Screening for Domestic Violence Among Adult Women in the United States

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BACKGROUND: Domestic violence is a problem frequently encountered in health care settings and a risk factor for physical and mental health problems.

OBJECTIVE: To provide nationally representative estimates of rates of domestic violence screening among women, to identify predictors of screening, and to describe settings where women are screened.

DESIGN AND PARTICIPANTS: We examined 4,821 women over the age of 18 from the second wave of Healthcare for Communities, a nationally representative household telephone survey conducted in 2000–2001.

MEASUREMENTS: Self-reports concerning whether the respondent was ever asked about domestic or family violence by any health care provider.

RESULTS: Only 7% (95% CI, 6%–8%) of women reported they were ever asked about domestic violence or family violence by a health care professional. Of women who were asked about abuse, nearly half (46%) were asked in a primary care setting, and 24% were asked in a specialty mental health setting. Women with risk factors for domestic violence were more likely to report being asked about it by a health care professional, but rates were still low.

CONCLUSIONS: Self-reported rates of screening for domestic violence are low even among women at higher risk for abuse. These findings reinforce the importance of developing training and raising awareness of domestic violence and its health implications. This is especially true in primary care and mental health specialty settings.

KEY WORDS: domestic violence; intimate partner violence; screening.

INTRODUCTION

Domestic violence, or intimate partner violence, is a major health risk factor that affects people from all ethnic and socio-economic groups.[1,2] In the United States, there are nearly 5.3 million violent episodes each year, and direct medical and mental health services for victims cost nearly $4.1 billion a year.[3] When lost days of paid work and household productivity are included, the yearly costs are estimated to exceed $5.8 billion.[3]

Among all women who present for health care in the United States, estimates of yearly domestic violence prevalence range from 4% to 23% and lifetime prevalence from 33% to 39%.[4] Domestic violence is both a direct and an indirect risk factor for physical and mental health problems that frequently are encountered in health care settings,[4] and it is associated with increased health care utilization.[5,6] It is at least as common as breast cancer and more common than thyroid problems, hypertension, and colon cancer, conditions for which primary care physicians routinely screen.[2]

Medical visits are seen by many experts as a missed opportunity for identifying domestic violence,[7–10] and there is concern that health care providers may anticipate abuse among poor, young, nonwhite patients and focus screening on these groups when data indicate that domestic violence cuts across all population subgroups.[1,2,11–13] Routine screening for a history of domestic violence is recommended by many experts [7–10] and by the American Medical Association,[14] the American College of Obstetrics and Gynecologists,[15] the Surgeon General,[16] and others. There are no rigorous studies of the effectiveness and risks of health care provider screening and intervention regarding domestic violence, and thus no true evidence-based guidelines.[17–20] The US Preventive Services Task Force concludes that there is insufficient evidence to recommend for or against screening women for domestic violence in health care settings.[18] Thus, current practice regarding domestic violence screening reflects over a decade of recommendations by professional organizations and experts, but no evidence-based guidelines supporting universal screening.

Published studies indicate that few women are screened and that many providers are uncomfortable addressing domestic violence.[13,21–25] We are aware of no nationally representative studies of this issue. This study provides nationally representative estimates of lifetime self-reported domestic violence screening in health care settings for United States women, describes the characteristics of women who reported being

screened, and describes the settings in which reported screening occurred.

METHODS

Data Source

Data are from the second wave (2000–2001) of Healthcare for Communities (HCC2), which is part of the Robert Wood Johnson Foundation's Health Tracking Initiative. The sampling frame for HCC2 consisted of respondents from the 1998–1999 Community Tracking Study (CTS2), the second wave of a large nationally representative survey within the Health Tracking Initiative[11] that focuses on health services use and health insurance coverage. To provide more power for subgroup analyses, HCC2 used CTS2 responses to oversample individuals with family income below $20,000, individuals with high psychological distress measured by two items from the 12-item Short Form Health Questionnaire (SF-12),[26] individuals with any mental health specialty visits during the prior year, and individuals who reported alcohol-related problems in the prior year. A sample of 10,500 individuals was drawn from 39,504 CTS wave-2 respondents and interviewed for HCC2, with HCC2 interviews occurring on average of 24 months after the CTS2 interviews on which stratified sampling was based. After including responses from an additional 2,681 respondents who participated in HCC wave-1 and CTS wave-2, the response rate for HCC was 60%, resulting in 7,909 completed interviews.

Of the completed interviews, 4,821 were with female respondents, all of whom were asked about screening for domestic or family violence. This analysis is based on these 4,821 women and is weighted to be representative of the female adult United States population using CTS data on demographic characteristics, employment, health and mental health status, and health care use to adjust for the probability of selection and nonresponse bias. We obtained verbal informed consent before each interview. The study was approved by the UCLA and RAND Internal Review Boards.

Measures

Screening Measures. The dependent variable is an indicator of lifetime screening for domestic violence or family violence by any health care provider. All female respondents were asked: "Has any doctor, other health care or mental health provider ever asked you questions about domestic violence or family violence?" Those who said yes were asked: "Where were you seen by this provider when you were asked these questions?" Open-ended responses were coded into the following categories: mental health setting, primary care setting, emergency room, obstetric/gynecological settings, and other locations.

Demographic Characteristics. Survey questions assessed age, marital status, education, presence of children under age 12 in the household, insurance status (insured or uninsured), and income (falling below the poverty line or not). Race/ethnicity was grouped into: white (non-Hispanic), black (non-Hispanic), Hispanic, and other race.

General Health. Respondents were asked to report presence or absence of 17 chronic medical conditions. Responses were collapsed into three categories: 0, 1, or 2 or more chronic conditions.

Mental Health. We screened for 12-month probable major depressive, dysthymic, general anxiety, panic disorders, and probable lifetime manic symptoms using the short-form version of the Composite International Diagnostic Interview (CIDI), which applies diagnostic criteria from the Diagnostic and Statistical Manual, Third Edition, Revised.[27] For probable panic disorder, we supplemented the short-form CIDI items with modified items from the full CIDI battery and, to reduce false positives, required limitation in social or role functioning using two items from the SF-12[26] and three items from the Sickness Impact Profile.[28] We assessed substance abuse using CIDI questions regarding recent use of illicit substances and the Alcohol Use Disorders Identification Test.[29]

Life Stressors. Respondents were asked if any of the following happened to them in the past 12 months: You had a serious argument with someone close to you; you separated, divorced, or ended an engagement or relationship; you were laid off or fired; you had a major financial crisis; you saw or witnessed someone being beaten, abused, or killed.

Service Use in Past 12 Months. Respondents were asked if they had visited a primary care provider or a mental health specialist in the past 12 months. Primary care included visits to a family physician, general internist, nurse or physician's assistant, chiropractor, or health clinic. Mental health specialist visits included seeing a counselor, social worker, psychologist, or psychiatrist.

Data Analysis

We compared respondents who did versus did not report lifetime screening for domestic violence or family violence by any health care professional across demographic, clinical, health care utilization, and life stressor variables using F tests to approximate Wald Statistics.[30] We used multiple logistic regression to identify clinical and demographic predictors of the likelihood of receiving lifetime screening for domestic violence or family violence by any health care professional. To clarify the relationship between accessing care and being screened for domestic violence, we also ran the logistic regression model using only the subset of women with primary care visits in the past year (N=4,118), with results nearly identical to those from the full sample (subsample models are available from authors upon request). All analyses were conducted using SUDAAN software, Version 9.0.1, and accounted for the complex survey design.[31]

We used a multiple imputation technique to account for missing data in several sociodemographic and clinical variables and to adjust for the uncertainty due to the imputations.[32] All variables had missingness rates of less than 2% except for income, which had 29% missing. The dependent variable was not imputed. Because estimates from the imputed and unimputed models were substantively similar, we presented only the imputed models. Unimputed models are available from the authors upon request.

RESULTS

Table 1 reports the percentage of women, by demographic, clinical, health care utilization, and life stressor characteristics, who reported lifetime screening for domestic or family violence. Seven percent (95% CI, 6%–8%) of all women reported lifetime screening by a health care professional. The percentage of women who reported lifetime screening was significantly greater among women who saw a primary care provider in the previous year compared to those who did not (7.8 vs. 3.08%,

$F = 19.80$, $p < 0.001$) and among those who visited a mental health specialist in the previous year compared to those who did not (36.5 vs. 5.1%, $F = 19.15$, $p < 0.001$).

Table 2 presents results from a logistic regression predicting the likelihood of reported lifetime screening for domestic or family violence by any health care professional. After controlling for other factors, access to care has a significant effect on the likelihood of reported screening: odds of reported screening were significantly higher among women who reported having seen a primary care provider in the past 12 months and among

Table 1. Women Reporting Lifetime Domestic/Family Violence Screening by a health care Provider[†]

| | | All Women (N=4,821) | | |
		Analytic *N*	*N* (%)[‡]	*P*-Value[§]
		4,821	479 (7.0)	N/A
Sociodemographic variables				
Age	<40	4,821	199 (10.0)	<0.001
	40–59		236 (8.24)	
	60+		44 (1.99)	
Ethnic group	White	4,821	369 (6.95)	0.560
	Black		57 (9.18)	
	Hispanic		39 (4.81)	
	Other		14 (9.4)	
Marital status	Married	4,817	219 (4.84)	0.004
	Living with partner		59 (21.51)	
	Single, not living with partner		201 (7.86)	
Income	≥ Poverty line	4,813	404 (7.22)	0.379
	< Poverty line		75 (6.1)	
Education	< High school	4,821	47 (5.13)	0.189
	High school degree		291 (7.58)	
	College degree		141 (6.52)	
Children under 12	None	4,816	309 (5.59)	0.014
	One or more		170 (10.57)	
Health insurance	Uninsured	4,789	56 (6.8)	0.848
	Insured		421 (7.09)	
Geographic location	Urban	4,821	437 (8.24)	<0.001
	Rural		42 (3.47)	
Clinical variables				
Chronic medical conditions	None	4,821	134 (4.66)	0.003
	One		105 (7.76)	
	Two or more		240 (8.85)	
Probable mental health problem	No	4,821	262 (4.96)	<0.001
	Yes		217 (18.2)	
Probable drug problem	No	4,821	454 (6.77)	0.026
	Yes		25 (22.87)	
Probable alcohol problem	No	4,813	449 (6.85)	0.202
	Yes		26 (9.96)	
Health care utilization in past 12 months				
Primary care visit	No	4,821	48 (3.08)	<0.001
	Yes		431 (7.75)	
Mental health visit	No	4,821	304 (5.12)	<0.001
	Yes		175 (36.5)	
Life stressors in past 12 months				
Serious argument	No	4,806	223 (4.88)	<0.001
	Yes		255 (14.42)	
Ended a relationship	No	4,819	379 (5.93)	0.010
	Yes		100 (20.78)	
Laid off or fired	No	4,818	440 (6.86)	0.272
	Yes		39 (10.87)	
Financial crisis	No	4,810	354 (5.97)	<0.001
	Yes		124 (17.05)	
Witnessed someone beaten/killed	No	4,818	436 (6.38)	0.005
	Yes		43 (40.45)	
Any life difficulty	No	4,820	166 (3.63)	<0.001
	Yes		313 (14.24)	

[†]*Data are from 4,821 women interviewed in Healthcare for Communities, 2000–2001.*
[‡]*Frequencies are unweighted, but percentages are weighted to be nationally representative.*
[§]*P-values comparing screening rates across categories are calculated from F-statistics.*

women who reported having seen a mental health provider in the past 12 months.

Several demographic characteristics significantly predicted the likelihood of reported screening. Married women were less likely to report lifetime screening than were single women or unmarried women living with a partner. Women were more likely to report lifetime screening if one or more child under the age of 12 lived in their home. The odds of reported screening were significantly lower among those older than 60 (vs. those between the ages of 40 and 59) and among those living in a rural (vs. urban) area. Neither ethnicity nor having an income below the poverty line significantly predicted lifetime screening.

A number of clinical and life stressor variables were associated with reported lifetime screening. The odds of reported screening were significantly higher among women

Table 3. Location of Domestic/Family Violence Screening by a health care Provider*

Location	All Women (N=450)	Primary Care Users (N=406)	Mental Health Specialist Users (N=164)
	% (SE)	% (SE)	% (SE)
Mental health	23.8 (5.5)	24.1 (5.9)	50.7 (10.7)
Primary care	45.8 (5.6)	45.7 (6.0)	25.6 (6.0)
Emergency room	11.0 (3.5)	11.7 (3.7)	12.8 (5.2)
Obstetrics/ Gynecological	3.3 (0.9)	3.3 (1.0)	2.3 (0.9)
Other location	16.2 (3.3)	15.3 (3.4)	9.1 (3.2)

Data are from 4,821 women interviewed in Healthcare for Communities, wave 2, in 2000–2001. Percentages are weighted to be nationally representative.

Table 2. Logistic Regression Model Predicting Lifetime Domestic/ Family Violence Screening by a health care Provider[†]

Covariates	OR (95% CI)	P-Value[‡]
Sociodemographic variables		
Age group		<0.001
<40	0.99 (0.67, 1.44)	0.94
40–59	1 (reference)	N/A
60+	0.33 (0.20, 0.54)	<0.001
Ethnic group		0.64
White	1 (reference)	N/A
African American	1.05 (0.51, 2.15)	0.90
Hispanic	0.52 (0.18, 1.51)	0.23
Other	1.17 (0.37, 3.67)	0.79
Marital status		<0.001
Married	1 (reference)	N/A
Living with partner	5.99 (2.66, 13.53)	<0.001
Single, not living with partner	1.63 (1.06, 2.51)	0.03
Income < poverty line	0.99 (0.67, 1.46)	0.95
Education		0.61
< High school	1 (reference)	N/A
High school degree	1.04 (0.56, 1.92)	0.91
College degree	0.80 (0.39, 1.62)	0.53
Child under 12 years in home	1.63 (1.10, 2.42)	0.02
Current health insurance	1.44 (0.77, 2.70)	0.25
Living in rural area	0.45 (0.27, 0.73)	0.001
Clinical variables		
Chronic medical conditions		0.12
None	1 (reference)	N/A
One	1.36 (0.72, 2.55)	0.35
Two or more	1.56 (1.01, 2.40)	0.04
Probable mental health problem	1.82 (1.23, 2.68)	0.002
Probable drug problem	2.51 (0.98, 6.47)	0.06
Probable alcohol problem	0.39 (0.17, 0.86)	0.02
Health care utilization in past 12 months		
Primary care visit	1.71 (1.06, 2.79)	0.03
Mental health specialist visit	5.41 (3.49, 8.39)	<0.001
Life stressors in past 12 months		
Serious argument	1.24 (0.86, 1.78)	0.24
Ended a relationship	1.48 (0.89, 2.45)	0.13
Laid off or fired	0.80 (0.25, 2.59)	0.71
Financial crisis	1.28 (0.72, 2.28)	0.39
Witnessed someone beaten/killed	7.00 (2.95, 16.62)	<0.001

[†]*Data are from 4,821 women interviewed in Healthcare for Communities in 2000–2001. Due to missing data on some covariates, the model is based on 4,751 observations. Logistic regressions were adjusted for the complex sampling design and multiple imputations.*
[‡]*P-values are calculated from F-statistics derived from the estimated logistic models.*
Each categorical variable with 3 or more categories (age group, ethnic group, marital status, education level, chronic medical condition) was tested by an omnibus test for the overall group effect.

with two or more chronic medical conditions as opposed to none, among those with a probable mental health problem, and among those who ended a relationship or witnessed someone being beaten or killed in the past 12 months. There also is a tendency for women with a drug abuse problem to be more likely to report lifetime screening, but the coefficient was borderline significant ($p=.056$). Women with an alcohol problem were significantly less likely to report lifetime screening. Sensitivity analyses indicated, however, that this finding is very sensitive to the specification of the weights.

We ran an additional model restricted to women who had seen a primary care provider in the past 12 months (model not shown). Because the estimates from the two models are very similar, it does not appear that the findings are driven by issues related to access to care.

Among the 479 women who reported lifetime screening, (450, 94%) reported a location. Forty-six percent of these women were screened in a primary care setting, 24% in a specialty mental health setting, 11% in an emergency room, 3% in an obstetric/ gynecologic setting, and 16% in other settings (Table 3). The distribution was almost identical for the subset of women who had visited a primary care provider in the past 12 months. In contrast, among women who had visited a mental health specialist in the past 12 months ($n=164$), 51% reported that they were screened in a mental health specialty setting, and only 26% reported that they were screened in a primary care setting.

DISCUSSION

To our knowledge, this is the first nationally representative study of screening for domestic violence by health care providers among United States women. Studies in particular practice settings mainly reported low lifetime screening rates[21–23] although a recent study found higher rates (42% among women who reported recent domestic violence and 28% among women not reporting recent domestic violence).[1] Our finding of very low rates of domestic violence screening is consistent with the earlier studies. We found these low rates even after major groups began advocating for screening.[14–16] It is likely that uncertainty about how to respond, provider discomfort,[13,24,25] and the lack of evidence-based guidelines contributed to the low rates.

We found similar rates of screening across ethnic, educational, and income groups. Thus, we did not corroborate the concern in the literature that health care providers are more likely to screen poor or non-white women.[2,11–13] Lower rates of access to care among poor or non-white women could obscure high rates of screening for those in care, but the persistence of our findings among the subset of women who had seen a primary care provider in the past year supports the main conclusion that provider screening rates are similar across ethnic and socioeconomic groups. Thus, the larger issue is the low rate of screening overall.

We found that reported lifetime domestic violence screening was more likely among women who had characteristics associated with higher risk for domestic violence: being younger,[1,33] unmarried,[11,23,33] or living unmarried with a partner;[1] having chronic medical conditions,[33–35] mental health problems,[23,33–35] or drug abuse problems;[33] having recently ended a relationship;[36] or having children living in the home.[36] In addition, screening was much more likely among women who had witnessed someone being beaten or killed in the past 12 months, which may be a marker for being a victim of violence. These findings suggest that providers may be picking up on risk factors and screening women based on these known factors. An alternative explanation is that persons at higher risk are more likely to remember having been screened.

Even among women with risk factors, the percent reporting screening is low. The bivariate analysis showed that only 23% of women with drug problems, 18% of women with a probable mental disorder, and 21% of women who recently ended a relationship reported ever being screened for domestic or family violence. Only among women who reported witnessing someone being beaten or killed in the past year did a substantial proportion (40%) report lifetime domestic violence screening. Hamberger and colleagues[23] previously suggested that provider inquiries reached only one-tenth of the observed victimization rate.

Nearly half (46%) of all women who reported being asked about domestic or family violence said that they were asked in a primary care setting and 24% said that they were asked in a specialty mental health setting. Although much has been written about routine screening in emergency departments, [36–38] only 11% of the women reported that they were asked about domestic violence in emergency rooms.

This study has some important limitations. We obtained a moderate response rate, compounded by nonresponse to the CTS survey. We created nonresponse weights, which may only partially account for nonresponse bias. We rely on self-report measures that deal with lifetime recall, and we have no measures of actual victimization although having witnessed someone being beaten or killed in the past 12 months may serve as a proxy measure. Our measure of domestic violence screening is broad and might include screening for child or elder abuse. In addition, it is possible that some women might not recognize questions about being hit or hurt as questions about domestic or family violence. We also do not know if women who were screened presented with signs of abuse that cued the provider to ask about abuse. Thus, we may be overestimating the amount of routine screening that takes place.

Despite these limitations, the study's findings are important for health care professionals and policymakers. To our knowl-edge, this study provides the first nationally representative data on domestic violence screening in health care settings. Such screening is important because health care settings are the only places that many victims seek help.[39] Moreover, the identification of domestic violence is clinically important because violence is prevalent and its presentation varied, and it may influence the evaluation of presenting complaints as well as the outcomes of care.[9,10] Screening can have other advantages as well, such as reducing the stigma associated with being a victim of domestic violence and promoting access to needed services.[21] These are important issues for future research and clinical practice guideline development.

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