Disability and Risk of Recent Sexual Violence in the United States

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Objectives. To examine the relative prevalence of recent (past 12 months) penetrative and nonpenetrative sexual violence comparing men and women with and without a disability.

Methods. Data are from the 2010 National Intimate Partner and Sexual Violence Survey, a national telephone survey of US adults, and includes an expansive measure of sexual violence victimization. A total of 9086 women and 7421 men completed the telephone survey in 2010.

Results. Compared with persons without a disability, persons with a disability were at increased risk for recent rape for women (adjusted odds ratio = 3.3; 95% confidence interval = 1.6, 6.7), and being made to penetrate a perpetrator for men (adjusted odds ratio = 4.2; 95% confidence interval = 1.6, 10.8). An estimated 39% of women raped in the 12 months preceding the survey had a disability at the time of the rape. For women and men, having a disability was associated with an increased risk of sexual coercion and noncontact unwanted sexual experiences.

Conclusions. In this nationally representative sample, men and women with a disability were at increased risk for recent sexual violence, compared to those without a disability. (*Am J Public Health.* 2016;106:928–933. doi:10.2105/AJPH.2015.303004)

Sexual violence is an important public health problem affecting millions of people each year. Studies in the general population indicate that, over the course of their lifetimes, women and some racial/ethnic minorities carry the greatest burden of sexual violence.[1,2] Compared with persons without a disability, those with disabilities are at greater risk for a number of distressing experiences including discrimination and negative behavior from others (e.g., mocking),[3,4] stigma,[4–6] and violence victimization.[4,7–11] Persons with a disability represent a significant portion of the US population with estimates approaching 19% of the noninstitutionalized civilian population in 2010.[12] People with disabilities may be especially vulnerable to sexual violence for the very reasons that put them at risk for other forms of violence[9–11] such as economic dependence,[13] dependence on others for daily living[10] and personal care,[14] and negative attitudes and beliefs held about people with disabilities.[3,4,15]

Findings from several studies indicate that adults with disabilities are more likely to report sexual violence victimization than adults without disabilities.[7–9,11,16–19] Systematic reviews[9,11,20] reveal an inconsistent and wide inclusion of a range of disabilities across studies, such as chronic conditions (e.g., hypertension); impairments of an intellectual, sensory, or physical nature; and mental health conditions. With a few exceptions,[16,21–23] most of the studies examining the association between disability status and sexual violence victimization have excluded men. Some relevant studies have combined women and men into 1 estimate (e.g., Bryen et al.[24]) making it impossible to compare by gender.

As a result, the field knows less about the association between male disability status and sexual violence victimization. All of the studies we located that focus on men have been of relatively limited samples. A recent study based on the Massachusetts Behavioral Risk Factor Surveillance System found that men with disabilities were more likely to experience past-year sexual violence than men or women without disabilities, but less likely than women with disabilities.[16] In a study of a convenience sample of men with physical or cognitive disabilities who used personal assistance services, 52% of the sample indicated that they had been sexually victimized since acquiring their disability.[23]

There are several limitations in the existing literature, including the use of measures of sexual violence that are limited in scope, the use of nonrepresentative samples, exclusion of men or use of a combined sample of men and women, and neglecting to examine the temporal relationship between disability and sexual violence victimization. As a consequence, prevalence estimates of sexual violence victimization of persons with disabilities vary widely.

In this current study, we attempted to fill these gaps in the literature. First, to our knowledge, it is the first nationally representative study in the United States to examine whether disability status is associated with a greater risk of sexual violence

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victimization. Second, it is the first nationally representative study to examine this relationship among men. Finally, this study examines the temporal precedence of disability relative to recent (past 12 months) sexual violence victimization. One reason why this is important is because the prevalence of sexual violence victimization is highest among those who are young[2] whereas having a disability skews toward those who are older.[25] As a result, the previous scholarship on this topic, particularly studies examining current disability related to lifetime sexual violence victimization, may be counting many experiences in which sexual violence was experienced long before the onset of a disability. To better disentangle the timing of disability and sexual violence victimization, and to better examine the association between disability status and greater risk of later sexual violence victimization, we considered when a disability occurred. We examined differences in the prevalence of 12-month sexual violence victimization, comparing those who had a disability more than 12 months before the survey to those who did not have a disability more than 12 months before the survey.

METHODS

Data came from the 2010 administration of the National Intimate Partner and Sexual Violence Survey (NISVS), an ongoing, national, random-digit-dial telephone survey of the noninstitutionalized English- or Spanish-speaking US adult population (aged 18 years or older). The NISVS assesses the prevalence and characteristics of sexual violence, stalking, and intimate partner violence by using a dual-frame sampling strategy that includes both landline and cell phones. A total of 9086 women and 7421 men completed the survey in 2010. Approximately 45.2% of interviews were conducted by landline telephone and 54.8% of interviews were conducted with a respondent's cell phone. The overall weighted response rate for the 2010 survey was 33.6%.[26] The weighted cooperation rate was 81.3%, and reflects the high proportion of respondents who agreed to participate among those who were contacted and determined to be eligible.

Measures

The survey includes behaviorally specific questions that assess the multiple forms of sexual violence victimization: rape (completed forced, attempted forced, or alcohol- or drug-facilitated penetration), being made to penetrate a perpetrator, sexual coercion, unwanted sexual contact, and noncontact unwanted sexual experiences. Sexual coercion involves unwanted sexual penetration that occurs after a person is pressured in a nonphysical way. Unwanted sexual contact includes experiences involving unwanted touch but not sexual penetration, such as being kissed in a sexual way, or having sexual body parts fondled or grabbed. Noncontact unwanted sexual experiences include, for example, someone exposing his or her sexual body parts, flashing, or masturbating in front of the victim, or someone harassing the victim in a public place in a way that made the victim feel unsafe. A complete list of the violence victimization questions measured in NISVS has been published elsewhere.[1] Respondents were asked questions about violence experienced over the lifetime and in the past 12 months, but we examined only the questions inquiring about sexual violence experienced within the 12 months before the survey in the current analysis.

Consistent with the 2 standard disability identifiers described in *Healthy People 2010,* Disability and Secondary Conditions—Objective 1,[27] respondents were identified as having a disability if they answered "yes" to either of the following questions: "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, a wheelchair, a special bed, or a special telephone?" Respondents providing affirmative responses were asked "How long have you been limited in this way?" or "How long have you been using this equipment?" Response options were "less than 1 year," "more than 1 year but less than 3 years," or "3 or more years." To establish that the disability occurred before any sexual violence victimization reported within the past 12 months, we classified respondents as having a disability for the current analyses only if they responded to 1 of these questions with a response of "more than 1 year but less than 3 years" or "3 or more years."

Analyses

We made statistical inference for prevalence and population estimates based on weighted analyses, in which we took complex sample design features such as dual sampling frames, stratified sampling, and unequal sample selection probabilities into account. We stratified all analyses by the gender of the respondent. We calculated demographic breakdowns (age, income, race/ethnicity, and education) by disability status (more than 12 months before the survey). We calculated the prevalence and estimated number of victims of each form of sexual violence and stratified them by disability status. We calculated the relative standard error, a measure of an estimate's reliability (standard error of an estimate divided by the estimate), for all estimates. If the relative standard error was greater than 30%, or based on a numerator of 20 or less, we deemed the estimate unreliable and it was not reported. This is a fairly common criterion used in a range of data systems (e.g., National Survey of Family Growth, National Health Interview Survey).

We examined the association between disability status (more than 12 months before the survey) and each form of sexual violence in weighted logistic regression models, with control for age, income, race/ethnicity, and education. We included covariates on the basis of their relationship to disability status (χ^2 $P < .05$). We also examined age by disability status interactions in relation to sexual violence victimization. We used SAS version 9.3 (SAS Institute, Cary, NC) and SAS-callable SUDAAN version 11.0 (Research Triangle Institute, Research Triangle Park, NC) for statistical analysis.

RESULTS

In the United States, 23.8% of women and 20.1% of men reported a disability for more than 1 year. Table 1 contains a breakdown of disability status by age, race/ethnicity, education, and income for women and men. As seen in Table 1, among adults with a disability, more than half (52.3%) of women and almost half (45.9%) of men were aged 55 years or older. About three quarters of women (75.8%) and men (72.0%) were White. Almost a third of women had some college

TABLE 1—Sociodemographics by Disability Status: National Intimate Partner and Sexual Violence Survey, United States, 2010

Characteristic	Women			Men		
	With a Disability,[a] No. (WTD%)	With No Disability,[a] No. (WTD%)	χ^2 (*P*)	With a Disability,[a] No. (WTD%)	With No Disability,[a] No. (WTD%)	χ^2 (*P*)
Age, y	2286	6748	63.81 (<.001)	1561	5827	38.47 (<.001)
18–24	102 (6.9)	704 (14.1)		75 (6.1)	760 (15.8)	
25–34	176 (7.4)	1208 (20.9)		126 (9.1)	1131 (20.5)	
35–44	258 (12.4)	1110 (18.3)		199 (17.0)	951 (19.6)	
45–54	491 (21.0)	1286 (17.7)		338 (21.8)	1156 (18.2)	
≥55	1259 (52.3)	2440 (29.0)		823 (45.9)	1829 (25.9)	
Race/ethnicity[b]	2292	6754	10.89 (<.001)	1553	5821	10.59 (<.001)
Hispanic	120 (8.9)	553 (13.9)		77 (9.0)	512 (15.7)	
Non-Hispanic Black	158 (9.7)	596 (13.0)		126 (14.8)	448 (10.1)	
Non-Hispanic White	1850 (75.8)	5201 (65.9)		1224 (72.0)	4440 (66.8)	
Non-Hispanic Asian/Pacific Islander	. . .[c]	. . .[c]		. . .[c]	. . .[c]	
Non-Hispanic American Indian/Alaska Native	41 (1.2)	62 (0.6)		34 (1.0)	71 (0.7)	
Non-Hispanic Multiracial	99 (2.0)	173 (0.9)		63 (1.5)	145 (1.1)	
Education	2292	6763	6.55 (<.001)	1563	5833	11.90 (<.001)
Did not graduate high school	225 (12.4)	423 (9.0)		177 (14.8)	430 (10.4)	
High-school graduate	579 (23.9)	1575 (24.3)		420 (28.9)	1533 (25.4)	
Some college	793 (32.8)	2017 (28.9)		467 (29.3)	1519 (25.2)	
College graduate	695 (30.9)	2748 (37.8)		499 (27.1)	2351 (39.0)	
Income, $	2296	6768	26.95 (<.001)	1563	5837	17.65 (<.001)
<25 000	930 (47.1)	1619 (31.6)		535 (41.9)	1138 (25.7)	
25 000 to <50 000	557 (24.2)	1613 (25.7)		393 (23.0)	1336 (25.0)	
50 000 to <75 000	293 (12.2)	1146 (15.4)		213 (13.7)	995 (16.0)	
≥75 000	370 (16.5)	1897 (27.4)		344 (21.5)	2034 (33.3)	
Missing	146	493		78	334	

Note. WTD = weighted.

[a]Respondents were classified as having a disability if (1) they reported having an activity limitation because of physical, mental, or emotional problems or a health problem that required special equipment, and (2) their limitation or health problem occurred >12 months before participating in the survey.

[b]Race/ethnicity was self-identified. The American Indian or Alaska Native designation does not indicate being enrolled or affiliated with a tribe.

[c]Estimate is not reported; relative standard error >30% or cell size ≤20.

(32.8%) or had a college degree (30.9%), and this was similar for men (29.3% with some college and 27.1% with a college degree). Almost half (47.1%) of women and 41.9% of men had incomes of less than $25 000 annually. The χ^2 analyses were all significant indicating that disability varies by age, race/ethnicity, education, and income for both women and men, suggesting the need to control for these demographics in additional analyses.

Table 2 displays the 12-month prevalence of each type of sexual violence by disability status for women and men. An estimated 1.8% of women with a disability reported recent rape victimization (past 12 months) compared with 0.9% of women without a disability. Nearly half of a million women with a disability (498 000) and about three quarters of a million women without a disability (772 000) experienced rape in the 12 months preceding the survey, indicating that more than 39% of the 1.27 million women raped in the 12 months preceding the survey had a disability when they were raped. The case count for men reporting rape in the preceding 12 months was too small to produce statistically reliable prevalence estimates by disability status.

When we looked at sexual violence other than rape, 6.9%, or an estimated 1.9 million women with a disability, reported recent victimization compared with 5.2% of women (almost 4.70 million women) who did not have a disability. This suggests that approximately 29% of the 6.64 million women who experienced sexual violence other than rape in the 12 months before the survey had a disability when they were victimized. Similarly, 6.3% of men (1.44 million men) with a disability reported sexual violence victimization other than rape recently, compared with 5.1% of men (4.56 million men) without a disability, which indicates that 24% of the 6 million men who experienced sexual violence other than rape in the 12 months before the survey had a disability when they were victimized. See Table 2 for additional findings for the specific types of sexual violence other than rape.

TABLE 2—12-Month Prevalence of Sexual Violence by Disability Status: National Intimate Partner and Sexual Violence Survey, United States, 2010

Variable	Women With Disability[a] (n = 2296)		Women With No Disability[a] (n = 6768)		Men With Disability[a] (n = 1563)		Men With No Disability[a] (n = 5837)	
	WTD%	Estimated No. of Victims[b]	WTD%	Estimated No. of Victims[b]	WTD%	Estimated No. of Victims[b]	WTD%	Estimated No. of Victims[b]
Rape	1.8	498 000	0.9	772 000	. . .[c]	. . .[c]	. . .[c]	. . .[c]
Sexual violence other than rape	6.9	1 942 000	5.2	4 699 000	6.3	1 444 000	5.1	4 562 000
Made to penetrate a perpetrator	. . .[c]	. . .[c]	. . .[c]	. . .[c]	. . .[c]	. . .[c]	. . .[c]	. . .[c]
Sexual coercion	2.7	753 000	1.8	1 657 000	2.0	463 000	1.3	1 184 000
Unwanted sexual contact	2.3	643 000	2.2	1 958 000	2.7	619 000	2.2	1 946 000
Noncontact unwanted sexual experiences	4.0	1 130 000	2.6	2 396 000	3.6	809 000	2.5	2 228 000

Note. WTD = weighted. Total number of women = 9064; total number of men = 7400.

[a]Respondents were classified as having a disability if (1) they reported having an activity limitation because of physical, mental, or emotional problems or a health problem that required special equipment, and (2) their limitation or health problem occurred > 12 months before participating in the survey.

[b]Rounded to the nearest thousand.

[c]Estimate is not reported; relative standard error > 30% or cell size ≤ 20.

Table 3 presents similar findings as Table 2, except they are adjusted by age of the respondent. As shown in the table, 2.6% of women with a disability experienced rape in the 12 months before the survey compared with 0.7% of women without a disability; 9.9% of women and 8.6% of men with a disability reported recent (past 12 months) sexual violence victimization other than rape, compared with 4.7% of women and 4.6% of men, respectively, without a disability. Other age-adjusted findings for the specific types of sexual violence other than rape are in a consistent direction, as seen in Table 3.

Table 3 also describes the associations between disability status more than 12 months before the survey and each form of recent sexual violence victimization, after control for age, income, race/ethnicity, and education. Women with a disability more than 12 months before the survey had increased odds of experiencing rape (adjusted odds ratio [AOR] = 3.3; 95% confidence interval [CI] = 1.6, 6.7) and sexual violence other than rape (AOR = 2.2; 95% CI = 1.6, 3.1) in the past 12 months compared with women without a disability. Specifically, women with a disability acquired more than 12 months before the survey had increased odds of experiencing recent sexual coercion (AOR = 2.5; 95% CI = 1.5, 4.1) and noncontact unwanted sexual experiences (AOR = 2.3; 95% CI = 1.4, 3.6).

For men, having a disability was associated with increased risk for experiencing recent sexual violence other than rape

TABLE 3—Age-Adjusted 12-Month Prevalence of Sexual Violence by Disability Status With Adjusted Odds Ratios of Sexual Violence by Disability Status: National Intimate Partner and Sexual Violence Survey, United States, 2010

Variable	Women (n = 9064)			Men (n = 7400)		
	With a Disability[a] (n = 2296), No. (WTD%)	With No Disability[a] (n = 6768), No. (WTD%)	AOR[b] (95% CI)	With a Disability[a] (n = 1563), No. (WTD%)	With No Disability[a] (n = 5837), No. (WTD%)	AOR[b] (95% CI)
Rape	26 (2.6)	43 (0.7)	3.3 (1.6, 6.7)	. . .[c]	. . .[c]	2.0 (0.4, 9.9)
Sexual violence other than rape	138 (9.9)	302 (4.7)	2.2 (1.6, 3.1)	82 (8.6)	246 (4.6)	1.9 (1.3, 2.9)
Made to penetrate a perpetrator	. . .[c]	. . .[c]	. . .[d]	. . .[c]	. . .[c]	4.2 (1.6, 10.8)
Sexual coercion	56 (3.6)	102 (1.6)	2.5 (1.5, 4.1)	28 (2.8)	67 (1.2)	2.1 (1.0, 4.4)
Unwanted sexual contact	45 (3.4)	117 (1.9)	1.7 (1.0, 3.0)	35 (4.1)	103 (2.0)	1.7 (0.9, 3.2)
Noncontact unwanted sexual experiences	74 (5.8)	163 (2.4)	2.3 (1.4, 3.6)	44 (4.2)	117 (2.2)	2.3 (1.4, 3.8)

Note. AOR = adjusted odds ratio; CI = confidence interval; WTD = weighted.

[a]Respondents were classified as having a disability if (1) they reported having an activity limitation because of physical, mental, or emotional problems or a health problem that required special equipment, and (2) their limitation or health problem occurred > 12 months before participating in the survey.

[b]AOR with control for age, income, race/ethnicity, and education.

[c]Estimate is not reported; relative standard error > 30% or cell size ≤ 20.

[d]Logistic regression model did not converge because of small cell sizes.

(AOR = 1.9; 95% CI = 1.3, 2.9) compared with men without a disability. More specifically, men with a disability acquired more than 12 months before the survey were at increased risk to be made to penetrate a perpetrator (AOR = 4.2; 95% CI = 1.6, 10.8), and were at increased risk to experience sexual coercion (AOR = 2.1; 95% CI = 1.0, 4.4) and noncontact unwanted sexual experiences (AOR = 2.3; 95% CI = 1.4, 3.8) in the past 12 months. We also examined age by disability status interaction terms in relation to sexual violence victimization; however, they were only significant in relation to men's experience of rape ($P < .01$) and noncontact unwanted sexual experiences ($P < .05$).

DISCUSSION

The results of this study, consistent with previous literature,[16–18,21,22] suggest that women and men with a disability are at greater risk for recent sexual violence victimization compared to those without a disability. Of note, women with a disability are at particular risk for experiencing rape whereas men with a disability are at particular risk for being made to sexually penetrate a perpetrator. For both women and men, having a disability was associated with an increased risk of sexual coercion (pressured sex without physical force) and noncontact unwanted sexual experiences, but was not associated with an increased risk of unwanted sexual contact (nonpenetrative acts such as fondling and other unwanted touch of a sexual nature). It is unclear why the odds of experiencing unwanted sexual contact were not higher for persons with a disability in light of the significant associations found between disability status and all other types of sexual violence victimization. Additional research is warranted to better understand this pattern. More insight into the types of perpetrators (e.g., intimate partners, acquaintances, caregivers) relative to the types of sexual violence experienced by persons with a disability could help explain these findings.

Of note, we found that approximately 39% of the US women who had been raped within the 12 months preceding the survey had a disability when they were raped. This proportion is particularly striking when one considers that sexual violence disproportionately affects younger age groups[1] and disability disproportionately affects older age groups,[12] and this proportion does not factor in the influence of age.

Findings revealed that when we adjusted for age, the differences in recent sexual violence prevalence were more pronounced between those who had a disability more than 12 months before the survey compared with those who did not. Adjusting by age and establishing the temporal sequencing of disability and sexual violence victimization is important in understanding the relationship between disability and sexual violence victimization because of the association between age and both disability and sexual violence victimization. Having a better sense about which came first may also inform prevention efforts. Future work in this area should consider stratifying analyses by age group to determine if the increased risk of sexual violence among people with disabilities is constant across the life span or if the association is stronger for adolescents or young adults who are particularly vulnerable to sexual violence.

This study provides much-needed information about the relationship between men's disability status and recent sexual violence victimization. Although most of the previous literature has focused on the potential vulnerability of women with disabilities, and most of the limited studies of men with disabilities have used small and unrepresentative samples, findings from this nationally representative study suggest that men with disabilities are also vulnerable to sexual violence victimization. Prevailing societal beliefs that men can take care of themselves may be part of the reason for less focus on the sexual violence victimization of men with disabilities.[28] Future research should explore the types and circumstances of disability that increase men's risk of sexual violence victimization, and explicate the differences relative to the experiences of women with disabilities. For example, there may be differences in risk for sexual violence victimization between men (and women) with intellectual and physical disabilities. Also, the risk of sexual violence victimization for those with newly acquired disabilities, such as arthritis, may be different than those with disabilities that have existed from birth. Persons with disabilities are a heterogeneous group, and experiences with violence may vary by these disability factors. However, to produce a sample size sufficient to examine the relative risk of specific disability factors, including disability type, oversampling of persons with disability will likely be required.

Limitations and Strengths

This study is subject to several limitations. First, the study was cross-sectional and so we were unable to establish causality. It is possible that sexual violence preceded, or in some cases, caused, a disability. However, unlike previous work, the current study established some measure of temporal precedence between disability and sexual violence victimization by establishing a point in time (12 months before the survey) and examining whether sexual violence occurred after that point in time. Second, like most telephone surveys, this study is limited in that it only includes those with a landline or cell phone, which excludes certain groups such as the homeless, those who were transient, or populations living in institutions (e.g., prisons, group homes, nursing homes). Others have noted the vulnerability to sexual violence of nursing home residents in particular[29] as they are dependent on staff for protection and care, so their exclusion from our sample limits our understanding of this high-risk subset of the population.

Third, although this study included a range of sexual violence victimization experiences, it is likely an underestimate of the true prevalence of sexual violence victimization, particularly recent victimization, for various reasons (e.g., sensitive nature of questions may have made respondents uncomfortable disclosing their victimization experiences, or current victims may have been concerned for their safety and therefore did not disclose). Fourth, certain disabilities, particularly intellectual disabilities, may have led to underestimates of sexual violence attributable to, for example, lack of understanding of the questions or memory issues. In addition, hearing-impaired individuals may not have been able to participate.

Fifth, those reporting a disability beginning less than 12 months ago were classified as without disability for the purpose of this analysis. This was done to ensure that a disability predated any sexual violence

victimization that was experienced in the 12-month period being examined. This is also a conservative assumption that likely decreased the effect size. Sixth, we were unable to quantify the severity of the disability. Seventh, we were unable to know the identity of the perpetrators (e.g., intimate partner, stranger). Finally, because the study assessed general disability, we were unable to ascertain whether specific types of disabilities (e.g., mental, visual, physical) were associated with increased vulnerability to sexual violence victimization in general or to specific types of sexual violence victimization.

This study also has a number of strengths. In addition to advancing knowledge on the temporal order of disability and sexual violence victimization, we assessed male victimization and examined sexual violence comprehensively, focusing on both penetrative and nonpenetrative unwanted sexual contact as well as noncontact unwanted experiences. Furthermore, the inclusion of age-adjusted analyses strengthens the findings given the likelihood of older ages to experience disability and younger ages to experience sexual violence victimization. Finally, we used a large, nationally representative sample, which is unique relative to previous research on this topic.

Conclusions

Findings from this study suggest that sexual violence prevention professionals should be aware of the disability status of potential sexual violence victims and the particular vulnerability that a disability creates. For example, promising strategies to prevent sexual violence perpetration, such as bystander strategies[30] that train young men to influence social norms and intervene with their peers when the potential for victimization exists, may be more effective if there is consideration and understanding among bystanders of the increased vulnerability of particular victims, such as persons with disabilities. In addition, with the higher risk of sexual violence victimization among persons with disabilities, health care screening of individuals with disabilities for sexual violence victimization may be useful in the prevention or early intervention of sexual violence. Additional research that determines the specific types of disabilities associated with the specific types of sexual violence victimization (penetrative vs nonpenetrative), the types of perpetrators (e.g., intimate partners, acquaintances, caregivers) that more frequently sexually victimize persons with disabilities, as well as other characteristics of victimization, may further inform efforts to prevent sexual violence among women and men with disabilities. AJPH

CONTRIBUTORS

All authors designed the study and participated in drafting the article and have provided approval of the final article. M. J. Breiding led the statistical analysis.

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HUMAN PARTICIPANT PROTECTION

The survey protocol for this study received approval from the institutional review board of RTI International.

REFERENCES

1. Black M, Basile K, Breiding M, et al. The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 summary report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; 2011.

2. Breiding MJ, Smith S, Basile K, Walters M, Chen J, Merrick M. Prevalence and characteristics of sexual violence, stalking, and intimate partner violence victimization—National Intimate Partner and Sexual Violence Survey, United States, 2011. *MMWR Surveill Summ*. 2014;63(SS-8):1–18.

3. Park J, Faulkner J, Schaller M. Evolved disease-avoidance processes and contemporary anti-social behavior: prejudicial attitudes and avoidance of people with physical disabilities. *J Nonverbal Behav*. 2003;27(2):65–87.

4. World Health Organization and the World Bank. *World Report on Disability*. Geneva, Switzerland: World Health Organization; 2011.

5. Overton SL, Medina SL. The stigma of mental illness. *J Counseling Dev*. 2008;86:143–151.

6. Wallhagen MI. The stigma of hearing loss. *Gerontologist*. 2010;50(1):66–75.

7. Casteel C, Martin S, Smith J, Gurka K, Kupper L. National study of physical and sexual assault among women with disabilities. *Inj Prev*. 2008;14(2):87–90.

8. Hughes RB, Lund E, Gabrielli J, Powers L, Curry MA. Prevalence of interpersonal violence against community-living adults with disabilities: a literature review. *Rehabil Psychol*. 2011;56(4):302–319.

9. Hughes K, Bellis M, Jones L, et al. Prevalence and risk of violence against adults with disabilities: a systematic review and meta-analysis of observational studies. *Lancet*. 2012;379(9826):1621–1629.

10. Nosek MA, Foley CC, Hughes RB, Howland CA. Vulnerabilities for abuse among women with disabilities. *Sexuality Disability*. 2001;19(3):177–189.

11. Plummer SB, Findley P. Women with disabilities' experience with physical and sexual abuse review of the literature and implications for the field. *Trauma Violence Abuse*. 2012;13(1):15–29.

12. Brault M. Americans with disabilities: 2010. Washington, DC: Economics and Statistics Administration, US Census Bureau; 2012.

13. Smith DL, Strauser D. Examining the impact of physical and sexual abuse on the employment of women with disabilities in the United States: an exploratory analysis. *Disabil Rehabil*. 2008;30(14):1039–1046.

14. Elman A. Confronting the sexual abuse of women with disabilities. 2005. Available at: http://www.vawnet.org. Accessed February 23, 2015.

15. Carmody M. Invisible victims: sexual assault of people with an intellectual disability. *Aust N Z J Dev Disabil*. 1991;17(2):229–236.

16. Mitra M, Mouradian V, Diamond M. Sexual violence victimization against men with disabilities. *Am J Prev Med*. 2011;41(5):494–497.

17. Martin SL, Ray N, Sotres-Alvarez D, et al. Physical and sexual assault of women with disabilities. *Violence Against Women*. 2006;12(9):823–837.

18. Nannini A. Sexual assault patterns among women with and without disabilities seeking survivor services. *Womens Health Issues*. 2006;16(6):372–379.

19. Santaularia J, Johnson M, Hart L, Haskett L, Welsh E, Faseru B. Relationships between sexual violence and chronic disease: a cross-sectional study. *BMC Public Health*. 2014;14:1286.

20. Grossman SF, Lundy M. Double jeopardy: a comparison of persons with and without disabilities who were victims of sexual abuse and/or sexual assault. *J Soc Work Disabil Rehabil*. 2008;7(1):19–46.

21. Cohen MM, Forte T, Du Mont J, Hyman I, Romans S. Adding insult to injury: intimate partner violence among women and men reporting activity limitations. *Ann Epidemiol*. 2006;16(8):644–651.

22. Goodman LA, Salyers M, Mueser K, et al. Recent victimization in women and men with severe mental illness: prevalence and correlates. *J Trauma Stress*. 2001;14(4):615–632.

23. Powers L, Curry M, McNeff E, Saxton M, Powers J, Oschwald M. End the silence: a survey of abuse against men with disabilities. *J Rehabil*. 2008;74(4):41–53.

24. Bryen D, Carey A, Frantz B. Ending the silence: adults who use augmentative communication and their experiences as victims of crimes. *Augment Altern Commun*. 2003;19(2):125–134.

25. Strawbridge WJ, Deleger S, Roberts R, Kaplan G. Physical activity reduces the risk of subsequent depression for older adults. *Am J Epidemiol*. 2002;156(4):328–334.

26. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys*. 8th ed. Oakbrook Terrace, IL: The American Association for Public Opinion Research; 2015.

27. *Healthy People 2010: Understanding and Improving Health*. 2nd ed. Washington, DC: US Department of Health and Human Services; 2000.

28. Saxton M, Curry M, Powers L, Maley S, Eckels K, Gross J. "Bring my scooter so I can leave you": a study of disabled women handling abuse by personal assistance providers. *Violence Against Women*. 2001;7(4):393–417.

29. Burgess AW, Dowdell E, Prentky R. Sexual abuse of nursing home residents. *J Psychosoc Nurs Ment Health Serv*. 2000;38(6):10–18.

30. Miller E, Tancredi D, McCauley H, et al. "Coaching boys into men": a cluster-randomized controlled trial of a dating violence prevention program. *J Adolesc Health*. 2012;51(5):431–438.