

Prevalence of Sexual Violence and Posttraumatic Stress Disorder in an Urban African-American Population

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Abstract Sexual violence is prevalent nationally and contributes to psychopathology in the general population. Despite elevated traumatic event exposure among economically disadvantaged urban-dwelling African-Americans, there is insufficient information on lifetime sexual violence exposure and associated psychopathology in this population. In 2008–2009, 1,306 African-Americans from a Detroit household probability sample reported on lifetime rape and sexual assault and past-month and lifetime post-traumatic stress disorder (PTSD). Lifetime sexual violence prevalence was 26.3 % for women and 5.1 % for men. Relative to non-victims, sexual violence victims: reported more other traumatic events; had 4 times greater unadjusted odds of past-month and lifetime PTSD; had 1.6 times greater adjusted odds of lifetime PTSD only after controlling for other traumatic events. Sexual violence was associated with increased risk for lifetime PTSD and exposure to other traumas. Findings highlight a need to screen for sexual violence and PTSD among urban African-Americans.

Keywords African-Americans · Rape · Stress disorders · Posttraumatic

Introduction

Sexual violence, which includes rape (i.e., penetration obtained by force or threat of force) and sexual assault (i.e., unwanted sexual contact obtained by force, threat of force, or manipulation), is prevalent in the United States. Approximately 18.3 % of women and 1.4 % of men report forcible rape, and 40.2 % of women and 4.2 % of men report sexual assault [1]. Although demographic characteristics (e.g., African-American heritage, socioeconomic disadvantage) are associated with increased risk for assaultive violence [2, 3], few studies have examined *sexual* violence exposure among urban-dwelling African-Americans. Relative to other forms of violent crime, rape is more likely to be perpetrated by an acquaintance and less likely to be formally reported to law enforcement [4]. Therefore, directly assessing exposure to sexual violence is important to understand how common and burdensome this experience is among urban-dwelling African-Americans.

Exposure to rape, typically considered the most severe form of sexual violence, is associated with a higher conditional prevalence of PTSD relative to other types of assaultive violence (e.g., mugging/robbery) [2]. Although several national studies have examined rape and PTSD among women [5], only one study explicitly examined the prevalence of sexual violence and mental disorders using a mixed gender population sample of urban-dwelling Hispanic and non-Hispanic white adults [6]. The present study will advance the literature by documenting the prevalence of sexual violence and PTSD among a large probability sample of African-American urban-dwelling adults.

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Methods

Participants

Participants were 1,306 African-American respondents (age 18 or older) who participated in the larger ($N = 1,547$) baseline survey for the Detroit Neighborhood Health Study (DNHS) between September 2008 and May 2009. Procedures were approved by the Institutional Review Board. Participants were drawn from a probability sample of households within the city limits of Detroit, and one adult from each household was randomly selected. Details are available elsewhere [3].

Measures

Sexual Violence

As part of a screening for 19 potentially traumatic events, participants were asked, “In your lifetime, have you ever (1) been raped? (2) experienced another kind of sexual assault or unwanted sexual contact as a result of force, threat of harm, or manipulation?” Participants who endorsed either question were considered sexual violence victims. Affirmative responses to the other traumatic events were summed into a continuous score for inclusion as a covariate in multivariate analyses.

PTSD

Participants were asked about their lifetime experience of 19 traumatic events. After identifying a worst event, they were cued to think of the period following the event during which symptoms were most frequent and intense and were asked whether they had ever been bothered by each of the 17 symptoms using the PTSD Checklist-Civilian version [7]. Participants rated each symptom on a Likert-style scale from 1 to 5 indicating how much they had been bothered by a symptom as a result of the event from “not at all” to “extremely”. Additional questions assessed other DSM-IV criteria: intense fear, horror, or helplessness in response to the event (Criterion A2), symptom duration of at least 1 month (Criterion E), and clinically significant functional impairment (Criterion F). To meet PTSD criteria, respondents had to endorse one or more of 5 re-experiencing symptoms, 3 or more of 7 avoidance/numbing symptoms, and 2 or more of 5 arousal symptoms as well as meeting criterion A, E, and F. The PCL-C has excellent internal consistency (Cronbach’s $\alpha = 0.93$), reliability, and validity and good psychometric properties when evaluated against a subsample of in-person clinical interviews [3].

Demographics

Age, sex, ethnicity, income level, education, marital status, and number of other traumatic events were assessed.

Procedures

As part of a larger investigation of traumatic life events and psychopathology, participants were administered a 40-min telephone survey. Trained interviewers obtained consent and offered participants \$25 compensation.

Statistical Analyses

First, we examined Chi square differences between sexual violence victims and non-victims on demographics. Second, we presented prevalence estimates of sexual violence and lifetime and past-month PTSD. Third, we examined the prevalence and adjusted odds of lifetime and past-month PTSD among sexual violence victims. Weights were applied to account for how contact information was obtained and the probability of being selected from households of different sizes.

Results

Descriptive Statistics

Demographic characteristics of participants are presented in Table 1; 16.4 % of the sample ($n = 235$) reported any sexual violence. Victims were more likely to be younger, $F(1, 1256) = 14.1, p < 0.001$, female, $F(1, 1298) = 96.7, p < 0.001$, and have less income, $\chi^2(1, 1306) = 4.0, p < 0.05$, relative to non-victims. Those with a high school diploma or GED were less likely to report sexual violence relative to those who had not completed high school or those who had attended college or graduate school, $\chi^2(2, 1306) = 9.4, p < 0.01$.

Prevalence of Sexual Violence and PTSD

For comparison to other studies, prevalence estimates for lifetime sexual violence and lifetime and past-month PTSD are presented overall and by sex in Table 2. Compared with men, women were more likely to report sexual violence (including rape and sexual assault) and both lifetime and past-month PTSD.

Prevalence and Odds of PTSD by Sexual Violence

The conditional prevalence of lifetime and past-month PTSD for sexual violence victims was 34.4 and 18.3 %,

Table 1 Demographic characteristics of African-Americans in the DNHS overall and by victims status

Characteristics	Overall (n = 1,306)	Victim (n = 235)	Non-victim (n = 1,063)	<i>p</i>
Mean age (SD)	50.4 (16.8)	46.6 (13.1)	51.3 (17.5)	<0.001
Gender				<0.001
Female (n %)	761 (53.5 %)	204 (85.3 %)	551 (47.0 %)	
Male (n %)	545 (46.5 %)	31 (14.7 %)	512 (53.0 %)	
Education				<0.001
Less than HS graduate	175 (15.2 %)	35 (21.2 %)	139 (14.1 %)	
HS graduate/GED	434 (44.8 %)	58 (32.7 %)	373 (47.2 %)	
Some college/college/grad degree	697 (40.0 %)	142 (46.1 %)	551 (38.7 %)	
Household income				<0.01
<\$15,000	394 (34.6 %)	87 (42.9 %)	305 (32.9 %)	
\$15,000–\$35,000	316 (27.0 %)	57 (27.8 %)	257 (26.8 %)	
\$35,000+	436 (38.5 %)	68 (29.3 %)	366 (40.3 %)	
Marital status				0.35
Married	336 (28.0 %)	54 (29.8 %)	279 (27.8 %)	
Divorced/separated/widowed	477 (27.5 %)	83 (27.5 %)	392 (27.5 %)	
Never married	493 (44.5 %)	98 (42.7 %)	392 (44.7 %)	
Employed				0.28
Yes	544 (44.3 %)	90 (59.7 %)	449 (44.9 %)	
No	748 (55.7 %)	142 (40.3 %)	603 (55.1 %)	
Mean number of other traumas (SD)	4.31 (3.31)	6.49 (3.32)	3.87 (3.18)	<0.001

Table 2 Prevalence of sexual violence and lifetime and past 30-day PTSD

	Overall (n = 1,306)	Women (n = 755)	Men (n = 543)	<i>p</i>
Any sexual violence	235 (16.4 %)	204 (26.3 %)	31 (5.1 %)	<0.001
Rape	139 (9.4 %)	133 (16.1 %)	6 (1.6 %)	<0.0001
Sexual assault	174 (12.0 %)	147 (19.1 %)	27 (3.9 %)	<0.001
Lifetime PTSD	185 (14.9 %)	133 (19.4 %)	52 (9.7 %)	<0.001
Past 30-day PTSD	93 (7.6 %)	70 (10.2 %)	23 (4.5 %)	<0.001

Any sexual violence refers to the experience of either rape or sexual assault; rape and sexual assault are not mutually exclusive as respondents may have endorsed both. ns are observed; % are weighted

respectively (Table 3). Unadjusted models indicated that the odds of lifetime and past 30-day PTSD were four times greater among sexual violence victims relative to non-victims. However, in fully adjusted models, sexual violence was only associated with 1.6 times greater odds of lifetime PTSD.

Discussion

This study documented the prevalence of sexual violence and PTSD in a large sample of urban-dwelling African-Americans. Two key findings emerged: (1) women in this African-American sample reported slightly lower prevalence of rape (16.1 %) and substantially lower prevalence

of sexual assault (19.1 %) compared to estimates of sexual violence obtained in a recent nationally representative study (18.3 % for rape and 40.2 % for sexual assault) [1]; and (2) after controlling for lifetime exposure to other traumatic events, sexual violence was only associated with increased odds of lifetime PTSD.

The lower prevalence of rape and sexual assault obtained among women in the present study relative to those in nationally representative surveys may relate to differences in assessment strategies. The current study relied on single questions requiring respondents to label their experience as rape or sexual assault, which may have reduced the ability to detect sexual violence [8]. Sexual assault is a broad construct encompassing different tactics (e.g., coercion) and experiences (unwanted sexual touching) that are subject to

Table 3 Prevalence, unadjusted, and adjusted odds of PTSD by sexual violence exposure

	Lifetime PTSD		Past 30-day PTSD	
	n (%)	OR (95 % CI)	n (%)	OR (95 % CI)
Model 1	75 (34.4 %)	4.2 (3.0,5.9)	40 (18.3 %)	3.8 (2.5, 5.8)
Model 2	–	3.8 (2.6,5.6)	–	3.2 (2.0, 5.2)
Model 3	–	1.6 (1.1,2.4)	–	1.3 (0.7, 2.3)

Model 1 = unadjusted odds ratio for sexual violence; Model 2 = adjusted (for sex, age, education, income level, and marital status) odds ratio; Model 3 = adjusted (for Model 2 demographics and number of other traumatic events) odds ratio

respondent interpretation. African-American women may be less likely to interpret their experiences as rape or sexual assault [9], thus, studies with behaviorally specific items may elucidate whether lower prevalence of sexual violence is due to participant interpretation or reflects a true lower prevalence. The proportion of men who reported sexual violence here was consistent with the prevalence obtained in national surveys [1]. Notably, a survey of adults from a similar geographic region using similar assessment methods to those used here found a lower overall prevalence of rape (5.4 %) and sexual assault (6.2 %) [2] than did the current study (9.4 % for rape and 12.0 % for sexual assault). Breslau et al. [2] sampled participants from the Detroit area, a broader geographic region where only 28.2 % of participants were ethnic minority. It is unclear whether sexual assault prevalence or willingness to report have increased over time, or whether differences in the ethnic composition of samples or size of region sampled account for differences in findings. Demographics associated with sexual violence (e.g., younger, female, low-income) are consistent with prior literature [1, 2, 4].

Although sexual violence was associated with four times greater odds of reporting lifetime or past-month PTSD in unadjusted models, after controlling for confounders including other traumatic events, sexual violence was only associated with increased risk for lifetime PTSD. Individuals under age 25 are at greatest risk for rape [4], therefore, given the older age of the sample, sexual violence likely occurred years before this assessment, and more recent other traumatic events may have a stronger impact on current psychological functioning. Nonetheless, compared to non-victims, sexual violence victims reported more other traumatic events, suggesting heightened risk for a cycle of exposure to multiple adverse events.

Results should be considered in the context of study limitations. Data regarding sexual violence and both lifetime and past-month PTSD were self-report and thus may be susceptible to biases or inaccuracies in recall. Questions used to assess sexual violence were limited (e.g., victims

were required to label their experiences as rape) and may have resulted in lower prevalence estimates than those obtained in other samples [8]. Although measures assessed lifetime sexual violence, they did not assess the number of times each of these events occurred or the ages at which these events were experienced. Future research should collect additional information about the nature and timeline of sexual violence exposure.

Conclusions

Despite limitations, this study suggests that sexual violence is prevalent and associated with lifetime PTSD among urban African-Americans. Further, sexual violence victims were more likely to report repeated traumatization, suggesting that intervening earlier in this adverse cycle could reduce risk for additional trauma and associated psychopathology.

Acknowledgments This work was supported by the first author's NIDA training fellowship T32DA031099 (PI: Hasin), Grant MH093612 awarded to Dr. Koenen, Grant DA022720-05S1 (PhenX supplement) awarded to Dr. Aiello, and Grants MH088283, DA022720, DA022720-S2 awarded to Dr. Galea.

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