ARTICLE

Rates and Risk Factors for Sexual Violence Among an Ethnically Diverse Sample of Adolescents

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Objectives: To investigate the occurrence of rape/attempted rape and verbal sexual coercion among an ethnically diverse adolescent population and to evaluate whether unique risk factors existed for victims of either type of forced sexual experience.

Design: Cross-sectional survey assessing sexual violence within the past 12 months, behaviors that occurred on each subject's most recent date, and the occurrence of unwanted sexual experiences on any dates in the past year and details about that date. Subjects identified as experiencing either rape/attempted rape or verbal sexual coercion were compared with nonvictims using bivariate and multivariate analyses.

Setting: Urban adolescent health care facility.

Participants: Female adolescents and young adults (n=689) between the ages of 14 and 23 years who presented for care and met the eligibility criteria.

Results: Approximately 30% of young women reported having an unwanted sexual experience in the past year. The risk of rape/attempted rape was increased by past mild to moderate (adjusted odds ratio [AOR]=4.27) or severe (AOR=15.24) physical aggression by the dating partner; date-specific behaviors, including decreased level of romantic involvement (AOR=0.63 per point decline) and going to the perpetrator's house to be alone (AOR=3.01); past sexual victimization as an adolescent (AOR=4.70); and lower levels of self-reported ethnic identity (AOR=1.07 per point decline). More important, alcohol use by the victim or perpetrator was unrelated to an increased risk of rape/attempted rape. The risk of verbal sexual coercion was increased by past mild to moderate (AOR=4.38) or severe (AOR=13.79) verbal aggression from the dating partner; date-specific behaviors, including decreased level of romantic involvement (AOR=0.70 per point decline) and greater number of past dates (AOR=7.53); going to the perpetrator's house to be alone (AOR=3.52); past sexual victimization as an adolescent (AOR=9.83); pressures to use alcohol (AOR=9.49); the victim not drinking alcohol during the date (AOR=14.38); and increasing age discrepancy between victim and perpetrator (AOR=1.23 per year increase).

Conclusions: Approximately 1 in 4 urban young women reported having experienced verbal sexual coercion or rape/attempted rape by a date or acquaintance in the past year. Distinct risk profiles for rape/attempted rape and verbal sexual coercion were identified when compared with those who did not report any victimization.

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ADOLESCENTS AND YOUNG adults are 4 times more likely to be victims of sexual assault than women in all other age groups,[1,2] with a lifetime prevalence of rape/attempted rape as high as 42%.[1,3-17] In most of these cases (80%-92%), the perpetrator is a date or acquaintance of the victim.[10,18-22]

A robust risk factor for the occurrence of sexual violence is a history of sexual victimization as either a child (aged <14 years) or an adolescent (aged ≤18 years).[5,13,14,21-23] Other identified risk factors include earlier age at menarche and/or first date,[12] number of dating and sexual partners,[5,17,24,25] history of dating violence,[26] and a sexually active peer group.[12] The social context of the date, date-specific behaviors, and the stage of the relationship also have been related to the risk of vulnerability to sexual violence, especially among white young women.[9,15,17,21,27,28] For example, when the male initiates the date, pays the date expenses, and drives,[11,24,28] the risk for sexual violence is increased. In addition, studies have suggested that forced sex is more likely to occur later in the dating relationship compared with earlier.[29]1

An important catalyst leading to the occurrence of sexual victimization by a date or acquaintance is the use of alcohol by the victim, perpetrator, or both.* Re-

References 5, 6, 10, 16, 24, 26, 28, 30-34.

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search suggests that alcohol use within the dating or social situation may lead to the misinterpretation of friendly nonsexual cues as sexual invitations, diminish coping responses, and limit the ability of a woman to ward off a potential attack.[17,34] These studies are based largely on white college women* and, thus, do not address the role of substance use in sexual violence among ethnically diverse populations. Abbey et al[17] found that African American college women were less likely than white college women to report the concurrent use of alcohol at the time of sexual violence.

In general, there is insufficient knowledge about the role of risk factors for sexual violence among ethnically diverse samples. Few studies have investigated racial/ethnic differences in sexual victimization despite suggestions that they may differ.[5,27] Two studies of adolescents and adults found no race/ethnicity differences,[35,36] but another study found that African American college women were somewhat more likely to report experiencing sexual assault than their white counterparts.[17] Thus, studies using ethnically diverse populations are needed to identify potential risk factors so that prevention and intervention programs for all young women may be developed.

We sought to describe the occurrence of date/acquaintance rape and other coercive sexual experiences in the past year among an ethnically diverse population and to evaluate contributing risk factors. Risk factors examined included demographic, reproductive, victim-specific (history of abuse and dating practices in the past year), date-specific (including the nature of the relationship), and substance use behaviors of the victim and perpetrator. Finally, we wanted to determine whether unique profiles existed for victims of rape/attempted rape vs verbally coerced sex when compared with young women who did not report any unwanted sexual experience. We hypothesized that younger adolescent age, a longer dating relationship, and alcohol use during the date would be significantly associated with date/acquaintance rape.

METHODS

Those eligible to participate were adolescent and young female adults aged 14 to 23 years who presented for health services at the Mount Sinai Adolescent Health Center, New York, NY, between October 3, 2000, and February 28, 2002; self-identified as white, African American, Puerto Rican, or Dominican; were not married and/or living with a male partner (because forced sex would not be considered date/acquaintance rape); were not currently pregnant; did not demonstrate an obvious cognitive or mental impairment; and reported being on 1 or more dates in the past year. Other racial/ethnic groups were not included because of low numbers. Recruitment occurred consecutively during randomly selected weekly clinic sessions; 908 women screened following clinic registration were deemed eligible. Time constraints led 137 subjects (15%) to refuse participation; 35 subjects (4%) agreed to participate but did not complete or return their questionnaires. It is possible that some eligible women were missed because of clinic traffic patterns. Based on the comparison of personal codes generated by the participants, 36 duplicate respondents were removed. Eleven questionnaires were eliminated because of systematic patterning of answering. Thus, analyses were conducted with 689 adolescent and young adult women. Eligible subjects who refused participation completed a short questionnaire; no differences in demographic or dating characteristics were detected for those individuals who completed vs did not complete the questionnaire.

The Institutional Review Board approved the study, and all participants provided written informed consent. A bilingual research assistant asked young women in the clinic waiting area if they would like to participate in a study of dating behaviors. Participants completed the self-administered questionnaire in either English or Spanish while in the waiting or examination room. To assure anonymity, subjects were instructed to avoid placing identifying information on the questionnaire. Participants received $15 for their effort and were given handouts containing information about relationship violence, alcohol and other drug abuse, and agencies that provided services to sexual assault survivors.

The self-report measure was finalized after pilot testing (n=50). Accurate Spanish translation was evaluated using forward-backward translation protocols. Only 4 subjects completed the Spanish version. Thus, no systematic comparisons could be made between the English and Spanish versions. Four broad categories of information were collected: demographic and reproductive characteristics, sexual and physical victimization by a dating partner, date-specific behaviors and social context of that date, and substance use by the victim and perpetrator.

DEMOGRAPHIC AND REPRODUCTIVE CHARACTERISTICS

Items included subject age, parental education and employment status, race/ethnicity, current living arrangements, school enrollment, last grade completed, religious attendance, birthplace, preferred language, partner age discrepancy (female age subtracted from male partner's age), age at menarche and first sexual intercourse, gravidity, and lifetime number of sexual partners. A 12-item ethnic identity scale[37] that uses a 4-point response option (from strongly agree to strongly disagree) to assess the extent to which subjects endorsed the importance and value of their ethnic heritage was used. For example, subjects were asked to agree or disagree with having made an effort to learn more about their ethnic group, to think about how their ethnic group affects their lives, and to determine their attachment to their ethnic group. A sum score was created, with lower scores reflecting greater ethnic affiliation.

SEXUAL AND PHYSICAL VICTIMIZATION BY A DATING PARTNER

The Sexual Experiences Survey[38,39] was used to assess sexual violence and unwanted sexual experiences in the past 12 months and during the lifetime. This 10-item measure is the most commonly used instrument to evaluate sexual victimization among young women,[9,10,15,16,24,28,38,39] and reliably classifies the occurrence of sexual victimization when used anonymously.[38] Consistent with other studies, subjects were classified, based on the most severe item to which they said yes, into 1 of 4 categories: no victimization, unwanted sexual contact (touching or kissing without permission), rape/attempted rape (use of physical force, alcohol, or other drugs or position of power), and verbal sexual coercion (being talked or pressured into having unwanted intercourse).[9,10,15,16,24,38,39] To classify a young woman as having experienced a history of abuse, each adolescent was asked to report the first age of occurrence of sexual victimization on the lifetime index of the Sexual Experiences Sur-

*References 1, 5, 6, 9, 10, 16, 17, 24, 26, 32, 33.

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vey.[38,39] If she reported an age of 14 years or younger, it was considered to be child abuse; otherwise, she was identified as experiencing prior victimization as an adolescent.

Each young woman also completed the verbal and physical abuse subscales from the Dating Violence Questionnaire,[26] which assessed violence from her most recent dating partner and prior verbal and physical violence experienced from the identified perpetrator, if applicable. Specifically, each young woman was asked to report the frequency (0-≥4 times) with which this dating partner verbally (criticized, humiliated, or shouted) or physically (pushed, shoved, restrained, or slapped) abused her. Prior physical violence was categorized into none, mild to moderate, or severe. Consistent with other research,[1,2] severe physical abuse from this dating partner was defined as 1 or more incidents during which she was choked, strangled, punched, or threatened with a knife or gun[40]; mild to moderate violence was defined as 1 or more episodes of being pushed or shoved, being held from leaving, having objects thrown at her, being verbally threatened with physical violence, or being subjected to reckless driving. Past verbal aggression by a dating partner was categorized as none, mild to moderate, or severe. Subjects who did not report any prior verbal abuse from this dating partner were coded as 0, those whose total score ranged from 1 to 20 were coded as mild to moderate, and those with total scores 2 SDs or more above the mean were coded as severe.

DATE-SPECIFIC BEHAVIORS AND SOCIAL CONTEXT

Subjects were asked to describe their most recent date (how long they had known this person, number of prior dates with this person, and whether this person was their exclusive sexual partner), their date's age, who initiated the date, who paid the expenses for the date, about date type (single, double, or group date), whether the date was chaperoned, what transportation was used, where they went (movie, sporting event, or dinner), and about the occurrence or nonoccurrence of "parking" and/or going to an apartment or house when no other people were present. The level of involvement in the relationship was evaluated using a 10-point rating scale; higher ratings indicated a more serious commitment. Subjects who reported an unwanted sexual experience in the past 12 months were asked parallel questions that allowed them to describe in detail the behaviors and context of that date during which the unwanted sexual contact occurred.

SUBSTANCE USE BY VICTIM AND PERPETRATOR

We assessed the frequency of lifetime substance (tobacco, hard liquor, marijuana, and other illicit drug) use and use in the past 12 months for the following categories: 0, 1 to 2, 3 to 5, 6 to 9, 10 to 19, 20 to 39, and 40 or more times.[41,42] We also assessed alcohol and other illicit drug use during their most recent date by the young woman and her date, including the number of drinks consumed before and during the date, the use of any illicit drugs, pressure experienced to use alcohol and/or other illicit substances, and how the subject felt as a result of using substances. If a subject reported an unwanted sexual experience, parallel questions were elicited about substance use during the context of this date.

STATISTICAL PLAN AND ANALYSIS

All data were manually entered, with 20% of surveys evaluated for accuracy. Subjects were grouped according to whether they reported 1 or more vs no unwanted sexual experiences in the past 12 months. Specific variables associated with assault were then identified by comparing demographic, reproductive, and victim-specific risk factors of sexually assaulted vs nonassaulted subjects using the χ^2 or t test. Date-specific behaviors associated with assault were identified by comparing dating behaviors associated with dates that included sexual victimization with those of participants on their most recent date who did not report assault. Separate logistic regression analyses using simultaneous entry in 4 blocks (demographic/reproductive, victim-specific risk factors, dating behaviors and social context characteristics of that date, and substance use by the victim and perpetrator) were conducted to identify correlates of verbal sexual coercion and rape/attempted rape. These 2 victim groupings were chosen based on past literature and to account for the fact that rape is a legal definition that varies across states. We did not conduct analyses on unwanted sexual contact because of the limited number of young women who reported this level of victimization. Variables significant at the $P<.10$ level were considered for entry into the logistic regression analysis, and the colinearity among significant variables was assessed. We included potential interactions in all models, but none were significant. Multivariate odds ratios with associated 95% confidence intervals were computed and reported. All data were analyzed using a commercially available software program (SPSS for Windows, 11.0; SPSS Inc, Chicago, Ill).

RESULTS

Approximately 30% (n=203) of the young women reported having an unwanted sexual experience during the previous 12 months; 21 (3%) reported that their sexual victimization occurred during their most recent date. Specifically, 41 (6%) of the 689 subjects reported unwanted touching, 71 (10%) reported verbal sexual coercion, 91 (13%) reported rape/attempted rape, and 486 (71%) did not report any sexual victimization. Of those who reported sexual victimization, 35% (192/542) were between the ages of 14 and 19 years and 28% (41/149) were between the ages of 20 and 23 years.

Few differences in demographic and reproductive characteristics emerged (**Table 1**). No differences in victimization groups were noted for age, those who reported being born in the United States, employment status, those enrolled in school, having repeated 1 or more grades in school, or early menarche (aged ≤10 years).

Victimization as an adolescent was associated with rape/attempted rape and verbal sexual coercion (**Table 2**). We did not find differences in age at first date (14.2 years for no victimization vs 14.8 years for rape/attempted rape), but did find that those who reported rape/attempted rape were less likely to report having a bisexual dating history (12% vs 6%; $P<.10$)

Several date-specific behaviors and social context variables were related to assault status (**Table 3**). Those young women who reported rape/attempted rape were significantly less likely to report that this was a single date (57% vs 74%; $P<.01$) and that this person asked them out for this date (69% vs 85%; $P<.001$). However, no differences between those who reported verbal sexual coercion were found for these same variables. Those who reported rape/attempted rape (45%) and verbal sexual coercion (49%) were significantly more likely to report that they went to the date's house to be alone compared with those who did not report any victimization (28%). Going to a park or to a friend's house to be alone and whether

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Table 1. Selected Demographic and Reproductive Health Characteristics of the Sample, Stratified by Victimization Status*

Variable	Victimization Status			
	None (n = 486)	Unwanted Contact (n = 41)	Rape/Attempted Rape (n = 91)	Verbal Sexual Coercion (n = 71)
Demographic data				
Race or ethnicity†				
White	41 (8)	6 (15)	9 (10)	11 (15)
African American	189 (39)	25 (61)‡	44 (48)	31 (44)
Puerto Rican	167 (34)	3 (7)	26 (29)	19 (27)
Dominican	89 (18)	7 (17)	12 (13)	10 (14)
Family structure				
Independent of parents	42 (9)	6 (15)	14 (15)	8 (11)
Lives with 1 parent	284 (58)	19 (46)	42 (46)§	42 (59)
Lives with 2 parents	112 (23)	10 (24)	20 (22)	11 (15)
Lives with other adult	48 (10)	6 (15)	15 (16)	10 (14)
Maternal education				
<High school or general equivalency diploma	175 (36)	15 (37)	22 (24)	18 (25)
High school	96 (20)	10 (24)	13 (14)	12 (17)
Some college or degree	210 (44)	16 (39)	56 (62)‖	41 (58)¶
Reproductive data				
Sexually active	434 (89)	36 (88)	87 (96)¶	71 (100)‖
Gravidity (≥1)	136 (28)	10 (24)	34 (37)¶	26 (37)
Lifetime No. of partners				
≤2	250 (52)	18 (45)	25 (28)	22 (32)
3-5	138 (29)	15 (38)	20 (22)	22 (32)
≥6	95 (20)	7 (18)	45 (50)‡	25 (36)‡

*Data are given as number (percentage) of each group. Comparisons are between each victimization group and no victimization abuse. Percentages may not total 100 because of rounding and/or missing data.

†The mean (SD) ethnic identity score for the 4 groups was 6.6 (5.8), 7.9 (7.8), 8.3 (7.3), and 7.0 (6.1), respectively. For unwanted contact, $P<.10$; and for rape/attempted rape, $P<.01$.

‡$P<.001$.

§$P<.05$.

‖$P<.01$.

¶$P<.10$.

Table 2. Selected Victim-Specific Characteristics, Stratified by Victimization Status*

Variable	Victimization Status			
	None (n = 486)	Unwanted Contact (n = 41)	Rape/Attempted Rape (n = 91)	Verbal Sexual Coercion (n = 71)
Prior sexual victimization				
None	400 (82)	23 (56)†	48 (53)	28 (39)
Child (≤14 y)	24 (5)	2 (5)	10 (11)	3 (4)
Adolescent	62 (13)	16 (39)	33 (36)†	40 (56)†
No. of new dating partners				
≤1	235 (49)	13 (32)	27 (30)	22 (31)‡
2	130 (27)	11 (27)	28 (31)	18 (25)
3-5	90 (19)	15 (37)‡	20 (22)	23 (32)
≥6	24 (5)	2 (5)	15 (17)†	8 (11)
No. of male sexual partners in the past 12 mo				
≤1	316 (65)	23 (56)	30 (33)	24 (35)†
2	84 (17)	11 (27)	26 (29)	18 (26)
≥3	86 (18)	7 (17)	35 (38)†	26 (38)

*Data are given as number (percentage) of each group. Comparisons are between each victimization group and no victimization abuse. Percentages may not total 100 because of rounding and/or missing data.

†$P<.001$.

‡$P<.01$.

or not the date drove were unrelated to sexual victimization. Those who experienced verbal sexual coercion were also significantly more likely to report high levels of past verbal aggression from this dating partner.

We found that those young women who reported rape/attempted rape were significantly more likely to report a history of using hard liquor (71%), marijuana (45%), and other illicit drugs (9%) when compared with those who did not report an unwanted sexual experience (58%, 34%, and 4%, respectively; $P<.02$). Similar findings were detected for those who reported verbal sexual coercion (72%, 56%, and 9%, respectively; $P<.02$). No difference in alco-

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Table 3. Selected Date-Specific Behaviors and Variables Within the Dating Context, Stratified by Victimization Status*

Variable	Victimization Status			
	None (n = 486)	Unwanted Contact (n = 41)	Rape/Attempted Rape (n = 91)	Verbal Sexual Coercion (n = 71)
Time known date, mo				
<1	48 (10)	9 (33)†	26 (33)†	14 (21)†
1-6	111 (23)	7 (26)	20 (26)	18 (27)
≥7	325 (67)	11 (41)	32 (41)	34 (52)
Prior No. of dates with this person				
≤5	201 (42)	21 (51)	42 (47)	27 (39)
6-10	67 (14)	2 (5)	10 (11)	17 (24)‡
≥11	211 (44)	18 (44)	38 (42)	26 (37)
Past violence experienced from this date				
Verbal				
None	234 (50)	18 (60)	36 (43)	16 (24)
Mild to moderate	221 (47)	12 (40)	36 (43)	39 (57)
Severe	16 (3)	0	11 (13)§	13 (19)†
Physical				
None	333 (71)	22 (73)	41 (49)	26 (38)
Mild to moderate	99 (21)	7 (23)	21 (25)	26 (38)
Severe	40 (8)	1 (3)	21 (25)†	17 (25)†

*Data are given as number (percentage) of each group. Comparisons are between each victimization group and no victimization abuse. Percentages may not total 100 because of rounding and/or missing data. The mean (SD) level of relationship score for the 4 groups was 7.3 (2.8), 3.8 (3.0), 4.5 (3.2), and 3.3 (5.6), respectively. For unwanted contact, $P<.10$; and for rape/attempted rape and verbal sexual coercion, $P<.001$. The mean (SD) age discrepancy for the 4 groups was 2.4 (2.7), 3.8 (4.2), 3.5 (3.3), and 3.1 (2.9) years, respectively. For unwanted contact, $P<.01$; for rape/attempted rape, $P<.001$; and for verbal sexual coercion, $P<.05$.

†$P<.001$.

‡$P<.10$.

§$P<.01$.

hol use by the victim during the date was found (18% vs 23% of rape/attempted rape victims). Interestingly, those who reported verbal sexual coercion were significantly less likely to drink during this date (6%, $P<.01$). Young women who experienced rape/attempted rape were significantly more likely to report pressure by the date to use either alcohol or marijuana (31% and 18%, respectively) compared with those not victimized (4% and 4%, respectively; $P>.001$). Those who reported verbal sexual coercion were also more likely to report experiencing pressure to use alcohol (12%, $P<.01$).

Perpetrator use of alcohol or marijuana was significantly associated with rape/attempted rape. Young women who reported that their date drank 1 or more drinks (40%) or used marijuana (25%) were significantly more likely to report rape/attempted rape than those who did not report any victimization (20% and 14%, respectively; $P<.01$). Of interest, only perpetrator use of marijuana was associated with verbal sexual coercion (24%, $P<.03$). Too few subjects (<1%) reported the use of illicit drugs such as ecstasy during the date to perform these analyses.

Distinct profiles of risk emerged for each type of sexual victimization when compared with no victimization in the past year (**Table 4**). As expected, prior sexual victimization as an adolescent, either verbal or physical victimization by the dating partner, and going to the date's house or apartment to be alone were associated with sexual assault. Although the length of the relationship was not significantly related to sexual victimization, a lowered level of romantic involvement increased the likelihood of reporting rape/attempted rape and verbal sexual coercion. Contrary to expectations, the use of alcohol by the victim or dating partner was not significantly associated with either type of sexual assault.

COMMENT

Almost 1 in 4 urban adolescents who presented to a primary care health setting reported having experienced verbal sexual coercion or rape/attempted rape by a date or acquaintance in the past year. In contrast to other research, we did not detect increased risk among adolescents compared with young adult women.[1,2] However, unique profiles associated with verbal sexual coercion and rape/attempted rape among this urban population were identified.

Demographic characteristics were associated with rape/attempted rape, but not with verbal sexual coercion. Similar to previous findings,[17] we found that the highest proportion of those reporting a forced sexual experience in the past year were African Americans (100 [35%] of 289), followed by Dominicans (29 [25%] of 118). In addition, decreasing ethnic identity was associated with increased reports of rape/attempted rape. Ethnic identity is a psychological construct reflecting various aspects of identification and membership in an ethnic group, including the way one feels about his or her ethnic background and an awareness of cultural values and mores.[37] It may be that there are no differences in the rates of sexual violence among young women of different ethnicities because those who experience a high degree of affiliation with their identity and culture are less likely to disclose

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Table 4. Factors Associated With Rape/Attempted Rape and Verbal Sexual Coercion*

Factor	Rape/Attempted Rape	Verbal Sexual Coercion
Demographic data		
Ethnic identity (per 1-point increase)	1.07 (1.01-1.14)	NS
Substance use		
Victim did not drink during the date	NS	14.38 (3.23-63.97)
Marijuana use in the past 12 mo	NS	3.64 (1.52-8.74)
Experienced pressure to use alcohol on a date	NS	9.49 (2.15-41.92)
Victim characteristic		
Prior adolescent sexual victimization†	4.70 (1.89-11.72)	9.83 (4.22-22.89)
Dating behaviors and social context		
Went to date's apartment or house to be alone	3.01 (1.36-6.67)	3.52 (1.59-7.94)
Rating of relationship (1 point)	0.63 (0.53-0.76)	0.70 (0.58-0.84)
Age discrepancy between victim and date (1-y unit)	NS	1.23 (1.06-1.41)
6-10 vs ≤5 prior dates	NS	7.53 (2.42-23.42)
Prior verbal aggression from date‡		
Mild to moderate	NS	4.38 (1.51-12.70)
Severe	NS	13.79 (2.33-81.65)
Prior physical aggression from date‡		
Mild to moderate	4.27 (1.45-12.56)	NS
Severe	15.24 (4.06-57.09)	NS

Abbreviation: NS, data not significant.

*Data are given as adjusted odds ratios (95% confidence intervals). Data were adjusted for age, race/ethnicity, living arrangement, mother's education, lifetime number of sexual partners, sexual activity, gravidity, victim's self-report of alcohol use in the past 12 months, dating partner's drinking and other drug use behavior during the date, number of new dating partners in the past 12 months, time known dating partner, and all other variables listed.

†The reference group is those with no history of sexual victimization.

‡The reference group is those with no episodes of aggression by a dating partner.

forced sexual experiences even when using an anonymous survey. Alternatively, strong feelings of belonging to one's culture may be protective against sexual assault because they may contribute to partner selection and mitigate other social and date-specific risk factors. Future research is needed to elucidate the interrelationships among ethnic identity, date-specific behaviors, and disclosure of sexual violence.

The lack of relationship between alcohol use by the perpetrator and/or victim among young women who reported rape/attempted rape is an important finding. Three explanations for the fact that our findings differ from studies of white college women are possible. First, women younger than 21 years and those who do not attend college may have less access to alcohol than women who are enrolled in college. Second, minority adolescents and young women may be less likely than their white peers to drink alcohol on a date. Finally, reports of sexual victimization among adolescents may vary based on alcohol use because either memory is better when not intoxicated or they feel more responsible and less victimized when they have been drinking.

Prior research has demonstrated a relationship between abuse as a child and sexual victimization as an adolescent.[22] Consistent with other researchers,[43,44] we found that prior victimization as an adolescent was a strong predictor of sexual victimization within this ethnically diverse sample of young women.

Several variables within the social context of the date were related to the reporting of verbally coerced sex. Specifically, an increasing age discrepancy between the partners, having at least 6 prior dates, and experiencing verbal abuse from this dating partner were all associated with verbally coerced sex. Concomitant reports of not drinking during the date, of pressure to use alcohol, and of verbal aggression suggest that male partners may have been using verbal and psychological abuse as a coercive strategy to control these young women.

Reports of experiencing prior severe physical violence from the dating partner were the strongest association with reports of experiencing rape/attempted rape, while mild to moderate physical violence increased the likelihood of reporting any type of sexual victimization. Prior research among a Midwestern sample of adolescents found that sexual violence occurred in tandem with physical violence.[45] Another study among college-aged women found that those who were physically assaulted in the past year were significantly more likely to be sexually assaulted in the same year.[45] Although our data do not allow for the determination of the causal pathways between physical and sexual violence, we speculate that for some women, having a dating partner who is physically aggressive may be a precursor to sexual violence later in the relationship. Regardless, prevention programs should include specific strategies that teach young women how to effectively mitigate the verbal abuse and other coercive verbal strategies that their partners may use.

Several limitations deserve mention. We cannot be sure that each young woman who experienced an unwanted sexual experience during the past year disclosed these experiences to us. However, Koss and Dinero[5] report that anonymous, written, self-report surveys, compared with face-to-face interviews, result in higher rates of participation among young adults. Second, our results may not generalize to adolescents who reside in other geographic areas, to those who are not presenting for health care, and to those at risk for sexual violence from same-

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What This Study Adds

Literature examining the occurrence of date/acquaintance rape and other coercive sexual violence, and the contributing role of alcohol, is compromised by the following: (1) a failure to sample sufficiently large numbers of minority adolescents and young adults to examine differences among women of different ages, (2) studies' exclusion of young adult women who do not attend college, (3) use of different time frames for recall (lifetime occurrence of sexual assault vs current drinking and dating practices), and (4) an absence of studies that investigate the role of alcohol use in sexual violence among those of diverse ethnic relationships.

We found that among an ethnically diverse population of urban adolescent females, 1 in 4 reported having experienced sexual assault by a date or acquaintance within the past year. Distinct risk profiles for rape/attempted rape and verbal sexual coercion compared with those who had not experienced forced sex were identified. In contrast to previous research using mostly college-aged white samples, victim or partner use of alcohol or other illicit drugs during the date did not predict either type of sexual assault.

sex relationships. Finally, these data are cross-sectional and subject to recall bias, especially for history of sexual victimization.

More than 1 in 4 urban adolescents and young adult women who sought care at an adolescent health care facility reported having experienced sexual assault by a date or acquaintance within the past year. Distinct risk profiles for rape/attempted rape and verbal sexual coercion compared with those who had not experienced forced sex were identified. Decreased ethnic identity and previous physical aggression by the dating partner were important correlates for rape/attempted rape, but not for verbal sexual coercion. Taken together, our findings suggest the need to educate young women on how to effectively manage verbal and psychological abuse and other types of coercive behaviors that may be exerted by male partners during the context of a date. Future studies are needed to determine the temporal relationship between physical and sexual aggression within dates and dating relationships and the exact role of ethnic identity in the experience and disclosure of sexual assault.

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REFERENCES

1. Koss MP, Gidycz CA, Wisniewski N. The scope of rape: incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *J Consult Clin Psychol*. 1987;55:162-170.
2. Bureau of Justice Statistics. *Criminal Victimization 2000: Changes 1999-2000 With Trends 1993-2000*. Washington, DC: US Dept of Justice; 2001.
3. Mills CS, Granoff BJ. Date and acquaintance rape among a sample of college students. *Soc Work*. 1992;37:504-509.
4. Gidycz CA, Coble CN, Latham L, Layman MJ. Sexual assault experiences in adulthood and prior victimizations experiences: a prospective analysis. *Psychol Women Q*. 1993;17:151-168.
5. Koss MP, Dinero TE. Discriminant analysis of risk factors for sexual victimization among a national sample of college women. *J Consult Clin Psychol*. 1989; 57:242-250.
6. Frinter MP, Rubinson L. Acquaintance rape: the influence of alcohol, fraternity membership, and sports team membership. *J Sex Educ Ther*. 1993;19:272-284.
7. Ogletree RJ. Sexual coercion experience and help-seeking behavior of college women. *J Am Coll Health*. 1993;41:149-153.
8. Biglan A, Noell J, Ochs L, Smolkowski K, Metzler C. Does sexual coercion play a role in the high-risk sexual behavior of adolescent and young adult women? *J Behav Med*. 1995;18:549-568.
9. Marx BP, Van Wie V, Gross AM. Date rape risk factors: a review and methodological critique of the literature. *Aggress Violent Behav*. 1996;1:27-45.
10. Koss MP, Cleveland HH. Stepping on toes: social roots of date rape lead to intractability and politicization. In: Schwartz MD, ed. *Researching Sexual Violence Against Women: Methodological and Personal Perspectives*. Thousand Oaks, Calif: Sage Publications; 1997:4-21.
11. Muehlenhard CL, Linton MA. Date rape and sexual aggression in dating situations: incidence and risk factors. *J Counsel Psychol*. 1987;34:186-196.
12. Vicary JR, Klingaman LR, Harkness WL. Risk factors associated with date rape and sexual assault of adolescent girls. *J Adolesc*. 1995;18:289-306.
13. Lodico MA, Gruber E, DiClemente RJ. Childhood sexual abuse and coercive sex among school-based adolescents in a midwestern state. *J Adolesc Health*. 1996; 18:211-217.
14. Urquiza AJ, Goodlin-Jones BL. Child sexual abuse and adult revictimization with women of color. *Violence Vict*. 1994;9:223-232.
15. Craig ME. Coercive sexuality in dating relationships: a situational model. *Clin Psychol Rev*. 1990;10:395-423.
16. Koss MP. Detecting the scope of rape: a review of prevalence research methods. *J Interpersonal Violence*. 1993;8:198-222.
17. Abbey A, Ross LT, McDuffie D, McAuslan P. Alcohol and dating risk factors for sexual assault among college women. *Psychol Women Q*. 1996;20:147-169.
18. Benson D, Charlton C, Goodhart F. Acquaintance rape on campus: a literature review. *J Am Coll Health*. 1992;40:157-165.
19. Ellis GM. Acquaintance rape. *Perspect Psychiatr Care*. 1994;30:11-16.
20. Daily SG. Alcohol, incest, and adolescence. In: Lawson AW, Lawson GW, eds. *Adolescent Substance Abuse: Etiology, Treatment, and Prevention*. Gaithersburg, Md: Aspen Publishers Inc; 1992:251-266.
21. Wyatt GE, Guthrie D, Notgrass CM. Differential effects of women's child sexual abuse and subsequent sexual revictimization. *J Consult Clin Psychol*. 1992; 60:167-173.
22. Humphrey JA, White JW. Women's vulnerability to sexual assault from adolescence to young adulthood. *J Adolesc Health*. 2000;27:419-424.
23. Hillis SD, Anda RF, Dube SR, Felitti VJ, Marchbanks PA, Marks JS. The association between adverse childhood experiences and adolescent pregnancy, long-term psychosocial consequences, and fetal death. *Pediatrics*. 2004;113:320-327.
24. White JW, Humphrey JA. A longitudinal approach to the study of sexual assault: theoretical and methodological considerations. In: Schwartz MD, ed. *Researching Sexual Violence Against Women: Methodological and Personal Perspectives*. Thousand Oaks, Calif: Sage Publications; 1998:4-21.
25. Dembo R, Williams L, La Voie L, et al. A longitudinal study of the relationships among alcohol use, marijuana/hashish use, cocaine use, and emotional/psychological functioning problems in a cohort of high-risk youths. *Int J Addict*. 1990;25:1341-1382.

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26. Symons PY, Groer MW, Kepler-Youngblood P, Slater V. Prevalence and predictors of adolescent dating violence. *J Child Adolesc Psychiatr Nurs*. 1994;7:14-23.
27. Koss MP, Goodman LA, Browne A, Fitzgerald LF, Keita GP, Russo NF. *No Safe Haven: Male Violence Against Women at Home, at Work and in the Community*. Washington, DC: American Psychological Association; 1994.
28. Nurius PS, Dimeff LA. Through her eyes: factors affecting women's perceptions of resistance to acquaintance sexual aggression threat. *Psychol Women Q*. 1996;20:123-145.
29. Ware SD, Dziuba-Leatherman J, Stapleton JG, Yodanis Carrie L. *Acquaintance and Date Rape: An Annotated Bibliography*. Westport, Conn: Greenwood Press; 1994.
30. Hanson KA, Gidycz CA. Evaluation of a sexual assault prevention program. *J Consult Clin Psychol*. 1993;61:1046-1052.
31. Roizen J. Issues in the epidemiology of alcohol and violence. In: Martin SE, ed. *Alcohol and Interpersonal Violence: Fostering Multidisciplinary Perspectives*. Rockville, Md: US Dept of Health & Human Services; 1993:3-36.
32. Canterbury RJ, Grossman SJ, Lloyd E. Drinking behaviors and lifetime incidents of date rape among high school graduates upon entering college. *Coll Stud J*. 1993;27:75-84.
33. Harrington NT, Leitenberg H. Relationship between alcohol consumption and victim behaviors immediately preceding sexual aggression by an acquaintance. *Violence Vict*. 1994;9:315-324.
34. Abbey A. Acquaintance rape and alcohol consumption on college campuses: how are they linked? *J Am Coll Health*. 1991;39:165-169.
35. Peipert JF, Domagalski LR. Epidemiology of adolescent sexual assault. *Obstet Gynecol*. 1994;84:867-871.
36. Muram D, Hostetler BR, Jones CE, Speck PM. Adolescent victims of sexual assault. *J Adolesc Health*. 1995;17:372-375.
37. Cuellar I, Roberts RE, Nyberg B, Moldonada RE. Ethnic identity and acculturation in a young adult Mexican origin population. *J Community Psychol*. 1997;25:535-549.
38. Koss MP, Oros CJ. Sexual Experiences Survey: a research instrument investigating sexual aggression and victimization. *J Consult Clin Psychol*. 1982;50:455-457.
39. Koss MP, Gidycz CA. Sexual Experiences Survey: reliability and validity. *J Consult Clin Psychol*. 1985;53:422-423.
40. Pan HS, Neidig PH, O'Leary KD. Predicting mild and severe husband-to-wife physical aggression. *J Consult Clin Psychol*. 1994;62:975-981.
41. Johnston LD, O'Malley PM, Bachman JG. *National Survey Results on Drug Use From Monitoring the Future Study, 1975-1992*. Bethesda, Md: National Institute on Drug Abuse; 1993:93-95.
42. Johnston LD, O'Malley PM, Bachman JG. *National Survey Results on Drug Use From Monitoring the Future Study, 1975-1995*. Bethesda, Md: National Institute on Drug Abuse; 1996:96-98.
43. Smith PH, White JW, Holland LJ. A longitudinal perspective on dating violence among adolescent and college-age women. *Am J Public Health*. 2003;93:1104-1109.
44. Himelein MJ. Risk factors for sexual victimization in dating. *Psychol Women Q*. 1995;19:31-48.
45. Bergman L. Dating violence among high school students. *Soc Work*. 1992;37:21-27.

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