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Women's Work, Gender Roles, and Intimate Partner Violence in Nigeria

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Abstract The purpose of this study was to determine the contribution of women's labor force participation to the risk of intimate partner violence (IPV) victimization in the past 12 months, using data for 20,635 currently married women aged 15–49 years from the 2013 nationally representative Nigeria Demographic and Health Survey. Multilevel logistic regression models of sexual and physical IPV, with interactions between women's work and social norms regarding traditional gender roles, were developed. Approximately 23% of women aged 15–49 years reported IPV victimization in the past 12 months. Results revealed that non-cash work relative to unemployment was positively associated with both forms of IPV victimization, after controlling for other factors. Women's engagement in cash work was positively correlated with sexual IPV. The positive association between cash work and physical IPV victimization was significantly larger for women who resided in localities with greater male approval of wife beating. In localities where husband-dominated decision making was more common, a spousal education gap that favored husbands was more positively associated with sexual IPV. The findings call for integrated IPV prevention and economic empowerment programs that consider gender norms and gender-role beliefs and are adapted to the locality setting, in order to promote social environments in which women can reap the full benefits of their economic empowerment.

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Introduction

Intimate partner violence (IPV) against women and girls is a pervasive human rights violation and a relentless health and social problem worldwide. Globally, an estimated 15–71% of women have experienced physical or sexual violence in their lifetime and 4–54% experienced these forms of violence in the past 12 months (Garcia-Moreno et al., 2006).

In Nigeria, women's lifetime exposure to IPV from their current husband or partner was 19% for emotional IPV, 14% for physical IPV, and 5% for sexual IPV (National Population Commission & ICF International, 2014). Estimates of lifetime IPV against women from small localized samples in Nigeria have ranged from 31.4 to 61.1% for psychological violence, from 19.9 to 31.4 for sexual violence, and from 7.3 to 31.4% for physical violence (Mapayi et al., 2013), although comparison across studies is limited by the use of non-standardized instruments and measures, and by varying degrees of under-reporting.

The adverse health effects of IPV against women and girls have been well documented. Women who are victims of IPV are at greater risk of posttraumatic stress disorder, anxiety, depression, suicidal behavior, and psychological distress (Do, Weiss, & Pollack, 2013; Johnson, Giordano, Longmore, & Manning, 2014; Mapayi et al., 2013) as compared to women who are not. Reproductive health consequences of IPV include, but are not limited to, unwanted pregnancy, gynecological disorders, pregnancy termination, pregnancy complications, and pelvic inflammatory diseases (Hall, Chappell, Parnell, Seed, & Bewley, 2014; Ismayilova & El-Bassel, 2014). Sexual violence, in particular, has been associated with victims' increased involvement in sex work, inconsistent condom use, fear of the perceived consequences

of negotiating condom use, higher risk of acquiring a sexually transmitted disease and HIV, and an increased likelihood of substance use (Fontenot, Fantasia, Lee-St John, & Sutherland, 2014; Mittal, Senn, & Carey, 2013; Schiff et al., 2014; Urada et al., 2013; Winter & Stephenson, 2013).

Male unemployment and the loss of the male breadwinner role have long been noted as stressors in marital relationships and as risk factors for women's IPV victimization (Cunradi, Todd, Duke, & Ames, 2009; Moore et al., 2008). One of the early studies on the link between socioeconomic status and IPV documented male frustrations brought on by low education, low status jobs, and unemployment as the primary reasons underlying women's physical violence victimization in marriage (Gelles, 1972). However, the contributions of women's employment to IPV are less well understood, not only because of the complex interplay between socioeconomic factors and gender, but also due to differing definitions and measurement of women's work and abuse. Empirical evidence is particularly sparse for low- and middle-income countries. Some studies found that currently employed women were more likely to experience sexual and/or physical IPV than women who were not currently working (Hjort & Villanger, 2011; Rahman, Hoque, & Makinoda, 2011).

Several, often conflicting, theoretical explanations of the associations between women's work and IPV have been proposed. Social exchange perspectives (Gelles, 1983) and household bargaining models posit that as a wife's relative resources increase, she gains more power in her marriage, leading to a lower risk of IPV victimization (England & Farkas, 1986; Farmer & Tiefenthaler, 1997; Gibson-Davis, Magnuson, Gennetian, & Duncan, 2005), and have been supported by findings that as the gender-wage gap decreased so did violence against women (Aizer, 2010).

In contrast, relative resource theory contends that as women become more economically independent, there may be a "male backlash" as husbands with fewer resources than their wives use violence to compensate for their labor force difficulties and the loss of their instrumental and symbolic role as breadwinner (Gibson-Davis et al., 2005). In line with this theory, Macmillan and Gartner (1999) found that women's labor force participation was associated with a lower risk of spousal violence when the male partner was employed but substantially increased when the male partner was unemployed. It was suggested that a wife's economic independence constituted a challenge to social prescriptions of male dominance and female dependence, contributing to husbands' use of violence to assert their power and dominance over their wives. In Nigeria, women with higher earnings or status than their husbands/partners (Antai, 2011a of Nigeria; Kaukinen, 2004) were at greater risk of physical and sexual IPV than women with the same earnings (Antai, 2011a), lending support to the notion that spousal asymmetries in income and occupational status are important considerations for understanding the etiology of IPV (McCloskey, 1996).

The effect of spouses' relative resources on the likelihood of IPV has been found to be contingent on the husband's gender ideology (Atkinson, Greenstein, & Lang, 2005). Gender-role strain theory (Pleck, 1995) contends that men who rigidly adhere to socially constructed standards of male and female behavior and traditional gender-role norms may experience negative psychological consequences and stress when these roles are violated (Levant, 2011), a phenomenon referred to as gender-role stress. Qualitative studies in Nigeria have noted that men are more likely to see their wives as homemakers rather than wage workers due to deep-rooted views of women's roles as daughters, unpaid household laborers, and mothers (Anugwom, 2009). The increasing tendency for Nigerian women to participate in paid employment outside of the home is perceived as a departure from traditional norms, and it has been observed that the risk of IPV tends to increase if women bring in substantial income or if husbands perceive their authority and gender roles as being threatened by women's work (Ezeah, 2013).

Patriarchy, the institutional sanctioning of women's subjugation in marriage, male dominance and control over women, and social values that legitimize or support violence against women are often considered to be at the core of women's IPV victimization in Nigeria, as in other parts of the world (Adebayo & Kolawole, 2013; Antai, 2011b; Eze-Anaba, 2007; Tenuche, 2011). IPV against women often results from failure to adhere to social expectations regarding women's behavior toward their husbands. Nagging, refusal to have sex with one's husband, challenging a husband's behavior (e.g., his marriage to another wife or drunkenness), not preparing meals on time, having or being suspected of having a sexual relationship outside of marriage, and accusations of witchcraft have been considered as justifiable reasons for a husband to assault his wife (Esere, Idowu, Durosaro, & Omotosho, 2009; Eze-Anaba, 2007; Kunnuji, 2015).

A positive association between IPV victimization and women's personal acceptance of wife beating in situations in which a wife fails to perform her traditional roles has been documented (Linos, Slopen, Subramanian, Berkman, & Kawachi, 2013). Drawing on Heise's (1998) socioecological model of IPV, some studies also showed that as the proportion of women (Antai & Adaji, 2012) or men (Uthman, Moradi, & Lawoko, 2011) in the community with tolerant attitudes toward wife beating increased, so did the women's odds of sexual and emotional IPV victimization. These findings were consistent with the argument that the social approval of violence as expressive or instrumental behavior raised the potential rewards of violence relative to its costs (Gelles, 1983), especially in settings where women had lower social, legal, and economic status or less access to institutional safeguards.

Feminist perspectives contend that economic and social processes operate to support a male-dominated social order characterized by gender hierarchies, the systematic subordination of women, and the normalization of women's IPV victimization

(Dobash & Dobash, 1979; Dobash, Dobash, Wilson, & Daly, 1992; Hunnicutt, 2009; Yllo, 1993). These processes have contributed to wide gender disparities in cash employment in Nigeria. In the agricultural sector, the vast majority of women are engaged in subsistence farming, while cash crop production is dominated by men (Owoyemni & Olusanya, 2014). It is estimated that one in two Nigerian women spends time doing unpaid work, while one in every two Nigerian men spends time on income-generating pursuits (Angel-Urdinola & Wodon, 2010). In 2004, 29.5% of women were employed in the public sector compared to 70.5% of men (British Council Nigeria, 2012). The informal sector employs about 46% of the Nigerian female labor force, mainly in microenterprises such as petty trading, transport, restaurants, and home-based manufacturing (Fapohunda, 2012a). These jobs often do not require formal education and are characterized by high levels of self-employment and part-time work which afford women the flexibility that enables them to meet childbearing and family responsibilities, low wages, lack of social benefits such as health insurance or pension, lack of social security provisions, and non-coverage by legislation (Adebayo, 2011; British Council Nigeria, 2012; Fapohunda, 2012b). Not having full-time paid employment and economic dependence have also been associated with an increased risk of IPV victimization among Nigerian women (Adebayo & Kolawole, 2013; Eze-Anaba, 2007), which supports the conclusion of Vyas and Watts (2009) that context-specific factors may determine whether women's economic independence is a protective or risk factor for IPV.

Although feminist scholars have suggested that social constructions of femininity interact with women's economic position to determine their risk of violence victimization, little attention has been paid to the ways that structural factors and social constructions of gender interact to determine IPV victimization rates among women (Anderson, 1997). Some studies have noted that in communities where traditional ideas about the status and roles of women are prevalent, the influence of individual-level measures of women's socioeconomic status on IPV may be reduced, reversed, or exacerbated. For example, Boyle, Georgiades, Cullen, and Racine (2009) found that acceptance of maltreatment at the community level was positively associated with IPV at both the individual and community levels and muted the protective influence of women's education. However, the moderating influences of community IPV norms on individual-level associations between women's work and IPV have rarely been explored.

The objectives of the study were to: (1) determine if women's work was a risk or protective factor for IPV; (2) determine whether the association between women's work and IPV victimization varied across localities; and (3) determine if the association between women's work and IPV was muted, reversed, or amplified in localities exhibiting greater male acceptance of IPV and husband dominance in decision making. The study built on research conducted by Antai (2011a) and Uthman et al. (2011) on the association between community IPV norms and IPV, which demonstrated that the level of community acceptance of IPV was associated with increased risks of IPV victimization among Nigerian women. The present study extended this research by investigating the intersection between community norms and women's work in determining IPV risk. Gender ideology that supports husband dominance and wife beating can undermine women's structural gains and jeopardize their health and contributions to economic development. An understanding of the role of social norms in the association between women's work and IPV has implications for the design of policies to support women's economic self-sufficiency and minimize or eliminate their IPV victimization experiences.

Method

Participants

The analysis was based on secondary data from the 2013 Nigeria Demographic and Health Survey, which was implemented by the National Population Commission on a nationally representative sample of 40,320 households and 39,902 women aged 15–49 years (National Population Commission & ICF International, 2014). The survey used a stratified three-stage cluster sampling design. Administratively, Nigeria is divided into 36 states and the Federal Capital Territory, Abuja. Each state is subdivided into local government areas (LGAs), and each LGA is divided into localities, with each locality being subdivided into census enumeration areas. Face-to-face individual interviews were conducted with all women aged 15–49 years in the households and all men aged 15–59 years in a subsample of half of the households. The Woman's Questionnaire was designed to collect information on a wide range of topics including, but not limited to, background characteristics of the participant, fertility, marriage, sexual activity, work, decision making, partner's characteristics, and domestic violence. The Man's Questionnaire collected similar information in less detail and did not include a domestic violence module.

Measures and Procedure

The domestic violence module was administered to one randomly selected woman per household. Spousal violence was measured using a modified version of the Conflict Tactics Scale (Strauss, 1990). Ever married women were asked about lifetime and recent (past 12 month) experiences of violence in their current marriage or in their most recent marriage if they were widowed, divorced, or separated. Women who experienced marital violence in the past 12 months were asked about disclosure of and help seeking for violence. Interviewers were asked to interrupt the interview if the woman's husband or another adult was

trying to listen, came into the room in which the interview was being conducted or tried to interfere in some other way.

Ethical approval of the survey instruments and procedures was granted by Ethics Committee of ICF International, Calverton, USA, and by the National Ethics Committee of the Federal Ministry of Health, Nigeria. Written consent was obtained from all participants prior to the interview, and data were collected confidentially.

Our outcomes measured women's sexual and physical IPV victimization in the past 12 months, each of which was defined as a binary variable. Questions on IPV were based on the Revised Conflict Tactics Scale (Strauss, 1990). Sexual violence measured whether the women's husband/partner physically forced her to have sexual intercourse with him even when she did not want to, physically forced her to perform any other unwanted sexual acts, or forced her with threats or in any other way to perform unwanted sexual acts. The occurrence of the any of following acts committed by a husband/partner in the same reference period constituted physical violence: (1) pushed her, shook her, or threw something at her; (2) slapped her; (3) twisted her arm or pulled her hair; (4) punched her with his fist or with something that could hurt her; (5) kicked her, dragged her, or beat her up; (6) tried to choke her or burn her on purpose; and (7) threatened her or attacked her with a knife, gun, or other weapon.

Our primary *individual-level variables* were women's work and education, and household poverty. Women's employment status excluded housework and was ascertained from responses to the following questions: (1) "Aside from your own housework, have you done any work in the last 7 days?" (2) "As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last 7 days, have you done any of these things or any other work?" (3) "Although you did not work in the last 7 days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave, or any other such reason?" (4) Have you done any work in the last 12 months?" Work in the past 12 months distinguished women who were unemployed (reference group) from those who did not work for cash (were unpaid or paid only in kind), and those who earned cash.

Education measured the highest level of schooling attended by the woman and comprised three groups: uneducated (reference group), primary, and secondary or higher. An index of household wealth was created from household amenities and possessions and divided into quintiles. The first and second quintiles constituted poor households and were assigned the value of "0," while the third, fourth, and fifth quintiles were categorized as relatively non-poor and assigned the value of "1." We also controlled for exposure to physical violence in the family of origin, which was defined as a binary variable indicating whether participant's father ever beat her mother, and for age and number of children ever born, both of which were defined as reported. Religion was a binary variable identifying whether the woman was Christian. Ethnicity comprised five "native" language groups: Hausa (reference group), Fulani, Igbo, Yoruba, and other.

The regressions controlled for seven relationship characteristics. Type of marriage distinguished monogamous (reference group) from polygynous unions. Marital control exerted by the husband/partner over the participant measured how many of the following specific acts of controlling behaviors were perpetrated by the husband/partner: husband was jealous or got angry if she talked to other men, accused her of being unfaithful, did not permit meetings with her female friends, tried to limit her contact with her family, insisted on knowing where she was at all times, and did not trust her with any money (Cronbach's alpha = 0.89). Other measures of relationship control were: (1) personal acceptance of wife beating and (2) participation in household decision making. Personal acceptance of wife beating was a composite variable created from responses to five questions asking whether a husband was justified in beating his wife under the following circumstances: if she goes out without telling him; if she neglects the children; if she argues with him; if she refuses to have sex with him; and if she burns the food. The measure demonstrated very good internal consistency (Cronbach's alpha = 0.91).

Women's participation in household decision making was a composite variable indicating how many of the following decisions were made by the participant either alone or with her husband/partner: her health care; major household purchases; visits to her family or relatives; and what is done with the husband's earnings. Cronbach's alpha for the resulting additive index was 0.87.

Variables measuring relationship inequality included: (1) spousal age gap, a binary variable measuring whether the husband/partner was 10 or more years older than her and (2) spousal education gap, a measure of status inconsistency, which identified whether the husband/partner's had five or more years of schooling than the participant. The analysis also controlled for husband's alcohol consumption (yes versus no), which was derived from the question: "Does (did) your (last) (husband/partner) drink alcohol?"

At the locality level, IPV norms were defined in terms of level of acceptance of wife beating among men residing in the locality, as reported in the Man's Questionnaire. Men were asked whether a husband was justified in beating his wife under the following circumstances: she goes out without telling him; she neglects the children; she argues with him; she refuses to have sex with him; and she burns the food. Responses were aggregated across all men interviewed in the locality and our measure reflected the percentage of men in the locality who believed that a husband was justified in beating his wife under one or more circumstances.

The second locality-level measure was a proxy for gender roles and captured the percentage of currently married men in the locality who reported that they were the sole decision maker

and was based on the following questions in the Man's Questionnaire: Who usually decides how the money you earn will be used? Who usually makes decisions about health care for yourself? Who usually makes decisions about making major household purchases? The response categories were: you, your wife/partner, you and your wife/partner jointly, or someone else. The numerator captured men who reported that they made all three decisions alone. For the bivariate analysis, localities were divided into tiers: low, medium, and high. Type of place of residence was a binary variable differentiating urban from rural localities (reference group). Region of residence consisted of two groups: north (reference group) and south.

Statistical Analysis

The analysis was based on currently married women, with marriage being defined to include informal cohabitation. Descriptive statistics were calculated for all variables in the study and prevalence estimated for each form of IPV victimization. We computed *F*-tests to investigate the association between the prevalence of sexual and physical IPV in the past 12 months and selected sample characteristics, taking into consideration the multistage sampling design. We developed incrementally two-level logistic regression models that offered simultaneous consideration of *i* women (Level 1) nested in *j* localities (Level 2) to account for the hierarchical structure of the data. As a minimum sample size of 50 higher-level groups is recommended for accurate estimation of standard errors in multilevel analysis (Maas & Hox, 2005) and Nigeria has only 37 states (including the Federal Capital Territory), the state level was ignored.

The multilevel estimates were based on a second-order predictive quasi-likelihood procedure, with the assumption that each IPV victimization outcome had a binomial distribution. The assumption of binomial variation was tested for each outcome separately by fitting extra-binomial variation. The resulting parameters were close to 1.0, suggesting that the Bernoulli distribution was an adequate assumption for the data. The regression models were estimated using reweighted iterative generalized least squares.

We estimated six models for each form of IPV. The first model was a null (empty) model with no explanatory variables and measured the relative importance of individual- and locality-level factors in accounting for the total residual variance in each form of IPV. The second model was a simple single-level logistic regression model with individual-level variables to permit a test of whether multilevel modeling was needed. Next, we estimated a two-level random intercept model to allow for the probability of IPV victimization to vary across localities, with all individual-level variables fixed, the assumption being that the effects of these explanatory variables were the same for each locality. The fourth model was a random coefficient model and assessed whether the differences in the probability of IPV victimization between unemployed women, those who did not work for cash, and those who worked for cash varied across localities. The significance of the random parameters was tested using an approximate Wald test. The fifth model added the locality-level variables. The sixth model added cross-level interaction terms between social norms and (1) women's work; (2) the spousal education gap; and (3) personal approval of wife beating. For ease of interpretation, the results were presented in the form of odds ratios (OR) and 95% confidence intervals (CI). For Models 2–6, we tested the improvement of each model over the previous using a chi-square test based on the deviances, with the degrees of freedom (*df*) equal to the difference in the number of parameters between the two models of interest.

The bivariate analyses were conducted using Stata version 12.0. Variance-inflation factors were estimated to assess multicollinearity and found to be acceptable, with the average VIF being 1.7 and the highest 3.2 (for secondary/higher education and other ethnic groups). The prevalence data were weighted to account for unequal probabilities of selection in the sample and non-response rates. The multilevel analysis was conducted using MLwiN 2.10 (Rasbash, Steele, Browne, & Goldstein, 2009) and was unweighted. There were 20,635 currently married women aged 15–49 years who were living in 883 localities and had no missing data on variables included in the analysis. Based on the recommendations of Maas and Hox (2005), the number of localities and the average sample sizes of 23.4 women per locality were considered adequate for modeling reliable locality-level associations and avoiding biased estimates of the second-level standard errors.

A total of 324 currently married women (1.6%) were excluded from the analysis due to missing values on one or more variables of interest. We used SVY procedures and *F*-tests in Stata to compare the characteristics of included and excluded cases. Compared to included cases, significantly more excluded women had secondary or higher education, had a history of father-to-mother physical violence, were partnered to men who consumed alcohol, and lived in localities with high levels of male approval of wife beating, and in the south. These differences were significant at the 5% level and constituted a source of bias.

Results

Characteristics of the Sample

Table 1 presents sociodemographic characteristics of the sample. Women in the sample were on average 31.3 years old and had given birth to 4.0 children. A third of women were unemployed and about 63% worked for cash. A third had attended secondary or higher levels of education but nearly half were uneducated. Forty-four percent of participants lived in poor households. A third of women were Hausa and a similar proportion was Yoruba, Igbo, or Fulani. Thirty-eight percent of the sample was Christian and a slightly higher proportion had wit-

Table 1 Distribution of currently married aged 15–49 years by background characteristics, Nigeria 2013

Variable	Percent
Women's work	
Unemployed	32.6
Non-cash work	4.7
Cash work	62.7
Education	
None	48.0
Primary	19.2
Secondary/higher	32.8
Women's decision making index	
0	46.7
1	11.0
2	8.5
3	16.4
4	17.4
Father beat mother	
No	55.6
Yes	44.4
Age (in years) ($M = 31.3$, SE = 0.109)	
15–19	8.0
20–24	15.9
25–29	21.0
30–34	17.3
35–39	15.2
40–44	11.9
45–49	10.7
No. of children ever born ($M = 4.0$, SE = 0.033)	
0–1	22.0
2–3	27.8
4–5	23.0
6+	27.2
Ethnicity	
Hausa	33.1
Fulani	8.0
Igbo	10.9
Yoruba	12.9
Other	35.1
Household poverty	
Poor	44.3
Non-poor	55.7
Type of marriage	
Monogamy	67.5
Polygyny	32.5
Personal acceptance of wife beating	
0	63.2
1	7.4
2	7.7
3	6.5
4	4.5
5	10.7
Religion	
Non-Christian	61.8
Christian	38.2
Husband's controlling behavior	
0	36.1
1	27.0
2	24.6
3	7.5
4	2.9
5	1.9
Spousal age gap	
<10 years	52.5
10+ years	47.5
Spousal education gap	
<5 years	80.0
5+ years	20.0
Partner consumes alcohol	
No	82.8
Yes	17.2
Type of place of residence	
Rural	63.5
Urban	36.5
Region	
North	66.9
South	33.1
Locality-level male approval of wife beating ($M = 24.9\%$, SE = 0.652)	
Low	36.3
Medium	32.4
High	31.3
Locality-level husband-dominated decision making ($M = 37.2\%$, SE = 0.998)	
Low	30.9
Medium	37.6
High	31.5
Total	100.0
N	20,635

nessed physical violence in their family of origin. Half of the women did not make household decisions alone or jointly with their partners. One in five women had a partner who had at least five more years of schooling and 48% of women married men who were 10 years older. Thirty-six percent of women had partners who did not exhibit any of the controlling behaviors examined and 83% had partners who did not consume alcohol. Sixty-three percent of women had zero tolerance of wife beating. Half as many women lived in localities with high male approval of wife beating and a similar proportion in localities with high levels

Table 2 Percentage of currently married women aged 15–49 years who experienced intimate partner violence victimization in the past 12 months by selected characteristics and type of violence, Nigeria 2013

	Sexual	Physical	*N*
Women's work	***	***	
Unemployed	3.6	9.4	6554
Non-cash work	11.5	26.4	1148
Cash work	4.1	14.4	12,933
Spousal education gap	*	*	
<5 years	4.0	13.0	16,556
5+ years	5.2	14.9	4079
Personal acceptance of wife beating	***	***	
0	2.7	11.5	12,721
1	5.5	16.9	1704
2	7.1	16.6	1708
3	6.4	16.8	1351
4	9.7	25.0	936
5	6.9	12.6	2215
Locality-level male approval of wife beating	***	***	
Low	3.0	10.1	6976
Medium	4.1	13.0	6694
High	5.7	17.5	6965
Locality-level husband-dominated decision making	***	***	
Low	5.0	17.8	6350
Medium	4.8	13.5	8060
High	2.7	8.9	6225
Total	4.2	13.4	20,635

* $p<.05$; ** $p<.01$; *** $p<.001$

of husband-dominated decision making. The average woman lived in a locality where 25% of men approved of wife beating and 37% of men made household decisions alone, without involving their wives. A third of the sample lived in regions in the south and 37% in urban areas.

Bivariate Results

Four percent of women reported being sexually victimized by their partners and 13% reported physical IPV victimization in the past 12 months. As Table 2 shows, there were significant socioeconomic differentials in IPV victimization rates. Women who were unemployed reported the lowest IPV prevalence rates regardless of the form of violence, while women who did not work for cash reported the highest rates. For example, the percentage of women who reported experiencing physical IPV in the past 12 months ranged from 9% among those who were unemployed to 26% among those who did not work for cash. Differentials in the prevalence of IPV by the spousal education gap were small. IPV prevalence rates also tended to be lowest among women with zero acceptance of wife beating and to increase with the number of circumstances under which wife beating was endorsed. However, prevalence rates were substantially lower among women with an index of 5 compared to those with an index of 4. For example, the percentage of women reporting sexual violence victimization increased from 3% among those with zero acceptance of wife beating to 10% among those with an acceptance index of 4 compared to 7% among those with an acceptance index of 5.

The level of male approval of wife beating in the locality was associated with sexual and physical IPV victimization rates. Sexual IPV victimization was reported by 3% of women in low male approval localities compared to 6% in high male approval localities. Contrary to expectations, IPV victimization rates were highest in localities with low levels of husband-dominated decision making and lowest in localities with high levels.

Multilevel Results

Table 3 shows ORs, CIs, and parameters from two-level logit regression models examining women's IPV victimization in the past 12 months. The regression analysis was done in six stages. We first estimated a null model for each form of IPV (see Table 3). This intercept-only model permitted a partitioning of

Table 3 Results of two-level logistic null and random intercept models of IPV victimization in the past 12 months among currently married women, Nigeria 2013

	Sexual		Physical	
	OR	95% CI	OR	95% CI
Null model				
Intercept	0.02***	(0.02, 0.02)	8.22***	(7.46, 9.04)
Intercept variance (SE)	2.79 (0.27)		1.50 (0.10)	
Log likelihood	−30,402.60		3340.69	
Random intercept model				
Intercept	3.24***	(2.58, 4.07)	0.01***	(0.01, 0.02)
Fixed effects				
Women's work				
Unemployed	1.00		1.00	
Non-cash work	2.22***	(1.70, 2.90)	1.42***	(1.17, 1.73)
Cash work	1.33**	(1.11, 1.59)	1.08	(0.95, 1.22)
Education				
Uneducated	1.00		1.00	
Primary	1.08	(0.87, 1.35)	1.48***	(1.27, 1.72)
Secondary/higher	1.11	(0.85, 1.44)	1.23*	(1.03, 1.46)
Women's decision making index	0.92**	(0.87, 0.97)	0.99	(0.95, 1.02)
Father beat mother				
No	1.00		1.00	
Yes	0.88	(0.72, 1.08)	0.95	(0.83, 1.08)
Age	0.97***	(0.96, 0.99)	0.98***	(0.98, 0.99)
No. of children ever born	1.08***	(1.03, 1.12)	1.11***	(1.08, 1.14)
Ethnicity				
Hausa	1.00		1.00	
Fulani	2.70***	(1.86, 3.94)	1.91***	(1.40, 2.60)
Igbo	1.64*	(1.06, 2.53)	2.26***	(1.67, 3.02)
Yoruba	0.97	(0.62, 1.52)	3.47***	(2.64, 4.56)
Other	2.92***	(2.14, 3.99)	3.44***	(2.73, 4.33)
Household poverty				
Poor	1.00		1.00	
Non-poor	0.90	(0.71, 1.13)	0.97	(0.83, 1.14)
Type of Marriage				
Monogamy	1.00		1.00	
Polygyny	1.22*	(1.02, 1.45)	1.27***	(1.13, 1.43)
Personal approval of wife beating	1.02	(0.98, 1.06)	1.02	(0.99, 1.05)
Religion				
Non-christian	1.00		1.00	
Christian	1.11	(0.86, 1.43)	1.58***	(1.36, 1.85)
Husband's controlling behavior	1.66***	(1.57, 1.75)	1.70***	(1.64, 1.76)
Spousal age gap				
<10 years	1.00		1.00	
10 or more years	0.90	(0.77, 1.04)	0.89*	(0.81, 0.98)
Spousal education gap				
<5 years	1.00		1.00	
5+ years	1.19	(0.99, 1.44)	1.15*	(1.02, 1.31)
Husband consumes alcohol				
No	1.00		1.00	

Table 3 continued

	Sexual		Physical	
	OR	95% CI	OR	95% CI
Yes	1.75***	(1.45, 2.11)	2.90***	(2.59, 3.24)
Random effect				
Intercept variance (SE)	1.18 (0.12)		0.53 (0.05)	
−2 Log likelihood	−19,732.10		−787.30	
No. of respondents	20,635		20,635	
No. of localities	883		883	

SE Standard error

* $p<.05$; ** $p<.01$; *** $p<.001$

the total variance into two variance components and revealed that, regardless of the form of violence, most of the variance in the probabilities of IPV victimization was attributable to the *individual-level variables*. We used the linear threshold approach which is on the logistic scale to calculate the variance partition coefficient. The percentage of the total variance that was attributable to the locality level was 46% for sexual IPV and 31% for physical IPV.

The second model was a simple logit regression model with no multilevel structure and only level-1 explanatory variables (not shown), while the third model was a random intercept model with the same explanatory variables (see Table 3). We tested the deviance difference between these models against the chi-square distribution with 1 *df* and, following the recommendations of Snijders and Bosker (1999), we halved the *p* value associated with the tail probability of the difference in the deviances to obtain a sharpened value of the deviance test of the significance of the random intercept variance. This approach yielded a deviance difference of 488.20 for sexual IPV, 5059.33 for physical IPV, and $p<.001$ for all outcomes, which indicated that the probability of each form of IPV victimization varied significantly across localities. The random intercept model also revealed that women who did not work for cash had significantly higher odds of IPV victimization in the past 12 months than women who were unemployed, regardless of the form of violence. Women who worked for cash had significantly higher odds of sexual IPV victimization than those who were unemployed. The following factors were also associated with increased odds of both forms of violence: number of children ever born, ethnicity, polygyny, and husband's controlling behavior and alcohol consumption (see Table 3).

Next, we introduced a random coefficient model to assess whether the association between women's work and IPV varied across localities. This model (not shown) had the same set of explanatory variables as the random intercept model shown in Table 3, the only difference being the random coefficients for the categories of women's work. We used a joint chi-square test with 5 *df* to test the significance of the random coefficients obtained. The test statistic was 10.27 for sexual IPV and 22.21 for physical IPV, signifying that at the 1% level, the association between women's work and physical IPV varied across localities.

The next stage of the analysis entailed adding locality-level variables to see whether they accounted for some of the residual variation among women who were unemployed, those who did not work for cash and those who worked for cash (see Table 4). As the random effects in Table 4 suggest, the residual between-locality variation in the probability of sexual IPV victimization was greater among women who worked for cash (2.87) than among those who did not (1.31); however, the reverse was the case for physical IPV victimization (0.82 vs. 1.06) (calculations not shown). Some of the locality-level variation in sexual IPV victimization among women who worked for cash was explained by differences in locality-level characteristics. A comparison of Tables 3 and 4 revealed that there was little change in the association between women's work and IPV victimization in the random coefficients model that included locality-level variables. On average, after adjusting for the full set of explanatory variables, the odds of sexual and physical IPV victimization in the past 12 months were 2.17 (95% CI, 1.62, 2.92) and 1.32 (95% CI, 1.05, 1.67) times as high for women engaged in non-cash work as for unemployed women, respectively (see Table 4). For women who worked for cash, the odds of sexual and physical IPV victimization were 1.31 (95% CI, 1.07, 1.59) and 1.10 (95% CI, 0.96, 1.26) times higher than the odds for women who were unemployed, respectively. All of these associations were statistically significant at the 1 or 5% level, with the exception of the association between cash work (as opposed to being unemployed) and physical IPV. Living in the south versus the north was negatively associated with sexual IPV and positively associated with physical IPV. The percentage of men in the locality who approved of wife beating was positively associated with physical IPV victimization (OR, 1.01; 95% CI, 1.01, 1.02), while the percentage of men who made household decisions alone was negatively associated with sexual IPV victimization (OR, 0.99; 95% CI, 0.99, 1.00). The number of children ever born, ethnicity, polygyny, husband's consumption of alcohol, and husband's controlling behav-

Table 4 Results of two-level logistic random coefficient models of IPV victimization in the past 12 months among currently married women, Nigeria 2013

	Sexual		Physical	
	OR	95% CI	OR	95% CI
Intercept	0.01***	(0.01, 0.02)	0.01***	(0.01, 0.01)
Fixed effects				
Women's work				
Unemployed	1.00		1.00	
Non-cash work	2.17***	(1.62, 2.92)	1.32*	(1.05, 1.67)
Cash work	1.31*	(1.07, 1.59)	1.10	(0.96, 1.26)
Education				
Uneducated	1.00		1.00	
Primary	1.10	(0.88, 1.37)	1.44***	(1.23, 1.68)
Secondary/higher	1.13	(0.87, 1.47)	1.20	(1.00, 1.44)
Women's decision making index	0.93*	(0.88, 0.98)	0.99	(0.96, 1.03)
Father beat mother				
No	1.00		1.00	
Yes	0.89	(0.73, 1.10)	0.94	(0.82, 1.07)
Age	1.03***	(1.01, 1.04)	0.98***	(0.98, 0.99)
No. of children ever born	1.07***	(1.03, 1.12)	1.11***	(1.08, 1.14)
Ethnicity				
Hausa	1.00		1.00	
Fulani	2.71***	(1.86, 3.95)	1.85***	(1.35, 2.55)
Igbo	2.10**	(1.33, 3.33)	1.76***	(1.29, 2.40)
Yoruba	1.31	(0.81, 2.12)	3.02***	(2.25, 4.06)
Other	2.93***	(2.15, 3.99)	3.14***	(2.47, 3.99)
Household poverty				
Poor	1.00		1.00	
Non-poor	1.01	(0.80, 1.27)	0.95	(0.80, 1.12)
Type of marriage				
Monogamy				
Polygyny	1.22*	(1.02, 1.45)	1.27***	(1.13, 1.44)
Personal approval of wife beating	1.01	(1.00, 1.01)	1.02	(0.99, 1.05)
Religion				
Non-christian	1.00		1.00	
Christian	1.17	(0.90, 1.52)	1.44***	(1.22, 1.69)
Husband's controlling behavior	1.66***	(1.57, 1.75)	1.72***	(1.66, 1.79)
Spousal age gap				
< 10 years	1.00		1.00	
10 or more years	0.90	(0.77, 1.04)	0.88*	(0.80, 0.98)
Spousal education gap				
< 5 years	1.00		1.00	
5 + years	1.18	(0.98, 1.43)	1.17*	(1.03, 1.34)
Husband consumes alcohol				
No	1.00			
Yes	1.80***	(1.49, 2.18)	1.80***	(1.49, 2.18)
Locality level				
Type of place of residence				
Rural	1.00		1.00	
Urban	0.90	(0.70, 1.17)	1.14	(0.96, 1.35)

Table 4 continued

	Sexual		Physical	
	OR	95% CI	OR	95% CI
Region				
North	1.00		1.00	
South	0.59***	(0.44, 0.79)	1.51***	(1.25, 1.82)
Male approval of wife beating	1.01	(1.00, 1.01)	1.01***	(1.01, 1.02)
Husband-dominated decision making	0.99**	(0.99, 1.00)	1.00	(1.00, 1.00)
Random effects				
Intercept variance (SE)	1.39 (0.24)		0.69 (0.12)	
Non-cash work-intercept covariance (SE)	−0.75 (0.33)		−0.24 (0.19)	
Non-cash work variance (SE)	1.42 (0.58)		0.86 (0.37)	
Cash work-intercept covariance (SE)	−0.46 (0.23)		−0.28 (0.12)	
Non-cash work–cash work covariance (SE)	0.85 (0.36)		0.11 (0.21)	
Cash work variance (SE)	0.70 (0.30)		0.47 (0.15)	
No. of respondents	20,635		20,635	
No. of localities	883		883	
−2 Log likelihood	−20,238.60		−2476.56	

* $p<.05$; ** $p<.01$; *** $p<.001$

ior continued to have significant positive associations with both forms of IPV victimization after controlling for the locality-level variables.

As Table 5 shows, the study found noteworthy cross-level interactions. The results indicated that cash work (relative to unemployment) was associated with significantly higher odds of physical IPV victimization (OR, 1.01; $p<.05$) in localities with increased male approval of wife beating. Significant contextual effects were also observed for the spousal education gap. Women whose husbands/partners had at least five more years of schooling were at higher risk of sexual IPV (OR, 1.02; $p<.05$) in localities with more husband-dominated decision making. We also examined whether women's acceptance of wife beating might be more positively associated with their odds of IPV victimization if they resided in localities with higher male endorsement of wife beating. Contrary to expectations, the interaction term was negative.

Discussion

This study has contributed to the literature by highlighting the importance of investigating the interactions between social constructions of gender and women's employment when determining the odds of women's sexual and physical violence victimization in intimate relationships. Unlike previous studies, we examined whether the association between women's employment and IPV varied across localities and the extent to which the associations were moderated by locality IPV norms. Contrary to other studies, we based our definitions of community norms on men's and not women's reports. We addressed a gap in the literature by measuring both descriptive and injunctive norms and assessing how those norms interacted to determine the risk of IPV victimization. We are not aware of any previous studies on IPV in sub-Saharan Africa that have examined the intersections between IPV and women's employment, gender roles, and social norms, or explored whether the association between women's employment and IPV varies across localities.

The study found that, in 2013, 23% of currently married Nigerian women reported experiencing some form of IPV in the past 12 months. This rate is consistent with other nationally representative studies conducted in Nigeria (Antai, 2011a; Linos et al., 2013; Uthman et al., 2011) but lower than those that have been reported for other African countries (Alio et al., 2011; Speizer, 2010). We found that the dominant influence of women's labor force participation was to increase the risk of IPV victimization, even after controlling for women's education, participation in household decision making, and other factors. Engagement in income-generating activities (relative to being unemployed) was a risk factor for sexual IPV in the past 12 months. Women who did not work for cash also had higher odds of experiencing each form of IPV victimization than unemployed women and in comparison with women who earned cash. The reasons why the odds ratios were lower for women earning cash than for those engaged in cash work are unclear.

The association between women's work and women's risks of IPV was anticipated because as societies undergo economic and social transformations, women's attainment of higher economic status could conflict with social expectations regarding appropriate gender roles (Cripe et al., 2008; Pallitto & O'Campo,

Table 5 Results of interaction terms in random coefficient models of intimate partner violence in the past 12 months among currently married women, Nigeria 2013

	Sexual		Physical	
	OR	95% CI	OR	95% CI
Intercept	0.01***	(0.01, 0.02)	0.01***	(0.01, 0.01)
Fixed effects				
Women's work				
Unemployed	1.00		1.00	
Non-cash work	1.68	(0.84, 3.36)	1.56	(0.91, 2.68)
Cash work	1.22	(0.79, 1.87)	1.03	(0.76, 1.33)
Personal approval of wife beating (PAWB)	1.11 *	(1.02, 1.20)	1.08*	(1.02, 1.14)
Spousal education gap (SEG)				
<5 years	1.00		1.00	
5+ years	0.85	(0.59, 1.21)	0.97	(0.76, 1.22)
Locality level				
Male approval of wife beating (MAWB)	1.01	(1.00, 1.02)	1.01***	(1.01, 1.02)
Husband-dominated decision making (HDDM)	0.99*	(0.99, 1.00)	1.00	(1.00, 1.00)
Interaction terms				
Non-cash work * MAWB	1.01	(0.99, 1.021)	1.00	(0.99, 1.01)
Cash work * MAWB	1.00	(0.99, 1.011)	1.01*	(1.00, 1.01)
Non-cash work * HDDM	1.01	(0.99, 1.021)	1.00	(0.99, 1.01)
Cash work * HDDM	1.00	(0.99, 1.010)	1.00	(0.99, 1.001)
PAWB * MAWB	1.00**	(1.00, 1.00)	1.00	(1.00, 1.00)
SEG * HDDM	1.016*	(1.002, 1.030)	1.01	(1.00, 1.02)
Random effects				
Intercept variance (SE)	(1.41, 0.24)		(0.66, 0.12)	
Non-cash work-intercept covariance (SE)	(−0.73, 0.33)		(−0.25, 0.19)	
Non-cash work variance (SE)	(1.32, 0.57)		(0.87, 0.37)	
Cash work-intercept covariance (SE)	(−0.48, 0.23)		(−0.25, 0.12)	
Non-cash work–cash work covariance (SE)	(0.81, 0.36)		(0.10, 0.21)	
Cash work variance (SE)	(0.69, 0.30)		(0.44, 0.15)	
No. of respondents	20,635		20,635	
No. of localities	883		833	
−2 Log likelihood	−20,486.00		−2480.41	

* $p<.05$; ** $p<.01$; *** $p<.001$. Regressions control for all other variables shown in Table 3

2005). It has been argued that, in general, Nigerian men tend to consider their wives as homemakers rather than wage workers due to deep-rooted views of women's roles as daughters, wives, unpaid household laborers, and mothers (Anugwom, 2009). One study of the influence of community norms on spousal violence in Nigeria suggested that with socioeconomic change and concomitant changes in traditional gender power dynamics in the home, men may become more violent toward their wives on the short term (Linos et al., 2013). It is possible that women who work may be more assertive and less inclined to conform to social expectations that women be submissive to their husbands, thereby triggering violence in their intimate relationships. We found that the associations between women's work and physical IPV victimization varied across localities.

While differences in the measurement of women's economic empowerment precluded a nuanced comparison of our findings with those of other studies, evidence about women's involvement in income-generation and past year IPV is mixed (Vyas & Watts, 2009). Some studies have suggested that women's economic empowerment may be associated with heightened risks of IPV. For example, our findings were consistent with a study in Bangladesh showing a positive association between women's employment and sexual IPV (Islam, Tareque, Tiedt, & Hoque, 2014). In Maputo, higher educational levels were positively

associated with psychological victimization (Zacarias, Macassa, Svanstrom, Soares, & Antai, 2012), which was attributed to the notion that a woman's economic empowerment may not be sufficient to counteract traditional gender roles.

These explanations were partly supported by the finding that locality-level male approval of IPV amplified the physical IPV risk associated with cash work, which underscored the importance of considering the interactions between the individual and the social environment in analyses and prevention of IPV. The interaction effect implied that in areas where more men accepted ideologies regarding the use of physical violence if women failed to meet their traditional roles, it would be difficult for women to reap the full benefits of their economic empowerment. Further research is needed to understand men's internalization of social belief systems regarding masculinity and gender roles, and how that varies according to the social location and context. Greater attention is also needed to the development of context-appropriate measures of masculine gender-role stress (Eisler & Skidmore, 1987) and to the examination of whether this factor mediates the association between women's work and IPV victimization.

Contrary to the previous studies (Antai, 2011a; Linos et al., 2013; Uthman et al., 2011), we found that women's own gender ideology as measured by their tolerance of IPV was not a significant correlate of IPV victimization, regardless of the form of violence. This finding may have been partly a reflection of methodological differences in the measurement of locality IPV acceptance, which was controlled for in the regressions. Most studies have defined community/locality acceptance of IPV on the basis of women's beliefs and attitudes on the assumption that women who adhered to traditional notions of husband's rights and privileges would be more likely to be married to men who were raised in families in which traditional gender roles were encouraged (Gage, 2005; Uthman et al., 2011). The current study based its definition of locality acceptance of IPV on men's beliefs and attitudes, thereby arriving at a more sensitive proxy of male endorsement of traditional gender roles.

We found that at the locality level, an increase in the percentage of men with tolerant attitudes toward IPV was positively associated with women's odds of physical IPV victimization, which supported the findings of Uthman et al. (2011). The interaction between women's IPV acceptance and locality-level male justification of IPV was surprisingly negative and statistically significant for sexual IPV victimization in the past 12 months. This raised a question as to the extent to which and how Nigerian wives navigated their marital relationships and locality norms in order to reduce their risk of experiencing violent acts perpetrated by their male partners. While women's acceptance of IPV could have reflected their socialization to accept male control and dominance, it was also possible that women's overt acceptance of IPV norms was a self-protection mechanism and a reflection of fear in a setting in which men may feel pressured to abide by gender-role expectations and to assert their dominance in marital unions through violence when traditional roles were transgressed by women. These issues warrant further research.

Our findings showed that even in situations where husbands had an educational advantage relative to their wives, social norms had implications for women's risks of IPV victimization. We found evidence of increased physical IPV risk with a spousal education gap that favored husbands. In addition, the individual-level associations between the spousal education gap and the odds of sexual IPV were moderated by social norms around husband dominance in household decision making. In localities where more husbands made household decisions without involving their wives, women faced increased risks of sexual IPV if they were partnered with men who had an educational advantage of 5 or more years. This finding was surprising. We had implicitly assumed that a wife with 5 years less education than her husband would not constitute a perceived threat to masculinity; but the significance of the interaction terms suggested that context mattered and, even if husbands were more educated, their behaviors were contingent on the extent to which the larger society adhered to marital roles traditionally linked to gender.

Several important methodological limitations should be considered in the interpretation of the results. The data were cross-sectional, limiting our ability to draw causal inferences, and excluded partnered women in non-marital relationships. The analysis also excluded women who were divorced, separated, or widowed as data on key explanatory variables such as women's participation in household decision making and polygyny were collected only from currently married women. It is also worth noting that responses to questions on IPV acceptance may have been subject not only to internalization of gender-role norms but also to social desirability effects. Furthermore, IPV victimization may have been under reported.

Our calculation of locality-level variables was based on approximately 23 women. A simulation-based study has shown that using the average education from DHS clusters may lead to a bias of 14% or less in multilevel estimates, but that the bias may vary in size depending on the distribution of the independent variable(s) between and within communities (Kravdal, 2006). Ignoring the state level in the multilevel analysis could have led to biased fixed and random parameters and their corresponding standard errors at the locality level (Van den Noortgate, Opdenakker, & Onghena, 2004). These limitations must be borne in mind when interpreting our findings.

The significance of the random intercepts implied that there were important unmeasured correlates of IPV in Nigeria. These unmeasured factors could have included low social support (Umubyeyi, Mogren, Ntaganira, & Krantz, 2014), poor communication skills (Longmore, Manning, Giordano, & Copp, 2014), participation in violence outside the home, and husband's history of abuse in childhood (Fulu, Jewkes, Roselli, Garcia-Moreno, & UN Multi-country Cross-sectional Study on Men and Violence Research Team, 2013), which have been found in previous studies to be associated with male perpetra-

tion of IPV or women's victimization. There was also a lack of data on whether women worked outside the home, hours of work, remuneration, type of job and its perceived social importance, and the prevalence of women-owned businesses. The lack of data on such covariates and their omission from the models presented here constituted a source of bias in our study. Future research should address these limitations and employ longitudinal designs.

Program Implications

Reducing gender-based violence and increasing women's and girl's access to and benefits from resources and economic opportunities are fundamental to the realization of human rights and sustainable development. Many countries in sub-Saharan Africa, including Nigeria, have made tremendous efforts to increase educational and employment opportunities for women in recent decades, although persistent gender gaps remain (Nwaoku & Efanga, 2011). The study's findings suggest that structural factors may intersect with social norms around gender roles, decision making, and power relations between men and women to undermine the possibilities for women's empowerment. In this regard, the signing into law in May 2015 in March 2013 of the Violence against Persons (Prohibition) Act is a key first step in creating an enabling legal environment for addressing IPV. The law includes a more comprehensive definition of rape and harsher sentences for sexual offenses, institutional protection for victims through restraining orders, and a new fund to rehabilitate victims of violence (see Eze-Anaba, 2007).

As our findings underscored important links between women's work, gender-role norms, and IPV, we believe our results support the development and implementation of social norm change programs that pay greater attention to gender-role beliefs in conjunction with economic empowerment programs. For example, because male norms around wife beating and husband-dominated decision making at the locality level emerged as important moderating variables, programs could help men identify ways to communicate with their partners to relieve any stress that they may experience due to women's employment and help men understand the value of egalitarian relationships. Community conversations around relationship dynamics, gender-role socialization, masculinity, and femininity, and traditional leader leadership and engagement are needed to deconstruct gender roles and IPV norms and help engender attitudinal change in all subgroups of society. Given that the association between women's employment and emotional IPV varied significantly across localities, programs would need to be adapted to the local setting. As with all violence-prevention programs, an integrated approach is needed to empower women economically and within intimate relationships, involve men and boys in IPV prevention efforts, and promote social environments in which women can reap the full benefits of their empowerment.

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