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The Effect of Health Education on the Prevention and Control of Gender-Based Violence Among People Living with HIV/AIDS in Nigeria

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Abstract

Background

Gender-based violence (GBV) is a critical public health and human rights issue, ranking among the leading causes of death globally. It often begins with verbal abuse, leading to anxiety, despair, and, in severe cases, death. This issue affects individuals of all genders in Nigeria and worldwide and is frequently overlooked as a risk factor for depression and mortality among people living with HIV/AIDS (PLHIV/AIDS). This study focused on participants from ART Clinics at various teaching hospitals in Nigeria, including the University of Port Harcourt, University of Uyo, Federal Medical Center Asaba, and Federal Medical Center Yenagoa.

Method

Using a quasi-experimental design from September 2023 to May 2024, the study enrolled 334 patients through a multistage sampling method. Data were collected via an interviewer-administered semi-structured questionnaire and analyzed using SPSS version 22, with a significance threshold set at $p < 0.05$. Inclusion criteria targeted PLHIV/AIDS aged 18 and older receiving treatment, while those who were physically or psychologically unwell were excluded.

Results

Among the 334 participants, 131 (39.2%) were male and 203 (60.8%) were female. The study found that 38.7% experienced GBV, with economic violence at 25.2% and sexual violence at 31.7%.

Conclusion

The prevalence of GBV is notably high among PLHIV/AIDS attending ART clinics in South-South Nigeria. Factors such as educational attainment, income level, marital status, poverty, depression, and inadequate health information contribute to this violence. Implementing health education interventions at the point of ART enrollment and focusing on the economic empowerment of PLHIV/AIDS is essential for improving their well-being.

Keywords: Gender-based violence (GBV), Economic violence, Sexual violence, PLHIV/AIDS (People Living with Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome), ART (Antiretroviral Therapy).

AIDS	Acquired Immunodeficiency Syndrome
ALHIV	Adolescents Living with HIV
ART	Antiretroviral Therapy
CDC	Centre for Disease Control and Prevention
CEDA Female Entertainers	Convention on the Elimination of All Forms of Discrimination Against Women FEWs
GBV	Gender-Based Violence
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
IPV	Intimate Partner Violence
MSM	Men who have Sex with Men
NACA	National Agency for the Control of
AIDS NACP	National AIDS Control Programme
NCIP	National Commission on Indigenous People
NDHS	Nigeria Demographic Health Survey
PLHIV/AIDS	People Living with Human Immunodeficiency Syndrome
SCT	Social Cognitive Theory
SDT	Self-determination Theory
SSA	Sub-Saharan African
STI	Sexually Transmitted Infections
UN	United Nation
UNICEF	United Nation International Children Emergency Fund
UNHCR	United Nation High Commissioner for Refugee
UNAIDS	Joint United Nation Programmes on HIV/AIDS
UNFPA	United Nation Population Funds
UNODC	United Nation Office on Drugs and Crime
USAID	United States Agency for International Development
WHO	World Health Organization

1. Introduction

Globally, gender-based violence (GBV) constitutes a major threat to human rights and public health (UNHCR, 2020). GBV refers to damaging behaviors directed at individuals due to their gender (UNHCR, 2020). Wirtz (2018) notes that GBV is associated with adverse health outcomes and increased mortality. While both males and females are affected by gender-based violence, women are disproportionately vulnerable, as this violence both reflects and exacerbates existing gender inequalities in their lives (World Bank Group, 2019). The GBV that women perpetrate against their male partners has garnered little attention for various reasons. One contributing factor is the stereotype that men are strong while women are perceived as weak, submissive, and dependent, reinforcing the notion of male dominance (Megorosi, Thobejane, & Luthada, 2018). According to Thobejane, Mogorosi, and Luthada (2018), gender-based violence has harmful effects on individuals, women, social welfare, families, children, and the broader community. The World Health Organization (WHO) and other studies estimate that as many as 30% of women globally may experience GBV (Li et al., 2014; Rigby & Johnson, 2017a; UNAIDS, 2016; WHO, 2015). Survivors of gender-based violence face compromised health, autonomy, safety, and dignity, yet there remains a stigma surrounding these experiences (UNFPA, 2022). Forms of gender-based violence include sexual, psychological/emotional, physical, verbal, and economic violence. Both men and women, including intimate and non-intimate partners, can perpetrate such violence (Europe Council, 2021). This study specifically focuses on economic and sexual violence.

Economic violence (EV) refers to behaviors that monitor and control an individual's use and distribution of money, the mistreatment or harassment of those in less fortunate situations, and the constant threat of being denied financial resources (Miskulin, 2020). Examples of economic violence include men failing to meet family needs, ignoring women's financial input, restricting funds for essentials like food and clothing, stealing or withholding money from a partner, preventing women from pursuing higher education or employment, undermining alimony, and spouses refusing to work or taking on debt. Pregnant women often hide instances of abuse due to fears of losing resources for their unborn children, such as housing, financial support, and an adult to assist with childcare (Tsapalas et al., 2021). Survivors

of economic violence may be more vulnerable to other forms of violence, particularly sexual assault, which is the most common type, and this can even trigger additional violence (Council of Europe, 2024). As a result, sexual assault frequently occurs in contexts involving financial matters. Moreover, even with increasing education levels, the risk of experiencing economic violence remains (Alkan et al., 2021).

Sexual violence: Any sexual act carried out on a person without their consent is considered sexual violence, encompassing both rape and sexual assault (CDC, 2017). The Centers for Disease Control and Prevention (CDC) states that gender-based violence (GBV) affects boys, women, girls, and men by encouraging high-risk sexual behaviors and transactional sex. It also hampers individuals' ability to access HIV treatment and disclose their status due to real or perceived fears of violence and abandonment (CDC, 2017).

Approximately one out of three women globally (30%) has encountered violence in intimate relationships, encompassing both physical and sexual abuse, or has faced non-partner sexual assault at some time in their lives (WHO, 2021). Meanwhile, about one in three men has experienced contact sexual violence or stalking by an intimate partner at some point in their lives (CDC, 2020). Sexual violence is one of the issues faced by PLHIV/AIDS, even as trauma increases the risk of transmission (Decker et al, 2016). Reports indicate that countries with weak educational systems, low accountability, high poverty levels, and gender inequality face elevated rates of sexual violence in academic settings (Kuteesa KN, Akpuokwe CU, Udeh CA, 2024). Survivors of gender-based violence also appear to face increased health issues, including chronic pain, gastrointestinal disorders, neurological issues, depression, suicidal ideation, post-traumatic stress disorder, and issues concerning sexual and reproductive health (Ferranti et al., 2018). Globally, it was confirmed in 2018 that by the end of 2017, 36.9 million individuals were living with HIV, including 1.8 million people with new infections recorded that same year (WHO, 2018). In 2017, 59% of adults and 52% of children were undergoing lifelong antiretroviral therapy (ART), while the rate was as high as 80% for pregnant and breastfeeding women who are living with HIV (WHO, 2018).

Regionally, findings from Northwest Ethiopia show that the prevalence of GBV is 37.9% (Workie et al, 2024), and

estimates of the incidence of gender-based violence (GBV) within populations in Central Asia suggest that people living with HIV/AIDS may experience a lifetime occurrence of around 50%, surpassing the global average (Jiwatram-Negron et al., 2017) compared to study from South Asia, the lifetime prevalence of gender-based violence is 35% higher than the global average (Martin-Raiser, 2022) where about 64% have neither sought help nor reported the violence perpetrated against them (Martin-Raiser, 2022).

In Sub-Saharan Africa, according to a study reported by UNFPA in Morocco, roughly 63 percent of the key population, was estimated to have experienced gender-based violence, though only 3 percent of cases were reported (UNFPA, 2020) while a study by Swahn et al. from Uganda reported a concurrent prevalence of 31.7% for gender-based violence among individuals living with HIV/AIDS. Studies show that GBV is more prevalent in developing countries with limited socioeconomic status and limited availability of education, especially in sub-Saharan African nations (Muluneh et al., 2020; Zellers et al., 2018). Hence, the consequences of high prevalence are illiteracy and poverty.

Nigeria is committed to these principles. However, despite legislative measures and ongoing initiatives to safeguard vulnerable populations from violence, significant work remains to protect survivors and hold perpetrators accountable (NDHS, 2018).

In Nigeria, 9% of women between the ages of 15 and 49 indicated that they had been subjected to sexual assault (NDHS, 2018). The incidence of sexual violence varies, with rates of 16% in the Northeast, 5% in the Southwest, and 5% in the Northwest. Gombe state has the largest proportion of women who have faced sexual violence (45%), while Kebbi has the lowest, with less than 1%, 59% prevalence was reported in Akwa Ibom state to have experienced GBV in their lifetime, 79.5% in Rivers state (Adeyemo, 2023) and it was reported that Delta state top the list of GBV complaints in Nigeria's Niger Delta region (International Center for Investigative Reporting, 2020).

Methodology

Research design

The quasi-experimental design was used to conduct this quantitative investigation.

Study area

The research was conducted in four southern Nigerian states: Rivers, Akwa Ibom, Bayelsa, and Delta States.

Rivers State, located in the South-South region of Nigeria, is home to 5,185,400 people (UN estimate, 2018). The state capital is Port Harcourt, a city situated along the Bonny River, known as the Garden City (Kio-Lawson & Dekor, 2014). Port Harcourt is located at longitude 7°2'1'E and latitude 4°49'27'N. Lugard Frederick founded Port Harcourt city in 1912 and was the then governor of the Southern and the Northern Nigeria Protectorate (African Affairs, 1972).

The investigation was carried out among the PLHIV/AIDS at the Antiretroviral Therapy Centre (ART) in Rivers State, Nigeria, at the University of Port Harcourt Teaching Hospital. The prevalence of HIV/AIDS based on the Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS), 2019 in Rivers State is 3.6% (NAIIS, 2019).

On September 23, 1987, General Ibrahim Badamosi Babangida's military government established Akwa Ibom State. With a land size of 6900 square kilometers and a population of 3,920,208, Akwa Ibom State was formed in 1987 from Cross River State. Akwa Ibom State is located to the south of the Atlantic Ocean, with Rivers State and Abia State to the west, and Cross River State to the east. The state's name comes from the Qua Iboe River, which runs through the area and flows into the Bight of Bonny.

The research was conducted with PLHIV/AIDS at the Antiretroviral Therapy Centre (ART) at the Teaching Hospital at the University of Uyo. Akwa Ibom State has a 4.8% HIV/AIDS prevalence (NAIIS, 2019).

Bayelsa State is located at the heart of the Niger Delta. Established on October 1, 1996, by the military government of Sani Abacha, it was created from Rivers State and is among the newest states in the federation. Bayelsa State was created out of Rivers State on October 1, 1996, by the Sani Abacha's military government with a population of 2,277,961.

The research was conducted with PLHIV/AIDS at the Antiretroviral Therapy Centre (ART) in Nigeria's Federal Medical Center in Yenagoa, Bayelsa State. According to NAIIS (2019), 1.7% of people in Bayelsa State have HIV/AIDS.

Federal Medical Center Asaba is a government-owned facility located in Delta State, Nigeria's. The state is called Delta State because it contains a sizable portion of the

Niger Delta. The research was conducted at the Federal Medical Centre Asaba, situated within Central Hospital Number 34, Nnebisi Road, DBS Junction, Asaba, Delta State among PLHIV/AIDS in Antiretroviral Therapy Centre (ART). The prevalence of HIV/AIDS in Delta State according to NAIIS, 2019, is 1.7% (NAIIS, 2019).

Sampling method

South-south, Nigeria comprises six states: Rivers State, Bayelsa State, Delta State, Edo State, Akwa Ibom State, and Cross River State out of which four states: Rivers state, Bayelsa state, Delta state, and Akwa Ibom state were pre-selected for the exercise.

The study employed a multistage sampling technique in clinic groups.

Stage i: The four states pre-selected have tertiary health facilities that are high-volume sites. The tertiary health facilities use eight differentiated service delivery models of care.

The study employed a multistage sampling technique in clinic groups.

Stage ii: Stratified Random Sampling Techniques was used. Facility-based model was grouped into eight classes. That is, fast track facility ART group, Facility ART group Care Worker led, Facility ART group-support group led, Decentralization-hub and spokes, Facility ART group-after hour, Facility ART group-weekends and public Holidays, Facility ART group-Children and adolescent club-peer manage, mother and infants, care- mentor mother led.

Among the eight groups, two of the groups (fast track ART refill group and support group) were randomly selected for the exercise.

Stage iii: Systematic sampling— Among the two selected groups first participants was chosen and the remaining participants were chosen using every 5th PLHIV/AIDS client based on their arrival and their hospital folders.

Target Population

A quasi-experimental study design was employed, with initial and post-intervention data collected from all four facilities, comparing outcomes between the control and intervention groups.

The research population consists of HIV/AIDS patients undergoing treatment at the UPTH, UUTH, FMC Delta

State, and FMC Bayelsa State, Nigeria from 18 years of age and above.

The intervention group was the PLHIV/AIDS receiving treatment at UPTH Antiretroviral Therapy Clinic, and PLHIV/AIDS receiving treatment at the UUTH Antiretroviral Therapy Clinic.

The control group was the PLHIV/AIDS receiving treatment at FMC Delta State Antiretroviral Therapy Clinic, and FMC Bayelsa State, Nigeria Antiretroviral Therapy Clinic.

Inclusion criteria

PLHIV/AIDS who received treatment during the baseline month and after nine months in the four facilities.

PLHIV/AIDS who were mentally competent to provide consent.

Exclusion criteria

PLHIV/AIDS who received treatment within the baseline month and after nine months in the four health facilities but are clinically unstable.

Sample size calculation

The sample size was calculated using the formula for the comparison of two proportions (Kirkwood, 2005).

$$n = (Z_{\alpha} + Z_{\beta})^2 \times (p_1(1-p_1) + p_2(1-p_2))$$
$$(p_1 - p_2)^2$$

Where;

n= minimum sample size required for each group.

Z_{α} = standard normal deviation (at the confidence level of 95%=1.96).

Z_{β} = standard normal deviation for statistical power (at 80%=0.84).

P2=The prevalence of GBV before intervention was 58.8% in the previous studies by Tantu et al. (Tantu et al., 2020) proportions.

P1= 73.8%. This represents the improvement in knowledge about gender-based violence (GBV) among people living with HIV/AIDS (PLHIV/AIDS) after the health education intervention in the current study.

P1-P2= difference between the two prevalences

$$n = (1.96 + 0.84)^2 \times (0.738(1 - 0.738) + 0.588(1 - 0.588))$$
$$(0.738 - 0.588)^2$$

n= 151.8= 152.

Allowing for addition of 10% response, the minimum sample size was 152+15 = 167 participants for each group. Total = 334 participants.

Result

Social and Demographic Features

A total of 334 participants took part in the study, with 167 in the control group and 167 in the intervention group (refer to Table 3.3).

Age Distribution:

Within the control group, the participants' age distribution was as follows: 23(13.8%) were aged 18-24 years, 50(29.9%) were aged 25-34 years, 50(29.9%) were aged 35-44 years, and 44(26.3%) were aged 45 years and above. In the intervention group, 14(8.4%) were aged 18-24 years, 35(21.0%) were aged 25-34 years, 62(37.1%) were aged 35-44 years, and 56(33.5%) were aged 45 years and above. The chi-square test for age distribution resulted in a value of

7.562 with a p-value of 0.056, indicating no statistical difference in age distribution between the intervention group and control group (p≤0.05).

Gender Distribution:

In the control group, 99(59.3%) were female and 68(40.7%) were male. In the intervention group, 104(62.3%) were female and 63(37.7%) were male. The chi-square test for gender distribution resulted in an estimate of 0.314 with a p-value of 0.575, indicating the distribution of genders in the intervention group and control group did not change significantly (p≤0.05).

Marital Status:

In the control group, 3(1.8%) were divorced, 100(59.9%) were married, 9(5.4%) were separated, 47(28.1%) were single, and 8(4.8%) were widowed. Within the intervention group, 8(4.8%) (8) were divorced, 89(53.3%) were married, 1(0.6%) were separated, 46(27.5%) were single, and 23(13.8%) were widowed. The chi-square test for marital status was significant (0.002*γ), indicating statistically the distribution of marital statuses in the intervention group and control group differed significantly (p≤0.05).

Educational Level:

In the control group, 9(5.4%) had no formal education, 33(19.8%) had primary education, 44(26.3%) had secondary education, and 81(48.5%) had tertiary education. In the intervention group, 11(6.6%) had no formal education, 28(16.8%) had primary education, 76(45.5%) had secondary education, and 52(31.1%) had tertiary education. The chi-square test for educational level resulted in a value of 15.466 with a p-value of 0.001*, suggesting that in the distribution of educational levels, there was a statistically significant difference between the intervention group and control group (p≤0.05).

Religion:

In the control group, 157(94.0%) were Christian, 7(4.2%) were Muslim, and 3(1.8%) practiced traditional religion. In the intervention group, 158(94.6%) were Christian, 7(4.2%) were Muslim, and 2(1.2%) practiced traditional religion. The chi-square test for religion resulted in a value of 0.903γ, indicating no statistically significant difference in religious distribution among the intervention group and control group (p≤0.05).

Table 1: Socio and Demographic Features

Variables	Control	Intervention	χ ² (P-value)
	(n=167)	(n=167)	
	Freq (%)	Freq (%)	
Age			
18-24 years	23 (13.8)	14 (8.4)	
25-34 years	50 (29.9)	35 (21.0)	7.562 (0.056)
35-44 years	50 (29.9)	62 (37.1)	

45 years and above	44 (26.3)	56 (33.5)	
Gender			
Female	99 (59.3)	104 (62.3)	0.314 (0.575)
Male	68 (40.7)	63 (37.7)	
Marital Status			
Divorced	3 (1.8)	8 (4.8)	
Married	100 (59.9)	89 (53.3)	0.002*^γ
Separated	9 (5.4)	1 (0.6)	
Single	47 (28.1)	46 (27.5)	
Widow/Widower	8 (4.8)	23 (13.8)	
Educational Level			
No formal education	9 (5.4)	11 (6.6)	
Primary education	33 (19.8)	28 (16.8)	15.466 (0.001)*
Secondary education	44 (26.3)	76 (45.5)	
Tertiary education	81 (48.5)	52 (31.1)	
Religion			
Christian	157 (94.0)	158 (94.6)	
Muslim	7 (4.2)	7 (4.2)	0.903 ^γ
Traditional	3 (1.8)	2 (1.2)	

*Statistically significant (p≤0.05); χ²=Chi-Square; γ=Fisher's Exact p-value.

Employment Status:

In the control group, 76(45.5%) of the participants were employed, 3(1.8%) were retired, 55(32.9%) were self-employed, 5(3.0%) and 28(16.8%) were unemployed. In the intervention group, 63(37.7%) of the participants were employed, 12(7.2%) were retired, 49(29.3%) were self-employed, 9(5.4%) and 34(20.4%) were unemployed. The chi-square test for employment status resulted in a value of 0.069^γ indicating that there is no meaningful difference in employment status distribution between the interventional group and control group (p≤0.05).

Monthly income:

In the control group, 69(41.3%) of the participants earned <50,000 monthly, 37(22.2%) earned between 50,000-99,000 monthly, 19(11.4%) earned between 100,000-149,000,

16(9.6%) earned between 150,000-199,000 monthly, 18(10.8%) earned between 200,000- 249,000 monthly, 8(4.8%) earned ≥250,000 monthly. The chi-square test for monthly income resulted in a statistically significant variation in the monthly income distribution between the control group and intervention group as shown by the p-value of 0.001*^γ (p≤0.05).

Household size (grouped):

In the control group, the household size (grouped) distribution of participants was as follows: 46(27.5%) of participants had 0-3 people who lived in their household, 89(53.3%) of participants had 4-6 people who lived in their household, 17(10.2%) of participants had 7-9 people who lived in their household, and 15(9.0%) of participants had 10 people and above who lived in their household. In the intervention group, the household size (grouped) distribution of participants was as follows: 56(33.5%) of participants had 0-3 people who lived in their household, 76(45.5%) of participants had 4-6

people who lived in their household, 27(16.2%) of participants had 7-9 people who lived in their household, and 8(4.8%) of participants had 10 people and above who lived in their household. The chisquare test for household size (grouped) distribution resulted in a value of 6.408 with a p- value of 0.093, there was no statistically significant change in the distribution of household sizes (grouped) between the control and intervention groups, as indicated by the p-value of 0.093 (p≤0.05).

Years diagnosed with HIV/AIDS:

In terms of years diagnosed with HIV/AIDS, in control group 4(2.4%) of the participants were diagnosed in year 2000-2005, 25(15.0%) of the participants were diagnosed in year 2006-2010, 57(34.1%) of the participants were diagnosed in year 2011-2015, 67(40.1%) of the participants were diagnosed in year 2016-2020, 14(8.4%) of the participants were diagnosed in year 2021-2023. In the intervention group, 5(3.0%) of the participants were diagnosed in years 2000-2005, 25(15.0%) of the participants were diagnosed in the year 2006-2010, 38(22.8%) of the participants were

diagnosed in the year 2011-2015, 72(43.1%) of the participants were diagnosed in year 2016-2020, 27(16.2%) of the participants were diagnosed in year 2021-2023. The chi-square test for years diagnosed with HIV/AIDS distribution resulted in a value of 0.084y, indicating no change is statistically significant between the control and intervention groups in the distribution of years diagnosed with HIV/AIDS (p≤0.05).

Duration with HIV/AIDS:

In terms of duration with HIV/AIDS, in the control group, 7(4.2%) of the participants were recent that is, they were ≤1 year, 47(28.1%) were 2-5 years, 58(34.7%) were 6-9 years, 39(23.4%) were 10-13 years, 16(9.6%) were ≥14 years. In the intervention group, 10(6.0%) of the participants were recent that is, they were ≤1 year, 61(36.5%) were 2-5 years, 48(28.7%) were 6-9 years, 29(17.4%) were 10-13 years, 19(11.4%) were ≥14 years. The chi- square test for duration with HIV/AIDS distribution resulted in a value of 5.015 had a p-value of 0.286, suggesting that no statistically significant difference was found in the control and intervention groups' distribution of duration with HIV/AIDS (p≤0.05).

Table 2: Socio-Economic Characteristics

Variables	Control (n=167)	Intervention (n=167)	χ ² (P-value)
	Freq (%)	Freq (%)	
Employment Status			
Employed	76 (45.5)	63 (37.7)	
Retired	3 (1.8)	12 (7.2)	0.069 ^y
Self-employed	55 (32.9)	49 (29.3)	
Student	5 (3.0)	9 (5.4)	
Unemployed	28 (16.8)	34 (20.4)	
Monthly Income			
<50,000	69 (41.3)	85 (50.9)	
50,000-99,000	37 (22.2)	52 (31.1)	
100,000-149,000	19 (11.4)	11 (6.6)	0.001^{*y}
150,000-199,000	16 (9.6)	7 (4.2)	
200,000-249,000	18 (10.8)	2 (1.2)	

≥250,000	8 (4.8)	10 (6.0)	
Household Size (Grouped)			
0-3	46 (27.5)	56 (33.5)	
4-6	89 (53.3)	76 (45.5)	6.408 (0.093)
7-9	17 (10.2)	27 (16.2)	
10 years and above	15 (9.0)	8 (4.8)	
Year Diagnosed with HIV/AIDS			
2000-2005	4 (2.4)	5 (3.0)	
2006-2010	25 (15.0)	25 (15.0)	0.084 ^γ
2011-2015	57 (34.1)	38 (22.8)	
2016-2020	67 (40.1)	72 (43.1)	
2021-2023	14 (8.4)	27 (16.2)	
Duration with HIV/AIDS			
≤1 year	7 (4.2)	10 (6.0)	
2-5 years	47 (28.1)	61 (36.5)	
6-9 years	58 (34.7)	48 (28.7)	5.015 (0.286)
10-13 years	39 (23.4)	29 (17.4)	
≥14 years	16 (9.6)	19 (11.4)	

*Statistically significant ($p \leq 0.05$); χ^2 =Chi-Square; γ =Fisher's Exact p-value.

Knowledge about Economic Violence, Sexual violence, and HIV/AIDS (Intervention)

As seen in Table 11.1, many of the participants 99.4% answered that 'they had heard of economic violence' after the intervention and this resulted in a statistically meaningful difference ($p=0.001$), and the participants affected by economic violence slightly reduced from the percentage of 36.73% before the study to 31.68% after the study which shows that participants who do not understand what being affected by economic violence means now understand. Although, there was no notable difference ($p=0.403$)

For participants 'ever heard of HIV/AIDS', most of the participants 99.4% 'correctly' answered that 'they've heard of HIV/AIDS and knew their status'. Only few participants 0.6% 'do not still recognize their status'. There was a significant difference ($p=0.007$)

A high proportion of participants answered before 90.45% and after 91.36% answered that 'HIV/AIDS is not a dead sentence'. However, few of the participants

answered that 'HIV/AIDS is a dead sentence'. No significant difference ($p=0.777$)

For knowledge of 'people with HIV/AIDS' vulnerability to Economic violence', 32.9% of the participants answered that the 'PLHIV/AIDS are vulnerable' before the study while 98.2% answered 'correctly' after the study. There was a statistically meaningful difference ($p=0.001$). However, a high proportion of the participants 95.1% answered 'correctly' that 'economic violence increases the risk of HIV transmission' after the study $p=0.001$

For 'ever heard of sexual violence', all the participants 100% 'correctly' answered with a difference that is statistically significant ($p=0.001$) while the survivors of sexual violence were 25.15% with a noticeable difference ($p=0.032$)

On the knowledge of PLHIV/AIDS more vulnerable to sexual violence, 32.3% answered 'correctly' before the study and a greater proportion 97.5% answered 'correctly' after the study with a statistically significant distinction ($p=0.001$).

For sexual violence increases the risk of HIV transmission, a good proportion 59.3% of the participants answered 'correctly' before the study, and the majority of the participants 96.9% answered

'correctly' after the study with few participants 3.1% answered 'incorrectly' which resulted in a statistically meaningful difference (p=0.001)

Table 3.1: Knowledge about Economic Violence, Sexual violence, and HIV/AIDS (Intervention)

Variables	Intervention Group		McNemar Test p-value
	Pre (n=167)	Post (n=163)	
	Freq (%)	Freq (%)	
Ever heard of Economic violence?			
No	69 (41.3)	1 (0.6)	0.001*
Yes	98 (58.7)	162 (99.4)	
If yes, Economic violence affected you?			
(n1=98; n2=162)			
No	62 (63.27)	110 (68.32)	0.403
Yes	36 (36.73)	51 (31.68)	
Ever heard of HIV/AIDS?			
No	10 (6.0)	1 (0.6)	0.007*
Yes	157 (94.0)	162 (99.4)	
If yes, is HIV/AIDS dead sentence?			
(n1=157; n2=162)			
No	142 (90.45)	148 (91.36)	0.777
Yes	15 (9.55)	14 (8.64)	
PLHIV/AIDS vulnerable to Economic violence?			
No	112 (67.1)	3 (1.8)	0.001*
Yes	55 (32.9)	160 (98.2)	
Economic violence increase HIV transmission?			
No	95 (56.9)	8 (4.9)	0.001*
Yes	72 (43.1)	155 (95.1)	

Ever heard of sexual violence?			
No	62 (37.1)	0 (0.0)	0.001*
Yes	105 (62.9)	163 (100.0)	
If yes, a survivor of sexual violence?			
(n1=104; n2=163)			
No	65 (62.50)	122 (74.85)	0.032*
Yes	39 (37.50)	41 (25.15)	
PLHIV/AIDS vulnerable to sexual violence?			
No	113 (67.7)	4 (2.5)	0.001*
Yes	54 (32.3)	159 (97.5)	
Sexual violence increase HIV transmission?			
No	68 (40.7)	5 (3.1)	0.001*
Yes	99 (59.3)	158 (96.9)	

***Statistically significant (p<0.05)**

To determine the prevalence of selected gender-based violence among PLHIV/AIDS before and after the health education intervention.

Prevalence of selected GBV (Control)

A total of 167 participants were recruited into the control group of the study. The prevalence of selected gender-based violence (GBV) was measured both before (Pre) and after (Post) a certain period (see Table 4.3).

Before the intervention, 116(69.5%) of the participants reported ‘not experiencing selected GBV’, while

51(30.5%) reported ‘experiencing it’. After the intervention period, the number of participants reporting ‘no experience of GBV’ slightly decreased to 111(66.5%), and those reporting ‘experiencing GBV’ slightly increased to 56(33.5%).

The McNemar test was used to determine if the changes in the prevalence of GBV were statistically significant. The test resulted in a p-value of 0.558, indicating that there is no observed changes in the prevalence of GBV from pre intervention to post intervention were not statistically significant (p<0.056).

Table 3.2: Prevalence of selected GBV (Control)

Variables	Control Group McNemar Test p-value	
	Pre (n=167)	Post (n=167)
	Freq (%)	Freq (%)
Prevalence of selected GBV		
No	116 (69.5)	111 (66.5) 0.558
Yes	51 (30.5)	56 (33.5)

***Statistically significant (p<0.056)**

To determine the prevalence of selected gender-based violence among PLHIV/AIDS before and after the health education intervention.

Prevalence of selected GBV (Intervention)

A total of 167 participants took part in the study's intervention group. The prevalence of selected gender-based violence (GBV) was measured both before (Pre) and after (Post) a certain period (see Table 11.2).

Before the intervention, 103 (61.7%) of the participants reported not experiencing selected GBV, while 64

(38.3%) reported experiencing it. After the intervention period, the number of participants reporting no experience of GBV slightly decreased to 100(61.3%), and those reporting experiencing GBV slightly increased to 63 (38.7%).

The McNemar test was used to determine if the modifications in the prevalence of GBV were statistically significant. The test resulted in a p-value of 0.951, indicating that the observed changes in the prevalence of GBV from pre intervention to post intervention were not statistically significant ($p \leq 0.05$).

Table 3.3: Prevalence of selected GBV (Intervention)

Variables	Intervention Group		McNemar Test p-value
	Pre (n=167)	Post (n=163)	
	Freq (%)	Freq (%)	
Prevalence of selected GBV			
No	103 (61.7)	100 (61.3)	0.951
Yes	64 (38.3)	63 (38.7)	

*Statistically significant ($p \leq 0.05$)

Discussion

The prevalence of gender-based violence (38.7%) in this study was similar to findings from other studies, including 37.9% in Northwest Ethiopia, 35.6% in Somalia (Le Mat et al., 2019), 33.3% in Papua New Guinea (Jewkes, Jama-Shai & Sikweyiya, 2017), and 36% in Delta State, Nigeria (Aye et al., 2024). This result aligns with the WHO Fact Sheet (2015), which indicated that around 35% of women have experienced gender-based violence either intimate partner violence or non-partner sexual violence at some point in their lives. The prevalence of gender-based violence in this study was also lower than that found in a study conducted in Rivers State, Nigeria, which reported a prevalence of 79.5% (Adeyemo, 2023). while the prevalence of economic violence is 44.9%, and according to the International Centre for Investigative Reporting (ICIR), Delta State tops the list of GBV complaints in 2020 (ICIR, 2020).

The fact sheet indicated that the Southeast Asia region has the highest prevalence of violence against women at 37.7%, closely followed by the Eastern Mediterranean

region at 37.0%. Notably, although the African region is frequently perceived as the most concerning, it ranked third at 36.6%. In comparison, the incidence in this study was less than the 50.6% and 63.4% rates of gender-based violence reported in humanitarian contexts in Eastern Ethiopia and Colombia (Vu et al., 2016).

A study conducted by Miskulin (2020) in Croatia found an 18.9% prevalence of economic violence, which is less than the rates reported in this current study. In contrast, Australia reported a prevalence of 80%, the USA reported over 90% prevalence, and the United Kingdom ranged from 43% to 98%, all of which are higher than the prevalence in this study. In contrast, a study conducted in the Philippines showed that the prevalence of economic violence varied between 1.5% and 6.7%, while a recent study from Australia found the lifetime prevalence of economic violence among Australians to be 11.5% (Gibbs, Dunkle & Jewkes, 2018).

Additionally, a recent study in South Africa revealed that 43.7% of women reported experiencing two or more instances of economic violence in the past year (Gibbs,

Dunkle & Jewkes, 2018) which is similar to this current study.

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