Future studies should attempt to control for these and other potentially contributing factors.

Conclusions

The current findings identify risks that are apparent at age 13 that elevate one's likelihood of victimization by age 18. The risks identified could serve as useful factors to target in preventive interventions, as well as to identify those at risk of victimization. The findings also reinforce parents' protective role in preventing their child's victimization, even for children who engage in high-risk behaviors. Parental strictness, or reasonable restrictions placed on early adolescents' activities, had a particularly beneficial effect. Indeed, parents' close oversight of their children's whereabouts, as well as parents' conservative sexual attitudes, likely set standards of behavior for their children that ultimately prove protective. Parents might also benefit by simply knowing that their involved and attentive parenting during early adolescence has long-term protective benefits.

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Figure 1.
Sexual victimization estimates given mothers' strictness and whether youth had ever been drunk during early adolescence.

Table 1

Percentages and Mean Scores of Study Variables (N=236 Youth, 228 Older Sisters, 191 Mothers)

	Range	Percentage	<i>M</i>	(<i>SD</i>)
<u>Participant characteristics</u>				
Youth gender (% female)	0, 1	52%		
Youth race/ethnicity	0, 1			
African American (0)		31%		
Latino/a (1)		69%		
Youth age at Time 1	11 – 15 yrs	--	13.6 yrs	(1.70)
Youth age at Time 2	16 – 21 yrs	--	18.4 yrs	(1.81)
Older sister age at Time 1	15 – 21 yrs	--	17.0 yrs	(1.34)
Mother age at Time 1	28 – 56 yrs	--	39.1 yrs	(4.89)
<u>Youth's risk behaviors, age 13</u>				
Got drunk ^a	0, 1	21.6%	--	--
Used marijuana ^a	0, 1	22.1%	--	--
Gone to party where alcohol used ^a	0, 1	38.0%	--	--
Gone to party where teens having sex ^a	0, 1	14.7%	--	--
Had intercourse ^a	0, 1	16.5%	--	--
Physical fighting ^a	0, 1	53.5%	--	--
Youth's shared activities with older sister, age 13	1 – 3	--	1.66	(0.44)
<u>Youth's perceptions of friends' high-risk behaviors, age 13</u>				
Percentage friends got drunk	0 – 4	--	1.29	(1.49)
Percentage friends use marijuana	0 – 4	--	1.08	(1.07)
Percentage friends had intercourse	0 – 4	--	0.90	(1.07)
Percentage friends got in a fight	0 – 4	--	1.55	(1.27)
<u>Older sisters' risk behaviors, youth age 13 (Older sister report)</u>				
Used marijuana ^a	0, 1	29.6%	--	--
Physical fighting ^a	0, 1	41.5%	--	--
Older sister a teen parent ^a	0, 1	45.5%	--	--
<u>Protective factors, youth age 13 (Mother report)</u>				
Two-adult household ^a	0, 1	53.2%	--	--
Mothers know whereabouts	1 – 4	--	3.02	(0.67)
Mothers' strictness	1 – 5	--	3.80	(0.73)
Mothers' conservative sex. attitudes	1 – 5	--	4.37	(0.99)
<u>Youth's sexual and dating violence by age 18</u>				
Sexual victimization ^{a,b}	0, 1	7.6%	--	--
Dating violence ^{a,c}	0, 1	7.6%	--	--

Note. See text for number, coding of items.

^a0 = no, 1 = yes.

^b Sexual victimization involved having experienced a forced sexual act, forced intercourse, or date rape.

^c Dating violence involved being hit, slapped, or punched so hard by a partner it left a mark or bruise.

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Table 2

Unadjusted Logistic Regressions of Sexual and Dating Violence Victimization by Age 18 on Age 13 Risk and Protective Factors

	Sexual victimization		Dating violence	
	OR	95% CI	OR	95% CI
<u>Personological, background characteristics</u>				
Youth gender ^a	7.64**	1.71 – 34.23	4.75*	1.33 – 17.02
Youth race/ethnicity ^b	1.07	0.36 – 3.16	0.81	0.29 – 2.27
Youth age	1.17	0.89 – 1.54	1.63**	1.20 – 2.21
<u>Youth's risk behaviors at age 13</u>				
Got drunk ^c	2.89*	1.04 – 8.04	2.14	0.75 – 6.12
Used marijuana ^c	1.12	0.35 – 3.61	3.58*	1.30 – 9.83
Gone to party where alcohol used ^c	1.98	0.74 – 5.36	3.28*	1.17 – 9.22
Gone to party where teens having sex ^c	1.34	0.36 – 4.94	3.74*	1.28 – 10.94
Had intercourse ^c	0.69	0.15 – 3.14	7.35***	2.62 – 20.64
Physical fighting ^c	0.88	0.58 – 1.34	0.91	0.61 – 1.38
Youth's shared activities with older sister, age 13	5.55*	1.83 – 11.9	1.26	0.42 – 3.78
<u>Youth's perceptions of friends' high-risk behaviors, age 13</u>				
Percentage friends drunk	8.02**	1.79 – 35.92	1.78	0.64 – 4.99
Percentage friends use marijuana	1.75	0.62 – 4.90	3.22*	1.02 – 10.19
Percentage friends had intercourse	1.32	0.88 – 2.00	1.70**	1.15 – 2.52
Percentage friends got in a fight	0.98	0.65 – 1.50	1.20	0.81 – 1.78
<u>Older sisters' risk behaviors, youth age 13</u>				
Used marijuana ^c	1.28	0.45 – 3.61	2.89*	1.02 – 8.32
Physical fighting ^c	1.34	0.50 – 3.61	1.74	0.61 – 4.99
Older sister a teen parent ^c	1.29	0.43 – 3.87	3.75*	1.11 – 13.87
<u>Protective factors, youth age 13</u>				
Two-adult household ^c	0.84	0.30 – 2.36	1.08	0.40 – 2.96
Mother knows whereabouts	1.27	0.58 – 2.76	0.54*	0.28 – 0.97
Mothers' strictness	0.61*	0.40 – 0.94	0.70	0.32 – 1.53
Mothers' conservative attitudes re: teenage sex	0.56**	0.36 – 0.87	0.61*	0.37 – 0.99

^aNote. 0 = boy, 1 = girl.

^b0 = African American, 1 = Latino.

^c0 = no, 1 = yes.

* $p < .05$.

** $p < .01$.

 $p < .001$.

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Table 3

Significant Interaction Effects Associated with Risk and Protective Factors for Youth's Sexual and Dating Victimization, with Significant Gender and Race/Ethnicity Interactions Noted

	Sexual victimization		Dating violence		Effect for:	
	OR	95% CI	OR	95% CI	OR	95% CI
Mothers' strictness $\times$ youth drunk	0.05**	0.01 – 0.45				
Mothers' strictness $\times$ youth drunk $\times$ gender	0.11**	0.02 – 0.56			Girls: 0.004*	0.00 – 0.61
Mothers' strictness $\times$ youth drunk $\times$ race/ethnicity	0.21**	0.07 – 0.67			Latinos: 0.06*	0.01 – 0.61
Mothers' strictness $\times$ party where teens having sex	0.03*	0.001 – 0.94				
Mothers' strictness $\times$ youth fighting	0.17*	0.03 – 0.81	0.20 ⁺	0.00 – 1.06		
Mothers' strictness $\times$ youth fighting $\times$ gender	0.33*	0.12 – 0.86			Girls: 0.18*	0.04 – 0.72
Mothers' strictness $\times$ youth fighting $\times$ race/ethnicity	0.35*	0.13 – 0.88			Latinos: 0.15*	0.02 – 0.88
Mothers' strictness $\times$ older sister fighting	0.18*	0.04 – 0.92				
Mothers' strictness $\times$ older sister fighting $\times$ race/ethnicity	0.38*	0.16 – 0.87			Latinos: 0.17*	0.03 – 0.96
Mothers' strictness $\times$ older sister a teen parent	0.21*	0.04 – 0.99				
Mothers' knowledge $\times$ older sister fighting			0.02*	0.00 – 0.91		
Mothers' knowledge $\times$ older sister fighting $\times$ gender			0.07*	0.01 – 0.83	Girls: 0.01*	0.00 – 0.92
Mothers' knowledge $\times$ older sister fighting $\times$ race/ethnicity			0.62*	0.40 – 0.98	Latinos: 0.14*	0.02 – 0.99
Mothers' knowledge $\times$ older sister teen parent			0.03 ⁺	0.001 – 1.31		
Mothers' conservative attitudes $\times$ youth drunk			0.07*	0.01 – 0.82		
Mothers' conservative attitudes $\times$ youth drunk $\times$ race/ethnicity			0.26*	0.08 – 0.89	Latinos: 0.08*	0.01 – 0.97

Note. Youth age was included as a covariate in all models predicting dating violence.

⁺ $p < .06$.

* $p < .05$.

** $p < .01$.