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Prevalence and Characteristics of Sexual Violence Against Men with Disabilities



Monika Mitra, PhD,¹ Vera E. Mouradian, PhD,² Michael H. Fox, ScD,³ Carter Pratt, MPH¹

Introduction: Few studies have examined lifetime and past-year sexual violence against men with disabilities and the types of perpetrator–survivor relationships among men with disabilities. The purpose of this study is to document the prevalence of lifetime and past-year sexual violence against men with disabilities in the U.S., compare these estimates with those of men without disabilities and women with and without disabilities, and examine the gender and relationship of the perpetrator of sexual violence against men with disabilities relative to perpetrator characteristics identified in incidents against other adults.

Methods: Behavioral Risk Factor Surveillance System 2005–2007 data were analyzed in 2014 using domain analysis and multivariate logistic regression.

Results: Men with a disability were more likely than men without a disability to report lifetime sexual violence (8.8% vs 6.0%). They were also more likely than men without a disability to report lifetime experience of attempted or completed nonconsensual sex (5.8% and 2.3% vs 4.1% and 1.4%, respectively). There were no statistically significant differences between the two groups of men's reports of their relationship to the perpetrator of the most recent incident of sexual violence or perpetrator gender.

Conclusions: Men with disabilities are at heightened risk for lifetime and current sexual violence compared with men without disabilities. Given the relatively high prevalence of sexual violence among people with disabilities of both genders, sexual assault screening, prevention, and response efforts need to be inclusive and attentive to all people with disabilities.

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Introduction

Over the past few decades, researchers have documented higher rates of violence against people with disabilities.^{1–6} Although most studies of sexual violence victimization against adults with disabilities have focused on women, a few emerging studies have examined sexual violence against men with disabilities.^{4,6–10} Mitra and colleagues⁹ found that men with disabilities in Massachusetts were more likely to report lifetime and past-year sexual violence than men without disabilities. Hayden et al.⁴ documented men with

physical disabilities to be at increased risk compared to those without physical disabilities for coerced sex. Another study found that British men reporting a long-standing illness or disability were more likely than those without to have experienced lifetime attempted or completed nonconsensual sex.¹

Studies examining the relationship between the perpetrator of sexual violence and men with disabilities have focused on sexual abuse by intimate partners^{6,11} and personal care assistants.⁷ Mitra and colleagues¹¹ found 2.6% of men with disabilities reported sexual abuse by an intimate partner compared with 1.1% of nondisabled men. Powers et al.⁷ found 9% reported sexual abuse by their personal care assistants. To the authors' knowledge, there are no population-based studies examining the gender or relationship of the perpetrator of sexual violence against men with disabilities.

This study uses national data to extend prior research on sexual violence against men with disabilities by

1. documenting prevalence of lifetime and past-year sexual violence among men with disabilities and

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2. describing gender and relationship of the perpetrator of violence against men with disabilities in comparison with men without disabilities, and women with and without disabilities.

Methods

Data from the 2005–2007 Behavioral Risk Factor Surveillance System (BRFSS)¹² were analyzed in 2014. The BRFSS is a state-based system of random-digit-dialed telephone health surveys in the U.S. Data from 2005 to 2007 were pooled to obtain a sample size that would allow sufficient power. The Sexual Violence module was an optional module administered during 2005–2007. Details about BRFSS sampling are available at www.cdc.gov/brfss/annual_data/annual_data.htm. This study was considered exempt from review by IRB because data are publicly available and de-identified.

Measures

Respondents were asked, *Are you limited in any way in any activities because of physical, mental, or emotional problems? and Do you now have any health problem that requires you to use special equipment, such as a cane, wheelchair, a special bed, or a special telephone?* Those responding *yes* to either of the two questions were classified as having a disability. Survey participants who responded *no* to both disability screening questions were classified as not having a disability. The main predictor variable was a four-category gender–disability status composite variable: men with disabilities, men without disabilities, women with disabilities, and women without disabilities.

The Sexual Violence Module assessed both lifetime and past-year sexual violence. Participants responding *yes* to any of the following questions were classified as having experienced lifetime sexual violence:

1. *Has anyone ever had sex with you after you said or showed that you didn't want them to or without your consent?* (completed nonconsensual sex).
2. *Has anyone ever attempted to have sex with you after you said or showed that you didn't want to or without your consent, but sex did not occur?* (attempted nonconsensual sex).
3. *In the past 12 months, has anyone touched sexual parts of your body after you said or showed that you didn't want them to, or without your consent?* (forced sexual touching).
4. *In the past 12 months, has anyone exposed you to unwanted sexual situations that did not involve physical touching?* (forced sexual exposure).

Respondents reporting lifetime completed and attempted non-consensual sex were asked if this had occurred in the past 12 months. Past-year violence was defined as a *yes* response to any of the questions on completed nonconsensual sex, attempted non-consensual sex, forced sexual touching, or forced sexual exposure in the past 12 months. The eight sexual violence outcome variables were as follows:

1. any lifetime sexual violence;
2. lifetime attempted nonconsensual sex;

3. lifetime completed nonconsensual sex;
4. any sexual violence in the past year;
5. past-year forced sexual exposure;
6. past-year forced sexual touching;
7. past-year attempted consensual sex; and
8. past-year completed nonconsensual sex.

In 2005, respondents who reported attempted or completed nonconsensual sex in the past year were asked, for the most recent of these experiences, to report the gender of the person who assaulted them and the person's relationship to themselves. In 2006 and 2007, these questions were asked of respondents who reported lifetime attempted or completed nonconsensual sex. The many original relationship categories were collapsed into five categories to ensure sufficient cell sizes for comparisons within and across the gender–disability composite groups. The five categories were as follows: intimate partner/date, family member, friend, acquaintance, and stranger/person known for <24 hours. The category of “multiple perpetrators” was excluded from analyses because of its rarity. The category “date” was combined with “intimate partner” in order to facilitate comparison of results from this study with the results of previous studies.^{13–16}

Sociodemographic variables included as covariates in the adjusted logistic regression analyses were age (18–34 years, 35–54 years, ≥55 years); race/ethnicity (white, non-Hispanic; Hispanic; other race, non-Hispanic); education (high school, General Educational Development [GED] test, or less; some college or technical school; college degree [≥4 years of college]); marital status (married or member of unmarried couple; divorced, widowed, or separated; never married and single); and employment status (employed; not working for any reason).

Statistical Analysis

Analyses were conducted on all cases for which there were valid answers to the gender, disability, and Sexual Violence Module questions. Data analyses were conducted in SAS, version 9.2, with strata, cluster, and weighting variables to account for the BRFSS's complex multistage sampling design and to adjust estimates based on Census-derived counts of each state's gender, age, and race/ethnicity distribution. Domain analyses, obtained via *proc survey-means* in SAS, were used to obtain prevalence estimates and 95% CIs for demographics, sexual violence, and perpetrator characteristics by gender–disability status group. Unadjusted logistic regression analyses were run to obtain the *p*-values for between-group comparisons in Tables 1, 2, and 3.

Separate adjusted logistic regression models were run to examine the association of the gender–disability composite variable with the sexual violence outcome variables, controlling for age; race/ethnicity; education; marital status; and employment (Table 4). Men without disabilities served as the ref group for all eight adjusted models. A similar set of analyses (not shown in Table 4) was conducted with women without disabilities as the ref group. *Proc surveyreg* was used to obtain *p*-values associated with within-group comparisons (*lsmeans*) of perpetrator–survivor relationship categories and perpetrator–gender categories (Tables 2 and 3).

Table 1. Lifetime and Past-Year Sexual Violence Prevalence

	Men with disabilities	Men without disabilities	Women with disabilities	Women without disabilities
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Lifetime sexual violence				
Lifetime sexual violence victimization	8.8 (7.8, 9.8)	6.0 (5.4, 6.5)	25.6 (24.6, 26.6)	14.7 (14.3, 15.2)
Lifetime attempted nonconsensual sex	5.8 (5.1, 6.6)	4.1 (3.7, 4.5)	19.1 (18.2, 20.0)	11.0 (10.6, 11.4)
Lifetime completed nonconsensual sex	2.3 (1.9, 2.7)	1.4 (1.1, 1.7)	17.5 (16.6, 18.4)	7.7 (7.4, 8.1)
Past-year sexual violence				
Sexual violence victimization past year	3.5 (2.7, 4.3)	2.5 (2.2, 2.9)	5.3 (4.7, 5.9)	2.7 (2.5, 3.0)
Forced sexual exposure	2.1 (1.4, 2.7)	1.5 (1.2, 1.7)	2.7 (2.3, 3.2)	1.4 (1.2, 1.6)
Forced sexual touching	1.4 (0.9, 1.8)	0.8 (0.6, 0.9)	2.8 (2.3, 3.3)	1.2 (1.0, 1.4)
Attempted nonconsensual sex	1.0 (0.6, 1.3)	0.9 (0.7, 1.1)	1.8 (1.4, 2.1)	0.9 (0.8, 1.1)
Completed nonconsensual sex	0.2 (0.1, 0.4)	0.2 (0.1, 0.3)	1.1 (0.8, 1.4)	0.5 (0.4, 0.6) ^a

Note: With the exception of the comparison of prevalence of forced sexual touching between the two groups of men, the unadjusted analyses confirmed the interpretation of results one would obtain via comparison of confidence intervals shown in Table 1. The unadjusted analyses comparing the prevalence of forced sexual touching indicated that the difference between the two groups of men is statistically significant at $p=0.005$.

^aThis CI only appears to overlap with the corresponding CI for men with disabilities because of rounding error. The two sets of CIs do not, in fact, overlap. This difference is statistically significant at $p=0.02$.

Results

Men and women were almost equally represented in the study (49.0% vs 51.0%). Overall, 20.3% of the sample reported having a disability (21.6% of women vs 18.9% of

men). Men with disabilities were older; more likely to report being white, non-Hispanic; more likely to report only a high school education or less; and less likely to be employed than men and women without disabilities. Men with disabilities were more likely than women with

Table 2. Prevalence of Perpetrator Relationship by Survivor Gender and Disability Status

	Men with disabilities	Men without disabilities	Women with disabilities	Women without disabilities
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Stranger	17.3 (10.9, 23.6)	16.0 (5.0, 26.6) ^a	9.8 (7.8, 11.8)	7.7 (6.3, 9.0)
Acquaintance	22.8 (15.0, 30.6)	19.4 (13.6, 25.2)	25.1 (21.5, 28.7)	20.9 (18.6, 23.1)
Friend	34.2 (22.8, 45.5)	30.6 (21.5, 39.7)	12.6 (10.4, 14.9)	24.6 (21.8, 27.3)
Intimate partner	17.4 (9.5, 25.3)	26.0 (17.0, 35.0)	39.6 (36.0, 43.2)	38.6 (35.7, 41.6)
Family member	8.3 (3.9, 12.7)	8.0 (2.7, 13.2) ^a	12.8 (10.5, 15.1)	8.2 (6.9, 9.6)

Note: Unadjusted logistic regression confirm the between-group differences illustrated in Table 2 with the following exceptions: Women without disabilities were less likely than either group of men to report the perpetrator of the most recent sexual assault against them to have been a stranger (comparison to men with disabilities: $p=0.0002$; comparison to men without disabilities: $p=0.0431$), and less likely than women with a disability to report that perpetrator to have been an acquaintance ($p=0.0428$). Women with a disability were less likely than men with a disability to report the perpetrator to have been a stranger ($p=0.0101$).

^aRelative SE exceeds 30%. Interpret with caution.

Among women, there were both between- and within-group statistically significant differences with the category Intimate Partner.

Table 3. Prevalence of Perpetrator Gender by Survivor Gender and Disability Status

	Men with disabilities	Men without disabilities	Women with disabilities	Women without disabilities
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
Attempted nonconsensual sex				
Male perpetrator	41.9 (31.3, 52.6)	31.6 (23.6, 39.5)	99.5 (99.1, 99.9)	99.2 (98.9, 99.6)
Female perpetrator	58.1 (47.4, 68.7)	68.4 (60.5, 76.4)	0.5 (0.1, 0.9) ^a	0.7 (0.4, 1.1)
Completed nonconsensual sex				
Male perpetrator	70.8 (58.9, 82.6)	63.4 (46.6, 80.2)	99.4 (99.0, 99.9)	99.5 (99.1, 99.8)
Female perpetrator	29.2 (17.3, 41.1)	36.5 (19.8, 53.3)	0.6 (0.1, 1.0) ^a	0.5 (0.2, 0.9) ^a

Note: Unadjusted logistic regression results confirm the between-group differences provided in Table 3. Proc Surveyreg lsmeans comparisons also supported the within-group differences illustrated above, with one exception: The difference in report of female and male perpetrators of attempted non-consensual sex by men without disabilities was not statistically significant.

^aRelative SE exceeds 30%. Interpret with caution.

disabilities to be employed and more likely than women regardless of disability status to be married or part of an unmarried couple.

Men with disabilities were more likely than men without disabilities to report lifetime sexual violence (8.8% vs 6.0%). They were also more likely than men without disabilities to report lifetime experience of

attempted and completed nonconsensual sex. Women with disabilities were most likely to report overall lifetime experience of sexual violence followed by women without disabilities (25.6% vs 14.7%). Similarly, women with disabilities were most likely to report the subtypes of lifetime sexual violence, followed by women without disabilities (Table 1). In unadjusted logistic regression

Table 4. Lifetime and Past-Year Sexual Violence by Gender and Disability

	Men with disabilities	Men without disabilities	Women with disabilities	Women without disabilities
	AOR^a (95% CI)	AOR^a (95% CI)	AOR^a (95% CI)	AOR^a (95% CI)
Lifetime sexual violence				
Lifetime attempted nonconsensual sex	1.8 (1.5, 2.1)**	(ref)	6.8 (6.0, 7.8)**	3.0 (2.6, 3.3)**
Lifetime completed nonconsensual sex	2.1 (1.6, 2.7)**	(ref)	18.1 (14.5, 22.6)**	6.0 (4.8, 7.4)**
Lifetime sexual violence victimization	1.9 (1.6, 2.3)**	(ref)	7.1 (6.4, 7.9)**	2.8 (2.6, 3.1)**
Past-year sexual violence				
Sexual violence victimization past year	2.1 (1.5, 2.8)**	(ref)	3.3 (2.7, 4.0)**	1.1 (1.0, 1.4)
Forced sexual exposure	2.1 (1.4, 3.1)**	(ref)	2.9 (2.2, 3.8)**	1.0 (0.8, 1.3) ^b
Forced sexual touching	2.4 (1.6, 3.7)**	(ref)	5.0 (3.6, 6.9)**	1.6 (1.2, 2.1)**
Attempted nonconsensual sex	1.6 (1.0, 2.5) ^b	(ref)	2.9 (2.1, 4.1)**	1.1 (0.8, 1.4) ^b
Completed nonconsensual sex	1.7 (0.8, 3.4) ^b	(ref)	7.4 (3.9, 13.9)**	2.4 (1.5, 4.0) [*]

^aAOR covariates included age, race/ethnicity, relationship status, education, and employment status.

^bRelative SE exceeds 30%. Interpret with caution.

*p < 0.05. Among women, there were both between- and within-group statistically significant differences with the category Intimate Partner.

analyses, the Wald chi-square statistics corresponding to all of the differences noted above were statistically significant at $p < 0.0001$.

In addition, men with disabilities were more likely than men without disabilities to report past-year sexual violence overall ($p = 0.01$) and past-year forced sexual touching ($p = 0.005$). Women with disabilities were more likely than all other groups to report past-year sexual violence overall and past-year attempted nonconsensual sex, completed nonconsensual sex, and forced sexual touching ($p < 0.01$ in all cases). Women with disabilities were more likely than men and women without disabilities ($p < 0.0001$ in both cases), but not significantly more likely than men with disabilities ($p = 0.1238$), to report forced sexual exposure. Men with disabilities were more likely than women without disabilities to report past-year sexual violence ($p = 0.04$) (Table 1). Most of the c-statistics for these analyses were < 0.70 (range, 0.56–0.72), indicating the desirability of adding terms to these basic models to improve predictive performance.

In adjusted logistic regressions, controlling for demographic characteristics, men with disabilities were more likely than men without disabilities to report all forms of lifetime sexual violence ($p < 0.0001$ in all cases) (Table 4). The adjusted odds were 2.1 times higher for report of any past-year sexual violence ($p < 0.0001$); 2.1 times higher for report of forced sexual exposure ($p = 0.0002$); 2.4 times higher for report of forced sexual touching ($p < 0.0001$); and 1.6 times higher for report of experiencing attempted nonconsensual sex in the past year ($p = 0.04$) (Table 4). Compared with women without disabilities, the adjusted odds for men with disabilities were 1.8 times higher for past-year sexual violence of any kind ($p < 0.0001$); 2.0 times higher for report of past-year forced sexual exposure ($p = 0.0002$); and 1.5 times higher for report of past-year forced sexual touching ($p = 0.0303$). The relative SEs associated both with the comparisons with men without disabilities and women without disabilities of experiences of past-year forced sexual touching and past-year attempted nonconsensual sex exceeded 30%, however, so these results should be interpreted with caution. The c-statistics associated with these adjusted logistic models ranged from 0.72 to 0.80, indicating adequate predictive performance.

There were no statistically significant differences in the relationship to the perpetrator of the most recent incident of sexual violence between men with and without disabilities (Table 2). The most commonly reported type of perpetrator–survivor relationship among men who had experienced sexual violence (34% for men with disabilities, and 30% for men without) was that of friend.

Regardless of disability status, women were more likely than men to report the perpetrator of the most recent incident of sexual violence against them to have been an intimate partner (all between-gender comparisons statistically significant at $p < 0.02$). Women were more likely to report intimate partners as perpetrators than all other categories of relationship ($p < 0.0001$). For women with disabilities, acquaintance was more commonly reported than the remaining three categories. Women with disabilities were less likely than other groups to report that the perpetrator in the most recent incident of sexual violence against them was a friend (Table 2).

There were no main effects of disability status on report of perpetrator gender. Regardless of disability status, women were much more likely to report male perpetrators than female for attempted and completed nonconsensual sex against them. Men with and without disabilities also were more likely to report completed nonconsensual sex to have been perpetrated against them by a man rather than a woman ($p < 0.0001$ for all of these within-category comparisons) (Table 3). Unlike female respondents, men with disabilities were more likely to report attempted nonconsensual sex to have been perpetrated by a woman than a man ($p = 0.0038$).

Discussion

This study extends findings from an earlier study on sexual violence against men with disabilities in Massachusetts⁹ by documenting national rates of lifetime and past-year sexual violence against men with disabilities. In addition, this is the first study that used national U.S. surveillance data to examine prevalence of different types of past-year sexual violence against men with disabilities, including forced sexual exposure, unwanted sexual touch, and attempted and completed nonconsensual sex. This study expands our understanding of sexual violence by examining the relationship and gender of the most recent perpetrator of sexual violence against men with disabilities in comparison with perpetrators of sexual violence against women with disabilities and men and women without disabilities.

The present findings are consistent with earlier studies that have found people with disabilities are at higher risk of being victims of sexual violence.^{2,3,17} More specifically, as with previous studies, this study found that men with disabilities were more likely than men without disabilities to experience sexual violence.^{1,9} Similar to the authors' previous study using Massachusetts BRFSS data,⁹ this study found that men with disabilities were more likely than women without disabilities to report past-year sexual violence.

Similar to previous studies of male victims of sexual violence,^{14–16} the perpetrators of completed nonconsensual sex against men were most likely to be other men, irrespective of disability status. Interestingly, both men with and without disabilities were more likely to report the perpetrator of the most recent incident of attempted nonconsensual sex against them to have been female. This finding was similar to another national study that found men were more likely to perpetrate completed penetration against other men, but women were more likely to be the perpetrators of other forms of sexual aggression against men.¹⁶

There were no statistically significant differences between men with and without disabilities in reports of the perpetrator–survivor relationship. Although the most commonly reported perpetrator relationship category among men was “friend,” it was not statistically significantly more common than most other relationship categories. For women, regardless of disability status, the most commonly reported category of perpetrator–survivor relationship was “intimate partner.”

These findings suggest that for both men and women, the perpetrator is most often a non-familial person with whom the victim has more than a passing relationship (particularly, intimate partners for women, and friends for men). Other studies also have found that most rape victims know the perpetrator. These studies found men were most likely to have been raped by an acquaintance,^{13,15,16,18} whereas women were most likely to have been raped by an intimate partner.^{13–16,19}

Results of this and similar studies support the need to include disability status as a demographic factor in future research and the need for healthcare providers to screen those with disabilities, regardless of gender, for sexual violence victimization. Surveillance of sexual violence against those with disabilities could be improved through the consistent and systematic use in population-based surveys of screening questions for disability status, type, and onset/duration. The high prevalence of sexual assault among people with disabilities relative to their peers without disabilities found in this and prior studies and the poor health outcomes associated with sexual assault^{1,16,20} suggest the importance for healthcare and other agencies that provide services to people with disabilities to screen both women and men regarding sexual assault experiences.

In preparation for positive screening outcomes, it is also important that healthcare and other agency staff know where to refer victims for appropriate sexual assault intervention services.²¹ Given the prevalence of intimate partners as perpetrators of sexual violence, programs that provide services focused on survivors of sexual violence or on survivors of intimate partner

violence may benefit from cross-trained staff, where this does not already occur, or to be prepared to refer survivors to accessible programs that do have such staff.

It is well established that only a small fraction of sexual violence victimizations are reported to official sources.^{15,22,23} Though the stigma of victim status and fear of recrimination may be barriers to reporting common to all groups, it is important that future research and healthcare screening efforts are sensitive to additional barriers and implications of self-report of sexual violence in the disability community. Reporting sexual victimization may be especially difficult for both men and women with disabilities who are dependent on the perpetrator for services.

Limitations

The BRFSS methodology precludes participation of those living in institutions or needing assistance with completing the interview owing to cognitive or intellectual disabilities. People who are deaf or hard of hearing may also be excluded from this telephone survey. The 2005–2007 BRFSS methodology excluded people who did not have landline telephones. The BRFSS disability-specific questions do not allow for determination of type, duration, severity, or onset of disability, all of which may have an effect on the association between gender and sexual violence. The questions about perpetrator relationship to the respondent and perpetrator gender were limited to the most recent attempted and completed sexual assault and were not structured to allow determination of perpetrator gender or relationship in other types of sexual assault. BRFSS data are based on self-report and therefore subject to the biases of self-reported data. The impact of state populations not represented in the study sample on the present results is unknown. A small percentage of respondents to the 2006–2007 surveys (5.7%) were skipped out of the Sexual Violence Module based on a negative answer to a question about whether they were in a safe place to answer the questions in the module. Women, regardless of disability status, and men with disabilities were more likely than non-disabled men to have reported it was not safe for them to answer the questions. The prevalence estimates for these three groups would possibly have been greater had those who reported safety issues answered the Sexual Violence questions. The authors present all comparisons with p -values <0.05 as potentially important differences between or within groups to minimize the risk of Type II error. However, multiple comparisons across subgroups may increase the likelihood that one or more comparisons are associated with a Type I error risk >0.05 .

Conclusions

Despite these limitations, the results of this study confirm prior research findings that has found men with disabilities are at heightened risk for sexual violence compared with men without disabilities.^{1,4,9} Results of this study support the need to include disability status as an important demographic factor in future related research and in the funding, design, and implementation of sexual violence prevention and intervention services.

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Appendix

Supplementary data

Supplementary data associated with this article can be found at <http://dx.doi.org/10.1016/j.amepre.2015.07.030>.