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Patterns and Predictors of Intimate Partner Violence among Pregnant Women Attending Healthcare Centers in Obio-Akpor, Rivers State

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Abstract

Intimate partner violence though not consistent with our cultural and traditional values and beliefs as a people, is becoming rampant and this is a misnomer. Intimate partner violence (IPV) especially among women is a global phenomenon and has become a major public health concern. The researcher adopted a descriptive cross-sectional study design to assess patterns and predictors of intimate partner violence among pregnant mothers attending healthcare Centre's in Obio/Akpor L.G.A., River's state. A self-structured survey was utilized to gather information from 416 systematically selected pregnant mothers with a response rate of 412(99%). Data was evaluated utilizing descriptive and inferential statistics at a 5% degree of significance. Findings showed that many of the respondents ages 23 – 31years, married, with tertiary education, of Christian faith, were into business and had two children. The prevalence of IPV before pregnancy was 21.4% while in current pregnancy it was 20.1%. The most common violence act was physical 83(20.1%), followed by verbal violence 79(19.2%), emotional violence accounted for 76(18.4%), psychological violence 68(16.5%) while the least reported was sexual violence with about 57(13.8%). Domestic and financial issues were the cause of most violent experiences accounting for 19.9% and 19.4%. Statistical analysis using multinomial logistic regression showed that educational attainment (p; 0.000) and lifestyle of the husband (p = 0.000) were the socioeconomic and sociodemographic factors respectively associated with IPV. It is recommended that screening for intimate partner violence among pregnant women should be provided as uniform care during antenatal visits.

Keywords: *Patterns, Pregnant women, Predictors, Intimate partner violence*

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1. Introduction

Relationship between two lovers like the one between a husband and wife is generally expected to be characterized by an atmosphere of peace, love and togetherness because of the belief that they are both joined in holy matrimony. However, most of the times this is not the reality in some homes as partners face unimaginable forms of battering that puts them in a state of helplessness. IPV, particularly among women, is a worldwide problem that has become a significant public health concern in both industrialized and developing nations, including Nigeria. Though males have been reported to be victims of IPV, it is women who are the most affected. Intimate partner abused during pregnancy is considerably more concerning, and it has been compared to an act of evil against mankind. IPV has been linked to becoming pregnant (Semahegn *et al*., 2013). Physical, psychological, or sexual aggression against a spouse, or a combination of these actions, are all examples of violence against a partner.

According to the National Intimate Partner and Sexual Abuse Survey from 2010, about 32.9 percent of women had suffered physical violence by an intimate partner in their lifetime, compared to 28.1 percent of males (Breiding *et al*., 2014). Domestic violence was found to be a significant factor contributing to mortality in or linked to pregnancy and delivery in the United Kingdom by the Office for National Statistics (2013), with 7.3 percent of women experiencing it in 2011/2012. Similarly, the Crime Survey for England and

Wales for the year ending March 2018 found that 7.9% of women had been abused by a spouse.

Intimate relationship violence is also common throughout Africa, according to studies, and is a reason for worry. According to a study on IPV among female victims in Malawi, 13% reported emotional abuse, 20% said they were pushed, shook, slapped, or punched, 3% said they were subjected to serious violence, and 13% said they were subjected to sexual assault (Bazargan-Hejazi *et al.*, 2013). Similarly, a survey of married women in an area in North Western Ethiopia found that 78.0 percent of them had experienced domestic abuse (Semahegn *et al*., 2013). At the Kisumu district hospital in Kenya, around 37% of pregnant women were found to have experienced at least one type of IPV throughout their pregnancy (Makayoto *et al*., 2013).

Few studies have looked at the problem of violence against pregnant women in Nigeria with prevalence of IPV being 28.3% in a tertiary hospital in southern Nigeria (Olagbuji al., 2010), 17.7% in Ibadan (Fawole *et al*., 2010), 7.8% in a teaching hospital in Rivers State (Jeremiah, *et al*., 2011) and 7.4% in Northern Nigeria (Iliyasu *et al*., 2013). These findings obviously reveal a high prevalence across settings and this portend an unacceptable trend.

Unfortunately, IPV among pregnant women show variations in its patterns among populations. There have been allegations of virtually all types of abuse against pregnant women in Nigeria, including physical, emotional, psychological, and sexual assault. For example, Jeremiah *et al*. (2011) found that verbal abuse in the form of screaming and swearing was the most common type of abuse among pregnant women, with just 1.2 percent reporting physical harm. However, according to research in Abakaliki, verbal abuse was the most common form of violence among pregnant women, followed by emotional and physical injuries (Onoh *et al*., 2013). According to research done in Kaduna, about 67 percent of mothers have suffered mental, physical, or sexual abuse (Kana *et al*., 2020).

The population examined had different predictors of intimate partner violence. These factors include educational attainment and employment (Iliyasu *et al*., 2013), previous experience of violence, HIV seropositivity, and frequent alcohol use (Olagbuji *et al*., 2009). One research, on the other hand, found no connection between HIV status and IPV. They found that obtaining a college education protected them against contracting IPV. IPV was predicted by a history of childhood maternal abuse, being in a polygamous marriage, being multiparous, or having a spouse who consumed alcohol (Makayoto *et al*., 2013). Perales *et al*. (2009) found that older (> 30 years), unmarried, working, and economically poor women, as well as those with less education, are more likely to be exposed to IPV throughout their lives and during pregnancy.

IPV has far-reaching effects in pregnant women, harming both the mother and the foetus. Poor nutrition, inconsistent or insufficient prenatal care, substance use, inadequate weight gain, and adverse neonatal outcomes, preterm birth, low birth weight, small for gestational age, as well as maternal and neonatal death, increased prevalence of depression, are some of the effects according to Alhusen *et al*., (2015). According to Balogun and John-Akinola (2015), intimate partner violence has a detrimental effect on women, including depression, hypertension, and reproductive system harm. The purpose of this research is to look at the patterns and determinants of intimate partner violence among pregnant women in Obio-Akpor Local Government, Rivers State.

2. Methodology

This section discussed the step-by-step approach used in conducting this research and included the study design, study area, population of the study, sample and sampling methods, source of data, study instrument and method of data collection, validity and reliability of tool, data analysis, and ethical considerations.

2.1 Study Area

The study was conducted in public primary healthcare Centre's in Obio-Akpor Local Government Area of Rivers State. There are fifteen government owned primary health centres in the local government area. The primary healthcare centres are owned and management by the Rivers State government under the Primary Health Care Management Board (PHCMB). The 15 primary healthcare centers include: Eliozu MPHC, Rumueme MPHC, Rumuigbo MPHC, Rumuokuta MPHC, Eneka MPHC, Rukpoku MPHC, Rumuekini MPHC, Ozuoba MPHC, Rumuolumeni MPHC, Iriebe MPHC, Rumukurusi MPHC, Rumuodomaya MPHC, Woji MPHC, Obio Cottage Hospital, Rumuepirikom MPHC. For this study, seven (7) primary healthcare centers were randomly selected through balloting. They include Rumuigbo MPHC, Rukpoku MPHC, Ozuoba MPHC, Iriebe primary health center, Rumuekini MPHC, Eliozu MPHC, and Obio Cottage Hospital.

2.2 Study Design

This research adopted a descriptive cross-sectional design. According to Polit and Back (2014) "Cross-sectional designs comprises the gathering of information at a period in time and are particularly suitable for explaining the status of relationship amongst phenomena at a given point". This design was preferred because an assessment of patterns and socio-demographic predictors of intimate partner violence among pregnant women is aimed at describing how the variables occur in the real world, and this is the focus of descriptive cross-sectional study designs.

2.3 Population of the Study

The population of the study comprised pregnant women attending the selected primary healthcare Centre's in Obio-Akpor Local Government Area of Rivers State. The antenatal records of the primary healthcare Centre's were accessed and the average attendance for the past three months was determined. The number of pregnant mothers that make up this population is 950.

2.3.1 Inclusion Criteria

This included expectant women who register with and are attending ANC service in the primary healthcare Centre's. The respondents were aged 15 – 49years

2.3.2 Exclusion Criteria

Pregnant women who register and are attending ANC service in the primary healthcare Centre's but are critically ill at the time of the study.

2.4 Sample and Sampling Techniques

The sample size is 416

The Cochrane formula for a population with known proportion was used as shown;

$n = Z^2pq/d^2$

Where n= Minimum sample size required; Z = level of statistical significance at 95% confidence level i.e., 1.96

p= proportion of women who have experienced IPV, d= sampling error 0.05, q=1-p

Therefore, by considering:

Z = 1.96, p= 41.9% to decimal = 0.419 (previous study in Port Harcourt by Itimi, *et al*., 2014).

q = 1 - 0.419 = 0.581

The minimum number of patients included in this study = 1.96 x 1.96 x 0.419x 0.581/0.0025

= 0.935/0.0025 = 374

If we assume 10% non-response rate, then the minimum number of patients becomes:

n(100%−10%) n = 374/0.90 = 415.5555555

Sample size n = 416

For sampling technique, respondents were selected using systematic sampling technique. A daily antenatal clinic register developed by a staff of the clinic which showed the number of pregnant women (sample frame) for each day was used to select the respondents for each day and same was done in all the seven facilities selected for the work.

2.5 Instrument for Data Collection

The study instrument was a researcher designed structured questionnaire.

Administration method: The tool was a researcher administered questionnaire

Objective to be measured by tool: The questionnaire was designed in line with the objective of the research study.

Objective 1: The prevalence of intimate relationship violence

Objective 2: The pattern of intimate partner violence among pregnant women

Objective 3: Socioeconomic determinants of intimate relationship violence among pregnant women**.**

Objective 4: Socio-demographic determinants of intimate partner violence among pregnant women**.**

The instrument was created to elicit questions that would help the researchers answer the study's research goals. It was divided into two sections: section A elicited demographic information from respondents, while section B evaluated the incidence of intimate partner violence among pregnant women**.**

2.6 Validity of the Instrument

For validity plan, after developing the questionnaire, it was submitted to the project supervisors who assessed its face and content validity. The supervisors certified that the items are relevant and are adequate to answer the research objectives. The instrument was also given to experts in the Center for Gender and Conflict Studies of the University of Port Harcourt for their comments and suggestions which was effected before the final draft was printed.

2.7 Reliability of the Instrument

A test re-test reliability study was conducted in Rumuokwuta primary health center; one of the facilities in Obio/Akpor Local Government Area that is not included in the study but share similar characteristics with the study settings. Forty copies of the questionnaire were administered to 40 expectant mothers who registered and are visiting antenatal care services in the hospital. Two weeks later, the respondents were asked to complete the same questionnaire. Reliability coefficient was calculated using the Spearman-Brown correlation. A reliability index of Rho = 0.97 was computed. The instrument was deemed reliable as a coefficient index of 0.97 was >0.8 as advocated by Kana *et al*. (2020).

2.8 Method of Data Collection

Two undergraduate nursing students were recruited as research assistants and trained on the data collection process for two days. Ethical approval was sought from the University of Port Harcourt, and the researcher submitted a copy of the ethical approval letter to the Chief Medical Officer of each facility. Then, permission to carry out the study in the healthcare Centre's was approved.

Regarding the questionnaire, verbal, and written consent was sought from pregnant women for permission to participate in the study. The purpose of the study was explained and process of completing the questionnaire communicated. Respondents were systematically picked from the daily attendant register. Research assistants guided respondents in completing the questionnaire and cross-checked instruments to ensure that they were duly completed. Duly completed questionnaires were retrieved on the spot.

2.9 Method of Data Analysis

Data was gathered utilizing the self-structured questionnaire, after which it was sorted, cleaned and tallied using an Excel worksheet. It was then transferred into Statistical Product and Service Solutions SPSS version 23 software which was used for data analysis.

Data was presented in tables and charts, and descriptive and inferential statistics were used to examine it. To characterize data on socio-demographic variables and other study goals, descriptive statistics of frequency distribution and simple percentages were employed. To find socioeconomic and sociodemographic determinants of intimate partner violence, researchers utilized multinomial logistic regression with a 5% threshold of significance.

2.10 Ethical Considerations

Ethical clearance: The Research Ethics Committee (REC) at the University of Port Harcourt in Rivers State provided ethical approval.

Permission: The Rivers State Primary Health Care Board granted formal permission to conduct the research at the chosen institutions after receiving the final copy of the proposal and the authorized ethical clearance.

Consent: A written inform consent detailing the purpose of the research and the rights of the prospective respondents was attached to the questionnaire. This information was explained to the respondents and consent was sought prior to data collection.

Confidentiality: All information given by respondents will be kept completely private, according to the respondents. The information you give will not be shared with anyone else and will only be used for academic purposes.

Risks: There is no anticipated risk associated with this study. However, the researcher ensured that all respondents were not exposed to any form of harm at the conduct of the research.

Benefits: The information gotten would help to inform the need for policy that would aim to curb the occurrence of intimate partner violence among pregnant women, identify the pattern of occurrence of intimate partner violence and group at high risk as well as address socio-demographic predators that would be identified.

3. Results and Discussion

This section talks about the outcome of this research and is presented so that it aligns with the research structure in the previous chapter. Out of the 416 polls conveyed, only 412 questionnaires were retrieved giving a response of 99%.

3.1 Result and analysis

3.1.1 Respondents' Socio-demographic data

Table 1 shows the respondent's personal characteristics with majority between ages 23 – 31years, married, with tertiary education, and of Christian faith. Also, the majorities were into business and have two children.

With regards to the age of respondents, 37(9.0%) are between 15 – 22years, 196(47.6%) are 23 – 31years, 142(34.5%) while 32(7.8%) are between 41 – 49years old. The marital status of respondents showed that 364(88.3%) are married, 32(7.8%) are single while 16(3.9%) are cohabiting.

Regarding educational attainment, the majority 262(63.6%) have tertiary education, 115(27.9%) secondary education, 20(4.9%) primary education while 15(3.6%) had no formal education. The religion showed that majority 383(93.0%) practice Christianity, 21(5.1%) are Islam while 8(1.9%) are of traditional religion. With respect to occupation, majority of the respondents 122(29.6%) are into business, 93(22.6%) are civil servants, 76(18.4%) self-employed, followed by 60(14.6%) are students, while 58(14.1%) have paid employment. Only 3 respondents indicated they have no occupation.

The number of children showed that majority 102(24.8%) have 2 children, 100(24.3%) 1 child, 85(20.6%) 3 children, 77(18.7%) are primiparous while 46(11.2%) have 4 children and above.

3.1.2 Respondent's Economic and Family history

Table 2 shows the economic and family history of respondents. With regards to personal monthly income of respondent, majority 127(30.8%) do not earn monthly income, 75(18.2%) earn below #36,000, 57(13.8%) earn between #36,000 – #49,000; 54(13.1%) earn between 50 – 69,000; 68(16.5%) earn between 70,000 – 99,000 while 31(7.5%) earn #100,000 and above. Majority 314(76.2%) are in a monogamy relationship, followed by 69(16.7%) who are single parents, 28(6.8%) polygamy while 1(0.2%) is multi-partner.

Regarding the occupation of husband, majority 149(36.2%) are civil servants, 129(31.3%) are businessmen, 103(25.0%) are self-employed, 17(4.1%) are artisans while 14(3.4%) are students. The lifestyle of husbands revealed that majority 321(77.9%) do not involve in social lifestyles such as drinking and/or smoking. However, 36(8.7%) drink, 31(7.5%) smoke while 18(4.4%) indulge in clubbing.

For educational attainment of husband, majority 291(70.6%) have tertiary education, 111(26.9%) secondary education, 7(1.7%) primary education while 3(0.7%) had no formal education. With regards to number of wives/partners by husband, majority 387(93.9%) have 1 partner, 18(4.4%) 2 partners, 4(1.0%) 3 partners while 3(0.7%) have 4 partners and above.

Table 1: Respondents' Bio-demographic data; n = 412

Variables	Frequency	Percentage
Age (in years) **Mean** = 2.6796 SA = 2.55247		
15 – 22	37	9.0
23 – 31	196	47.6
32 – 40	142	34.5
41 – 49	32	7.8
Marital status		
Married	364	88.3
Single	32	7.8
Cohabiting	16	3.9
Educational attainment		
No informal education	15	3.6
Primary education	20	4.9
Secondary education	115	27.9
Tertiary education	262	63.6
Religion		
Christianity	383	93.0
Islam	21	5.1
Traditional religion	8	1.9
Occupation		
Civil servant	93	22.6
Student	60	14.6
Business	122	29.6
Self-employed	76	18.4
Paid employment	58	14.1
None	3	0.7
Number of children		
None	77	18.7
1	100	24.3
2	102	24.8
3	85	20.6
4 and above	46	11.2

3.1.3 Prevalence of intimate partner violence before pregnancy

Figure 1 shows the prevalence of intimate partner violence among respondents before pregnancy. It shows a prevalence of 88(21.4%) with the majority 324(78.6%) reporting that they did not experience IPV prior to current pregnancy.

Table 2: Respondents' Economic and Family history; n = 412

Variables	Frequency	Percentage
Personal monthly income (N490 = 1$)		
None	127	30.8
Below 36,000	75	18.2
36,000 – 49,000	57	13.8
50,000 – 69,000	54	13.1
70,000 – 99,000	68	16.5
100,000 and above	31	7.5
Type of union		
Monogamy	314	76.2
Polygamy	28	6.8
Single parent	69	16.7
Multi-partner	1	0.2
Occupation of husband		
Civil servant	149	36.2
Student	14	3.4
Business	129	31.3
Self-employed	103	25.0
Artisan	17	4.1
Husband's monthly income (N490 = 1$)		
None	68	16.5
Below 36,000	34	8.3
36,000 – 49,000	41	10.0
50,000 – 69,000	70	17.0
70,000 – 99,000	94	22.8
100,000 and above	101	24.5
Husband's Lifestyle		
Smoking	31	7.5
Drinking	36	8.7
Clubbing	18	4.4
None	321	77.9
Husband's educational attainment		
No informal education	3	0.7
Primary education	7	1.7
Secondary education	111	26.9
Tertiary education	291	70.6
Husband's number of wives/partners		
1	387	93.9
2	18	4.4
3	4	1.0
4 and above	3	0.7

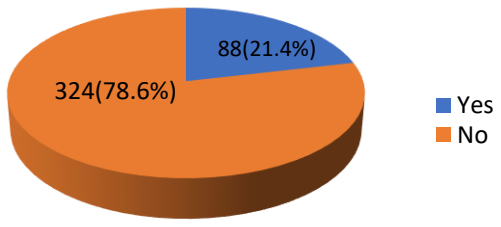

Figure 1: Experience of intimate partner violence prior to index pregnancy.

3.1.4 Prevalence of intimate partner violence in current pregnancy

Figure 2 shows the prevalence of intimate partner violence among respondents in current pregnancy. It shows a prevalence of 83(20.1%), however, the majority 329(79.9%) of the respondents reported that they did not experience IPV in current pregnancy.

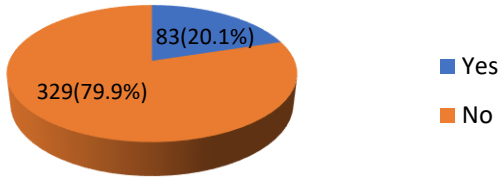

Figure 2: Experience of intimate partner violence in current pregnancy.

3.1.5 Patterns of IPV among pregnant women

Table 3 above shows data on the types of violence melted on respondents in current pregnancy. It shows that the most common violence act was physical 83(20.1%) indicating that all respondents that experienced violence had this form of abuse. This was followed by verbal violence with 79(19.2%) respondents, emotional violence accounted for 76(18.4%), psychological violence was reported among 68(16.5%) pregnant women while sexual violence was the least reported with about 57(13.8%) of the respondents reporting this abuse.

With respect to the reasons for violence experience, majority indicated that domestic and financial issues were the cause of most violent experience accounting for 19.9% and 19.4% respectively. However, pregnancy is unwanted was indicated by 37(9.0%) of the respondents, while pressure to have a male child was reported by 33(8.0%) respondents. 28(6.8%) indicated delay in having current pregnancy as a cause of violence, 6(1.5%) said family interference. Only about 3(0.7%) respondents implicated psychological issues as the cause of violent experience.

3.1.6 Socio-economic predictors of intimate partner violence among respondents

Table 4 presents multinomial regression showing result of likelihood ratio test. Logistic regression was performed to ascertain the association of socio-economic variables like monthly income, number of children, type of union, occupation of husband, monthly income of husband, lifestyle of husband, education of husband and number of wives of husband on the likelihood that participants experience IPV. This was tested at 5% significant level. The goodness-of-fit showed a Pearson chi-square statistic of 0.006. The model explained 26.6% (NagelkerkeR^2) of the variance in IPV and correctly classified 83.5% of cases. The likelihood ratio test showed that logistic regression model was statistically significant for lifestyle of husband (p = 0.000).

Table 3: Forms of violence experienced in the current pregnancy

Items	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Types of violence experienced				
Physical (slapping, pushing, kicking, punching)	83	20.1	329	79.9
Emotional	76	18.4	336	81.6
Psychological	68	16.5	344	83.5
Sexual	57	13.8	355	86.2
Verbal	79	19.2	333	80.8
Reason for violence				
Domestic issues	82	19.9	330	80.1
Financial issues	80	19.4	332	80.5
Pregnancy is unwanted	37	9.0	375	91.0
Pressure to have a male child	33	8.0	379	92.0
Delay in having current pregnancy	28	6.8	384	93.2
Family interference	6	1.5	406	98.5
Psychological issues	3	0.7	409	99.3

Table 4: Multinomial Regression showing result of Likelihood Ratio Test

	Model Fitting Criteria -2 Log Likelihood of	Likelihood Ratio Tests		
Effect	Reduced Model	Chi-Square	Df	Sig.
Intercept	324.656[a]	.000	0	.
Monthly income	330.915	6.259	5	.282
Number of children	326.663	2.007	6	.919
Type of Union	326.750	2.095	3	.553
Occupation of Husband	325.333	.677	4	.954
Monthly income of Husband	334.372	9.716	9	.374
Lifestyle of Husband	357.770	33.114	6	.000
Education of Husband	331.112	6.456	3	.091
Number of wives	326.060	1.404	4	.844

A chi-square statistical is the difference between the final model and a reduced model under -2 log-like conditions. The reduced model consists of the omission of a finished model effect. The null hypothesis is that all the effect parameters are 0.

A. This reduced model corresponds to the final model since it does not improve the degrees of freedom by removing the effect.

3.1.7 Socio-demographic predictors of intimate partner violence among respondents

Table 5 presents multinomial regression showing result of Likelihood Ratio Test. Multinomial logistic regression was performed to ascertain the association of socio-demographic variables like marital status, age, religion educational attainment, and occupation on the likelihood that participants experience IPV. The goodness-of-fit displayed a chi-square statistics of 0.239. The model explained 19.7% (NagelkerkeR^2) of the variance in IPV and correctly classified 81.6% of cases. The logistic regression model was statistically significant for educational attainment (p = 0.000). Respondents who have no formal education and primary education are more likely to experience IPV than those with higher educational attainment. Also, being married and having younger age have the likelihood to experience IPV. However, the model was not statistically significant for age (p = 0.165), marital status (p = 0.119), religion (p = 0.266) and occupation (p = 0.539).

Summary of Findings:

This study found that the majority of respondents 196(47.6%) are 23 – 31years age bracket, 364(88.3%) married, 262(63.6%) with tertiary education, and 383(93.0%) are of Christian faith, were into business and have two children. The prevalence of IPV before pregnancy was 21.4% while in current pregnancy it was 20.1%. Physical violence 83(20.1%) was reported as the most experienced violent act among this study population, and this was closely followed by verbal violence 79(19.2%). Emotional violence accounted for 76(18.4%), psychological violence 68(16.5%) while sexual violence was the least reported with about 57(13.8%). Lifestyle of husband (p = 0.000) was the only socio-economic factor associated with experience of IPV. However, educational attainment (p = 0.000) was the socio-demographic variable associated with IPV.

Table 5: Multinomial Regression showing result of Likelihood Ratio Test

Effect	Model Fitting Criteria -2 Log Likelihood of Reduced Model	Likelihood Ratio Tests Chi-Square	Df	Sig.
Intercept	156.490[a]	.000	0	.
Age	164.333	7.843	5	.165
Marital status	160.744	4.254	2	.119
Educational attainment	182.443	25.953	3	.000
Religion	159.137	2.647	2	.266
Occupation	160.562	4.072	5	.539

The chi-square statistics are the difference between the finished model and the reduced model under -2 log-like conditions. The reduced model consists of a failure to influence the final model. The zero hypothesis is that all the effect parameters are 0.

A. This reduced model corresponds to the final model since it does not improve the degrees of freedom by removing the effect.

3.2 Discussion

3.2.1 Prevalence of intimate partner violence among pregnant women

The result of this research showed that prevalence of IPV before pregnancy was about 21.4% while in current pregnancy it was 20.1% accounting for about one-fifth of the research population. This discovery is above the data reported in former studies in Nigeria (Jeremiah *et al*., 2011; Iliyasu *et al,* 2013). This high prevalence seen in this study may be attributed to domestic issues which may have been affected by the occupation of respondents as well as the quest to address financial responsibilities. Majority of the respondents are business owners, civil servants and self-employed and may be showing much commitment to their career/job and this may reduce the extent to which pregnant women pay attention to, and involve in domestic activities. Also, financial challenges experienced by families in the face of worsening economic situations in recent times may promote misunderstandings and aggressive behaviour. However, this prevalence was significantly lower than that reported in studies conducted in other countries like Peru (Perales *et al*., 2009), Jodan (Okour & Badarneh, 2011), Kenya (Makayoto *et al*., 2013) and in Northwest Ethiopia (Azene *et al*., 2019).

3.2.2 Patterns of intimate partner violence among pregnant women

Findings showed that respondents in this study reported all forms of violence including physical, verbal, emotional psychological and sexual violence. However, the most common type of IPV among pregnant women was physical violence with approximately one-fifth of cases reported. Verbal violence was reported in less than one-fifth of the respondents, emotional violence accounted for 18.4%, psychological violence was reported by 16.5% pregnant women while sexual violence was the least violence experienced with about 13.8% of the respondents reporting this abuse. This finding agrees with the other studies who reported physical violence as the predominant violent act among pregnant women (Okour & Badarneh, 2011; Iliyasu *et al*., 2013). On the contrary, comparable research in Port Harcourt found that the most frequent type of abuse was verbal abuse (Jeremiah *et al*., 2013). Psychological violence was found as the most frequent type of maltreatment among pregnant women in another research (Makayoto *et al*., 2013; Azene *et al*., 2019).

This study found that domestic and financial issues where major reasons for the violence experienced accounting for less than one-fifth of the population. This result is similar to the finding of Iliyasu *et al*. (2013). However, pregnancy is unwanted was indicated by 37(9.0%) of the respondents, while pressure to have a male child was reported by 33(8.0%) respondents. 28(6.8%) indicated delay in having current pregnancy as a cause of violence, 6(1.5%) said family interference. Only about 3(0.7%) respondents implicated psychological issues as the cause of violent experience.

3.2.3 Socio-economic predictors of intimate partner violence among pregnant women

After adjusting for potential confounders, the likelihood ratio test showed that logistic regression model was statistically significant for lifestyle of husband (p = 0.000). This finding may be attributed to the location of these health centers. Most of these facilities are in the heart of the cities with economic values and characterizes by high social activities where lifestyles like smoking, drinking or clubbing seems to be prevalent and a norm. This finding is consistent with previous studies whose result found social habits of husband to be associated with IPV (Onoh *et al*., 2013; Oche *et al*., 2020). Literatures found common lifestyle amongst partners that influence IPV is alcohol use (Makayoto *et al*., 2013; Azene *et al*., 2019).

3.2.4 Socio-demographic predictors of intimate partner violence among pregnant women

After controlling for possible confounders, the logistic regression model for educational attainment was shown to be statistically significant (p = 0.000). Respondents with no formal education or just a primary education are more likely to be exposed to IPV than those with a higher level of education**.** Also, being married and having younger age have the likelihood to experience IPV. This result agrees with previous studies as lower educational status was found as a predictor of IPV across most studies (Jeremiah *et al*., 2011; Iliyasu *et al*., 2013; Azene *et al*., 2019). While this study found that being married and having a younger age are predictors of IPV, Perales *et al*., (2009) found that older (30 years), unmarried,

employed, and economically disadvantaged women are more likely to experience lifetime and pregnancy IPV, though their findings support the conclusion that those with little education are more likely to experience IPV.

4. Conclusions

This research discovered that the prevalence of IPV before and during current pregnancy was 21.4% and 20.1% respectively. Forms of IPV among the respondents were physical, verbal, psychological, sexual and emotional. However, physical violence was the most prevalent in this study. Result also displayed those reasons for violent behaviors were financial and domestic challenges. The lifestyle of husband ($p = 0.000$) was the only socioeconomic factor that influenced IPV in this study. Result of hypothesis showed that educational attainment ($p = 0.000$) was the sociodemographic data that is significantly linked with IPV.

5. Limitations of the Study

The major limitation in this research is that the research was conducted in selected PHCs in Obio/Akpor Local Government Area and findings may not be generalizable to all the PHCs in the area. However, this limitation was addressed by making the selection through a random balloting.

6. Nursing Implications

A critical role for Midwives has always been in the assessment of all pregnant women at every point of care in order to identify actual and potential situations that may jeopardize the health of every pregnant woman throughout the perinatal period and also ensure positive outcome of the period of gestation. This assessment may help screen for acts of abuse on pregnant women by an intimate partner and ensuring that they get timely intervention with positive outcomes. Hence, the discoveries of this research have implication for nursing.

First, finding showed that the experience of IPV before pregnancy was about 21.4% while in current pregnancy it was 20.1% accounting for about one-fifth of the study population. Midwives can therefore take on their advocacy role by creating awareness among all stakeholders on the increase in occurrence of violence experience among pregnant women and the danger it possesses to the health and welfare of the mother and baby. Midwives can provide information through communication technology, ICT materials in form of leaflets, and posters that would contain synopsis on IPV and the various forms as well as the need for mothers to seek appropriate interventions. These materials can be distributed during the antenatal clinic days to all pregnant women especially at booking.

Second, the findings in this research displayed that all forms of IPV was reported by respondents. The pattern of IPV reflects high incidence of physical violence among the study population, followed by acts of verbal abuse. There is therefore the need for midwives to make screening for IPV a standard operation for all pregnant women during antenatal visit. This will help to identify high risk mothers and provide prompt intervention. This would mean that appropriate tool for assessment should be developed and relevant training of all midwives across the state on its correct use. Also, the respondents acknowledged that financial and domestic reasons were reasons for assault. Mothers should be encouraged and assisted were necessary to be productively engaged in activities that make them economically relevant. For those who cannot get a gainful employment, the midwives can liaise with non-governmental and government agencies to provide empowerment programs for skill acquisition and development. Midwives should provide regular education on the need for mothers to speak up and report any form of abuse and they should be referred to support systems available to address this situation. Counseling and support of mothers by exploring ways to address issues surrounding domestic responsibility and the need to utilize better coping strategies will help to reduce the prevalence of IPV.

Third, finding showed that profound affiliation existed amongst respondent's educational attainment, and prevalence of IPV. Midwives therefore need to pay close attention to mothers who have low educational background when screening for IPV. Also, education and instructions regarding IPV and its prevention should be provided in simple and easy to understand terms. It is also important for midwives to champion the campaign for the education of the girl child as this will bring about enlightenment and women empowerment. Lastly, the lifestyle of husband was found to be affiliated with IPV. Midwives may need to create awareness and promote information about the dangers of IPV by targeting men and young males. They may need to launch a campaign on family unity and good parenting in different men forums across the state. Midwives should encourage government to enact laws that prescribe punishment for men who abuse their spouse as a way to discourage this abuse on women's right. It is believed that this may help reduce the incidence of IPV. Also, families that are going through crisis can be identified during routine antenatal care and counseling and support provided for them.

7. Recommendations

The ensuing commendations are made founded on the discoveries in this research:

1. Midwives should ensure that screening for IPV among pregnant women be provided as a routine assessment during antenatal visits.
2. Midwives are encouraged to provide education and teaching on IPV, its forms and prevention on a regular basis during the antenatal visits.
3. Midwives should champion and collaborate with ministry of health to develop a standardized screening template or tool for IPV that will be adopted nationally and provide training and retraining of all midwives on its use.
4. Midwives should encourage government, non-governmental organization to institute initiatives that seek to provide support in form of education, empowerment, counseling, support e.t.c. for pregnant women who experience IPV.
5. Government should ensure the inclusion of violence against women into the educational curriculum so as to provide reorientation early for the youths.
6. The men (husbands) should be encouraged by the midwives to be actively involved in ante natal visits with their wives and they should be well educated on the consequences of violence on pregnant women.

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