Influence of Community Social Norms on Spousal Violence: A Population-Based Multilevel Study of Nigerian Women

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Objectives. We examined whether social norms toward spousal violence in Nigeria, at the state level, are associated with a woman's exposure to physical and sexual violence perpetrated by her husband.

Methods. Using data from the 2008 Demographic and Health Survey, we fit four 3-level random intercepts models to examine contextual factors associated with spousal violence while accounting for individual-level predictors.

Results. Of the 18 798 ever-married Nigerian women in our sample, 18.7% reported exposure to spousal sexual or physical violence. The prevalence was geographically patterned by state and ranged from 3% to 50%. Permissive state-level social norms toward spousal violence were positively associated with a woman's report of physical and sexual violence perpetrated by her husband (odds ratio [OR] = 1.80; 95% confidence interval [CI] = 1.17, 2.77), after adjusting for individual-level characteristics. A number of individual-level variables were significantly associated with victimization, including a woman's accepting beliefs toward spousal violence (OR = 1.11; 95% CI = 1.09, 1.14). Women living in states with Sharia law were less likely to report spousal violence (OR = 0.58; 95% CI = 0.35, 0.95).

Conclusions. Efforts to end violence against women, particularly spousal violence, should consider broader social and contextual determinants of violence including social norms. (*Am J Public Health.* 2013;103:148–155. doi:10.2105/AJPH.2012.300829)

Intimate partner violence (IPV) directed against women is both a severe challenge to promoting gender equality and a significant public health problem impacting the lives of women throughout the world.[1] It is associated with a multitude of adverse physical, reproductive, and mental health outcomes for women and their children, and is a significant health burden for communities.[2–7] To date, research on IPV perpetration and victimization has primarily examined individual-level predictors,[8,9] although, increasingly, contextual factors that may allow for the perpetuation of such behavior are also being explored, including the role of neighborhood disadvantage, political violence, and lack of collective efficacy.[9–13] This article draws on a social determinants approach and, using multilevel modeling, builds on this literature to examine the role of community-level social norms on spousal violence.

Recognizing that in many countries across the globe a significant proportion of both women and men continue to view spousal violence perpetrated by the husband as a normal and justified occurrence in marriage,[14] we questioned whether social norms justifying IPV were positively associated with a woman's risk of becoming a victim of such violence. A study comparing 17 sub-Saharan African countries found that in most countries, more than half the women surveyed justified spousal violence in certain scenarios; however, the rates varied from as low as 28% in Madagascar to as high as 74% in Ethiopia.[15] Similarly, in Asia, rates of acceptance of spousal violence among women ranged from 29% in Nepal to 57% in India.[16] Studies from the Middle East also indicated a broad acceptance of spousal abuse, reaching as high as 87% in Jordan.[17–19]

Social norm theories have been forwarded in a number of different disciplines, including economics, political science, and social psychology.[20,21] Public health research, especially research on behavioral interventions, has often drawn on such literature to explain the prevalence of "negative" behaviors, such as heavy drinking or smoking. Social norms can constrain individual behaviors, through social enforcement or the sanctioning of certain behaviors based on implied consequences of not complying.[22,23] We may therefore expect higher rates of spousal violence in communities with more accepting norms around such violence. Some recent community-based interventions to combat violence against women focused on changing attitudes and norms as a key component.[24,25] However, there has been little quantitative research on the relationship between social norms around spousal violence and women's health. Some recent studies showed a positive association at the individual level between a woman's accepting attitudes toward spousal violence and her report of such violence, including in Nigeria.[17,26] However, to our knowledge, only 2 studies, both from India, examined social norms toward spousal violence at the societal level in relation to women's risk of victimization, independent of her personal attitudes toward spousal violence.[27,28]

In this article, we examined the hypothesis that permissive state-level social norms around spousal violence in Nigeria were positively associated with a woman's risk of victimization. It was inherently a multilevel question because we were interested in understanding the role of this contextual variable on spousal violence victimization, while also accounting for individual-level predictors. We selected Nigeria not only because it is the most populous country in Africa, with over 140 million people, but also because of the ethnic and religious diversity. There are about 374 ethnic groups, and about half the population is Muslim, 40% is Christian, and 10% follow indigenous religious practices.[29] As a federalist country, Nigeria is made up of 36 states and a Federal Capital Territory (FCT), with each having its own legal codes and unique sociopolitical and economic context. Sharia law is enforced in 12 states in the North, where the population

is predominantly Muslim, and civil and customary law is practiced in the other states. Given this heterogeneity in the legal system, including family law, as well as the geographical patterning by religious and ethnic affiliation, we expected that social norms toward IPV would vary by state, and that the prevalence of spousal violence would not be uniform across the country. To our knowledge, this was the first study to examine this question in a sub-Saharan African context.

METHODS

We used the 2008 Nigeria Demographic and Health Survey (2008 NDHS), a nationally representative cross-sectional survey of 33 385 women aged 15 to 49 years (97% response rate) and 15 486 men aged 15 to 59 years (93% response rate). The sampling frame was the 2006 National Census, and the sample was selected using a stratified 2-stage cluster design. There was a minimum target of 950 completed women interviews in each state, distributed proportionately among its urban and rural areas, to ensure reliable estimates for each state. The primary sampling unit (PSU) was defined on the basis of 2006 census enumeration areas, with a minimum requirement of 80 households per PSU. A total of 888 PSUs were included, 286 in urban areas and 602 in rural areas. All women between the ages of 15 and 49 years were interviewed in each PSU, and men were interviewed in every second household selected for the women's interview. Further details of the study sampling design and interview procedures can be found elsewhere.[29]

Three questionnaires were administered: household, women, and men. Data on attitudes toward violence were collected in the women's and men's questionnaires. In each household, 1 randomly selected woman was also administered a special module on domestic violence, only if there was privacy to ensure confidentiality. The present study was based on the 18 798 ever-married women in Nigeria who responded to the questions on spousal violence exposure (74.1% of the 25 364 ever-married women that were interviewed). Because only 1 woman per household was randomly selected to be administered the special module on domestic violence, our study excluded 6124 married women missing data on exposure to physical or sexual violence, either because they were not randomly selected to be administered the survey or because privacy could not be ensured. Additionally, we excluded 442 women missing responses on 1 or more individual-level covariates included in the models. Women who did not complete the violence module differed from respondents on nearly every sociodemographic variable considered. Nonrespondents were more likely to be older, less educated, less wealthy, living in households with more occupants, residing in nonurban areas, and to be in polygamous marital arrangements. There were no differences based on employment status or report of witnessing their father abuse their mother.

Measures

Spousal violence. Our outcome, exposure to spousal violence, was based on a woman's report of having experienced any form of physical or sexual violence perpetrated by her husband since the age of 15 years. The questions asked:

> (Does/did) your (last) husband ever do any of the following things to you: a) slap you? b) twist your arm or pull your hair? c) push you, shake you, or throw something that could hurt you? d) punch you with his fist or with something that could hurt you? e) kick you, drag you or beat you up? f) try to choke you or burn you on purpose? g) threaten or attack you with a knife, gun, or any other weapon? h) physically force you to have sexual intercourse with him even when you did not want to? i) force you to perform any sexual acts you did not want to?

A woman was considered to have experienced spousal violence if she reported affirmatively to any of the components in the question. We limited the scope of the variable to physical and sexual violence because our measure of social norms toward spousal violence was based on a set of questions that only assessed whether physical violence was permissible, including if a woman refused sex.

Social norms toward spousal violence. Social norms toward spousal violence were assessed by aggregating individual-level responses to 5 questions on a husband's right to beat his wife. Specifically, the questionnaire asked:

> Sometimes a husband is annoyed or angered by things which his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations? (1) "if wife burns the food"; (2) "if wife argues with the husband"; (3) "if wife goes out without informing the husband"; (4) "if wife neglects the children"; (5) "if the wife refuses to have sexual relations with the husband."

We created individual-level scores based on a scale from 0 to 5 for all men and women who were administered the questionnaire, including all 33 385 women and 15 486 men aged 15 to 59 years (i.e., not only our sample of ever-married women included in the present analysis). We created an average acceptance score for men and for women separately, and then calculated the average of men's and women's attitudes for each state. We chose to use this variable as a continuous score (0–5), to understand whether there would be benefits to women at an incremental level in reducing, before eventually eliminating, such accepting norms. For descriptive purposes, we also created a dichotomous variable that described the proportion of the state that accepted spousal violence in any of the 5 scenarios.

Covariates

Individual level. We included a number of individual demographic and socioeconomic variables: age, education, wealth, ethnicity, religion, marital type and status, employment status, and location (urban vs rural). We also included a variable on history of parental spousal violence based on a question that asked the woman whether her father beat her mother. All of these variables were included as categorical variables, as shown in Table 1. We also included the individual score on "attitudes toward spousal violence" as previously described, as a continuous variable from 0 to 5.

State level. At the state level, we included 2 variables to control for the level of development and legal framework in each state. The Human Development Index (HDI) is an index created by the United Nations Development Program based on life expectancy, literacy, and gross domestic product per capita. HDI is usually estimated at the national level, but the 2008–2009 Nigeria Human Development Report[30] included HDI scores for each state. The second state-level variable, Sharia law, was included as a dichotomous variable.

Statistical Analysis

We conducted our analyses using SAS, version 9.2 (SAS Institute, Cary, North

TABLE 1—Descriptive Characteristics of Ever-Married Women in Nigeria and by Exposure to Spousal Violence: 2008 Nigeria Demographic and Health Survey

Characteristics	Sample Characteristics,[a] No. (%) or Mean ±SD	Exposure to Spousal Violence,[b] No. (%) or Mean ±SD
Total	18 798 (100)	3506 (18.7)
Age, y		
15–19	1606 (8.54)	163 (10.1)
20–24	3076 (16.4)	540 (17.6)
25–29	4261 (22.7)	878 (20.6)
30–39	6002 (31.9)	1208 (20.1)
40–49	3853 (20.5)	717 (18.6)
Education		
No education	9040 (48.1)	1146 (12.7)
Primary	4216 (22.4)	1153 (27.3)
Secondary	4287 (22.8)	1039 (24.2)
Higher	1255 (6.68)	168 (13.4)
Wealth quintile		
Lowest	4888 (26.0)	724 (14.8)
Second	4071 (21.7)	683 (16.8)
Middle	3550 (18.9)	810 (22.8)
Fourth	3282 (17.5)	744 (22.7)
Highest	3007 (16.0)	545 (18.1)
Marital status		
Formerly married	884 (4.7)	317 (35.9)
Single-wife marriage	13 506 (71.9)	2385 (17.7)
Polygamous marriage	4296 (22.9)	783 (18.2)
Not reported	112 (0.6)	21 (18.8)
Employment status		
Employed	12 477 (66.4)	2674 (21.4)
Not employed	6321 (33.6)	832 (13.2)
Religion		
Catholic	1671 (8.89)	497 (29.7)
Other Christian	6743 (35.9)	1894 (28.1)
Muslim	10 006 (53.2)	1013 (10.1)
Traditionalist/other	378 (2.01)	102 (27.0)
Location		
Urban	5389 (28.7)	938 (17.4)
Nonurban	13 409 (71.3)	2568 (19.2)
Household size		
1–4 people	7774 (41.4)	1330 (17.1)
5–7 people	7333 (39.0)	1489 (20.3)
≥8 people	3691 (19.6)	687 (18.6)
Ethnicity		
Fulani and Hausa	6528 (34.7)	463 (7.1)
Igbo	2093 (11.1)	528 (25.2)
Yoruba	2691 (14.3)	378 (14.0)
Other	7486 (39.8)	2137 (28.5)

Continued

Carolina). We first conducted descriptive analyses for the sample as a whole and for women who experienced spousal violence. Second, we computed a series of multilevel logistic regression models using PROC GLIMMIX. Data were analyzed based on a multilevel structure with women (level 1) nested within PSUs (level 2), nested within states (level 3). We focused on the fixed effects of both individual- and state-level variables, but allowed for heterogeneity between states and between PSUs.

In a stepwise fashion, we fit four 3-level random intercepts models. The first model included only individual-level predictors and the second only state-level variables. The third model included the main state-level predictor: social norms around spousal violence and all individual-level variables. In the final model, we included HDI and Sharia law. Statistical significance was evaluated at $P<.05$.

RESULTS

Of the 18 798 ever-married Nigerian women in our sample, 18.7% reported exposure to spousal sexual or physical violence since the age of 15 years. The prevalence of spousal violence was geographically patterned by state, with 3% of ever-married women reporting exposure in the state with the lowest prevalence compared with 50% in the state with the highest prevalence (SD = 13%).

Table 1 presents the characteristics of the sample, and includes information on the number and percent of women reporting spousal violence based on demographic and other characteristics.

Table 2 shows the variation in state-level variables of interest across the 36 states and FCT and 888 PSUs. We found that 44% of women and 34% of men living in Nigeria believed that a husband was justified in hitting his wife in at least 1 of the scenarios presented. However, there was significant variation at the state level in terms of these beliefs. In the least permissive state, only 9% of respondents justified violence in any of the 5 scenarios, yielding an average score of 0.20 in our continuous scale, whereas in the most permissive state, 75% of respondents justified violence in at least 1 scenario, with a score of 2.02 scenarios under which a husband was justified in beating his wife. At the PSU level, the range

TABLE 1—*Continued*

History of family abuse		
Father abused mother	2011 (10.7)	897 (44.6)
Father did not abuse mother	16 787 (89.3)	2609 (15.5)
Attitudes toward spousal violence[c]		
Do not accept violence	9893 (52.6)	1502 (15.2)
Accept violence	8905 (47.4)	2004 (22.5)
Continuous score on 0-5 scale	1.41 ±1.85	1.73 ±1.84

Note. Data are drawn from the 2008 Nigeria Demographic and Health Survey and include ever-married women that responded to the additional Domestic Violence special module (administered to 1 randomly selected woman in each household when privacy was assured) and did not have missing data on any of the variables. Spousal violence includes physical and sexual violence perpetrated by a husband or former husband (excludes emotional violence). The sample size was n = 18 798.

[a]Number and percentage of women with the descriptive characteristic out of the total sample.

[b]Number and percentage of women with the characteristic who reported spousal sexual and physical violence since age 15 years.

[c]Attitudes toward violence—this variable was created based on 5 questions on whether it is justified for a husband to beat his wife. The first 2 rows are based on a dichotomous classification (if responded no to all 5 questions—do not accept violence) and the last as a continuous score from 0 to 5.

was greater (0–2.83). Table 3 presents the results of a series of multilevel logistic regression models predicting report of spousal physical or sexual violence, with *i* women nested in *j* PSUs nested in *k* states.

Model 1, which only included individual-level sociodemographic characteristics, showed that each 1 point increase in acceptance of violence was associated with an 11% higher odds of spousal violence (95% confidence interval [CI] = 1.09,1.14). In addition, spousal violence was significantly associated with a range of demographic variables, including age, religion and ethnicity, and variables related to socioeconomic status. Specifically, women with the highest level of education were significantly less likely to report violence than women in the other 3 categories. Somewhat unexpected, women who were not employed and women in the lowest wealth quintile were significantly less likely to report violence, controlling for all other individual variables. Household composition was also shown to be important, with women in polygamous marriages, those in larger households (more than 4 people), and those formerly married significantly more likely to report exposure to spousal violence. Finally, a history of parental spousal violence was particularly strongly associated with a woman's personal exposure to violence from her husband (odds ratio [OR] = 2.55; 95% CI = 2.29, 2.85).

TABLE 2—State-Level Characteristics: Influence of Community Social Norms on Spousal Violence, Nigeria, 2008

Characteristic	Mean	Median	Minimum	Maximum	SD
Prevalence of physical or sexual violence, %	21	16	3	50	13
State-level continuous attitudes score[a]	1.09	1.07	0.20	2.02	0.51
Proportion of population endorsing spousal violence in ≥ 1 setting,[a] %	39	39	9	75	16
Human Development Index (×100)	47	47	28	72	10
Sharia law	0.32	0.00	0.00	1.00	0.47

Note. The sample size was n = 37.

[a]Percentage of men and women who reported that it is justified for a husband to beat his wife in at least 1 of the 5 scenarios provided.

In model 2, we examined state-level variables alone and showed that permissive social norms around spousal violence at the state level were significantly and strongly associated with higher levels of spousal violence (OR = 2.58; 95% CI = 1.60, 4.15). By contrast, state-level HDI was not statistically significantly associated with spousal violence. Sharia law was also significantly associated with spousal violence, such that, on average, states governed by Sharia law had lower rates of spousal violence than states that were not.

In Model 3, we observed that state-level social norms around spousal violence were not significantly associated with spousal violence, when controlling for individual-level characteristics. In the full model, after variables for HDI and Sharia law were included (model 4), the association between social norms and spousal violence became significant, such that each 1 point increase in attitudes toward violence was associated with an 80% increase in the odds of spousal violence. Sharia law remained significantly associated with spousal violence, after accounting for individual characteristics, although the magnitude of the protective effect decreased (model 2 OR = 0.24 vs model 4 OR = 0.58). The associations for the individual-level characteristics were largely unchanged in the fully adjusted model.

In sensitivity analyses, we tested for the presence of cross-level interactions between state-level social norms and individual-level attitudes toward spousal violence as well as individual-level educational attainment, but neither was significant (data not shown). As a robustness test, we additionally ran the full model with social norms aggregated at the PSU level, instead of the state level, and found that the association was significant and in the same direction (data not shown).

Table 4 displays the state and PSU random effect variance. The null model indicated that spousal violence was clustered at both the PSU and state level, with more variability between states than within states. Comparing the final model with the full model, the variance of the state random effect decreased from 0.826 to 0.282 (66% decrease) when both individual and contextual variables were included. At the PSU level, the decrease was primarily because of the individual level factors and was reduced from 0.259 to 0.161 (38% decrease).

TABLE 3—Adjusted Odds Ratios from Random Intercepts Three-level Logistic Models of Spousal Violence Among Ever-Married Women: Influence of Community Social Norms on Spousal Violence, Nigeria, 2008

Variable	Model 1,[a] OR (95% CI)	Model 2,[b] OR* (95% CI)	Model 3,[c] OR (95% CI)	Model 4,[d] OR (95% CI)
State level				
Attitudes toward violence (scale 0–5)		2.58* (1.60, 4.15)	1.30 (0.87, 1.93)	1.80* (1.17, 2.77)
Human Development Index (0–100)		1.02 (0.995, 1.05)		1.01 (0.99, 1.04)
Sharia Law (Ref = not Sharia State)		0.24* (0.14, 0.41)		0.58* (0.35, 0.95)
Individual level				
Age, y				
40–49 (Ref)	1.00		1.00	1.00
15–19	0.89 (0.72, 1.09)		0.89 (0.72, 1.09)	0.89 (0.72, 1.10)
20–24	1.17* (1.01, 1.36)		1.17* (1.01, 1.36)	1.17* (1.01, 1.36)
25–29	1.21* (1.07, 1.38)		1.21* (1.07, 1.38)	1.21* (1.07, 1.38)
30–39	1.11 (0.98, 1.24)		1.11 (0.98, 1.24)	1.11 (0.98, 1.24)
Education				
Highest (Ref)	1.00		1.00	1.00
No Education	1.74* (1.39, 2.18)		1.74* (1.39, 2.18)	1.74* (1.39, 2.18)
Primary	2.08* (1.69, 2.56)		2.08* (1.69, 2.56)	2.07* (1.68, 2.55)
Secondary	1.81* (1.49, 2.21)		1.81* (1.49, 2.21)	1.81* (1.49, 2.20)
Wealth quintile				
Highest (Ref)	1.00		1.00	1.00
Lowest	0.76* (0.62, 0.94)		0.76* (0.62, 0.93)	0.77* (0.62, 0.94)
Second	0.85 (0.70, 1.03)		0.85 (0.70, 1.03)	0.85 (0.70, 1.03)
Middle	1.05 (0.88, 1.24)		1.04 (0.88, 1.24)	1.04 (0.88, 1.24)
Fourth	1.06 (0.91, 1.24)		1.06 (0.91, 1.24)	1.06 (0.91, 1.23)
Marital status				
Single-wife marriage (Ref)	1.00		1.00	1.00
Polygamous marriage	1.21* (1.09, 1.35)		1.21* (1.09, 1.36)	1.21* (1.08, 1.35)
Formerly married	2.02* (1.71, 2.39)		2.02* (1.71, 2.39)	2.02* (1.71, 2.39)
Not reported	1.02 (0.60, 1.73)		1.02 (0.60, 1.73)	1.02* (0.60, 1.72)
Employment status				
Employed (Ref)	1.00		1.00	1.00
Not employed	0.83* (0.75, 0.92)		0.83* (0.75, 0.92)	0.83* (0.75, 0.92)
Religion				
Other Christian (Ref)	1.00		1.00	1.00
Traditionalist/other	1.13 (0.86, 1.49)		1.13 (0.85, 1.49)	1.13 (0.86, 1.50)
Catholic	0.99 (0.85, 1.15)		0.99 (0.85, 1.15)	0.98 (0.84, 1.14)
Muslim	0.73* (0.63, 0.85)		0.73* (0.62, 0.85)	0.75* (0.64, 0.87)
Location				
Urban (Ref)	1.00		1.00	1.00
Nonurban	0.96 (0.84, 1.10)		0.96 (0.84, 1.10)	0.97 (0.85, 1.10)
Household size				
1–4 people (Ref)	1.00		1.00	1.00
5–7 people	1.14* (1.00, 1.29)		1.13* (1.00, 1.29)	1.14* (1.00, 1.29)
≥	1.18* (1.08, 1.3)		1.18* (1.08, 1.3)	1.18* (1.08, 1.30)

Continued

DISCUSSION

We documented a highly geographically patterned risk for spousal violence by state in Nigeria. Although overall 19% of ever-married women reported sexual and physical violence perpetrated by their husband, state-level prevalence ranged from 3% to 50%. This finding is important for policymakers in Nigeria, who might target resources for prevention based on prevalence, but also underscores the usefulness of multilevel modeling for simultaneously examining contextual and compositional factors to understand upstream social determinants of spousal violence and explain regional variations.[31,32] Building on recent research that examined contextual determinants of IPV, including neighborhood poverty and conditions,[9,11] violent crime,[28] and community-level literacy,[33] we confirmed our hypothesis that permissive social norms toward spousal violence were positively associated with a woman's exposure to sexual and physical violence perpetrated by her husband in Nigeria, controlling for individual characteristics.

There are 2 broad categories of social norms: descriptive norms that imply a perceived consensus on the pattern of behavior (i.e., in our community men hit their wives), and injunctive norms that describe consensus about a prescribed or prohibited behavior (i.e., in our community it is acceptable for men to hit their wives).[21,34] In this article, we focused primarily on injunctive norms around whether it was justified for a husband to hit or beat his wife if he was angered by her behavior. We showed that every additional unit increase in the state-level score on our social norms scale (representing an additional scenario where violence was justified) was associated with 80% higher odds of spousal violence, controlling for individual-level characteristics. This finding is consistent with 2 previous studies, both from India, showing a positive association between community-level norms toward violence and the actual occurrence of some form of violence.[27,28] Our study adds to this limited literature because, unlike previous studies, it used both men's and women's responses to create the state-level variable on social norms,

TABLE 3—*Continued*

Ethnicity			
Fulani and Hausa (Ref)	1.00	1.00	1.00
Igbo	2.04* (1.68, 2.47)	2.05* (1.69, 2.48)	1.96* (1.62, 2.38)
Yoruba	1.92* (1.44, 2.58)	1.95* (1.45, 2.61)	1.81* (1.35, 2.44)
Other	1.85* (1.40, 2.45)	1.89* (1.43, 2.51)	1.77* (1.34, 2.34)
Witness violence by father			
Did not witness father (Ref)	1.00	1.00	1.00
Witnessed father beat mother	2.55* (2.29, 2.85)	2.55* (2.29, 2.85)	2.54* (2.28, 2.84)
Accept violence (continuous 0–5)	1.11* (1.09, 1.14)	1.11* (1.09, 1.14)	1.11* (1.09, 1.14)

Note. CI = confidence interval; OR = odds ratio.
[a]Three-level hierarchical logistic model including only individual-level characteristics.
[b]Three-level hierarchical logistic model including only state-level variables: social norms, Human Development Index, and dummy variable for Sharia law.
[c]Three-level hierarchical logistic model including individual-level characteristics and main state-level predictor: social norms.
[d]Three-level hierarchical logistic model including all individual-level characteristics and all state-level variables.
*$P < .05$.

which likely better reflected community-wide norms. It was also the first study, to our knowledge, to examine this question in a sub-Saharan African setting and to account for structural differences at the contextual level, including the legal framework.

At the individual level, we showed a significant positive association between a woman's accepting beliefs toward spousal violence and her own report of sexual and physical violence victimization. This finding is consistent with other individual-level studies from Nigeria,[26] Uganda,[35] and the Middle East.[17,18] Our finding adds to this individual-level literature through multilevel analysis, and suggests that there might be different processes at the state level and the individual level through which beliefs and norms impact a woman's exposure to violence in the home (because both remained significant in the final model). We examined but did not find evidence for a cross-level interaction between these 2 variables, as was found in India.[27] Our models also showed that witnessing maternal abuse was highly associated with a woman's own experience with violence, a finding consistent with studies that showed an intergenerational cycling of violence.[36] Further qualitative and quantitative research could examine the relationship between beliefs about the acceptability of violence and its relation to witnessing violence,[35] taking into account the potential for reverse causation, whereby women rationalize violence after they have been exposed to it either as children (witnessing maternal abuse) or by their own partner, to understand the intergenerational cycling of both violence and social norms that accept such behavior.

At the contextual level, we also found that women living in states with Sharia law were less likely to report spousal violence. Although further research is needed to understand how legal, political, social, and religious factors intersect to impact rates of domestic violence,[37] this finding could be consistent with the theory that women are exposed to violence when they transgress traditional gender roles.[38,39] If women living in states governed by Sharia law more readily fulfill traditional gender roles, because of more conservative legal and social contexts, we might expect to find less spousal violence motivated by a desire to "punish" transgression. Although most studies have shown a negative association between female empowerment and IPV,[40] those showing a positive association suggested that in the short term men might be more violent toward women as traditional gender power dynamics in the home become obsolete and new ones are renegotiated.[14,36,38,41] This theory is also consistent with our finding that employed women were more likely to report spousal violence than unemployed women. If "transition" is a risk factor,[38] and states in Nigeria are following different trajectories with regards to women's empowerment, we might expect state-level variation. Violence prevention efforts and empowerment-related programs should consider these potentially complex dynamics.

The cross-sectional design of this study posed a number of limitations, including the inability to assess causal relationships. At the same time, although state-level social norms were measured in 2007, the exposure to spousal violence asked women to report on their experience since age 15 years. For older women, in particular, norms might have been different when they experienced the violence. Similarly, Sharia law did not become the legal framework in states the same year. Another limitation was that not all women were

TABLE 4—Random Effect Variance at the State and PSU Levels: Influence of Community Social Norms on Spousal Violence, Nigeria, 2008

		Model 1: Compositional (Individual Variables Only)		Model 2: Contextual (State Variables Only)		Model 3: Social Norms and Individual Variables		Model 4: Full Model	
	Null Model, Variance (SE)	Variance (SE)	% Change From Null	Variance (SE)	% Change From Null	Variance (SE)	% Change From Null	Variance (SE)	% Change From Null
State-level	0.826 (0.203)	0.350 (0.092)	57.6	0.356 (0.095)	56.9	0.342 (0.091)	58.6	0.282 (0.078)	65.9
PSU-level	0.259 (0.031)	0.162 (0.026)	37.5	0.259 (0.030)	0	0.162 (0.026)	37.5	0.161 (0.026)	37.8

Note. PSU = primary sampling unit.

administered the domestic violence module. We examined the characteristics of women that did not receive the module, and there were significant differences in the level of education, marital status, and others, which limits the generalizability of our results. Finally, this study could not address the complex issue of differential underreporting of IPV, which might be influenced by a number of individual, household, and community factors that were not adjusted for in the present study. Qualitative research is needed to gain insight on factors that influence reporting accuracy of IPV in Nigeria.

Given global efforts to end violence against women, this study is important both for policymakers and service providers. It underscored how social factors impact spousal violence perpetration in the developing world and suggested that solutions should be expanded to include the community at large. Guided by a political economy of health framework,[42] we believe that social norms capture a broader social context of gender inequity that is perpetuated informally, and reflect institutionalized or structural disparities in various domains, including employment, education, and the home. This analysis was unable to capture the complexity of these dynamics, given its cross-sectional data structure, but we suggest that greater attention is needed in future research on the interaction between social norms, gender roles, and the intersection of gender inequality with other forms of discrimination (based on ethnicity, class, and so on) that make certain women, in certain communities, more susceptible to violence. ■

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Contributors

All authors were involved in the design of the study and in interpreting data and results. N. Linos and N. Slopen were primarily responsible for the statistical analysis and drafting the article, and I. Kawachi, L. Berkman, and S. V. Subramanian provided guidance and supervision at every stage.

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