

Prevalence and Determinants of Domestic Violence Against Women Living with the Human Immunodeficiency Virus in Anambra State, Nigeria

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DOI: <https://doi.org/10.62154/ajhcer.2025.020.01025>

Abstract

Domestic violence and the Human Immunodeficiency Virus infection (HIV) continue to be serious public health challenge. Domestic violence including intimate partner violence among women living with HIV interfere with achieving the Sustainable Development Goals (SDG) 3 and 5. The aim of this study was to assess the prevalence, and risk factors for domestic violence for domestic violence against women living with HIV/AIDS. A descriptive cross-sectional study design was employed to sample 300 women living with HIV attending HIV clinic at Teaching Hospital in Southeast Nigeria. Informed consent was obtained and an interviewer-administered questionnaire adapted from the WHO Multi-Country Study on Women's Health and Domestic Violence was used for data collection. The respondents' mean age was 37.3±11.4 years. The study showed that 55.3% of the respondents do not know the HIV status of their partners. The overall physical, emotional, and sexual prevalence of domestic violence in this study were 15.3%, 13.3%, 8.7%, and 5.0% respectively. The risk factors that were statistically significant in this study were the respondent's age (P: 0.001; χ^2 : 15.43; 95% CI: 1.579-50.517), the partner's level of educational (P:0.048; χ^2 :3.91; 95% CI: 0.890 - 25.444), the number of children (P:0.003; χ^2 : 7.80; 95% CI: 2.995 - 60.707), and marital status (P:0.03; χ^2 : 2.830; 95% CI: 1.117 - 28.926). Practical solution that requires a holistic and interdisciplinary approach that will involve the victim, the perpetrator, the community, the policy makers, government and the non-governmental stakeholders is inevitable.

Keywords: Domestic Violence, Intimate Partner Violence, Women Living with HIV, Nigeria, Prevalence, Determinants, Anambra State.

Introduction

Domestic violence and HIV infection remain prominent public health issues with widespread adverse effects on women globally (Alemayehu et al., 2015; Aryal et al., 2012).

The prevalence of domestic violence is estimated to impact women worldwide, ranging from 15% to 71% at different points in their lives (Hatcher et al., 2015; World Health Organization, 2021). Women, particularly in various regions, continue to be the most vulnerable demographic, experiencing a disproportionate increase in HIV infection rates (World Health Organization, 2021). As of 2016, approximately "17.8 million women aged 15 and above were living with HIV (WLHIV), constituting 52% of the total HIV-infected population" (Hakim et al., 2022).

Domestic violence perpetrated against women exposes women and female adolescents to an elevated susceptibility to HIV infection, consequently "rendering women more susceptible to contracting HIV through three primary mechanisms". The first mechanism entails the plausibility of direct transmission via coerced sexual actions. The second mechanism involves the potential impact of distressing confrontations on subsequent sexual conduct by augmenting women's inclination towards engaging in risky HIV-related behaviour (Wagman et al., 2016). Lastly, violence may impede women's capacity to partake in securing and safeguarding sexual practices within their existing relationships, as well as hinder their access to HIV-related services, including treatment for "sexually transmitted infections (STIs), voluntary counselling and testing, and interventions aimed at preventing mother-to-child transmission" (Leburu & Phetlho-Thekisho, 2015). Domestic violence is commonly perpetrated by males who hold positions of trust, intimacy, and authority, including spouses, romantic partners, "fathers, fathers-in-law, stepfathers, siblings, uncles, sons, or other kin". In the majority of instances, men are the instigators of domestic violence against women. Nevertheless, women can also display aggressiveness, although their behaviour accounts for a minority of cases of domestic violence (Obarisiagbon, 2019).

Domestic violence is characterized as a recurrent occurrence of forceful actions carried out by either one or both individuals involved in a close association, encompassing marriage, dating, familial bonds, friendship, or cohabitation (Shambayati & Abolhasani, 2014). Various forms of domestic abuse encompass physical aggressiveness (such as "hitting, kicking, biting, shoving, restraining, and throwing objects at one's partner") or the utilization of threats of physical aggression (Chiejine I. et al., 2023; Hatcher et al., 2015).

Domestic violence increases the probability of acquiring HIV infection, and Human Immunodeficiency Virus testing may be delayed or prevented. It can discourage the revealing of Human Immunodeficiency Virus status to partners and increases the vulnerability of HIV infected women. (WLHIV) (Fiorentino et al., 2019).

Women infected with HIV have higher probability to encounter domestic violence and family isolation than other women (Fiorentino et al., 2019). Intimate partner violence is "associated with decreased access or usage of healthcare services, less engagement in HIV care services, poor antiviral medication (ART) adherence, and worse health-related quality of life, which is a major predictor of mortality in PLHIV" (Fiorentino et al., 2019). Suicidal ideation and attempts, depression, anxiety, and post-traumatic disorders are more frequent in HIV infected patients experiencing intimate partner violence than in other people living with HIV (Fiorentino et al., 2019).

This study aims to examine the prevalence and risk factors of domestic violence among women living with retroviral infection/AIDS receiving medical care at a government hospital in Anambra State, Southeast Nigeria.

Conceptual Framework

A conceptual pathway which establishes a connection between intimate partner violence and HIV infection, was derived from a concept developed by Jewkes, Dunkle, Nduna, and Shai (Wagman et al., 2016). It has been revealed that there exists a bidirectional relationship between intimate partner violence (IPV) and HIV infection, with both direct and indirect links. Specifically, forced sexual intercourse or rape perpetrated by partners who are living with HIV significantly increases the risk of transmission.

Pathway linking intimate partner violence and HIV

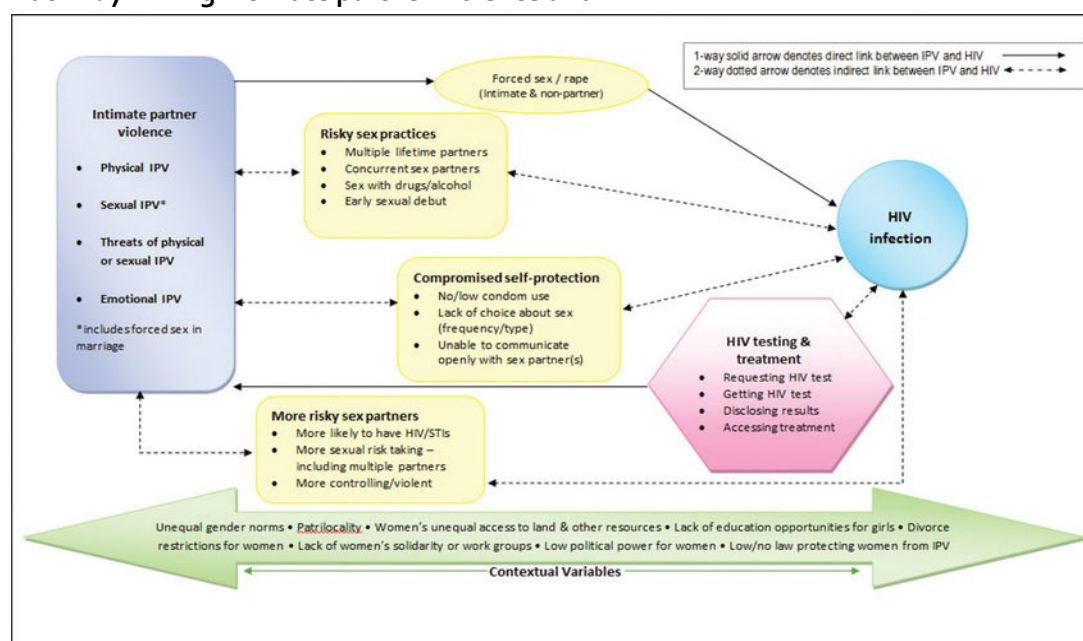


Figure 1: Pathways between intimate partner violence and HIV infection (Wagman et al., 2016)

Methodology

Study Area

The study was carried out in the region of Anambra, which is the site of the prestigious Nnamdi Azikiwe University Teaching Hospital (NAUTH), Anambra State. The state capital is known as Awka. Anambra State shares borders with Delta State to the west, Imo and Rivers State to the south, Enugu state to the east, and Kogi state to the north. In terms of popularity, Anambra is ranked as the eighth most prominent state within Nigeria. It is the second most densely populated state in Nigeria, following closely behind Lagos State (city population, 2020).

Research Design

A descriptive cross-sectional was employed in the study.

Study Population

The study population encompassed all women living with HIV who were accessing care at the HIV unit of Nnamdi Azikiwe University Teaching Hospital Nnewi (NAUTH).

Sample Size Determination

A total sample size of 300 women was used in the study which was determined using the Cochran's formula for descriptive studies, given as;

$$N = Z^2 pq/d^2.$$

Where;

n = The minimum sample size

Z= Standard normal deviate of the 95% confidence which is 1.96

P = Prevalence or proportion of outcome measure from previous studies,

q = 1-p

d= Precision or margin of error usually fixed at 5% (0.05)

The prevalence of domestic violence of 22.1% [95%CI (17.5% to 27.4%)] from a previous study in Aminu Kano Teaching Hospital, Nigeria by (Iliyasu et al., 2011) was used.

Therefore, P= 0.221

q = 1- p. Therefore, q= 1- 0.221;

q= 0.779

d is 5%(0.05).

Computing the values into the formula: $N = Z^2 pq/d^2$

$N = 1.96^2 \times 0.221 \times (0.779) / 0.05^2$.

N = 265.

A 10% Non-response rate was considered.

Therefore, total sample size = 265 + (0.1 X 265) = 291.5.

Sample population for the study was approximated to 300

Sampling Technique

Systematic random sampling method was employed in this study.

Study Instrument

A semi-structured interviewer-administered questionnaire adapted from the "WHO multi-Country Study on Women's Health and Domestic Violence" was used. (García-Moreno, 2013).

Plan for Data Management

The collected data underwent rigorous supervision, with a double-check of study instruments collected each day to ensure accuracy and completeness. A meticulous data

cleaning process was employed, involving techniques such as frequency analysis, sorting, and listing to identify missing values and outliers.

Statistical Analysis

Data was organized and documented in tables, frequencies, percentages and figures. The variables of respondents and their partners were described using simple frequencies, measures of central tendency, and measures of variability. Bivariable statistical analysis was used to assess the association between each independent variable and the outcome variable, domestic violence. All variable with p value <0.05 at 95% confidence interval (CI) in the bivariate analysis were assessed for multivariable analysis to find the factors that are significantly associated with domestic violence and control for confounders using SPSS version 25.

Ethical Considerations

Ethical clearance was obtained from the ethics research committee of school of post graduate studies, University of Port-Harcourt with reference number UPH/ SPH/ ACAD/MPH/ ETHICS/ 2022/ 044) and Nnamdi Azikiwe University Teaching Hospital (NAUTH). Written informed consent and signed consent were obtained from each participant clearly addressing and informing them about the purpose, risk, and benefit of the study.

Results

Table 1: Sociodemographic characteristics of women living with HIV

Variable	Domestic violence			P-value
	Yes (N= 109)(%)	No (N = 291)(%)	Total(%)	
Age (years)				0.001
<30	5(13.9)	31(86.1)	36	
30-39	10(12.7)	69(87.3)	79	
40-49	5(5.4)	87(94.6)	92	
>49	26(28.0)	67(72.0)	93	
Religion				0.722
Christianity	45(15.3)	249(84.7)	294	
Islam	1(25.0)	3(75.0)	4	
Others*	0(0.0)	2(100.0)	2	
Marital status				0.029
Single	11(17.2)	53(82.8)	64	
Married	28(12.8)	190(87.2)	218	
Cohabiting	1(33.3)	2(66.7)	3	
Divorced/separated	6(40.0)	9(60.0)	15	
Relationship duration				0.172
<1	1(6.7)	14(93.3)	15	
1-5	18(17.0)	88(83.0)	106	
>5	17(12.2)	122(87.8)	139	
No relationship	10(25.0)	30(75.0)	40	

Ethnicity				0.701
Igbo	40(15.7)	214(84.3)	254	
Yoruba	3(13.6)	19(86.4)	22	
Hausa	3(17.6)	14(82.4)	17	
Others	0(0.0)	7(100.0)	7	
Level of education				0.322
No Formal education	6(24.0)	19(86.0)	25	
Primary	12(19.7)	49(80.3)	61	
Secondary	22(13.9)	136(86.1)	158	
Tertiary and above	6(10.7)	50(89.3)	56	
Occupation				0.724
Not working/House wife	7(11.9)	52(88.1)	59	
Professional	3(27.3)	8(72.7)	11	
Civil servant	7(14.9)	40(85.1)	47	
Business/Trading	28(15.6)	151(84.4)	179	
Others*	1(25.0)	3(75.0)	4	
Income(monthly)				0.885
<30,000	26(15.9)	138(84.1)	164	
30,000-50,000	20(14.8)	115(85.2)	135	
>50,000	0(0.0)	1(100.0)	1	
Duration of HIV infection				0.314
<1	3(33.3)	6(66.7)	9	
1-5	17(14.7)	99(85.3)	116	
>5	26(14.9)	149(85.1)	175	
Viral load status				0.509
<20	33(17.3)	158(82.7)	191	
20-1000	7(15.6)	38(84.4)	45	
>1000	2(10.0)	18(90.0)	20	
Not sure	4(9.1)	40(90.9)	44	
Number of children				0.027
0	4(6.7)	56(93.3)	60	
1-5	27(15.2)	151(84.8)	178	
>5	15(24.2)	47(75.8)	62	

Others* (Security agent and farmers)

Table1 shows the socio-demographic characteristics of the respondents in this study. The mean age of the respondents was 37.3($\pm$ 11.0), and most of the respondents were 40-49 years (92; 30.7%). The age of the respondents was significant in the experience of domestic violence (P: 0.001). Respondents who were older than 49 years experienced domestic violence more than other age group in this study (28.0%). Most of the respondents were Christians (294; 98.0%), and the Igbos made up the majority (254; 84.7%) of the in the respondents, and majority were married (218; 72.7). The association of marital status of women living with HIV to domestic violence was significant (P: 0.029). The divorced women experienced domestic violence the most (40.0%). Most of the respondents had secondary school education (158; 52.7%),it was noted that respondents with no formal education experienced domestic violence more often than their counterparts. The occupation of majority of the respondents was business or trading (179; 59.7). The monthly wages of most

of the respondents was below ₦30,000 (164; 54.7%). Respondents having monthly income less than 30,000 experienced domestic violence the most (15.9%). The study revealed that the mean and median duration of HIV infection were 2.6 and 3.0 years respectively. Most of the respondents had the HIV infection for over five years (175; 58.3%). Respondents who were positive for less than 1-year experienced domestic violence most (33.3%) Most of the respondents had viral load of <20 copies/ml (191; 63.7%), The respondents with viral load of <20 copies/ml experienced domestic violence more than the other groups (17.5%). The respondents having 1-5 children were more in number than the other groups in the study (59.3%;178). Respondents having more than five children experienced domestic violence the most (24.2%), The association of the number of children to domestic violence was significant in this study as P-value was 0.027.

The mean age of the partners of the respondents was 42.9 ($\pm$ 11.4) years, most of the partners were 40-49 years old (105; 35.0%), Christians (297; 99.0%), Igbo (263; 87.7%), and secondary education (147; 49.0%), and businessmen or traders (231; 77.0%). Educational status; and use of alcohol and substance abuse were significant variables for the partners (P:0.017 and 0.001).

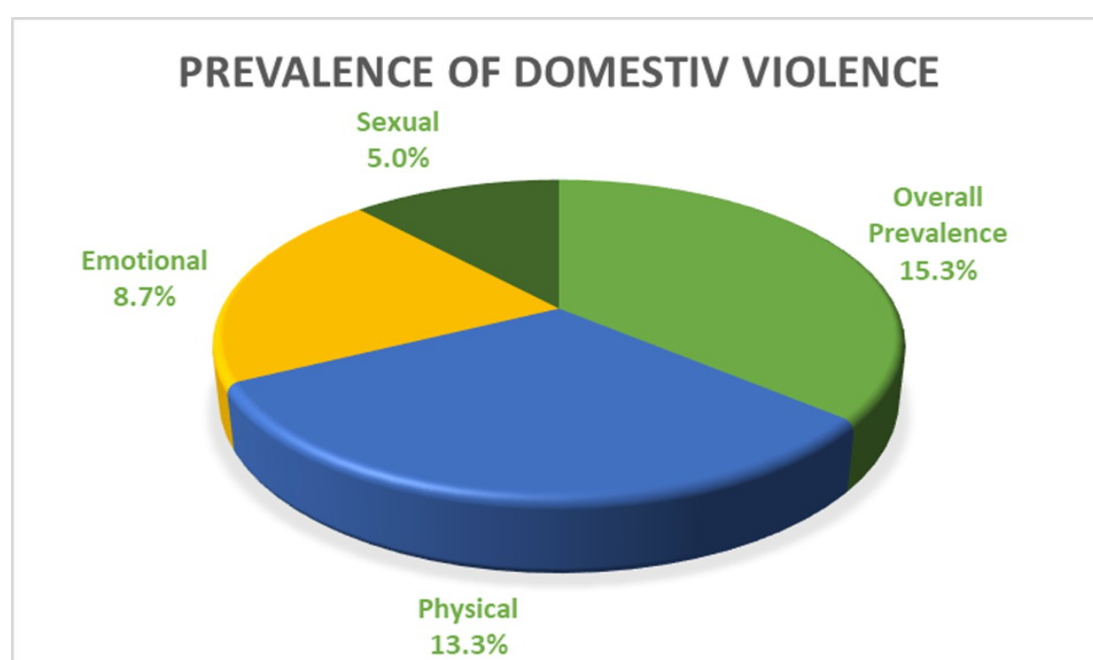


Figure 2: The prevalence and forms of domestic violence among women living with HIV attending clinic in NAUTH

Figure 2 showed that the overall prevalence physical, emotional, and sexual violence were 15.3%, 13.3%, 8.7% and 5.0% respectively.

The commonest forms of physical violence experienced were 'slapped or threw object that could hurt you' (6.0%) and 'threatened or actually attacked you with weapon, gun or knife' (6.0%). The commonest form of emotional violence experienced was 'insulted or made you

feel bad' (7.7%). The commonest form of sexual sexual violence experienced was 'physically forced you to have sex' (5.0)

Table 2: Logistic regression: Domestic violence among women living with HIV

Risk factor	Experienced IPV		χ^2	P-value	OR	95% CI
	Yes (n: 109)	No (n: 291)				
Age (years)			15.434	0.000		
< 30 (Ref.)	5(13.9)	31(86.1)			1	
30-39	10(12.7)	69(87.3)			1.797	0.336-9.599
40-49	5(5.4)	87(94.6)			0.855	0.183-4.003
>49	26(28.0)	67(72.0)			8.931	1.579-50.517
Age of partner (years)			0.087	0.767		
< 30 (Ref.)	7(10.1)	62(89.9)			1	
30-39	19(26.8)	52(73.2)			0.633	0.144 - 2.779
40-49	10(9.5)	95(90.5)			0.520	0.127 - 2.118
> 49	10(18.2)	45(31.8)			0.648	0.137- 3.066
Educational status of partner			3.911	0.042		
No formal education	8 (32.0)	17 (68.0)			4.758	0.890 - 25.444
Primary	17 (20.0)	68 (80.0)			1.986	0.467 - 8.437
Secondary	18 (12.2)	129 (87.8)			1.217	0.301 - 4.913
Tertiary (Ref.)	3 (7.0)	40 (93.0)			1	
Number of children alive			7.800	0.003		
Non (Ref.)	4 (6.7)	56 (93.3)			1	
1-5	27 (15.2)	151 (84.8)			6.758	1.937 - 23.5822
>5	15 (24.2)	47 (75.8)			13.485	2.995 - 60.707
Marital status			2.830	0.03		
Single (Ref.)	11 (17.2)	53 (82.8)			1	
Married	28 (12.8)	190 (87.2)			0.643	0.209 - 1.980
Cohabiting	1 (33.3)	2 (66.7)			4.651	0.297 - 72.873
Divorced	6 (40.0)	9 (60.0)			5.685	1.117 - 28.926
Use of recreational substance			5.167	0.6131		
Cigarette	13 (38.2)	21 (61.8)			798385918.435	0.000
Marijuana	2 (20.0)	8 (80.0)			42084660.210	0.000
Alcohol	31 (12.3)	222 (22.0)			396415447.710	0.000
Others (Ref.)	0 (0.0)	3 (100.0)			1	

Ref., Reference category; n: numbers. χ^2 : Chi-Square, OR: Odds ratio, 95% CI: 95% Confidence interval.

In table 2 the factors statistically significant with domestic violence include:

- The age of the respondents (χ^2 : 15.434; 95% CL: 1.579-50.517; P-value: 0.001): It was found that the respondents that were above 49 years of age were 8.9 times likely to suffer domestic violence than those who were less than 30 years of age.
- The educational status of the partner (χ^2 : 3.911; 95% CL: 0.890 - 25.444; P-value: 0.048): The partners of respondents who had no formal education were 4.7

times more likely to perpetrate domestic violence than partners of respondents who had tertiary and above education.

- iii. The number of children in the relationship (χ^2 : 7.800; 95% CL: 2.995 - 60.707; P-value: 0.003): The respondents who have more than 5 children with them were almost 13.5 times likelihood to experience domestic violence than respondents who do not have any child living with them.
- iv. Marital status (χ^2 : 2.830; 95% CL: 1.117 – 28.926; P-value: 0.03): The respondents who were divorced were almost 5.7 times likelihood to experience domestic violence than the singles.

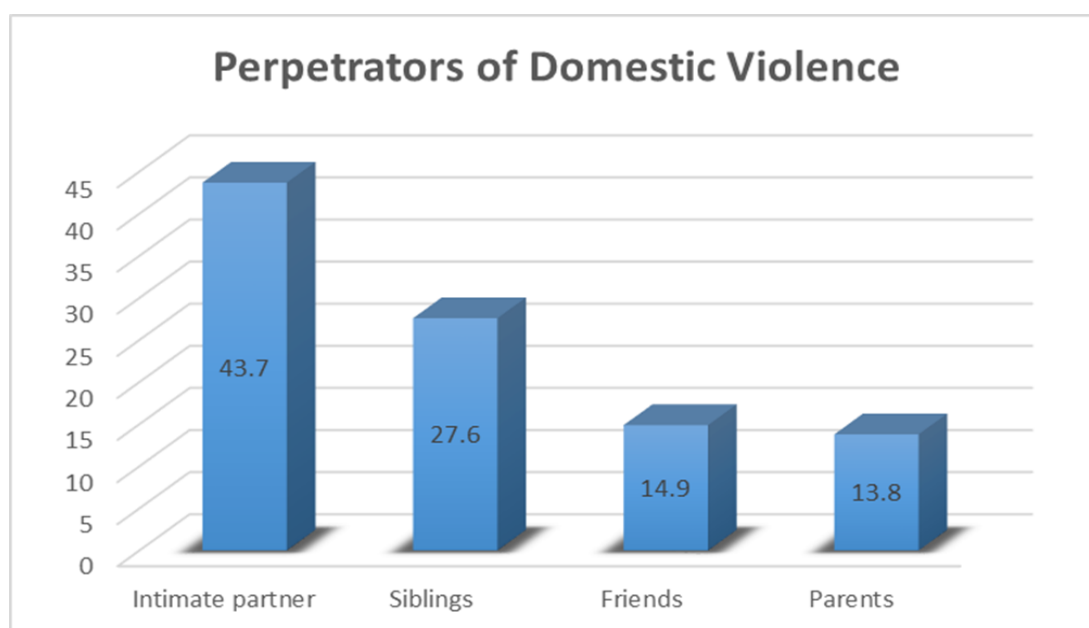


Figure 3: Perpetrators of domestic violence against women living with HIV attending HIV clinic in NAUTH

The percentage distribution of the perpetrators of domestic violence is shown. Majority of the perpetrators of domestic violence were intimate partners (43.7%).

Discussion

Domestic violence is a serious medical and social challenge that requires practical action because of its consequences to the victim, the family and the society. Domestic violence is a global pandemic that affects women of all races, different regions and location, different culture, religion and socio-economic status (World Health Organization, 2024)

Domestic violence among women living with the Human immunodeficiency virus is a complex of two chronic global challenges. Women living with the Human Immunodeficiency Virus tend to be at higher risk to experience domestic violence than women who do not have the HIV infection. And because of their situation (HIV status) they find it more difficult to disclose their experience of domestic violence or report their

perpetrator because of fear of been exposed of the stigma of HIV(Wagman et al., 2016). Domestic violence against women living with HIV is a hidden demoralizer and depression aggravator because it may affect their hospital appointment visit, adherence to drugs and may negatively promote transmission of the infection.

In the study, the mean age of the respondents (37.3 years) was higher than that found in studies by Mehta et al., and Kaggia et al.(Kaggiah et al., 2022; Mehta et al., 2019). In this study more than 60% of the respondents were above 40 years old and age was significant with the experience of domestic violence. This shows that as the age of the respondent increases, there is tendency for the participant to have experience domestic violence once in her life time.

In the South-eastern part of Nigeria, the dominant religion is Christianity. Most of the participants in this study were Christians Majority of the respondents were married. The divorced respondents had the highest experience of domestic violence in this study which is similar to the study by Iliyasu et. al, (2011) in Kano teaching hospital. The possible reasons for the divorced women to experience domestic violence more than the other category of women may include:

Economic hardship: The divorced women may be more prone to financial difficulties and insecurity, which can expose them to be more vulnerable to violence and exploitation by their former partners or new partners. They are likely to have less access to legal and social services that can protect them from domestic violence(World Health Organization, 2014a).

Social support: The divorced women may face stigma and discrimination from their families and communities, this may result to loss of social support and networks and make them more dependent on their abusers and less able to see for help formally and informally. in such situation their self-esteem and confidence will be battered(World Health Organization, 2014b).

Psychological distress: Divorced women may experience emotional trauma and stress, which can affect their mental health and well-being. They may also suffer from depression, anxiety, post-traumatic stress disorder, and suicidal thoughts, which can impair their judgment and coping skills(World Health Organization, 2021).

Power imbalance: Women who have divorced may feel less in control of their lives, which leaves them more vulnerable to abusers' coercion and manipulation. In an effort to reclaim their power and dominance over them, their ex-partners may also harass and threaten them.

Lack of awareness: Women who have recently divorced might not know their rights and options, or they might not be able to identify the warning signs and patterns of domestic abuse. They might also believe that they are to blame for the abuse or that they are powerless to stop it since they have internalized the guilt and blame for their divorce(World Health Organization, 2021).

These reasons stated could be why women cohabiting and the singles may experience more domestic violence than the married women. The married women have advantages over the others because their relationship is backed by traditional rights and supported by both

families. Secondly because the women are legally married, it gives the married women confidence and there is stability in the relationship. The male spouse in the legally or traditionally married relationship often have regards to the wife and family members and thus he is careful not to abuse his wife. Marital status was significantly associated with experience of domestic violence.

From this study the duration of the relationship between the respondents and her partner was assessed. Most of the relationships in this study were above five years duration followed by those within one to five years duration. The respondents who are not currently in a relationship were the least in number. It was found that the women not in a relationship experienced domestic violence the most followed by women who were in a relationship that was less than one year old. The possible reasons why a woman who is not in a relationship would experience more domestic violence include; the absence of a stable relationship, potential partner may not trust the woman and verse vasa, there may be suspicion of multiple partners and affairs by a potential partner, and living without a partner is a risk for domestic violence from relatives and close members. The women who were in a relationship less than one year experienced more domestic violence than women with over 5 years of relationship for the following reasons: The partners may not understand each other as they are just new in the friendship and conflict would be frequent; lack of trust at the beginning of the relationship may aggravate the tendency for domestic violence to happen; if they are yet to be married because the relationship is still new, the risk of domestic violence tends to increase; the women may be more eager to please their partners and avoid conflict, which could make them less likely to assert their boundaries or seek help; they may be more isolated from their friends, family, or support network, who could provide them with emotional, practical, or financial assistance; they may have lower self-esteem or confidence, which could make them more dependent on their partner or more susceptible to their partner's criticism or blame; they may be more hopeful or optimistic about their relationship, which could make them more willing to forgive their partner or rationalize their partners' behaviour.

The educational status of the respondents was assessed in this study. The study showed that most of the respondents completed secondary school education, followed by respondents that had primary school education, those who had tertiary and above education were the smallest in number. It was interesting to note the gradual decline in the percentages of domestic violence experienced by the women from the level of no formal education to the tertiary level of education. It showed an indirect relationship of level of education of the woman to the frequency of experience of domestic violence. The higher the educational status of a woman the lesser the risk of domestic violence occurring. Similar results were found in other studies (Dabaghi et al., 2023; Goyomsa et al., 2022; Iliyasu et al., 2011). However, there was no significant association between level of education and domestic violence in this study, similar result was found by Dabaghi et. al. (2023), Goyomsa et. al. (2022), Brooks et. al. (2019), Vameghi et. al. (2018), Reichel, D. (2017) and Iliyasu et.al. (2011). The possible reasons why a woman with low level of education may experience more

violence include fewer economic opportunities and resources, which could make her more dependent on her partner or less able to leave an abusive relationship; less access to information and services that could help her prevent, cope with, or escape from violence, such as legal aid, health care, or counselling; she may face more social stigma or discrimination, which could affect her self-esteem, confidence, or empowerment; She may have less social support or networks, which could provide her with emotional, practical, or financial assistance; low level of education could mean no employment Women with higher level of education tends to marry men with higher level of education and socio-economic status. Men with higher education and high socio-economic status are less likely to perpetrate domestic violence; women with higher education levels tends to have a household that is more financially and economically comfortable than women with lower educational status; this reduces financial tension, stress, frustrations which may activate conflict and domestic violence

The women earning less than 30,000 Naira monthly experienced domestic violence the most and the possible reasons include the following- She is more likely to be married to a spouse who has low educational status and socioeconomic status; poverty in the family can cause financial stress, conflict and violence, she is likely to be less educated, less access to information and social support, and therefore prone to domestic violence than the educated woman. However, the monthly income was not significantly associated with domestic violence.

More than half of the respondents in this study were aware of their HIV status for over 5 years ago, followed by women who were aware of their HIV status 1-5 years ago prior to the study. The respondents who were aware of positive HIV status less than one-year ago experienced domestic violence the most. The possible reasons why the women who knew their HIV status less than one year ago experience more domestic violence include- frustration and anger towards spouse, inability to cope with the new situation can lead to more conflict in the relationship, and disclosure of her status to the partner may expose her to more domestic violence. The duration of HIV infection was not significantly associated with domestic violence in this study.

More than 60% of the respondents in this study had viral load of <20 copies/ml, followed by respondents who had viral load of between 20-1000 copies/ml. The respondents with viral load of <20 copies/ml experienced domestic violence most followed by respondents with viral load between 20-1000 copies/ml. There was consistency in the relationship of viral load status to the experience of domestic violence, the better the viral load the more the experience of domestic violence. The Viral load status was not significantly associated with domestic violence in this study.

The respondents who had 1-5 children were more than the other groups in the study, respondents who had more than 5 children were next in number and those who do not have any child were the least in number. Respondents who had more than 5 children experienced domestic violence the most (24.2%). The number of children in the household was directly related to frequency of domestic violence experienced by the women. The possible reason

for these maybe related to the fact that the more the number of children the more the responsibility and stress to take care of them, this may lead to frustration, anger; and domestic violence may follow especially when the financial resources are not available. This finding was similar to the result in the studies by Brooks et.al. and Kabwama et. al. in Uganda(Brooks et al., 2019; Kabwama et al., 2019). The number of children in the household was significantly associated with domestic violence.

The overall prevalence of domestic violence, encompassing physical, emotional, and sexual violence, observed in this research was comparatively lower than findings from studies conducted in various regions, including Kano State, Nigeria (Iliyasu et al., 2011), Edo State (Ezeanochie et al., 2011), Kaggia et al. (2022), Kabwama et al. (2016), Burgos-Soto et al. (2014), Brooks et al. (2019), Fiorentino et al. (2019), Goyomsa et al. (2012), Mehta et al. (2019), Biomnda et al. (2020), and the Nigeria Population Commission (2019).

Notably, the prevalence of sexual violence in our study aligns with the finding in the survey by the Nigeria Population Commission (2019), where 4% of women reported experiencing sexual violence in the preceding 12 months. This suggests that, while our overall rates of domestic violence are lower in comparison, the incidence of sexual violence reflects a similar pattern to the national context outlined by the Nigeria Population Commission. The variance in prevalence rate in various studies may be due to differences in the willingness to disclose information regarding the experience of domestic violence, the low awareness level of what domestic violence encompasses, cultural and religious belief, comfortable privacy during data collection, assurance of confidentiality, and confidence in the system for help or assistance. The methodology applied in the study may affect the prevalence rate result, and recall bias may be a challenge. The difference in prevalence rate may be adduced to the screening method used in the methodology. There are several instruments use for the screening of violence and they have different scoring for the different pattern of violence. There is no definite operational definition for domestic violence, because in some studies four operational classifications were used for domestic violence (physical, controlling behaviour, emotional, and sexual), in other studies verbal violence was separated from psychological or emotional violence while in other studies controlling behaviour was not considered in the methodology.

The risk factors for domestic violence among women living with HIV/AIDS

Age of the respondent and marital status were a risk factor in this study which was similar to studied by Iliyasu et al. (2011). The status of relationship was a risk factor as found in studies by Iliyasu et. al. (2011), The older the respondent, the longer the duration for domestic violence exposure and those that are not in a relationship(divorced) tends not to be secured or protected from experiencing domestic violence

The number of children living with the respondent is a risk factor in this study which was similar to results from studies by Ezeanochie et al., (2011) and Ndugwa et.at.,2016. The number of children in a relationship tend to imposes more economic burden, frustration and stress in the family and hence predispose to domestic abuse.

The educational level of a partner emerged as a significant risk factor for domestic violence, a finding consistent with studies conducted by Iliyasu et al. (2011), Ezeanochie et al. (2011), and Burgos-Soto et al. (2014). Partners with lower educational attainment are inclined to perpetrate violence more frequently than their educated counterparts, aligning with the observations of the World Health Organization (WHO) in 2012. The lower educational status of a partner may signify a lower socio-economic state, suggesting that the influence of poverty in the context of HIV infection may contribute to a higher susceptibility to domestic violence (Ezeanochie et al., 2011). The present study indicates that women with lower educational status experienced domestic violence more frequently, corroborating findings reported by the Nigeria Population Commission in 2019. This underscores the pivotal role of educational status in mitigating domestic violence at the community, state, or national levels.

Furthermore, the consumption of recreational substances, including alcohol, emerges as an associated factor for domestic violence, consistent with the findings of the Nigeria Population Commission in 2019, where a husband's alcohol consumption was strongly linked to a woman's likelihood of experiencing any form of violence. Notably, this study reveals that intimate partners were the primary perpetrators of domestic violence against women living with HIV, a trend also identified in the study by Iliyasu et al. (2011) in Kano State, Nigeria.

Conclusion and Recommendations

Domestic violence may take a long time to eliminate because it is a very complex phenomenon, and has been part of many traditional and cultural system where it is seen or assume to be a normal thing. Therefore, it will take a lot of efforts to change the orientation of individuals, families and communities to understand that what is seen as normal about domestic violence is not acceptable. Domestic violence among women living with the Human immunodeficiency virus is a complex of two chronic global challenges. Women living with the Human Immunodeficiency Virus tend to be at higher risk to experience domestic violence than women who do not have the HIV infection. Domestic violence against women living with HIV is a hidden demoralizer and depression aggravator because it may affect their hospital appointment visit, adherence to drugs and may negatively promote transmission of the infection.

The strength and weakness of the study

The strength in the research includes the quality of data collected as the study was conducted in a setting where women living with HIV are available for clinic and free medical services. The female research assistants were also staff who the participants were familial with and this created a conducive environment.

One limitation in this study is possible underreporting of domestic violence from the face-to-face interviews when compared with responses from self-administered questionnaires. Since domestic violence is a complex, delicate, and intimate topic; and the perceived stigma

and shame (feeling of been cause of the violence) associated, underreporting was anticipated. HIV infection is associated with stigma and the respondent may not be comfortable with interviewer that she is not familiar with. This was addressed using trained familiar staff working in HIV unit of the hospital facility

The intertwining of the HIV epidemic and domestic violence necessitates collaborative efforts from various stakeholders to effectively tackle this significant public health challenge. The findings emphasize the importance of tailored interventions and support systems to mitigate the impact of domestic violence on women living with HIV and highlight the interconnected nature of health and social issues within this population.

Domestic violence can be reduced to the barest minimum but it requires a holistic and interdisciplinary approach that will involve the victim, the perpetrator, the community, the policy makers, the government and the non-governmental stakeholders. These are the recommendations to reduce domestic violence:

The education and orientation of the family and the community: The education and orientation of the family and the community about HIV/AIDS, domestic abuse, their relationship; and the role of the family and the community dealing with this situation is very important.

Good communication and conflict resolution: There are need for good communication and negotiation in conflict resolution between women living with HIV, immediate family members and their partners. This can be achieved through formal education; and health education during HIV clinic and counselling services in the health facility.

Male incorporation into family and reproductive health: The men should be incorporated into family and reproductive health programmes as it will expose them to the importance of domestic violence and its consequences.

Family planning and contraception: Family planning services should be in cooperated in all HIV clinic and it has the advantage of preventing unwanted pregnancy and transmission of HIV infection from mother to child. Family planning will ameliorate economic hardship and frustration that are favourable conditions for the perpetration and experience of domestic violence.

The Government and other stakeholders through the health facility can make provision for counselling and mental health services in the hospital and other recognise setting. Health workers should be trained in the area of counselling and basic mental health services. The Coping and handling stress is very important because inability to cope with prevailing socio-economic stress with many children may create an environment for domestic violence to occur.

The community should be incorporated in programmes kicking against domestic violence. Community mobilization and advocacy should be prioritised. The active involvement and participation of the gate-keepers and stakeholders in the community in creating awareness, enlighten them on the dangers and consequences of domestic violence cannot be over emphasized.

Declaration of Conflict of Interest

The authors declare no conflict of interest.

Funding

The study was self-funded.

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