Original Research Article

PREVALENCE AND FORMS OF INTIMATE PARTNER VIOLENCE AMONG PEOPLE LIVING WITH HIV/AIDS IN SOKOTO STATE, NIGERIA

Abstract

Introduction: Intimate partner violence (IPV) is an aberrant behavior that occurs within an intimate relationship resulting in physical, sexual, and psychological harm to a partner. It transcends all strata of the society including socio-cultural groups, families and the community as a whole. Amongst people diagnosed with the Human Immuno-deficiency Virus (HIV), IPV could have adverse health consequences and this could have serious implications for disease progression, transmission and control. This study was therefore aimed at assessing the knowledge, prevalence and forms of IPV against people with HIV/AIDS in Sokoto metropolis, Nigeria.

Methods: A cross-sectional descriptive study design was used to recruit a total of 330 respondents which comprised adult male and female HIV/AIDS patients receiving comprehensive health care services in selected health facilities in Sokoto metropolis. Data on knowledge, prevalence and forms of IPV was elicited using a set of semi-structured interviewer-administered questionnaire downloaded into Open Data Kit (ODK). Data collected was entered into and analyzed using SPSS statistical software version 25 with level of statistical significance set at $p<0.05$

Results: More than two-thirds, 259 (78.5%) of the respondents were diagnosed with HIV within the last one to ten years with almost all, 323(97.9%) having good knowledge of IPV. Only 28 (8.5%) of the respondents experienced at least one form of IPV with more females (9.5%) compared to 4.5% of males experiencing IPV. The various forms of IPV experienced by the respondents included sexual (4.2%), physical (6.7%) and psychological (8.5%).

Conclusion: Although almost all the respondents were knowledgeable about IPV, only a few of them experienced one form of IPV or the other. This has wider public health implications for interventions and underscores the need to initiate IPV screening among people living with HIV, improved awareness of IPV and supportive in care services and counseling aimed at better clinical outcomes amongst PLWHA

Keywords: Intimate partner violence, HIV, Prevalence, PLWHA, Sokoto

1. Introduction

Intimate Partner Violence (IPV) is often defined as any behavior within an intimate relationship that causes physical, psychological, or sexual harm to those within the relationship (1). Globally, intimate partner violence (IPV) is a serious public health problem with a global prevalence of 30% for physical and/or sexual IPV among ever-partnered women (2).Estimates by authors across different regions in Nigeria have reported prevalence of IPV ranging from 29% in South west (3), 41% in South south (4) , 42% in the North (5) to 78.8% in Southeast (6).

Intimate partner violence (IPV) is associated with immediate and lifelong adverse health consequences, including impairment of multiple organ systems, physical injuries, permanent disabilities, and death (7,8). Studies from South Africa and Rwanda have indicated that physical,

sexual and psychological IPV were associated with higher levels of subsequent risk of HIV(9,10). In sub-Saharan Africa, the prevalence of IPV among HIV- positive women ranged from 26 to 72% (11,12) It is to be noted that Intimate partner violence and HIV are overlapping/intersecting challenges, with a significantly high prevalence among women who are living with HIV/AIDS (13-15) .

Intimate partner violence in all its forms considerably increases the risk of human immunodeficiency virus (HIV) infection, especially in communities where the traditional patriarchal system operates, and violence against women perpetrated by an intimate partner is endorsed (16). Significant evidence also indicated that violence against women may increase the risk of HIV transmission both directly and indirectly (17). A systematic review has revealed that several persons living with HIV have experienced different forms of IPV (18) with coerced or forced sexual initiation having a significant contribution to a woman's risk for HIV infection (19). Previous studies have observed that after the disclosure of HIV serostatus, one in three women experienced partner violence while some women experienced controlling behaviour by their partner, including emotional abuse, denial of communication, blame, abandonment, refusal to use safer sex methods, withdrawal of marital support, and marriage dissolution, stigma, and violence (20,21). The Federal Government of Nigeria Official Gazette of November 2014 forbids discrimination against People living with HIV/AIDS (PLWHA) including any form of violence against such persons (22). Most of the previous studies carried out in several countries had focused on IPV against women with little attention to both men and women. To the best of the authors, no work has been carried out to assess IPV against PLWHA in Sokoto state hence the need for this study which was aimed at assessing the knowledge, prevalence and forms of IPV against people with HIV/AIDS in Sokoto metropolis, Nigeria.

2.0.MATERIALS AND METHOD

2.1.Study Area

Sokoto (also called the seat of the caliphate) is located in North-Western Nigeria near the confluence of the Sokoto River and Rima River. The inhabitants of the area are predominantly Muslim of Hausa and Fulani ethnic groups. It has a total of 23 local government areas (LGAs). The metropolis which is the capital city of the state is home to UsmanuDanfodiyo University Teaching Hospital, State Specialist Hospital, several primary health centers and private health facilities. Several of these health facilities render comprehensive HIV/AIDS services in Sokoto among which are seven centers within the metropolis including the following: (1) Primary Health Care: Military Barracks Hospital, Sokoto, Holy Family Trinity Hospital Sokoto and CHC Kofar Rini. (2)Secondary Health Care: Women and Children Welfare Centre (WCWC), Sokoto and Maryam Abacha Women and Children Clinic (MAWCC), Sokoto. (3) Tertiary Health Care: UsmanuDanfodio University Teaching Hospital (UDUTH), Sokoto and State Specialist Hospital (SHS), Sokoto. The services rendered include consultation, HIV testing, adherence counseling, home visits and drug dispensing.

2.2.Study Design

A cross-sectional descriptive study design was used.

2.3.Study Population

The target populations for this study were adult male and female persons with HIV/AIDS residing in Sokoto metropolis. The study populations weremale and female persons with HIV/AIDS receiving treatment at selected health facilities in the metropolis offering

comprehensive HIV/AIDS services during the study period. Study participants were individuals with HIV/AIDS sampled from among the study population.

2.4.Inclusion Criteria

Adult male and female HIV/AIDS patients receiving comprehensive health care services in Sokoto metropolis not later than one year before the commencement of the study.

2.5.Exclusion Criteria

Clients who are critically ill and were not into any relationshipwere excluded.

2.6.Sample Size Determination

The minimum sample size was determined using the formula for cross-sectional studies

$$n = \frac{Z^2 pq}{d^2}$$

where;
n = minimum sample size desired;
Z = standard normal deviation at 95% confidence interval =1.96;
p = prevalence of intimate partner violence in a previous study =28%=0.28 [23]
q = complementary probability of p = 1 - p = 0.72
d = tolerable alpha error or level of precision =5% =0.05;
Therefore n = $\frac{1.96^2 \times 0.28 \times 0.72}{0.0025}$ =310
Considering the population of adults with HIV/AIDS is less than 10,000 in Sokoto state, the formula;

$$n_{f = n/1+(n)/(N)}$$

Where n_f = Desired sample size for a population less than 10,000
n = Minimal sample size for a population greater than 10,000
N = Estimated population of adult HIV/AIDS patients in Sokoto metropolis =7,322 (as obtained from registers of facilities).
$n_{f =}$ = 297.41 ≈ 297
Allowing for a response rate of 90%, n = 330
Three hundred and thirty (330) eligible participants were recruited into the study

2.7.Sampling Technique

A two-stage sampling technique was carried out. A line list of the health facilities rendering comprehensive HIV/AIDS services in Sokoto metropolis was obtained (7). The health facilities were grouped into primary, secondary and tertiary.

Stage 1:
Using simple random sampling by balloting, one facility was selected from amongst primary, secondary and tertiary Health facilities (3 in all) namely,UsmanuDanfodiyo University Teaching Hospital, Maryam Abacha Women and Children Clinic, and CHC Kofar Rini Sokoto.
The patients' registers in each of the selected health facilities were assessed to determine the number of patients attending each facility weekly. Thereafter proportionate to size allocation was done.

Sage 2:
Systematic sampling technique was used at each of the selected health facilities to recruit eligible participants into the study after proportional allocation based on the number of patients attending each facility every week

2.8.Study Instruments:

A semi-structured interviewer-administered questionnaire was used to collect data from study participants comprising the following sections:

- Section A: socio-demographic profile
- Section B: partner's socio-demographic profile
- Section C: HIV/AIDS History
- Section D: knowledge of IPV
- Section E: experience and forms of IPV.

The Questionnaire was developed and uploaded to the researcher's server via the Open Data Kit (ODK) application. The validated form was downloaded from the internet server into the Android phones and tablets of all the data collectors that was used to collect data on the field. Data collected from the field was sent to the researchers' servers via the internet for aggregation and real-time monitoring of data collection.

2.9.Training of research assistants:

A two-day training on the conduct of research, the objectives of the study, protection of personal information, interpersonal communication skills, ethics related to fieldwork, and data collection using ODK was conducted by the researchers involving resident doctors and final-year medical students of our university. After the training, the instrument for data collection was pretested among adult HIV/AIDS patients receiving care in another health facility outside the selected ones in Sokoto metropolis. This was followed by the administration of the questionnaire to the respondents which lasted for five days

2.10. Data management:

Exploratory data analysis using SPSS statistical software version 25 was done to identify errors in the data entry and determine the distribution of the data, this will involve running descriptive statistics for all the variables. Quantitative variables were summarized using mean and standard deviation while categorical variables were summarized using frequencies and percentages

A chi-square test was done to test associations between independent categorical variables and the prevalence of IPV among the participants.The level of statistical significance (α) for the analyses was set at $P < 0.05$.

2.11. Ethical consideration:

Ethical approval to carry out the research was obtained from the Health Research Ethics Committee of the UsmanuDanfodiyo University Teaching Hospital. Permission was sought from various heads of the health facilities while written informed consent was obtained from individual participants. The respondents were assured of strict confidentiality of their responses and were informed that their participation was voluntary and could withdraw their participation at any stage of the study.

3.0 Results

A total of 330 questionnaires were administered giving a response rate of 100 percent. The mean age of the respondents was 36.95years ± 9.93, with most 153 (46.4%) of them within the age group of 30-39 years. Most, 264 (80.0%) of the respondents were females, 285 (86.4%) were Muslims and 277 (83.9%) currently married. More than half 167 (60.3%) of the respondents were in monogamous family settings, and 310 (93.9%) had between 0-7 children. Less than half,

139 (42.1%) of the respondents had secondary school as their highest level of education (Table 1).

Table 1: Socio-demographic characteristics of people with HIV/AIDS in Sokoto metropolis

Variables	Frequencies n = 330	Percentage (%)
Age in years		
<30	69	20.9
30-39	153	46.4
40-49	58	17.6
50-59	35	10.6
≥ 60	15	4.5
Sex		
Male	66	20.0
Female	264	80.0
Religion		
Islam	285	86.4
Christianity	45	13.6
Relationship Status		
Currently married	277	83.9
Divorced/Separated	25	7.6
Boyfriend/Girlfriend living together	10	3.0
Boyfriend/Girlfriend living apart	18	5.5
Family setting if married		
Monogamy	167	60.3
Polygamy	110	39.7
No. of children		
0-7	310	93.9
>7	20	6.1
No. of children alive		
0-7	317	96.1
>7	13	3.9
Tribe		
Hausa	235	71.2
Fulani	41	12.4
Igbo	21	6.4
Yoruba	27	8.2
[1]Others	6	1.8
Highest level of education		
None	36	10.9
Primary	45	13.6
Secondary	139	42.1
Tertiary	87	26.4
Quranic only	23	7.0
Occupation		
Unemployed	68	20.6

Petty trader	114	34.5
Civil servant	42	12.7
Business	80	24.2
Farmers	10	3.0
[2]Others	16	4.8
Which of these do you take		
Cigarette		
Yes	9	2.7
No	321	97.3
Alcohol		
Yes	2	0.6
No	328	99.4
Totulin[¥]		
Yes	1	0.3
No	329	00.7
Marijuana		
Yes	2	0.6
No	328	99.4

[1]Dakarkari, Idoma, Igala, [2]Driver, Student, tailor[¥]**A cough syrup commonly used as drug of abuse**

Table 2 shows the mean age of the respondents' partners was 43.23 ± 9.922 years; those within the age group of 40-49 years had the highest proportion 114 (34.5%). Most 285 (86.4%) were Muslims, less than half 145 (43.9%) had attained the tertiary level of education and 121 (36.7%) were civil servants. Only 10(3.0%) and 7(2.1%) of the respondents used alcohol and marijuana respectively.

Table 2: Sociodemographic characteristics of the partners of people living with HIV/AIDS in Sokoto Metropolis

Variables	**Frequencies n = 330**	**Percentage (%)**
Age in years		
<30	18	5.5
30-39	98	29.7
40-49	114	34.5
50-59	74	22.4
60-69	24	7.3
>70	2	0.6
Religion		
Islam	285	86.4
Christianity	45	13.6
Highest level of education		
None	15	4.5
Primary	30	9.1
Secondary	130	39.4

Tertiary	145	43.9
Quranic only	10	3.0
Occupation		
Unemployed	42	12.7
Petty trader	37	11.2
Civil servant	121	36.7
Business	94	28.5
Farmers	18	5.5
*Others	18	5.5
Which of these does your partner take (multiple responses allowed)		
Cigarette		
Yes	64	19.4
No	266	80.6
Alcohol		
Yes	10	3.0
No	320	99.0
Tutolin[α]		
Yes	3	0.9
No	327	99.1
Marijuana		
Yes	7	2.1
No	323	97.9

*Carpenter, Driver, Mechanic, Student

[α] cough syrup used as drug of addiction

In Table 3,more than two-thirds 259 (78.5%) of the respondents were diagnosed with HIV for of 1-10 years. All 330 (100.0%) the respondents are currently on anti-retroviral medication with 267 (80.9%) having been on treatment for 1-9 years. Most 286 (86.7%) of the respondents' partners knew their HIV status; close to one-third 109 (33.0%) used condoms during sexual intercourse and almost half 161 (48.8%) respondents did not know if their partners had other sexual partners.

Table 3: HIV/AIDS History of respondentsliving with HOV/AIDS in Sokoto metropolis

Variables	**Frequencies n =330**	**Percentage (%)**
Duration of HIV diagnosis (years)		
1-10	295	89.4
>10	35	10.6
On anti-retroviral medication		
Yes	330	100.0
No	0	0.0
Duration of treatment (years)		
1-9	267	80.9

10-19	57	17.3
≥20	6	1.8
Partneraware of his/her status		
Yes	286	86.7
No	25	7.6
Don't know	19	5.8
Use of condoms during sexual intercourse		
Yes	109	33.0
No	221	67.0
Do you know if your partner has other sexual partners		
Yes	61	18.5
No	108	32.7
Don't know	161	48.8

HIV – Human Immunodeficiency Virus

Almost all 323 (97.9%) respondents had good knowledge of intimate partner violence with only 7 (2.1%) recording poor knowledge (Table 4).

Table 4: Knowledge of Intimate Partner Violence among people with HIV/AIDS in Sokoto metropolis

Variables	Frequencies n = 330	Percentage (%)
Have you heard of IPV?		
Yes	310	93.9
No	20	6.1
Have you witnessed IPV as a child growing up?		
Yes	66	20.0
No	264	80.0
Which ofthese acts constitute IPV?		
Being shoved		
Yes	317	96.1
No	13	3.9
Being slapped		
Yes	322	97.6
No	8	2.4
Being kicked		
Yes	323	97.9
No	7	2.1
Being pushed		
Yes	322	97.6
No	8	2.4
Being dragged		
Yes	323	97.9
No	7	2.1
Being beaten up		
Yes	321	97.3
No	9	2.7
Being scolded		
Yes	323	97.9
No	7	2.1
Being burnt on purpose		
Yes	7	97.9
No	323	2.1
Being threatened		
Yes	321	97.3
No	9	2.7
Using a weapon		
Yes	323	97.9

No	7	2.1
Being insulted		
Yes	320	97.0
No	10	3.0
Using abusive language		
Yes	322	97.6
No	8	2.4
Being belittled		
Yes	322	97.6
No	8	2.4
Being intimidated in front of other people		
Yes	320	97.0
No	10	3.0
Getting jealous that a partner is unfaithful when he/she relates with other women/men		
Yes	320	97.0
No	10	3.0
Getting suspicious that partner is unfaithful when he/she relates with other women/men		
Yes	321	97.3
No	9	2.7
Preventing or restricting partner from going to his/her parent's friends'/relatives' houses		
Yes	322	97.6
No	8	2.4
Physically forcing partner to have sexual intercourse when she/he did not want to		
Yes	291	88.2
No	39	11.8
Making the partner to do sexual activities they find degrading or humiliating?		
Yes	323	97.9
No	7	2.1
Knowledge grade		
Good	323	97.9
Poor	7	2.1

IPV – Intimate Partner Violence

Of all the respondents, only 28 (8.5%) had experienced at least one form of intimate partner violence while 302 (91.5%) had no experience (Figure 1).

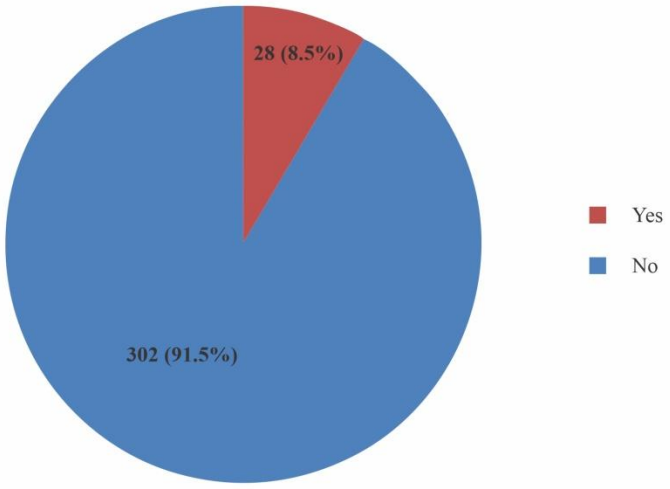

Figure 1: Prevalence of Intimate Partner Violence amongst PLWHA in Sokoto metropolis

Findings from the study showed that more females (9.5%) experienced IPV more compared to males (4.5%) (fig.2)

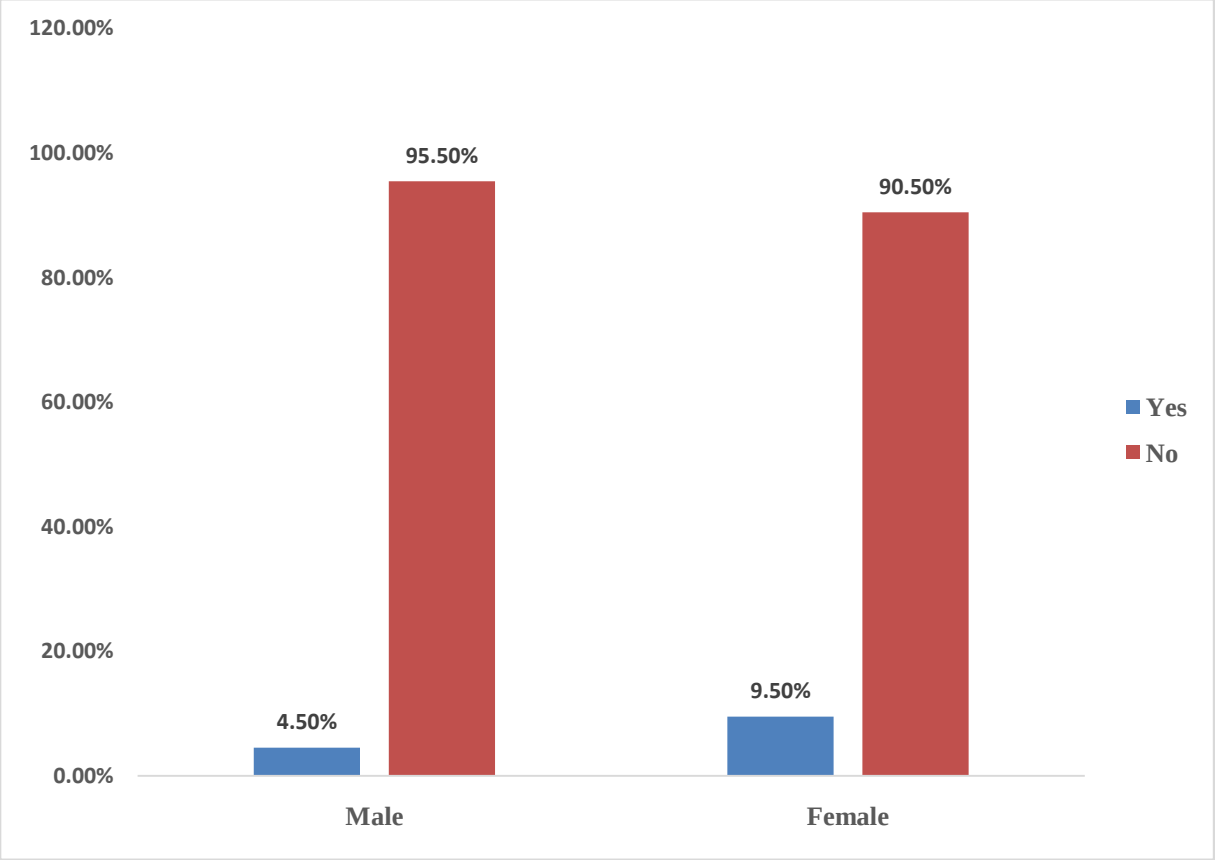

Figure 2:Prevalence of Intimate Partner Violence by Sex amongst people with HIV/AIDS in Sokoto metropolis

Forms of Intimate Partner Violence experienced by respondents

The prevalence of physical violence was 6.7%. The commonest form of physical violence experienced by the respondents was being slapped by partner 18 (15.0%) followed by being pushed by partner 17 (14.2%). The least 2 (1.7%) forms of physical abuse experienced by respondents were being burnt on purpose, using sharp objects on them and being threatened with a gun by their partners (Table 5).

Table 5: Physical abuse among people with HIV/AIDS in Sokoto metropolis

*Variables	Frequency n = 28	Percentage (%)
Partner ever slapped you?	18	15.0
Partner ever pushed you?	17	14.2
Partner ever hit you with her hand?	14	11.7
Partner ever beaten you up?	14	11.7
Partner ever thrown something at you?	12	10.0
Partner ever hit you with anything that could hurt you?	10	8.3
Partner ever shoved you?	9	7.5
Partner ever dragged you?	6	5.0
Partner ever scalded you?	6	5.0
Partner ever kicked you?	5	4.2
Partner ever pulled your hair?	3	2.5
Partner ever burnt you on purpose?	2	1.7
Partner ever used a sharp object on you (e.g knife, razor, bottle)?	2	1.7
Partner ever threatened you with a gun?	2	1.7

*Multiple responses allowed

The prevalence of psychological violence was 8.5%. The commonest form of psychological violence experienced by the respondents was respondents feeling ignored by their partners 24 (16.4%), followed by respondent's partners monitoring their movements 17 (11.6%). The least 5 (3.4%) forms of psychological abuse experienced by respondents were that of the threat of hurting the respondent's family, children or pets (Table 6).

Table 6: Psychological abuse among respondents

***Variables**	**Frequency n = 28**	**Percentage (%)**
Partner ignores your feelings	24	16.4
Partner monitors your movement	17	11.6
Partner threatens to leave or make you leave	16	11.0
Partner monitors your phone calls with others	16	11.0
Partner goes through your phone without your permission	16	11.0
Partner stalks you when you are with other people	13	8.9
Partner threatens to take your children	8	5.5
Partner threatens to hurt your prized possessions	8	5.5
Partner isolates you from friends and family?	7	4.8
Partner goes through your documents without your permission?	6	4.1
Partner threatens to hurt your family?	5	3.4
Partner threatens to hurt your children?	5	3.4
Partner threatens to hurt your pets?	5	3.4

*Multiple responses allowed

The prevalence of sexual violence was 4.2% with the commonest form of sexual violence experienced by the respondents being denial of sex as a punishment 10 (25.0%). The least forms of sexual abuse experienced by respondents included being forced or threatened to engage in oral sex, getting hurt or injured in respondents' private parts intentionally and being forced to watch pornographic films against respondents' will 3 (7.5%)(Table 7).
All the respondents reported various effects of IPV which included cuts and abrasions, miscarriages, abandonment, depression, and loneliness

Table 7: Sexual abuse among respondents

***Variables**	**Frequency n = 28**	**Percentage (%)**
Sexual abuse		
Partner ever denied you sex as a punishment?	10	25.0
Partner forced you to have sex with him/her against your will?	6	15.0
Partner used threats to make you have sex with her/him?	6	15.0
Partner made hurtful statements about your sexual performance?	6	15.0
Partner used force or threats to make you engage in oral sex?	3	7.5
Partner forced you to have sex with a condom against your judgment?	3	7.5
Partner ever hurt or caused injury to your private parts intentionally?	3	7.5
Partner forced you to watch pornographic film against your will?	3	7.5

*Multiple responses allowed

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The proportion of respondents 20 (13.2%), who were married and in a monogamous family setting that experienced intimate partner violence was less than those who experienced IPV 147 (86.8%) in the same family setting, and the association was statistically significant ($\chi^2 = 4.460$, p = 0.035). Among female respondents, the proportion of those who did not experience IPV 239 (90.5%) was higher than those who had experienced IPV25 (9.5%), but the association was not statistically significant ($\chi^2 = 1.694$, P = 0.199) (Table 8).

Table 8: Relationship between respondents' socio-demographic characteristics and experience of intimate partner violence

Variable	Experience of intimate partner violence		Test statistic p value	OR (95% CI)
	Yes n(%)	No n (%)		
Age group (years)				
19 – 30	7 (6.4)	102 (93.6)	$\chi^2 = 0.892$	0.654 (0.269 – 1.588)
>30	21 (9.5)	200 (90.5)	p = 0.345	
Sex (respondent)				
Male	3 (4.5)	63 (95.5)	$\chi^2 = 1.694$	0.455 (0.133 – 1.556)
Female	25 (9.5)	239 (90.5)	P = 0.199	
Relationship status				
Currently married	25 (9.0)	252 (91.0)	Fisher's exact = 1.555	-
Divorced/separated	2 (8.0)	23 (92.0)	p = 0.654	
Boyfriend/girlfriend living together	1 (10.0)	9 (90.0)		
Boyfriend/girlfriend living apart	0 (0.0)	18 (100.0)		
Family setting if married				
Monogamy	20 (13.2)	147 (86.8)	$\chi^2 = 4.460$	2.875 (1.039 – 7.856)
Polygamy	5 (4.7)	105 (95.3)	**p = 0.035**	
No. of children				
0-7	26 (8.4)	284 (91.6)	Fisher's exact	0.824 (0.181 – 3.749)
>7	2 (10.0)	18 (90.0)	P = 0.682	
Educational status				
Informal	8 (13.6)	51 (86.4)	$\chi^2 = 2.383$	1.969 (0.822 – 4.715)
Formal	20 (7.4)	251 (92.6)	P = 0.123	
Occupation				

Unemployed	9 (11.5)	69 (88.5)	$\chi^2 = 1.141$	1.580 (0.679 – 3.676)
Employed	18 (7.6)	218 (92.4)	p = 0.285	
Substance abuse				
Yes	2 (16.7)	10 (83.3)	Fisher's exact	2.246 (0.467– 10.799)
No	26 (8.2)	292 (91.8)	p = 0.270	
Knowledge grade				
Good	27 (8.4)	296 (91.6)	Fisher's exact	0.547 (0.064 – 4.714)
Poor	1 (14.3)	6 (85.7)	p = 0.466	

χ^2 = Pearson's chi square, p = < 0.05, OR = odds ratio, CI = Confidence Interval

The number of female respondents with good knowledge about IPV 261 (98.9%) was higher than the number of male respondents 62 (93.9%) and the association was statistically significant (Fisher's exact = NA, p = 0.032). Also, the proportion of the respondents with 0-7 children and had good knowledge of IPV 306 (98.7%) was higher than those with more than 7 children 17 (85.0%) and the association was statistically significant (Fisher's exact = NA, p = 0.006) (Table 9).

Table 9: Relationship between respondents' socio-demographic characteristics and knowledge of intimate partner violence

Variable	Knowledge grade of IPV		Test statistic p value	OR (95% CI)
	Good n(%)	Poor n (%)		
Age group (years)				
19 – 30	109 (100.0)	0 (0.0)	Fisher's exact= Not available	1.033 (1.008 – 1.058)
>30	214 (96.8)	7 (3.2)	p = 0.100	
Sex (respondent)				
Male	62 (93.9)	4 (6.1)	Fisher's exact= Not available	0.178 (0.039 – 0.817)
Female	261 (98.9)	3 (1.1)	**P = 0.032**	
Relationship status				
Currently married	251 (97.3)	7 (2.7)	Fisher's exact = 0.500	-
Divorced/separated	22 (100.0)	0 (0.0)	p = 1.000	
Boyfriend/girlfriend living together	10 (100.0)	0 (0.0)		
Boyfriend/girlfriend living apart	18 (100.0)	0 (0.0)		
Family setting if married				
Monogamy	147 (96.7)	5 (3.3)	Fisher's exact = Not available	0.565 (0.108 – 2.970)
Polygamy	104 (98.1)	2 (1.93)	p = 0.704	
No. of children				
0-7	306 (98.7)	4 (1.3)	Fisher's exact = not available	13.500 (2.796 – 65.189)
>7	17 (85.0)	3 (15.0)	**P = 0.006**	
Educational status				
Informal	58 (98.3)	1 (1.7)	Fisher's exact = Not available	1.313 (0.155– 11.117)
Formal	265 (97.8)	6 (2.2)	P = 1.000	
Occupation				
Unemployed	78 (100.0)	0 (0.0)	Fisher's exact = Not available	1.031 (1.008 – 1.054)
Employed	229 (97.0)	7 (3.0)	p = 0.199	

Substance intake					
Yes	12 (100.0)	0 (0.0)	Fisher's exact = Not available	1.023 (1.006 – 1.040)	
No	311 (97.8)	7 (2.2)	p = 1.000		

χ^2 = Pearson's chi square, p = < 0.05, OR = odds ratio, CI = Confidence Interval

The proportion of respondents diagnosed with HIV/AIDS 269 (91.2%) ,within 1 – 10 years who did not experience intimate partner violence was higher than those who experienced IPV 26 (8.8%), however, the association was not statistically significant (Fisher's exact, p = 0.752) (Table 10).

Table 10: Relationship between respondents' HIV/AIDS history and experience of intimate partner violence

Variable	**Experience of intimate partner violence**		**Test statistic**	**OR (95% CI)**	
	Yes n(%)	**No n (%)**	**p value**		
Duration of HIV diagnosis (years)					
1-10	26 (8.8)	269 (91.2)	Fisher's exact	1.595 (0.362 – 7.027)	
>10	2 (5.7)	33 (94.3)	p = 0.752		
Duration on antiretroviral medication (years)					
1-10	26 (8.8)	271 (91.2)	Fisher's exact	1.487 (0.337 – 6.568)	
>10	2 (6.1)	31 (93.9)	p = 1.000		
Partner knows his/her HIV status?					
Yes	23 (8.0)	263 (92.0)	Fisher's exact = 1.118	-	
No	3 (12.0)	22 (88.0)	P = 0.598		
Don't know	2 (10.5)	17 (89.5)			
Do you use any condoms during sexual intercourse?					
Yes	11 (10.1)	98 (89.9)	χ^2 = 0.541	1.347 (0.608 – 2.985)	

No	17 (7.7)	204 (92.3)	P = 0.462	
Aware if your partner has other sexual partners?				
Yes	6 (9.8)	55 (90.2)	$\chi^2 = 1.112$	-
No	11 (10.2)	97 (89.8)	p = 0.574	
Don't know	11 (6.8)	150 (93.2)		

χ^2 = Pearson's chi square, p = < 0.05, OR = odds ratio, CI = Confidence Interval
HIV – Human Immunodeficiency Virus

4.0. Discussion

It has been observed that the general perception of IPV used to be that of a female victim and a male perpetrator. However, this perception is gradually being adjusted to expose the increasing trend of a female perpetrator and a male victim, or a male-male or female-female victim and perpetrator with varying magnitudes, forms, and motivations (24). Nevertheless, it is important to mention that there are reports that suggest that the motivations for perpetrating IPV by men and women are similar (25,26).

In this study, the magnitude ofIPV among the respondents was low (8.4%) and this is a reflection of the socio-cultural milieu of the study area where acts of IPV are seen as normal within a relationship. In a similar study where investigators used data from the Medical Monitoring Project (MMP), an annual cross-sectional survey used to produce nationally representative estimates of sociodemographic, behavioral, and clinical characteristics of adult PWH in the U.S.A, it was observed that only 4.4% of their respondents experienced IPV in the past 12 months (27)A study amongst the general population in China indicated that the prevalence of IPV among people living with HIV was 15.44%, a result lower than that of Canada (35%) (28). In contrast to these findings, a similar study from Enugu, Southeast Nigeria recorded the magnitude of IPV among their respondents to be 52.5% in the last 12 months before the study(24) . Similarly, a study in rural US noted that 39% of their study subjects experienced IPV in the past one year while 66.7% experienced more than one form of IPV(29). Also, findings

from a study in Uganda, a country with a high burden of HIV observed that 65.29 and 72.22% of men and women with HIV respectively reported that theyhad experienced at least one form of IPV in their lifetime(12). The difference in the magnitude between our study and others could be attributed to cultural differences as cases of IPV amongst partners should not be made public hence the low reportage of IPV in our society. In the different cultures of Nigeria, women are made to believe that IPV is a practice that has been passed from one generation to another therefore the women must come to terms with it and the men must not report it otherwise it will be seen as a sign of weakness and lack of machoism.

Before now the general perception of IPV used to be that of a female victim and a male perpetrator. However, this perception is gradually being adjusted to expose the increasing trend of a female perpetrator and a male victim, or a male-male or female-female victim and perpetrator(30).

In thisstudy the prevalence of IPV was found to be statistically higher among females (9.5%) than males (4.5%) living with HIV. This finding was not surprising, as IPV is a problem commonly occurring among women (29), and research has shown that gender is a prominent risk factor for IPV, with women being disproportionately affected when compared to men (30)

Low prevalence rates of IPV have been reported amongst women in Ogun state Nigeria, 5.02% (31),Jos 12.6%(32), and Kenya, 14.6% (33). Similar studies from Zaria, and Kano in northern Nigeria reported22and 28%among their study subjects respectively (34, 35).

The national figure reported among the general populace during the Nigeria Demographic and Health Survey (NDHS) was 28% while it was 30% for women in the general population and these figuresare by far greater than figures obtained in this study(36).Furthermore, a higher prevalence of IPV wasobtained from other studies in Nigeria (65.8%)(37), South Africa 67.3% (38),DRC Congo 51%(39) , and Columbia Canada 59% (40).

The much higher figures reported in studies from other parts of Nigeria and Africa compared to our own figure may be due to socio-cultural differences and specific instruments used to collect data as studies that utilized the WHO questionnaire with behaviorally specific questions on acts of IPV, have been found to improve disclosure rates (41).

Men are usually more educated, often engaged in paid employment, and therefore economically more viable than women and this invariably explains the inequality in power hence it is expected that IPV should always be perpetrated by the men. However this is not always the case and in the absence of any visible compromise by men, women are now known to perpetrate violence against men as seen in this study where 4.5% of the men were known to have experienced violence. The prevalence of IPV among men is low when compared to similar studies in rural Appalachia USA 39% (29), Enugu Nigeria 39% (24), Uganda 69.3% (12), and China 16.3% (42). The high prevalence observed in other studies may not be unrelated to good reporting of IPV in those societies compared to our study area where abuse of men must not be heard as such trends if in public domain will demean men and see them as weak.

There is a huge body of literature that shows the various forms of IPV experienced across the globe. In this study, the commonest form of abuse experienced by our respondents was psychological (8.5%) followed by sexual and physical abuse. This is in consonance with findings from other studies (12, 29, 35, 42).

It has been observed in developing countries that a woman is the property of the husband who handles her the way he likes, and there is a failure of authorities to treat sexual violence as a criminal offence, hence discouraging reporting on sexual violence by most women (43,44). Although these abuses occurred in different locations, however, the forms and magnitude vary

considerably. As reported in this study, the effects of IPV ranged from physical to emotional problems including cuts and abrasions, loneliness, abandonment, miscarriages by the women and depression. The study conducted in Enugu state Nigeria observed that their respondents suffered the same problems that includes both physical to mental health problems, and sometimes suicidal ideations which might have been heightened by the double burden of experiencing IPV while living with HIV(24). Findings from this study indicated that being in a monogamous marriage was the only factor associated with the risk of IPV amongst our respondents. In contrast to this finding, the study from Uganda showed that the sociodemographic status of being married was associated with a higher risk of IPV(45), while another type of marital status, such as being divorced, was also associated with IPV in another context(46). This calls for concerted efforts including improving public awareness and providing family counselling aimed at stemming the tide of IPV regardless of marital status and marriage settings.

5.0. Conclusion

The overall prevalence of IPV among People living with HIV in Sokoto is not high, however, IPV is disproportionately higher amongwomen compared to men. This underscores the need to initiate IPV screening among people living with HIV, improved awareness of IPV and supportive in care services and counseling aimed at better clinical outcomes amongst PLWHA

Limitations of the study

This study explored personal experiences of IPV and it was difficult extracting these information from the respondents for obvious reasons especially amongst the men as they would not want to be seen as weaklings in the hands of their female partners. Recall bias played out during interview sessions

Ethical Approval and consent to participate

Ethical approval for this study was obtained from the Health Research Ethics Committee of UsmanuDanfodiyo University Teaching Hospital Sokoto and written informed consent obtained from participants before the commencement of data collection

Consent for publication

All the authors went through the final version of the manuscript and have consented to the paper being published

Data Availability

Data for this research can be made available on reasonable request

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