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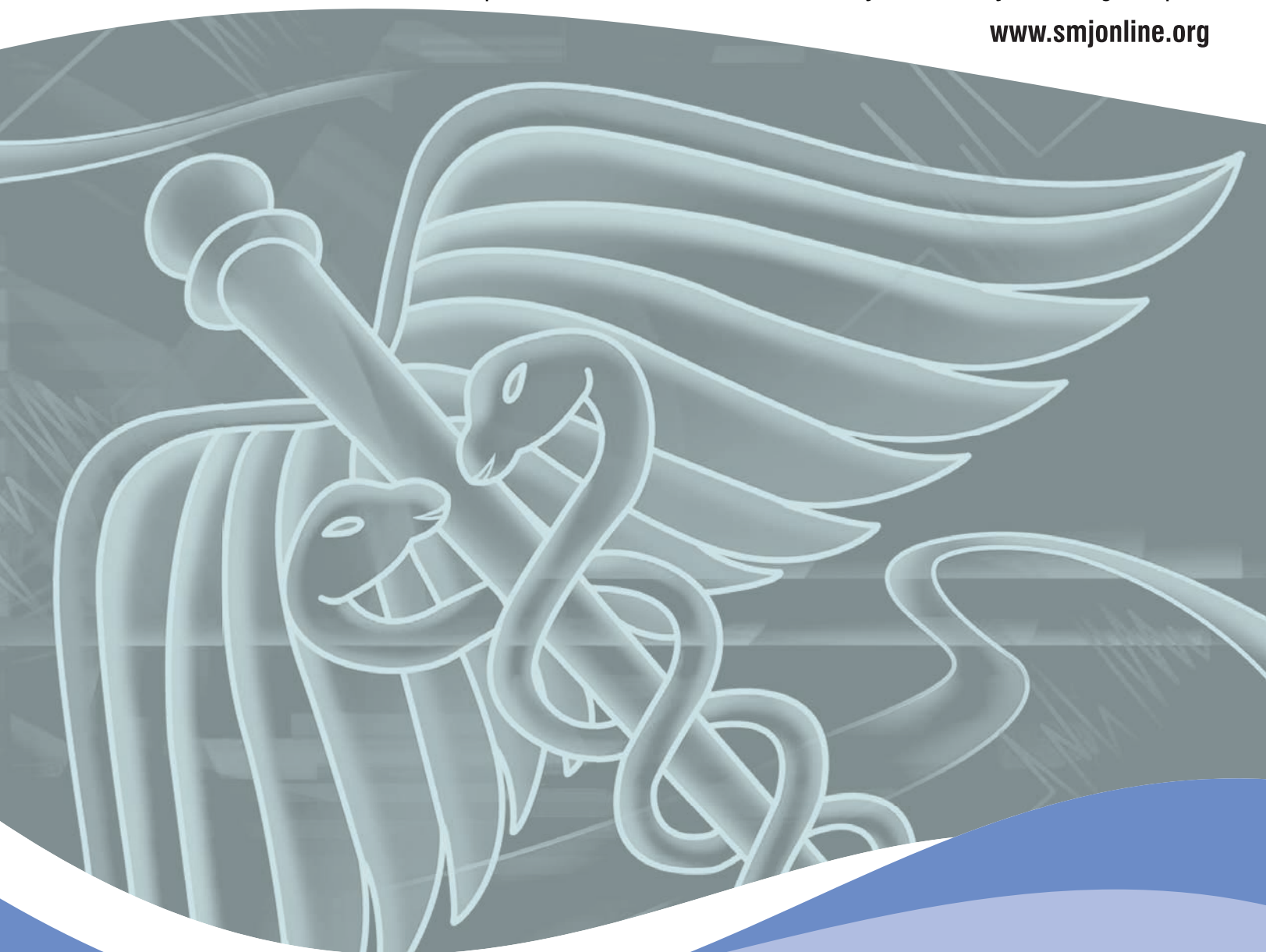
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# Intimate partner violence and associated factors in an obstetric population in Jos, North-central Nigeria

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## ABSTRACT

**Background:** Intimate partner violence (IPV) during pregnancy is a human right and public health concern, often life-threatening to both the mother and fetus. This study sought to ascertain the prevalence of IPV, pattern, and associated factors in a Nigerian obstetric population. **Materials and Methods:** This is a cross-sectional study among 338 pregnant women at term between January and July 2015 using pretested self-administered questionnaires to ascertain their sociodemographic and obstetric characteristics as well as partners' features. IPV was assessed using the hurt, insult, threaten, and scream validated screening tool. Data were analyzed using SPSS version 20 for windows (SPSS Inc., Chicago, IL, USA). Multivariate analysis was done to ascertain associated factors for IPV and  $P < 0.05$  was considered statistically significant. **Results:** Prevalence of IPV among women was 14.8% (50/338). One hundred and twenty-seven respondents (37.6%) suffered verbal abuse, 28.4% had physical violence, while 5.3% reported sexual abuse. Most of the women, i.e., 72.0% (36/50) did not report violence and 76.0% (38/50) disclosed that they still felt safe in their marital relationship. Independent risk factors for IPV were duration of marriage of 6.8 years ( $P = 0.04$ , odds ratio [OR] = 8.8, 95% confidence interval [CI] = 7.8–9.9), maternal primary educational status ( $P = 0.02$ , OR = 10.7, 95% CI = 1.1–103.1), and male partner cigarette smoking ( $P = 0.003$ , OR = 3.1, 95% CI = 3.0–316.0). **Conclusion:** IPV during pregnancy is common in this obstetric population. Screening for IPV should be a part of routine antenatal care, especially among women with long marriage duration, primary educational status, and those whose husbands smoking cigarettes is recommended.

**Keywords:** Intimate partner violence, Nigeria, pregnancy, risk factors

## INTRODUCTION

Violence against women committed by a spouse or sexual intimate is an emerging and important public health and human rights concern. This is especially more worrisome when it occurs during pregnancy because of its detrimental health consequences for both the mother and the fetus.<sup>[1-3]</sup> Intimate partner violence (IPV)

can be in the form of physical, sexual, or emotional abusive acts as well as controlling behaviors.<sup>[4,5]</sup> An especially troublesome form of physical violence during pregnancy is when the woman's abdomen is targeted thereby jeopardizing the pregnancy with possible resultant increase in maternal and perinatal morbidity and mortality.<sup>[2,3]</sup>

The World Health Organization's multi-country study on women's health and domestic violence against women found varied prevalence of physical IPV between 1% in Japan to 28% in Peru, with majority

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ranging between 4% and 12% among the countries.<sup>[6]</sup> Across Africa, prevalence of IPV in pregnancy of 9% in South Africa, 13.5% in Uganda, and 32.0% in Egypt has been reported.<sup>[7-9]</sup> In Nigeria, the prevalence of IPV during pregnancy varies with reported figures of 28.4% and 13.6% from Northern and Southern regions of the country, respectively.<sup>[4,10]</sup>

Most studies on IPV during pregnancy measure physical violence, although sexual, verbal, and emotional abuse during pregnancy are also detrimental to women's well-being. Reported patterns of IPV during pregnancy in parts of Nigeria include physical aggression (hitting, kicking, throwing objects, restraining, and biting), verbal and sexual abuse.<sup>[4,11-13]</sup> These violent acts during pregnancy can have fatal and nonfatal adverse health outcomes for the pregnant woman and her child due to direct effects of physical abuse on the woman's body as well as physiological effects of stress on fetal growth and development.<sup>[14]</sup> These adverse outcomes include miscarriage, antepartum hemorrhage (placental abruption), preterm labor and delivery, intra-uterine growth restriction, cesarean delivery, perinatal death, and maternal depression.<sup>[3,11,14,15]</sup>

IPV appears to be more prevalent in African and Latin-American countries compared to European and Asian countries.<sup>[8]</sup> A number of risk factors for IPV during pregnancy have been identified by studies elsewhere including young maternal age, low maternal educational status, unemployment, single marital status, and unplanned pregnancy.<sup>[3,16,17]</sup> Other risk factors related to the male partner include unemployment and intake of alcohol.<sup>[7,11,18]</sup>

Most women who suffer IPV during pregnancy do not report such abuse and do not seek for assistance.<sup>[12,13]</sup> IPV during pregnancy is more common than some maternal health conditions routinely screened for during antenatal care including pre-eclampsia and gestational diabetes.<sup>[8]</sup> The impact of IPV during pregnancy is increasingly being recognized as a major public health issue, but focus on IPV during pregnancy is usually not considered in our clinical setting. Hence, this study sought to ascertain the prevalence, pattern, and associated factors of IPV in this obstetric population in Jos, Nigeria. The findings may stimulate development and implementation of policy regarding routine screening for IPV against pregnant women in the hospital.

## MATERIALS AND METHODS

This descriptive cross-sectional study was carried out between January and July 2015 among consenting pregnant women at term in the antenatal clinic of Bingham University Teaching Hospital, Jos, Nigeria. Single pregnant women and those not residing with their husbands for whatever reasons were excluded from the study. A structured pretested questionnaire was administered confidentially. Inquiry was made about their sociodemographic and obstetric features including their HIV status, history of forced sexual intercourse in current pregnancy, and whether the violence was reported if abused? The women were also asked whether they felt safe in their current relationship. Questions regarding their husbands' sociodemographic features, HIV status, alcohol consumption, cigarette smoking, and other substances of abuse were asked.

The subjects were screened for IPV during the pregnancy using the hurt, insult, threaten, and scream (HITS) validated screening tool for IPV in pregnancy which accurately detect 96% of victims and 91% of nonvictims.<sup>[19,20]</sup> Questions in the HITS screening model were: How often does your partner physically hurt you, insult or talk down to you, threatens you with harm or screams or curse at you? The responses were scored between 1 and 5 and then summed up to form HITS interval scale, which could range from 4 to 20. Using a cutoff of  $\geq 10.5$ , a diagnosis of IPV during pregnancy was made. Multigravidas were also asked about exposure to IPV in previous pregnancy using the same HITS screening model.

Minimum sample size of 313 was calculated using the formula:  $n = Z^2pq/d^2$ , and IPV prevalence of 28.4% was reported from Zaria, Nigeria.<sup>[4]</sup> The final sample size was adjusted to 360 to compensate for possible nonresponse rate of 15%. The data were analyzed using SPSS version 20 for windows (SPSS Inc., Chicago, IL, USA). Associations between numerical variables were assessed using Student's *t*-test whereas categorical variables were assessed using Chi-square test or Fisher's exact test whenever expected value in a cell was  $< 5$ . Statistical significance was set at  $P < 0.05$ . Ethical approval for the study was obtained from the Human Research and Ethics Committee of the Hospital.

## RESULTS

Out of 360 eligible pregnant women recruited, 338 women correctly filled the questionnaires whereas 22

incompletely or incorrectly filled the questionnaires, resulting in a response rate of 93.9% and this formed the study population. The women were from 44 different ethnic groups spread across Nigeria. The mean age of the subjects was  $30.9 \pm 4.9$  years and a range of 19–45 years. Approximately, half (49.8%) of them were aged 21–30 years. All the women were married with a mean duration of marriage of  $5.3 \pm 3.8$  years and range of 1–20 years. Three hundred and sixteen (93.5%) and 22 (6.5%) of the study population were in a monogamous and polygamous family setting, respectively. Most of them (326 [96.4%]) were Christians while 12 (3.6%) were Muslims. Majority of the women (252 [74.6%]) had tertiary education, more than half (198 [58.6%]) were employed, while 140 (41.4%) were unemployed. The mean gravidity and parity of the women were  $2.0 \pm 1.5$  and  $1.3 \pm 1.3$ , respectively. Table 1 shows the sociodemographic and obstetric features of the study population.

The average age of their husbands was  $37.4 \pm 4$  years with a range of 27–53 years. Majority (240 [71.0%]) were aged between 31 and 40 years. Most of them were of Igbo ethnic group (82 [24.3%]), majority (328 [97.0%]) were Christians, while 10 (3.0%) were Muslims. Almost, all of them (320 [94.7%]) were employed and were mostly civil servants (162 [47.9%]) and businessmen (152 [45.0%]).

Among the study population, fifty of them had a HITS score of  $\geq 10.5$ , depicting that they suffered IPV during the index pregnancy. Hence, the prevalence of IPV among the study population was 14.8% (50/338). In addition, among the study population, 18 (5.3%) women reported sexual abuse (forced sexual intercourse) by their intimate partners. Surprisingly, out of 50 women who suffered IPV during the pregnancy, 38 (76.0%) of them felt they were safe in their marital relationship while only 12 (24.0%) felt unsafe in their marriage. Most of the women [36 (72.0%)] who had IPV in pregnancy did not report the violence to anybody. Of the 14 (28.0%) women who reported such abuse, 12 (85.7%) disclosed it to their husbands' parents and friends (2 [14.3%]). Table 2 shows the pattern of violence suffered by the women and the reasons offered by the women for not reporting the abuse.

In ascertaining the prevalence of IPV in previous pregnancies among multigravidas in the study population, 16 out of 234 had HITS score  $>10.5$ , giving a prevalence of IPV in previous pregnancies of 6.8% (16/234). Pregnant women who suffered IPV in

**Table 1: Sociodemographic and obstetric characteristics and corresponding intimate partner violence frequencies**

Characteristics	Frequency (%) n=338	Frequency of IPV (%)
Age groups (years)		
≤20	4 (1.2)	0 (0.0)
21-25	36 (10.7)	4 (11.1)
26-30	132 (39.1)	16 (12.1)
31-35	106 (31.3)	18 (17.0)
36-40	54 (16.0)	12 (22.2)
≥41	6 (1.8)	0 (0.0)
Ethnic groups		
Igbo	84 (24.9)	10 (11.9)
Yoruba	36 (10.6)	8 (22.2)
Berom	34 (10.0)	4 (11.8)
Irigwe	21 (6.2)	4 (19.0)
Tarok	18 (5.3)	4 (22.2)
Ngas	16 (4.7)	4 (25.0)
Hausa	12 (3.6)	0 (0.0)
Mwaghavul	10 (3.0)	2 (20.0)
Others*	107 (31.7)	14 (13.1)
Educational status		
Primary	8 (2.4)	4 (50.0)
Secondary	78 (23.1)	16 (20.5)
Tertiary	252 (74.5)	30 (11.9)
Occupation status		
Business	132 (39.1)	28 (21.2)
Students	72 (21.3)	8 (11.1)
Homemaker	68 (20.1)	8 (11.8)
Civil servants	66 (19.5)	6 (9.1)
Duration of marriage (years)		
1-5	216 (63.9)	26 (12.0)
6-10	92 (27.2)	16 (17.4)
11-15	20 (5.9)	6 (30.0)
16-20	10 (3.0)	2 (20.0)
Gravidity		
1	104 (30.8)	10 (9.6)
1-4	200 (59.2)	32 (16.0)
≥5	34 (10.0)	8 (23.5)
Parity		
0	108 (31.9)	12 (11.1)
1-4	224 (66.3)	38 (20.0)
≥5	6 (1.8)	0 (0.0)

\*Others - Idoma, Ron, Rukuba, Igala, Edo, Eggon, Anaguta, Kilba, Baju, Tiv, Yala, Mada, Afizere, Mupun, Sayawa, Mushere, Jere, Kataf, etc., IPV: Intimate partner violence

**Table 2: Pattern of intimate partner violence and reasons for not reporting**

IPV features	Frequency (%)
Pattern of IPV*	
Verbal violence	127 (37.6)
Physical abuse	96 (28.4)
Sexual abuse (forced sex)	18 (5.3)
Reasons offered for not reporting IPV**	
Usually settle our differences quickly	12 (33.3)
Because I love him	8 (22.2)
Always forgave him as it is good to forgive	6 (16.7)
Don't want to expose our family affairs	4 (11.1)
To avoid shame and maintain integrity	3 (8.3)
Considered as part of marriage challenges	2 (5.6)
Fear and distrust of people	1 (2.8)

\*Some women reported two or more types of abuse; \*\*Some women offered more than one reason. IPV: Intimate partner violence

a previous pregnancy were more likely to be abused again in current pregnancy compared to those that had no IPV during a previous pregnancy (odds ratio [OR] = 6.8, 95% confidence interval [CI] = 5.2–8.9,  $P < 0.0001$ ).

Bivariate analysis showed that mean duration of marriage of 6.8 years ( $6.8 \pm 4.3$  vs.  $5.0 \pm 3.6$ ,  $P = 0.03$ ), polygamous family setting (OR = 5.12,  $P = 0.01$ ), maternal positive HIV status (OR = 8.95,  $P = 0.01$ ), and primary educational status (OR = 6.20,  $P = 0.04$ ) were significantly associated with IPV during pregnancy among the study population. With respect to the male partners, cigarette smoking (OR = 27.30,  $P = 0.002$ ) and positive HIV status (OR = 7.26,  $P = 0.02$ ) were the risk factors for perpetration of IPV during pregnancy. Table 3 shows the results of bivariate analysis. However, multivariate logistic regression analysis showed that only duration of marriage of 6.8 years ( $P = 0.04$ , OR = 8.8, 95% CI = 7.8–9.9), maternal primary educational status ( $P = 0.02$ , OR = 10.7, 95% CI = 1.1–103.1), and male partner cigarette smoking ( $P = 0.003$ , OR = 3.1, 95% CI = 3.0–316.0) were the independent factors associated with IPV during pregnancy in this obstetric population.

**Table 3: Predictors of intimate partner violence during pregnancy**

Risk factors	Mean or OR	95% CI	P
<b>Maternal features</b>			
Subjects' age	31.9±4.7 versus 30.8±4.9	-	0.28 <sup>+</sup>
Duration of marriage	6.8±4.3 versus 5.0±3.6	-	0.03 <sup>+</sup>
Gravidity	2.9±1.5 versus 2.5±1.5	-	0.43 <sup>+</sup>
Parity	1.6±1.2 versus 1.3±1.2	-	0.24 <sup>+</sup>
Religion	0.85	0.79-1.09	0.59
Primary educational status	6.20	5.30-46.0	0.04 <sup>†</sup>
Unemployed status	0.77	0.19-1.85	0.55
Unplanned pregnancy	0.45	0.19-1.06	0.06
Not having a male child	1.79	0.76-4.22	0.18
Polygamous family setting	5.12	4.91-6.20	0.01 <sup>†</sup>
Reactive HIV status	8.95	1.87-42.84	0.01 <sup>†</sup>
Discordant ethnicity between couples	1.86	0.77-4.49	0.17
<b>Male partners' features</b>			
Age (years)	38.4±4.3 versus 37.2±4.9	-	0.21 <sup>+</sup>
Employment status	1.70	0.33-8.71	0.62 <sup>†</sup>
Religion	0.69	0.07-6.40	0.56 <sup>†</sup>
Consumption of alcohol	2.28	0.85-6.12	0.14 <sup>†</sup>
Cigarette smoking	27.30	2.9-255.50	0.002 <sup>†</sup>
Drug abuse	2.96	0.26-33.91	0.38 <sup>†</sup>
Reactive HIV status	7.26	4.97-10.61	0.02 <sup>†</sup>

<sup>+</sup>t-test; <sup>†</sup>Fisher's exact test. OR: Odds ratio; CI: Confidence interval

## DISCUSSION

The period of pregnancy may be a time of risk of injury to some women caused by an intimate partner, and the violence may begin or escalate during the course of pregnancy. Our study found IPV prevalence of 14.8% among the obstetric population. This is lower than reported Nigerian figures of 28.4% from Zaria, 44.6% from Abakaliki, 34.3% from Birnin Kudu, and 37.4% from Abuja.<sup>[4,11,13,21]</sup> It is, however, >2.3% from Abeokuta and 7.4% from Kano,<sup>[22,23]</sup> but comparable to 13.6% from Abakaliki and 11.0% from Enugu.<sup>[10,24]</sup> This wide variation in the reported rates of IPV during pregnancy may be attributed to differences in methodology, stage in pregnancy when the studies were conducted, and differences in cultural perceptions regarding violence against women, which may affect its disclosure including perceiving IPV as an excusable act or as a means of chastising or correcting an erring wife.<sup>[12,21,25]</sup>

Furthermore, in this study, women who suffered IPV in a previous pregnancy were more at risk of repeated violence in current pregnancy compared to those that had no violence. Pregnancy has been observed as a period of unique vulnerability for IPV due to changes in women's physical, social, emotional, and economic needs, and this makes antenatal care a window of opportunity for identifying such women.<sup>[26]</sup>

Violence against women by an intimate partner is manifested by physical, verbal, sexual, and emotional abusive acts. Physical violence during pregnancy was noted in 28.4% of the women in this study. This is comparable to the reported figures of 23.4% and 29.6% in Abuja and Lagos, respectively.<sup>[21,27]</sup> This form of violence is especially of more concern when targeted to the woman's abdomen, which could result in adverse maternal and fetal outcomes including antepartum hemorrhage due to placental abruption. Verbal abuse was experienced by 37.6% of the pregnant women. This high rate of verbal abuse is comparable to reports from studies elsewhere in Nigeria where reported figures of 52.3–66.4% among obstetric populations were noted.<sup>[12,24,27]</sup> Higher rate of verbal abuse compared to physical violence in this study may be attributed to the fact that women who suffer verbal abuse are more likely to report physical violence also, as most verbal abuses end up with physical assault.<sup>[1]</sup> Verbal abuse predisposes to psychological trauma among women, which in pregnancy could lead to depression, lack of attachment to the child, and lower rates of breastfeeding.<sup>[28]</sup>

Our study found a prevalence rate of 5.3% of sexual violence (forced sex) among the women. This is, however, less than reported figures of 10.2–14.2% among other Nigerian obstetric populations.<sup>[12,21,23,27]</sup> These variations may be attributed to different sociocultural influences on the attitude of women including acceptance of such abuse as excusable or as normal in the context of marriage setting as viewed by some cultures in Nigeria. Sexual violence, especially during pregnancy is associated with detrimental effects on both the mother and the fetus.<sup>[26]</sup>

Despite the high rate and different forms of IPV noted in this study, only 28.0% of women who suffered IPV reported the violence and this was mainly due to husbands' parents. Surprisingly, over four-fifth of them disclosed that they felt safe in the marriage relationship despite the abuse by their husbands. Reasons for not reporting the abuse included love for their husbands, avoidance of embarrassment, and the need to keep private family matters secret. Some of these reasons were offered by abused pregnant women in other studies.<sup>[11,12,29]</sup> This high rate of nonreporting of violence against women has also been noted elsewhere in Nigeria.<sup>[1,13,27]</sup> These findings are not surprising, considering the reasons offered by the women and the fact that violence against women is seen as a strategy for correcting misbehavior by women.<sup>[2,13,25]</sup> This trend underscores the need for aggressive public enlightenment about these vices against women so as to change the orientation and attitude of women toward IPV and to encourage reporting of such violence to lawful authorities in the society. In addition, enactment of relevant societal laws may assist in curbing violence in families.

In this study, pregnant women with primary level of education were at a greater risk of IPV during pregnancy compared to those with higher educational attainment. This is similar to findings in other Nigerian clinical settings<sup>[10,11]</sup> and elsewhere in South Africa.<sup>[29]</sup> This may be attributable to the fact that higher education empowers women leading to greater self-confidence, ability to use information and resources, and attainment of economic independence.<sup>[30]</sup> In addition, women with duration of marriage of 6.8 years or more have higher odds of IPV during pregnancy and this may be related to influence of other factors in the family including greater responsibility accompanied with decrease in income to cater for children's needs, considering that financial difficulties predispose to violence against women.<sup>[26]</sup>

As reported in other studies,<sup>[3,11,26]</sup> substance and drug abuse including cigarette smoking has been identified as risk factors for IPV during pregnancy. Engagement in these habits predispose to intoxication, which may ultimately lead to irresponsible behaviors including violence against women.<sup>[30]</sup> Other identified predictors of IPV during pregnancy in the literature include young maternal age, low parity, polygamous family setting, unplanned pregnancy, unemployment, and HIV-positive status.<sup>[10,11,13,23,26]</sup> These were, however, not significant on logistic regression analysis in this study. However, unplanned pregnancy, positive HIV status, and polygamous family setting were significant on bivariate analysis. This nonsignificant association may be due to some un-identified confounding factors in this study population and the relatively small sample size.

This study is limited by the fact that it was a hospital-based research and so generalization of the findings to the general population should be with caution. In addition, information from the women was self-reported, and a degree of recall bias or bias reporting might be present. However, the study highlights the magnitude of IPV among our women, a social problem that has been underreported and often neglected in our society.

## CONCLUSION

IPV is common among pregnant women in this obstetric population, and efforts should be geared toward inculcating screening policy for IPV as a part of routine antenatal care, especially among women with long duration of marriage, primary educational status as well as those whose husbands abuse substances such as tobacco.

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## Conflicts of interest

There are no conflicts of interest.

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