

# Are Primary Care Clinicians Serving Low-Income Patients More Likely to Screen for Domestic Violence?

Brittnie E. Bloom<sup>1,2</sup>, Paula Tavrow<sup>3</sup>

<sup>1</sup>Department of Global Health, San Diego State University, School of Global Public Health, 5500 Campanile Drive, GMCS 322C, San Diego, CA 92182, USA, <sup>2</sup>Department of Medicine, University of California, San Diego, Division of Infectious Diseases and Global Public Health, 9500 Gilman Drive, San Diego, CA 92093, USA <sup>3</sup>Department of Community Health Sciences, University of California at Los Angeles, Fielding School of Public Health, Los Angeles, CA 90095, USA

## ABSTRACT

**Background:** Women of all income levels experience domestic violence (DV). Primary health-care providers are able to screen women early and provide services or referrals; however, regular DV screening rarely occurs in the US. We investigated whether implicit bias based on patient population income level could be influencing provider practices in California. **Methods:** Data for this study were drawn from a self-administered survey conducted from October 2013 to March 2014. Providers ( $n = 152$ ) were included if they worked in primary care and provided information on the predominant income of their patients. The survey included questions on provider demographics, screening practices, and number of female victims identified. **Results:** Providers serving low-income patient populations (LIPPs) or higher-income patient populations had equivalent training and knowledge about DV. However, DV screening practices (e.g., screening more often, at a younger age, and giving a screening question for DV) and outcomes (DV victims identified) varied significantly by patient population income level ( $P < 0.01$ ). Working with low-income patients and engaging in universal screening practices both predicted more victim identification ( $P < 0.01$ ). **Conclusions:** Implicit bias appears to influence clinicians' screening practices, with those serving LIPPs being more likely to screen regardless of training or knowledge. If DV screening in primary care occurred more regularly, it would yield more detection of victims at all income levels. Training and self-reflection could combat implicit bias, as well as written policies and standardized procedures to encourage universal screening practices by clinicians irrespective of the income level of their patient populations.

**Key words:** Domestic violence, implicit bias, patient populations, screening, violence prevention

## BACKGROUND

At least one in four women in the United States will experience domestic violence (DV) in her lifetime. Women from all socioeconomic levels, ages, occupations, religions, and ethnicities have been documented

to suffer abuse from their intimate partners.<sup>[1,2]</sup> The National Violence Against Women Survey estimates that more than 5 million DV victimizations occur every year among women aged 18 and older, with about 550,000 requiring medical attention.<sup>[3]</sup> Victims often visit their primary health-care provider with complaints and injuries that providers may not associate directly with DV, such as anxiety, depression,

### Address for correspondence:

Brittnie E. Bloom, San Diego State University and University of California San Diego, School of Global Public Health, 5500 Campanile Drive, GMCS 322C, San Diego, CA 92182, USA. Tel: 619-549-0393. E-mail: bbloom@sdsu.edu

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substance use, suicidal ideation, irritable bowel syndrome, sexually transmitted infections, pregnancy complications, and other health complaints.<sup>[4-7]</sup> Since victims may not disclose DV unprompted, primary care clinicians need to screen them for DV as the initial step in identifying them and helping them to obtain supportive services. The relative privacy, safety, and professionalism of a clinician's office can put victims at ease, thus giving providers a unique opportunity to discover nascent or chronic abuse, intimidation, or fear.

Studies indicate that screening for DV leads to increased identification of victims in many health-care settings including emergency rooms, obstetrics and gynecology, prenatal care settings, and primary care settings.<sup>[8-13]</sup> Mandating universal screening for DV in health-care settings has been controversial in the US Health Care System since it was first proposed in the 1980s.<sup>[14]</sup> Beginning in 1999, major organizations have been advocating for routine or universal DV screening, including Futures Without Violence, the American College of Obstetricians and Gynecologists, and the Centers for Disease Control and Prevention.<sup>[15-18]</sup> In 2013, the US Preventive Services Task Force recommended that clinicians screen women of childbearing age for DV and provide intervention services or referrals to women who screen positive.<sup>[19]</sup> Due to a limited evidence base on the effects of screening, this recommendation is currently under review.

To date, DV screening has not been universally integrated into health-care settings in the US. A nationally representative telephone survey of 4821 adult women found that only 7% reported ever being screened for DV in a health-care setting.<sup>[20]</sup> Providers resist universal screening for numerous reasons, including lack of training in DV, discomfort with the topic, fear of offending patients, concern about mandatory reporting requirements, or time-related concerns.<sup>[4,21-23]</sup> Researchers have also documented clinic-level barriers, such as having inadequate administrative or management support for victims once they are identified, not having a set protocol for screening or referrals, and being required to keep consultations brief.<sup>[21,24]</sup> In addition, providers may not screen patients if they feel it is not part of their job or not a problem among the populations they serve.<sup>[25,26]</sup>

Although DV affects women of all backgrounds, studies suggest that some people, such as those of lower socioeconomic status, may experience more DV.<sup>[27-29]</sup> For instance, a multistate study found that an annual income of less than \$25,000 was strongly associated with DV.<sup>[30]</sup> Women who have less education or are divorced/separated also appear to experience higher rates of DV.<sup>[29,31]</sup> Those patients who present to providers with two or more physical symptoms (e.g., tiredness, chest pain, and diarrhea), physical injuries (e.g., bruising, ruptured eardrums, or have patterns of repeated injury), post-traumatic stress disorder, or depression

also are more likely to be experiencing DV.<sup>[29,32-34]</sup>

In some areas of primary care, researchers have detected an implicit bias in how clinicians treat low-income patient populations (LIPPs) as compared to higher-income patient populations (HIPPs).<sup>[35]</sup> Implicit bias refers to the attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner.<sup>[36]</sup> Implicit bias related to socioeconomic status may explain why providers are less likely to recommend that LIPPs sign up for breast cancer screening, enroll in prenatal care, or undergo Papanicolaou tests.<sup>[37-41]</sup> Moreover, researchers have noted that physicians frequently presume that LIPPs have lower self-control and less ability to change negative health behaviors than higher income patients.<sup>[42]</sup> However, research about potential provider biases in screening for DV has been limited. A 2008 study found that health care providers screened for DV more often among African Americans whose annual incomes were less than \$25,000 as compared to those with higher incomes, but this same pattern was not seen among patients who were not African-American, indicating biases in screening behaviors.<sup>43</sup>

In this study, our goal is to determine whether implicit bias related to the income level of patient populations is affecting primary care practitioners' DV screening and identification in California. We will assess whether health-care providers working with predominantly LIPPs report significantly different DV screening practices and outcomes as compared to those working with HIPPs. We also will seek to determine which factors seem most predictive of whether a provider identifies DV victims.

## MATERIALS AND METHODS

This study is based on data from a cross-sectional survey of health-care providers, mostly based in California.<sup>[44]</sup> To be eligible for the study, health-care providers needed to be clinicians (physicians, nurse practitioners, physician assistants, or nurses), currently practicing in a primary care setting and seeing female patients aged 15 or older.

Data were collected between October 2013 and March 2014 in Southern California using three different recruitment mechanisms. The first mechanism entailed requesting directors from three professional provider networks to forward the survey link to their providers through email. The second mechanism involved administering the survey to health-care providers from Safety Net Clinics in Los Angeles before one hour training on DV. All training participants were asked to self-complete the paper survey. The third mechanism consisted of approaching individual providers over 2 days at the 2014 Annual PriMed Conference West, a regional conference for primary care and family practice clinicians held in Anaheim, California. All PriMed participants

self-administered the paper survey. No participants received direct compensation for participating in the survey but could elect to enter their information into a raffle for a gift card of nominal value. Overall, 191 providers took the survey, of whom 11 completed it online and 180 self-administered the survey through paper in-person. For this study, we extracted the 152 providers who indicated they worked in primary care and had provided information on the predominant income of their patient populations, which is our focus.

The survey, designed to take 8–10 minutes, included quantitative and qualitative questions. Quantitative questions captured providers' demographics, patient profiles, screening frequencies and practices, past training, confidence in assisting DV survivors, and how many DV survivors they identified in the past month. Qualitative questions included asking providers to record what first question they would normally ask when screening for DV, where they might refer a DV victim, and what specific DV code (if any) they used in electronic medical records.

Variables were operationalized as follows. For the income of their patient population, providers had been asked if they primarily served low-income populations, to which they could respond “yes,” “no,” or “don’t know.” Those who answered “don’t know” were excluded from the analysis. Providers who responded “yes” were categorized as working with LIPPs, and those who responded “no” were categorized as working with HIPPs. For questions on how often providers screen for DV, they were given five options: “always,” “most of the time,” “sometimes,” “rarely,” or “never.” During regression analysis, this screening variable was dichotomized into “always or most of the time” and “sometimes, rarely, or never.” Our outcome variable, the number of DV victims identified in the last 30 days, was also collapsed into two categories (none vs. one or more) for logistic regression analysis, because we wished to predict identification of any victims.

Open-ended questions were grouped into categories and cross-checked for interrater reliability. Regarding the training they had received in DV, providers' responses were categorized as pre-service training (i.e., while in professional school), in-service training (i.e., at the workplace or through continuing education), both, or none. Providers gave many responses to the question, “At what age do you begin screening for DV?” Their responses were coded and categorized as: “any time” indicating that age did not matter to the physician when screening; “less than 18 years old” indicating that the provider gave a specific age or age range under 18; “18 years or older” indicating that the provider said 18 or a higher age; and “no response” indicating that the provider did not respond to the question. Regarding the first question that a provider used for DV screening, for any question written the provider was given a code of “1.” If the

answer was left blank, they were given a “0.”

Finally, we created a “universal screening” index from three screening practice questions to estimate the extent of recommended screening. The three items included were: (a) Start to screen female patients before the age of 18; (b) screen female patients “always or most of the time;” and (c) able to record an initial screening question used. These items all have face validity and correlated with the outcome. Providers with higher index scores were more regularly engaging in recommended screening practices.

Data were entered into SPSS 25 and analyzed. Bivariate comparisons were conducted of providers serving predominantly low-income and higher-income populations. Then we performed logistic regression analysis to determine predictors of reported identification of DV victims. Finally, we carried out ANOVA analysis to assess the impact of the universal screening index on victim identification by patient population type.

## RESULTS

Of the 152 primary care providers included in the analysis, 98 (64%) worked primarily with LIPPs and most (90.7%) worked in California [Table 1]. Two-thirds of the providers were female and about half were older than 50. There were slightly more physician assistants, nurse practitioners, and nurses (54.6%) than physicians (45.4%). About one-third of participants had not received any training on DV, while nearly 20% had received both in-service and pre-service training. Regarding provider demographics, the only significant difference by patient income level was the number of years that a provider had been in practice: Those working with LIPPs were considerably more likely to have been in practice 10 years or less (45.9%) as compared to those working with HIPPs (17%) ( $P < 0.01$ ).

In contrast, DV screening practices and outcomes varied significantly by the income level of the provider's patients [Table 2]. More than half of providers working with LIPPs reported screening always or most of the time, as compared to only 18.9% of providers working with HIPPs ( $P < 0.01$ ). Those working with LIPPs were more likely to start screening their patients at ages 18 or younger (46.5% vs. 26.4%), able to provide a screening question (92.9% vs. 77.4%), and state a specific code for documenting DV in electronic medical records (45.5% vs. 22.6%) (all  $P < 0.01$ ). Our “universal screening” index revealed that 40.4% of the providers working with LIPPs engaged in all three recommended screening practices, as compared to only 13.2% of providers working with HIPPs ( $P < 0.01$ ). Regarding DV outcomes, about half of all providers knew a specific place to refer DV victims. However, those working with LIPPs were more than twice as likely to report having identified at least one DV

**Table 1: Demographics of primary health-care providers by predominant income of their clinic's patients**

Characteristics	LIPPs n=99 (%)	HIPPs n=53 (%)	Total n=152 (%)	P
Age				0.270
30 or younger	8 (8.2)	4 (7.5)	12 (7.9)	
31-50	44 (44.9)	17 (32.1)	61 (40.4)	
51 or older	46 (46.9)	32 (60.4)	78 (51.7)	
Sex				0.066
Male	28 (28.6)	23 (43.4)	51 (33.8)	
Female	70 (71.4)	30 (56.6)	100 (66.2)	
Works in California				0.228
Yes	90 (92.8)	46 (86.8)	136 (90.7)	
No	7 (7.2)	7 (13.2)	14 (9.3)	
Occupation				0.178
Physician	41 (41.4)	28 (52.8)	69 (45.4)	
NP, PA, nurse, other	58 (58.6)	25 (47.2)	83 (54.6)	
Total years in clinical practice				0.000
<10 years	45 (45.9)	9 (17.0)	54 (35.8)	
11–20 years	15 (15.3)	21 (39.6)	36 (23.8)	
21 years or more	38 (38.8)	23 (43.4)	61 (40.4)	
Received training in DV				0.828
Pre-service and in-service training	21 (21.2)	8 (15.1)	29 (19.1)	
Pre-service only	18 (16.2)	10 (18.9)	26 (17.1)	
In-service only	32 (32.3)	18 (34.0)	50 (32.9)	
No training	30 (30.3)	17 (32.1)	47 (30.9)	

All data are presented as n (%). NP: Nurse practitioner; PA: Physician's assistant. LIPPs: Low-income patient populations, HIPPs: Higher-income patient populations, DV: Domestic violence

victim in the past month (52.6% vs. 22.7%) ( $P < 0.01$ ).

To determine the predictors for identifying DV victims in the past 30 days, we conducted logistic regression analysis. The six predictors we tested were gender (male vs. female), how many years providers had been in practice (three categories), whether they had received any DV training, if they knew where to refer someone who was experiencing DV, their score on the “universal screening” index, and whether they worked with LIPPs. As shown in Table 3, two of these predictors were found to be significantly associated with identifying one or more DV victims: score on universal screening practices (adjusted odds ratio [AOR] = 1.62) and working with LIPPs (AOR=3.14) (both  $P < 0.01$ ).

Using ANOVA, we further tested the impact of our “universal screening” index on whether DV victims were identified. We found that providers working with LIPPs completed significantly more screening activities on average to identify one or more DV victims than those working with HIPPs (2.29 vs. 1.75 activities, respectively) [Table 4]. Overall, it took on average 1.84 screening activities to identify one or more DV victims, regardless of income of clinic setting

( $P < 0.01$ ).

## DISCUSSION

Even though female patients do not mind being screened for DV, this study found that only 31% of primary care providers engaged in recommended universal screening practices.<sup>[45]</sup> Particularly striking were differences by patient population income, with just 13% of providers serving higher-income patients reporting regular screening of adolescent girls and women, as compared to 40% of those serving low-income patients. We suggest that this result reveals an implicit provider bias that higher income patients would not benefit from DV screening, since providers of both patient income types had equivalent DV training and referral knowledge. Other possible explanations are that providers feel less comfortable screening women from a similar socioeconomic stratum or that clinics serving LIPPs are more likely to have on-site social workers who can facilitate referrals.

Our research also confirms that regular DV screening of all adolescents and adult women in primary care would yield

**Table 2:** Reported primary health-care provider screening practices and outcomes by predominant income of their clinic's patients

Screening Practices and Outcomes	LIPPs n=99 (%)	HIPPs n=53 (%)	Total n=152 (%)	P
How often screens for DV				0.000
Always, most of the time	52 (52.5)	10 (18.9)	62 (40.8)	
Sometimes, rarely, or never	47 (47.5)	43 (81.1)	90 (59.2)	
Age begins screening females for DV				0.003
Any time (age doesn't matter)	19 (19.2)	5 (9.4)	24 (15.8)	
<18 years old	46 (46.5)	14 (26.4)	60 (39.5)	
18 years or older	25 (25.3)	20 (37.7)	45 (29.6)	
No response	9 (9.1)	14 (26.4)	23 (15.1)	
Can provide a first screening question				0.006
Yes	92 (92.9)	41 (77.4)	133 (87.5)	
No	7 (7.1)	12 (22.6)	19 (12.5)	
Does all the above (universal screening) <sup>1</sup>				0.000
Yes (all 3 items)	40 (40.4)	7 (13.2)	47 (30.9)	
Partial (1–2 items)	53 (53.6)	35 (66.0)	88 (57.9)	
No (0 items)	6 (6.1)	11 (20.8)	17 (11.2)	
Uses specific code for documenting DV				0.006
Yes	45 (45.5)	12 (22.6)	57 (37.5)	
No	54 (54.5)	41 (77.4)	95 (62.5)	
Knows where to refer DV victim				0.984
Yes, knows specific place (s) or person (s)	54 (54.5)	29 (54.7)	83 (54.6)	
Doesn't know or gives vague response	45 (45.9)	24 (45.3)	69 (45.4)	
Reported number of DV victims identified in the last 30 days				0.001
None	47 (47.5)	41 (77.4)	88 (57.9)	
1–2 victims	39 (39.5)	11 (20.8)	50 (32.9)	
3 or more victims	13 (13.1)	1 (1.9)	14 (9.2)	

All data are presented as n (%). DV=Intimate Partner Violence; <sup>1</sup>"Universal screening" = (1) screens always or most of the time, (2) starts screening before age 18, and (3) could provide interviewer with a first screening question. Maximum score is 3. LIPPs: Low-income patient populations, HIPPs: Higher-income patient populations. DV: Domestic violence

more detection of those experiencing DV.<sup>[8,10,11,13]</sup> Unlike previous studies, provider's gender and prior DV training did not predict whether they reported having detected DV victims in the past month.<sup>[44,46-47]</sup> Only two variables, universal screening and working with mainly low-income patients, predicted primary care providers' reported identification of one or more DV victims. A potential advantage of engaging in universal screening practices in primary care settings, as compared to emergency rooms or in specialized services, is that it increases the likelihood that a clinician would be able to assist victims to obtain services when the DV is still in its incipient stage. This could reduce physical injury and psychological suffering of victims. Moreover, primary care is more readily accessible to patient populations of all incomes

and therefore is a good entry point for adolescents and women who might not know what kinds of services might be available to them.

While it does seem likely that women of lower socioeconomic status experience more DV, as noted earlier, this study suggests that if providers adopted universal screening practices for all women, more women of higher income suffering from DV would be identified. It is noteworthy that the study found that only 1.75 screening activities were required on average to detect a higher income DV victim, as compared to 2.29 screening activities for a lower income victim. Alternatively, the higher number of screening activities required per low-income patient identified could relate to a higher level of

distrust of doctors, as was found by Armstrong *et al.*<sup>[48]</sup> In low-income clinics, having the same health-care provider is uncommon, due to staff turnover.<sup>[49]</sup> Not obtaining continuity of care from the same primary health-care provider may be a barrier in building a trusting relationship with a provider and might discourage disclosure of DV. If undocumented, these patients may also have greater fears of deportation or income loss if they speak out. These barriers may therefore require additional energy from health-care providers working with LIPPs to encourage disclosure. The opposite may be true with HIPPs. Patients with higher incomes may have more trusting relations with their health-care providers and feel more comfortable disclosing sensitive information if they are given the opportunity to do so.

This study had several limitations. As a convenience sample, it is possible that this study did not accurately represent the screening practices of primary health-care providers in California. However, the researchers are unaware of any

inherent biases in the recruitment of providers. In addition, the study did not collect any data on the race or ethnicity of either the providers who participated in the study or of the patients they served. It is possible, as documented in the literature, that providers' screening practices were influenced by the race or ethnicity of their patients and not just their income level.<sup>[38,43]</sup> It is also possible that providers were more or less likely to screen based on whether their patients were of the same race or ethnicity as themselves. These issues require additional research. Finally, there were limitations related to the self-report measures used. Some providers may have overstated the frequency of their screening practices due to social desirability. By creating the universal screening index, we were able to triangulate information to improve accuracy. Ultimately, however, we had to rely on what the health-care providers disclosed to us, as there is no way to authenticate much of the information we collected based on their responses.

## CONCLUSIONS

Implicit bias may explain why primary health-care providers serving low-income populations self-reported significantly more DV screening activities, despite having similar levels of DV training as other providers. As is the case with other occurrences of implicit bias, providers should be encouraged to engage in self-reflection and peer appraisal to determine if they are unconsciously presuming that DV is a problem mainly or exclusively in LIPPs. Continuing education in DV screening could help providers identify and correct this implicit bias. Health facility administrators may also harbor this implicit bias, which could be influencing clinic procedures. They, too, may need to engage in self-reflection and appraisal of their practices. This study confirmed that more DV screening leads to more identification. Currently, the majority of primary care providers are not engaging in universal screening. To promote screening and referrals, written policies and standardized procedures should be in place, with visible reminders present throughout the facility.<sup>[50]</sup> Providers need to be aware that DV

**Table 3: Predictors of reported identification of any DV victim in the last 30 days, using logistic regression (n=151)**

Predictors Variables**	Results	
	One or more victims identified	
	AOR <sup>2</sup>	CI 95%
Female provider	0.97	(0.44, 2.14)
Total years in practice	1.36	(0.90, 2.08)
Received DV training	1.99	(0.85, 4.65)
Knew where to refer	0.86	(0.41, 1.83)
Did universal screening <sup>1</sup>	1.62	(1.06, 2.45)
Works in a low-income clinic	3.14	(1.34, 7.32)

<sup>1</sup>Universal screening index= (1) screens always or most of the time, (2) starts screening before age 18, and (3) could provide interviewer with a first screening question. Maximum score is 3. <sup>2</sup>Adjusted for all items listed. LIPPs: Low-income patient populations, HIPPs: Higher-income patient populations. DV: Domestic violence, AOR: Adjusted odds ratio, CI: Confidence interval

**Table 4: Reported number of DV victims identified, by mean universal screening index<sup>1</sup> and predominant income of their clinic's patients, using ANOVA**

Number of DV victims identified	LIPPs (n=99)	HIPPs (n=53)	Total (n=152)	F-value (sig.)
None	1.91	1.20	1.58	25.4 (0.000)
One or more	2.29	1.75	2.19	
Total	2.11	1.32	1.84	

<sup>1</sup>Universal screening index= (1) screens always or most of the time, (2) starts screening before age 18, and (3) could provide interviewer with a first screening question. Maximum score is 3. LIPPs: Low-income patient populations, HIPPs: Higher-income patient populations. DV: Domestic violence

screening can help all women to disclose an unsafe home environment, which can be an important first step in getting supportive services.

## DECLARATIONS

This study received ethical approval from the Institutional Review Board #13-001626 of the UCLA. All participants provided their written consent before participating in the study.

## COMPETING INTERESTS

Neither author has any financial nor non-financial competing interests.

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