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Dating Violence Among Urban, Minority, Middle School Youth and Associated Sexual Risk Behaviors and Substance Use

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Abstract

BACKGROUND—Whereas dating violence among high school students has been linked with sexual risk-taking and substance use, this association has been understudied among early adolescents. We estimated the prevalence of physical and nonphysical dating violence in a sample

of middle school students and examined associations between dating violence, sexual, and substance use behaviors.

METHODS—Logistic regression models for clustered data from 7th grade students attending 10 Texas urban middle schools were used to examine cross-sectional associations between dating violence victimization and risk behaviors.

RESULTS—The sample (N = 950) was 48.5% African American, 36.0% Hispanic, 55.7% female, mean age 13.1 years (SD 0.64). About 1 in 5 reported physical dating violence victimization, 48.1% reported nonphysical victimization, and 52.6% reported any victimization. Adjusted logistic regression analyses indicated that physical, nonphysical, and any victimization was associated with ever having sex, ever using alcohol, and ever using drugs.

CONCLUSIONS—Over 50% of sampled middle school students had experienced dating violence, which may be associated with early sexual initiation and substance use. Middle school interventions that prevent dating violence are needed.

Keywords

dating violence; middle school; adolescent; sexual behaviors; alcohol and drug use; substance abuse

Adolescent dating violence (ADV) is an important public health problem in the United States. Nationally, about 10% of 9th–12th graders report having been “hit, slap[ped], or physically hurt” by a boyfriend or girlfriend on purpose during the last year.¹ Other studies have found that roughly 1 in 4 youth experience some form of dating violence victimization, including emotional and psychological as well as physical violence,^{2–4} and still others report an even higher prevalence (55%).⁵ Minority youth may be at greater risk. The 2009 Youth Risk Behavior Survey (YRBS) data indicated that the prevalence of physical ADV is higher among black (14.3%) and Hispanic (11.5%) than white (8.0%) students.¹ Data regarding the prevalence of emotional or psychological forms of ADV among minorities are less clear.^{6–8}

Evidence suggests several quality of life issues related to experiencing dating violence. Suicidality,^{9–13} depression,^{9,10,14,15} poor life satisfaction, and poor emotional well-being^{9,12,13,16} have been shown to be associated with ADV. Serious health risk behaviors, such as cigarette smoking^{9,11,12,14,17} and alcohol use^{9,11–13,16–19} also have been associated with dating violence victimization, as have cocaine use^{11–13,16} and unhealthy weight control methods, including diet pill and laxative use/vomiting^{13,20} and dieting and bingeing/purging.⁹ In addition, several sexual risk behaviors have been found to be associated with dating violence. For example, early age of sexual debut (<15 years of age), lack of condom use, and increased number of partners have been associated with dating violence.^{11–13,21–24} While the associated morbidity issues alone could pose significant threats to a student’s academic performance, there is also evidence to show that experiencing ADV itself is directly associated with poor performance in schools.^{4,25} Most of these studies have been cross-sectional and those that were longitudinal have shown mixed results. The inconclusiveness of both cross-sectional and longitudinal studies may indicate that many of these risk behaviors are both precursors and outcomes of ADV. Wekerle and Wolfe²⁶ have suggested that social learning theory is one “of the most influential perspectives on research

and intervention in relationship violence.” Social learning or social cognitive theory maintains that behavior is determined by the interaction of individual, environmental, and behavioral factors.²⁷ This interaction also may be responsible, in part, for the mixed results seen between studies. Furthermore, epidemiological studies of ADV have focused mostly on high school-aged adolescents. While a few of these studies have included middle school-aged youth^{3,6,28–30} none has focused solely on a middle school population. Because the “foundations for future relationships begin with early dating,”³¹ research needs to focus on middle school-aged youth in attempts to lay the foundations for healthy relationships in the future. Thus, the purpose of this study was to (1) estimate the prevalence of physical and nonphysical ADV victimization in a sample of urban, minority middle school students; and (2) examine the associations between ADV victimization and sexual and substance use risk behaviors.

METHODS

Participants

The sample for this analysis is from baseline data collected as part of the *It's Your Game, Keep It Real* (IYG) study, a human immunodeficiency virus (HIV), sexually transmitted disease (STD), and pregnancy prevention intervention and evaluation study targeting 7th grade students from 10 southeast Texas urban middle schools. Baseline data were collected between November 2004 and January 2005. The majority of students were eligible for free or reduced-price lunches, an indicator of low socioeconomic status (SES). Students classified by the school as learning disabled or as having limited English proficiency (ie, had their primary instruction in Spanish) were excluded from the sample.

Measures

Dating violence—Dating violence was assessed by items adapted from the Peer Rejection Questionnaire which has been previously validated for use with adolescents.³² Only students who reported having a boyfriend or girlfriend in the last year received these items. For this analysis, physical dating violence was assessed by one item, “How often has a boyfriend or girlfriend hit, kicked or pushed you in a mean way in the past year?” Response options were on a 5-point Likert scale ranging from 0 (never) to 4 (a few times a week). Responses were dichotomized so that a response of 0 resulted in a code of 0 and any response from 1 to 4 resulted in a code of 1. Nonphysical dating violence was assessed with 4 items: (1) “How often has a boyfriend or girlfriend threatened to hurt or beat you up in the past year?” (2) “How often has a boyfriend or girlfriend called you names in the past year?” (3) “How often has a boyfriend or girlfriend put you down in the past year?” and (4) “How often has a boyfriend or girlfriend spread nasty rumors about you in the past year?” These items were combined so that only a response of 0 to all items resulted in a code of 0, whereas a response of 1 for any item resulted in a code of 1. A category of any dating violence was also created combining physical and nonphysical dating violence. This item was coded similarly to nonphysical dating violence, ie, only a response of 0 on all items resulted in a code of 0 and a response of 1 for any item resulted in a code of 1.

Sexual intercourse—Initiation of any sexual intercourse (ever had sex) includes oral and anal sex as well as vaginal intercourse. Each type of sex was assessed with a question such as: “Have you ever had oral sex?” with an age-appropriate definition to ensure comprehension. Response options were dichotomous (yes/no) and a response of yes to any sexual behavior item resulted in a code of 1, whereas only a response of no to all items resulted in a code of 0. Few studies distinguish among vaginal, anal, and oral sex; thus, these items were combined to facilitate comparison to other studies.

Substance use—Ever drinking alcohol was assessed by 1 item asking, “During your life, on how many days have you had at least one drink of alcohol?”³³ Participants were instructed that this included drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey but did not include drinks for religious purposes. Response options were on a 7-point scale and ranged from 0 days to 100 or more days. Responses were dichotomized so that any response of 1 or above was coded as ever drinking alcohol. Drug use was assessed using 1 dichotomous (yes/no) item that asked participants if they have ever used any drugs, such as marijuana and cocaine.

Demographic variables—Demographic variables measured included race/ethnicity, age, and sex. Race/ethnicity was categorized as African American, Hispanic, and “Other” (including white, Asian, Native American, and non-Hispanic mixed race/ethnicity youth). Age was calculated from the participants’ birth date in years as a continuous variable. Sex was a dichotomous variable. All items were self-reported.

Procedures

At each school, a convenience sample of 7th grade students was identified. School personnel selected a subject area, eg, science or physical education, which the majority of 7th grade students attended. IYG staff distributed information, including parental consent forms, to students. Students were asked to return the signed parental consent packet to their class teacher. A school contact coordinated the return of the consent forms. Nonrespondent youth were given consent forms up to 3 times to maximize response rates. Youth received a \$5 gift certificate for returning signed consent forms regardless of their parent’s decision to allow participation. Active parental consent was obtained during fall 2004 and was received for about half of the eligible students. Ninety percentage of consented students were actually surveyed (N = 1307); reasons for nonparticipation included being absent on survey dates or refusal to participate in the survey. Student assent was obtained at the time of the survey.

Surveys were administered on laptop computers via audio-computer-assisted self-interview (ACASI) during regular school hours. Surveys were conducted in a quiet location such as an empty classroom or library. Laptops were arranged so that students could not see each other’s screens and were equipped with headphones for acoustic privacy. The use of ACASI systems has been found to be a valid and reliable method for obtaining sensitive information, including sexual risk-taking behavior, as it appears to increase the honesty of reporting over pencil-paper surveys.^{34,35} In addition, ACASI methodology mitigates problems of low literacy levels and attention deficits. It also allowed for an automatic

skipping procedure to limit exposure of nonsexually experienced students to sexually explicit items.³⁶

Analysis

Chi-square analyses were used to determine significant differences regarding demographics and risk behaviors between those who had a boyfriend/girlfriend in the last year and those who did not, as only youth who had dated in the last year received the dating violence items. Logistic regression models for clustered data were used to examine the relationship between the independent variables of physical, nonphysical, and any dating violence, and the dependent variables, ever had sex, lifetime alcohol use, and lifetime drug use, restricted to students who had a boyfriend/girlfriend in the last year. Odds ratios (ORs) were calculated to assess the association between each dating violence exposure measure and each risk behavior measure adjusting for demographic variables and for the presence of intraclass correlations (ICC).

RESULTS

Baseline data were collected from 1307 students, the majority of whom were African American (43.5%) or Hispanic (41.7%). The remaining students (14.8%) were classified as other race/ethnicity and comprised white, Asian, and Native American students as well as students of mixed race/ethnicity. The mean age was 13.09 (SD = 0.62); the sample was 57% female and 43% male. About 12% reported ever having sexual intercourse, 34.5% reported using alcohol in their lifetime, and 8.6% reported ever using drugs in their lifetime.

The sample for these analyses were restricted to 950 students (73%) who reported having a boyfriend or girlfriend in the last year because only these students received items asking about dating violence. African American and Hispanic students made up the majority of the analytic sample (48.5% and 36.0%, respectively), whereas other racial/ethnic group students accounted for 15.5%. There were more female students (55.7%) than males (44.3%) and the mean age was 13.1 (SD = 0.64). For the analytic sample, 16.4% reported ever having sexual intercourse, 39.7% reported ever using alcohol, and 11.0% reported ever using drugs. Statistically significant differences existed between those students in the analytic sample (who had a boyfriend/girlfriend in the last year) and the full sample on race/ethnicity, age, and the 3 risk behaviors of sexual intercourse (lifetime), alcohol use (lifetime), and drug use (lifetime). In other words, youth in the restricted sample were more likely to be African Americans, slightly older, and were more likely to have engaged in the risk behaviors than youth in the full sample ($p < .001$) (Table 1).

A little over half of 7th grade youth who had a boyfriend or girlfriend in the last year reported experiencing any dating violence victimization. One in 5 reported experiencing physical dating violence victimization and almost half reported experiencing nonphysical dating violence victimization. There were no significant differences in the prevalence of dating violence victimization by race/ethnicity. However, more boys reported experiencing physical dating violence victimization than girls ($p < .01$). There were no other significant differences in dating violence victimization by sex (Table 2).

Logistic regression analyses indicated that physical, nonphysical, and any dating violence victimization were each associated with ever having sex when controlling for age, race, sex, and ICC. The odds of ever having sex among those who had experienced physical dating violence victimization were 2.08 (95% CI: 1.51, 2.86) compared to those who had not experienced physical dating violence victimization. Among those who had experienced nonphysical dating violence victimization, the odds were 1.94 (95% CI: 1.60, 2.34) and among those who had experienced any dating violence victimization, the odds were 1.86 (95% CI: 1.41, 2.45) compared to those who had not experienced nonphysical and any dating violence victimization. Similarly, all forms of ADV victimization were associated with ever using alcohol and lifetime drug use after adjusting for covariates and the ICC (Table 3).

DISCUSSION

Seventh grade students in 10 public urban middle schools reported high rates of ADV victimization; about half of the students who had a boyfriend or girlfriend in the last year reported nonphysical victimization or any form of victimization. One in 5 youth reported experiencing being hit, kicked, or pushed in a mean way in the last year by a boyfriend or girlfriend. Not only are these rates similar to those seen in older, high school populations^{2,4,17,37} they are similar to those seen among adult females.³⁸ This suggests that patterns of physical dating violence may be initiated at an earlier age than previously reported and may continue into later dating relationships.

In addition, experiencing various forms of dating violence victimization, including physical, nonphysical, or any form of dating violence victimization, was associated with an increased likelihood of reporting engagement in risk behaviors. These risk behaviors included ever having sex, ever using alcohol, and ever using drugs. These associations were present when controlling for demographic variables and ICC. Previous studies among older populations have reported similar associations^{13,14,17} but these data suggest that experiencing ADV, even in middle school, may put victims at risk for adverse health behaviors. Although we cannot assess the direction of causality using cross-sectional data, it could be that sexual activity may be a way to placate abusive partners or may even be done out of fear or coercion. Similarly, using drugs and/or alcohol could be a coping mechanism for experiencing dating violence or may lead to volatile situations where violence could occur. It also could be that risky behaviors cluster together.³⁹ In addition, there were significant differences between those who had a boyfriend/girlfriend in the last year and those that did not for all of the risk behaviors. It could be that early initiation of dating in itself may be associated with increased likelihood of engaging in risk behaviors. More research is needed to assess the direction of causality of these relationships; however, early intervention with middle school-aged youth regarding healthy dating relationships and effective refusal and communication skills is critical and may help prevent both ADV and related risk behaviors.

In this study, boys were more likely to experience physical dating violence victimization compared to girls. A similar pattern has been reported in previous studies with older youth;^{37,40} some other studies, however, have found the opposite or no sex difference in physical ADV victimization.^{8,15,21,24,41} A recent debate in the literature argues that the

context and outcomes of partner violence are vastly different for girls than boys and that we cannot ignore the gender context in our policies and programs.⁴² We need more research, both quantitative and qualitative, to examine the underlying etiologies, context, and outcomes for boys and girls, especially in middle school-aged youth.

Previous studies have found that African American and Hispanic youth are more likely to experience ADV.^{24,41} In this study, there were no significant differences in dating violence victimization by race/ethnicity. A study conducted in a similar geographic location and population found comparable results.¹⁷ It could be that in a population consisting primarily of minority students, as was the case for this sample, racial and ethnic differences are not as apparent. It is also possible that a factor closely linked to race/ethnicity, such as, SES is a more important indicator of dating violence. This has been noted in at least one other study in a similar population¹⁷ an indeed the majority of youth in the current sample were of low SES.

Limitations

There is the potential for selection bias as youth who are engaging in risky behaviors may be less likely to return parental consent forms to participate in the study, may not be in school, or may be absent on survey days. This would result in an underreporting of risk behaviors and affects the generalizability of the results. Furthermore, students who were not able to speak English were excluded from the original sample. This also affects the generalizability of the results, especially in an urban school district in Texas. An additional limitation is that all data were self-reported. Additional measures, such as, family SES, school grades, friendship, social networks, self-esteem, school size, poverty, disorder, and organization, would have added to the understanding of the impacts of ADV. However, many of these items were not included in the survey and those that were, such as SES and grades, were not included in analyses because they showed little variability. However, these variables are important to include in future analyses and would add to the understanding of ADV and the associated factors. In addition, future analyses should avoid combining and dichotomizing individual dating violence items. Combining the items may have resulted in the loss of critical information. The cross-sectional nature of this analysis further limits any assessment of causality. Finally, results may not generalize to all middle school youth as the sample is from 1 urban public school district in Texas and consists of a large minority population.

Conclusions

The results of this study indicate that youth in middle school are at risk for ADV victimization and may experience ADV at similar rates to their older high school counterparts. In addition, as found in older populations, ADV victimization may be associated with several risk behavior outcomes, such as early initiation of sexual behaviors and alcohol or drug use. These findings suggest the need for intervention and prevention efforts to reduce dating violence in middle schools and potentially even earlier.

IMPLICATIONS FOR SCHOOL HEALTH

Middle school-aged youth have been understudied with regard to ADV. This analysis indicates that middle school-aged youth experience dating violence at similar rates to their older high school-aged counterparts, and it is associated with serious health risk behaviors even among this early adolescent population. Middle school personnel have a unique opportunity to help youth establish the foundations for future healthy dating relationships and should work to include ADV interventions designed for middle school youth as part of the standard curriculum. Unfortunately, current interventions focus mostly on high school youth and have shown limited efficacy.⁴³ School personnel and public health researchers should partner to design and implement interventions that target middle school-aged youth and more research needs to focus on ADV and its effects on middle school youth. In addition, school personnel, nurses, and counselors need to be aware of the prevalence of ADV victimization among middle school students as well as the associated risk behaviors. School personnel need to be equipped to screen for victimization and to provide support for both victims and perpetrators.

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Human Subjects Approval Statement

The study was approved by the University of Texas Houston Committee for the Protection of Human Subjects.

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Table 1

Demographic Characteristics and Reported Risk Behaviors for the Overall and Restricted Samples

	Overall Sample		Restricted Sample	
	N	Frequency (%) or Mean (SD)	N	Frequency (%) or Mean (SD)
Race/Ethnicity*	1307		950	
African American		569 (43.5%)		461 (48.5%)
Hispanic		545 (41.7%)		342 (36.0%)
Other [†]		193 (14.8%)		147 (15.5%)
Sex	1307		950	
Male		562 (43.0%)		421 (44.3%)
Female		745 (57.0%)		529 (55.7%)
Age*	1307	13.09 (0.62)	950	13.14 (0.64)
Risk behaviors				
Sexual behavior (lifetime)* [‡]	1301	158 (12.1%)	945	155 (16.4%)
Alcohol use (lifetime)*	1190	411 (34.5%)	855	339 (39.7%)
Drug use (lifetime)*	1250	108 (8.6%)	900	99 (11.0%)

* p< .0001.

[†] White, Asian, Native American, and mixed race/ethnicity.[‡] Sexual behavior includes participation in oral, vaginal, or anal sex.

Table 2

Prevalence of Adolescent Dating Violence Victimization

	Total N (%)	Male N (%)	Female N (%)	African American N (%)	Hispanic N (%)	Other [†] N (%)
Physical dating violence (N= 948)	200 (21.1)	111* (26.4)	89 (16.8)	102 (22.1)	73 (21.3)	25 (17.0)
Nonphysical dating violence (N= 947)	457 (48.1)	191 (45.4)	266 (50.3)	216 (46.9)	167 (48.8)	74 (50.3)
Any dating violence (N= 949)	500 (52.6)	223 (53.0)	277 (52.4)	238 (51.6)	183 (53.5)	79 (53.7)

* p< .01.

[†] White, Asian, Native American, and mixed race/ethnicity.

Table 3

Adjusted Odds Ratios (95% CI) Between Adolescent Dating Violence and Sexual Risk and Substance Use Outcomes

	Adjusted Odds Ratio (95% Confidence Interval)*		
	Sexual intercourse (lifetime)	Alcohol use (lifetime)	Drug use (lifetime)
	OR (95% CI)	OR (95% CI)	OR (95% CI)
Physical dating violence	2.08 (1.51,2.86)	1.73 (1.22,2.44)	1.69 (1.10, 2.59)
Nonphysical dating violence	1.94 (1.60,2.34)	1.84 (1.41,2.40)	2.34 (1.46, 3.75)
Any dating violence	1.86 (1.41, 2.45)	1.83 (1.45,2.30)	2.08 (1.23, 3.52)

* All models controlled for age, gender, race/ethnicity, and ICC; $p < .05$; the referent group was comprised of those who did not experience dating violence.