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North Central Nigerian Primary Health Care Workers' Knowledge, Attitudes, and Practices about HIV Post-Exposure Prophylaxis

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Abstract:

The prevention of HIV/AIDS among health care workers (HCWs) continues to be a major concern. Human immunodeficiency virus infection puts the public's health at risk and kills many people, including healthcare workers. The risk of HIV transmission among healthcare workers during job exposure is becoming a real concern. The purpose of this study is to evaluate South-East Nigerian primary health care workers' knowledge, attitudes, and practices regarding HIV post-exposure prophylaxis. Four hundred respondents were chosen using a descriptive cross-sectional survey design and multistage sampling approaches. SPSS software, in its 25th version, has been used to analyze the data. For the main outcome variables—knowledge, attitude, and practice about the vaccination schedule—mean scores have been produced. A P-value of less than 0.05 was deemed significant. The results of this study indicate that 218 (54.5%) of the respondents were male, 182 (45.5%) were female, 312 (78.0%) had good knowledge, and 336 (84.0%) had good attitude regarding post exposure prophylaxis for HIV/AIDS. The respondents' age, religion, tribe, marital status, and year of practice were found to be significantly associated with their knowledge of post exposure prophylaxis for HIV/AIDS at X^2=32.035, p=0.000), (X^2=16.442, p=0.001), (X^2=372.429, p=0.000), (X^2=15.777, p=0.003), and (X^2=22.988, p=0.000) at p<0.05, while the respondents' gender did not significantly affect the study. The majority of individuals exhibited good levels of PEP knowledge, attitude, and practice,

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according to the research. It is imperative that all medical personnel understand the HIV PEP policy in hospitals. Public health professionals must run health education initiatives to assist individuals understand and utilize HIV prevention and treatment (PEP) in order to lower the risk of HIV infection at work.

Keywords: Primary Healthcare, Infection, HIV and Post-Exposure Prophylaxis,

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Introduction

The most concerned individuals in many nations, including Nigeria, are health care workers (HCWs). Nigeria is one of the countries most affected by the HIV/AIDS pandemic. According to the "Announcement" from 2016, 1.4% of people are HIV positive. Every day, tens of thousands of healthcare workers (HCWs) throughout the world unintentionally come into contact with blood-borne infections (WHO, 2017). According to Thomas et al. (2015), following these types of workplace incidents, the WHO and ILO recommend HIV Post-Exposure Prophylaxis (PEP) to prevent the spread of HIV. When administered shortly after exposure, PEP medications have been demonstrated to reduce HIV risk by 81%. According to Iloanusi et al. (2019), Nigeria has the highest number of HIV/AIDS cases worldwide.

According to Domkam et al. (2018), healthcare workers are responsible for around 2.5% of all HIV infections worldwide. Healthcare workers who handle blood or bodily fluids on the job have a slight but significant risk of contracting HIV and other blood-borne infections. PEP is frequently not administered to those who seek medical attention more than 72 hours after being exposed to HIV or to people who are not at high risk of HIV transmission. PEP cannot be used in place of appropriate safety precautions while handling potentially contaminated materials or fluids. Giving PEP to healthcare professionals who had been exposed to HIV through needle stick incidents reduced their risk of contracting the virus by around 81% in previous case-controlled trials. The effectiveness of PEP after sexual activity and other non-work-related occurrences is uncertain, although this supports its usage after exposure.

Statement of the Problem

Lagos is home to over 177.5 million Nigerians. The high prevalence of HIV infection is one of the nation's health issues. In 2014, 3.4 million people were infected, according to UNAIDS, the United Nations' joint HIV/AIDS program. Healthcare personnel are at danger of catching HIV when they come into contact with the blood and other body fluids of patients who are infected. Healthcare personnel confront a substantial occupational risk because of the high incidence of needle stick injuries (NSI) and the large number of HIV-positive patients. Medical personnel are inevitably exposed to HIV, which results in infection.

For HIV infection, an antiretroviral treatment plan, or PEP, tries to reduce the chance of getting the virus after being exposed to it by a medical practitioner or another person. According to Ajibola et al. (2014), it is a way to stop HIV from spreading. According to Ajibola et al., the high rate of HIV infections among healthcare workers may be caused by ignorance, improper PEP usage, and Nigerian healthcare providers' failure to report injuries they have incurred while providing treatment for patients with HIV. (2014). What motivates healthcare professionals in Nigeria and other Sub-Saharan African nations to use HIV prophylaxis to avoid contracting the virus after working in a hospital remains unknown.

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professionals in Nigeria and other Sub-Saharan African nations to use HIV prophylaxis to avoid contracting the virus after working in a hospital remains unknown.

Research Methods

Healthcare workers at a few hospitals in North central are the subjects of this cross-sectional survey. Southeast Asian geopolitical difficulties (Plateau, Nasarawa, Abuja, Kwara, Kogi, Niger and Benue). The wet season runs from April to November, while the dry season is from December to March. The yearly temperature ranges from 30 to 36 degrees Celsius, while the annual precipitation ranges from 3000 to 4000 millimeters. According to the 2006 national census, 16,381,729 people live in the zone. With a 3% national growth rate, the zone's population is now projected to reach 22,279,151.

125 physicians, 188 nurses, and 87 laboratory scientists/technologists make up the study's sample of 400 primary health professionals in North central Nigeria. The formula created by Cochran (1963:75) was initially used to calculate the sample size. The following calculation was made:

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

$$n = \frac{(1.96^2)(0.5)(0.5)}{0.05^2} = \frac{0.9604}{0.0025} = 384.16$$

$\therefore n = 400$ (to the nearest hundred).

To choose participants for this quantitative study, the researcher used a multistage sample technique that included stratified, proportional, and basic random selection. The 400 participants in the research were divided into three groups: physicians, registered nurses, and lab scientists. We recruited research participants using stratified sampling to ensure that the different categories of primary healthcare providers in the area who serve HIV-positive patients were properly represented in the sample. As a consequence, the parameter estimations were more accurate. The stratification approach does not go against the random selection principle as a probability sample may be drawn from each group.

To distribute the instruments, the researcher traveled to the hospitals and other healthcare institutions that comprised the sample with the assistance of three research assistants. Before distributing the instruments to the personnel, the researcher obtained permission from the administration of the hospital or health center. Presenting a copy of their ethical clearance and a legitimate form of identification, the researcher and research assistants formally presented themselves to the administration of hospitals and/or primary healthcare facilities.

To analyze the data, SPSS version 25 was used. Copies of the instruments were acquired, graded, and collected in order to examine the data. A univariate analysis was performed after the necessary data purification, and the results were presented as a percentage. Graphs, charts, and frequency tables were used to display the frequency distributions of the dependent and independent variables. The Chi-square test, Phi, Cramer, and contingency coefficients were used to assess the degree of association between dependent and independent categorical variables at a 95% confidence level.

RESULTS

Table 1: Socio demographic characteristics of the respondents

Variable	Categories	Frequency	Percent
Age group	20 – 29	57	14.3
	30 – 39	97	24.3
	40 – 49	116	29.0
	50 – 59	86	21.5
	60 – 69	44	11.0
Sex	Male	218	54.5
	Female	182	45.5
Religion	Christianity	213	53.3
	Islam	125	31.3
	Traditional	20	5.0
	Others	42	10.5
Tribe	Yoruba	93	23.3
	Igbo	74	18.5
	Hausa	146	36.5
	Others	87	21.8
Marital Status	Married	215	53.8
	Single	124	31.0
	Separated	35	8.8
	Widow	17	4.3
	Divorced	9	2.3
Educational level	Tertiary	400	100.0
Year of Practice	>10years	50	12.5
	1year	55	13.8
	2-3years	175	43.8
	4-10years	120	30.0
How long have you work in the current department	>10 years	72	18.0
	>2 years	132	33.0
	2-4 years	119	29.8
	5-10 years	77	19.3
Have you being exposed to Occupational HIV before	Yes	109	27.3
	No	125	31.3
	I don't know	166	41.5

The socio demographic characteristics of the respondents are shown in Table 1; the majority of the respondents, 116 (29.0%), were between the ages of 40 and 49, 97 (24.3%) were between the ages of 30 and 39, and 86 (21.5%) were 21.5%; the respondents' gender revealed that 218 (54.5%) were male and 182 (45.5%) were female; the respondents' religion revealed that 213 (53.3%) were Christians, 125 (31.1%) were Muslims, and 20 (5.0%) were traditional; the respondents' tribe revealed that 93 (23.3%) were Yoruba, 74 (18.5%) were Igbo, and 146 (36.5%) were Hausa; the respondents' marital status revealed

that 215 (53.8%) were married, and 124 (31.0%) were single; all respondents had tertiary education. Fifty (12.5%) of the respondents had more than ten years of experience, 55 (13.8%) had two to three years, and 120 (30.0%) had four to ten years. The variable based on the respondents' history of exposure to occupational HIV revealed that 109 (27.3%) had previously been exposed to occupational HIV.

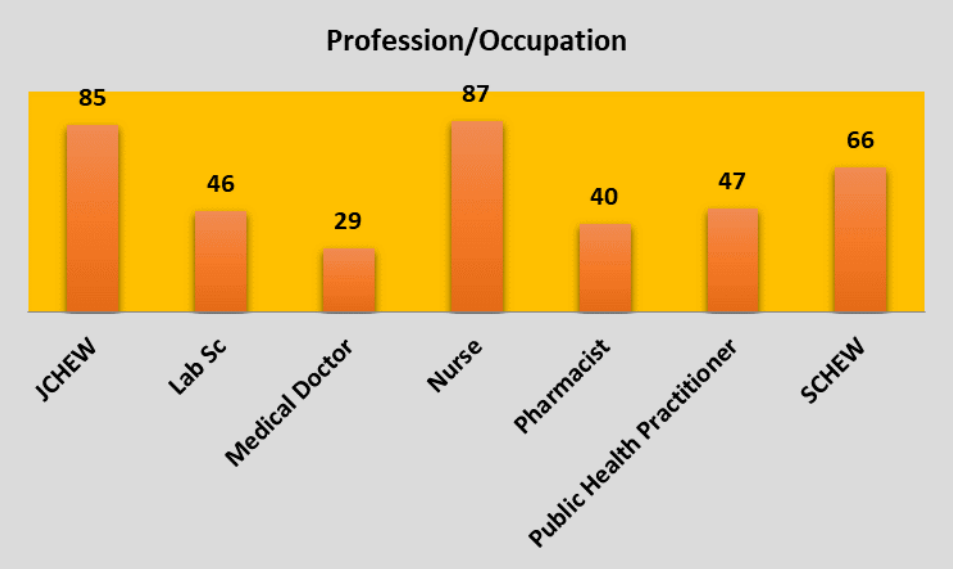

Figure 1: Profession of the respondents

According to Figure 1, 85 (21.3%) of the responders were JCHEWs, 46 (11.5%) were laboratory scientists, 29 (7.3%) were doctors, 87 (21.8%) were nurses, 40 (10.0%) were pharmacists, 47 (11.8%) were public health practitioners, and 66 (16.5%) were SCHEWs.

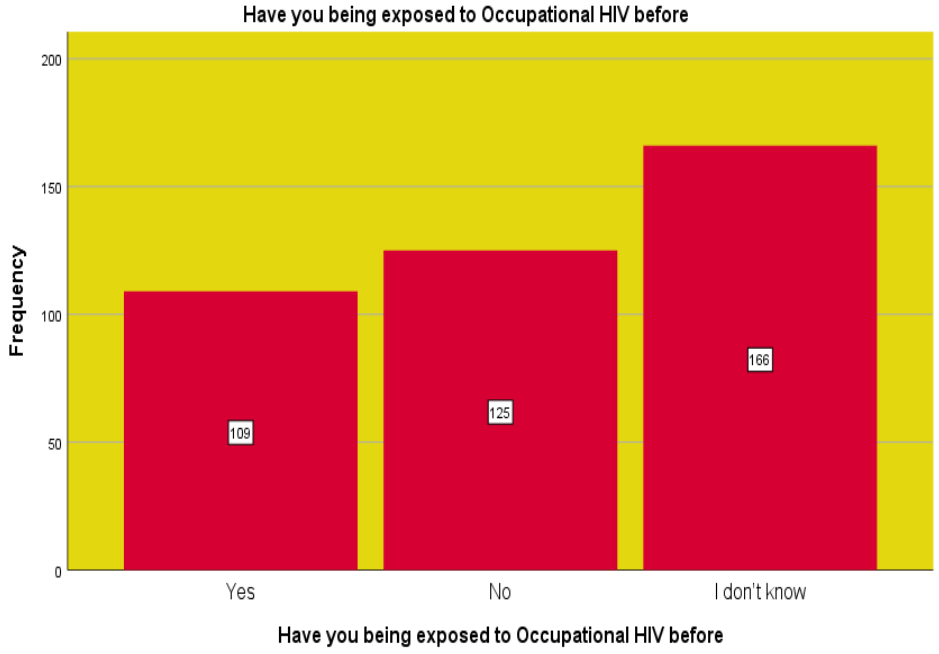

Figure 2: History of occupational exposure to HIV

Figure 2 shows the history of HIV exposure at work. Of those, 109 (27.3%) had a history of HIV exposure at work, 125 (31.3%) said they did not, and 166 (41.5%) said they were unsure.

Table 2: Knowledge of the respondents on post exposure prophylaxis for HIV/AIDS

Variable	Categories	Frequency	Percent
Can you get HIV from occupational exposure	Yes	398	99.5
	No	2	0.5
How will you indicate level of exposure to occupational HIV in your facility	High	234	58.5
	medium/moderate	85	21.3
	Low	81	20.3
Have you ever heard of post exposure prophylaxis (PEP) for HIV	Yes	400	100.0
Do you know any sexually transmitted infection	Yes	400	100.0
When will you think PEP should indicate	Patient at high risk	103	25.8
	Patient known with HIV	15	3.8
	HIV with unknown	282	70.5
What is the maximum time to delay the PEP	24 hours	382	95.5
	48 hours	13	3.3
	72 hours	5	1.3
What is preferable time to take PEP	28 days	143	35.8
	40 days	88	22.0
	6 month	104	26.0
	Life time	65	16.3
Have you attend any training about PEP	Yes	312	78.0
	No	88	22.0
Do you know about the PEP guide lines	Yes	307	76.8
	No	87	21.8
	I don't know	6	1.5
What is the effectiveness of PEP Within hour	After 6 hour of exposure	87	21.8
	After 12 hour of exposure	144	36.0
	After 72 hour of exposure	169	42.3

The respondents' knowledge of post exposure prophylaxis for HIV/AIDS is shown in Table 2, where 398 (99.5%) indicate that occupational exposure can result in HIV. The variable based

on how you will indicate the level of occupational HIV exposure in your facility shows that 234 (58.5%) indicate high, 85 (21.3%) indicate medium/moderate, and 81 (20.3%) indicate low. All respondents (100%) had heard of post exposure prophylaxis (PEP) for HIV and were aware of sexually transmitted infections; the respondents' maximum time to delay PEP is indicated by 382 (70.5%) indicate 24 hours, 13 (3.3%) indicate 48 hours, and 5 (1.3%) indicate 72 hours; the preferred time to take PEP is indicated by 143 (35.8%) indicate 28 days, 88 (22.0%) indicate 40 days, and the preferred time to take PEP is indicated by 143 (22.0%) indicate 28 days. 312 (78.0%) had received PEP training, 307 (76.8%) were aware of the PEP guidelines, and 104 (26.0%) said six months, while 65 (16.3%) indicated lifetime.

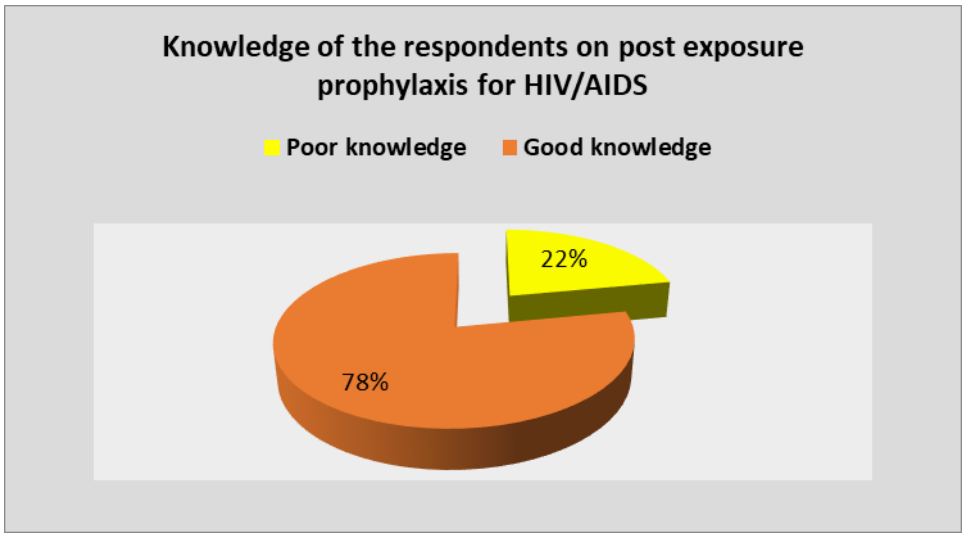

Figure 3: Knowledge of the respondents on post exposure prophylaxis for HIV/AIDS

Figure 3 shows the respondents' awareness of post-exposure prophylaxis for HIV/AIDS. Of them, 312 (78.0%) have high knowledge, whereas 88 (22.0%) have low understanding.

Table 3: Association between socio demographic and knowledge of the respondents on post exposure prophylaxis for HIV/AIDS

Variable	Categories	Poor knowledge	Good knowledge	Total	Chi square (χ^2)	df	P-value
Age group	20 – 29	27(47.4%)	30(52.6%)	57(100.0%)	32.035	4	0.000
	30 – 39	9(9.3%)	88(90.7%)	97(100.0%)			
	40 – 49	28(24.1%)	88(75.9%)	116(100.0%)			
	50 – 59	17(19.8%)	69(80.2%)	86(100.0%)			
	60 – 69	7(15.9%)	37(84.1%)	44(100.0%)			
Sex	Male	42(19.3%)	176(80.7%)	218(100.0%)	2.087	1	0.149
	Female	46(25.3%)	136(74.7%)	182(100.0%)			
Religion	Christianity	57(26.8%)	156(73.2%)	213(100.0%)	16.442	3	0.001

	Islam	29(23.2%)	96(76.8%)	125(100.0%)			
	Traditional	2(10.0%)	18(90.0%)	20(100.0%)			
	Others	0(0.0%)	42(100.0%)	42(100.0%)			
Tribe	Yoruba	88(94.6%)	5(5.4%)	93(100.0%)	372.429	3	0.000
	Igbo	0(0.0%)	74(100.0%)	74(100.0%)			
	Hausa	0(0.0%)	146(100.0%)	146(100.0%)			
	Others	0(0.0%)	87(100.0%)	87(100.0%)			
Marital Status	Married	49(22.8%)	166(77.2%)	215(100.0%)	15.777	4	0.003
	Single	33(26.6%)	91(73.4%)	124(100.0%)			
	Separated	0(0.0%)	35(100.0%)	35(100.0%)			
	Widow	6(35.3%)	11(64.7%)	17(100.0%)			
	Divorced	0(0.0%)	9(100.0%)	9(100.0%)			
Year of Practice	>10years	9(18.0%)	41(82.0%)	50(100.0%)	22.988	3	0.000
	1year	0(0.0%)	55(100.0%)	55(100.0%)			
	2-3years	53(30.3%)	122(69.7%)	175(100.0%)			
	4-10years	26(21.7%)	94(78.3%)	120(100.0%)			

The relationship between respondents' sociodemographic characteristics and their knowledge of HIV/AIDS post-exposure prophylaxis is shown in Table 3; the sociodemographic variables based on age, religion, tribe, marital status, and year of practice show a significant association with respondents' knowledge of HIV/AIDS post-exposure prophylaxis at (X^2=32.035,p=0.000), (X^2=16.442,p=0.001), (X^2=372.429,p=0.000), (15.777,p=0.003), and (X^2=22.988,p=0.000) at $p<0.05$, while respondents' gender has a non-significant association.

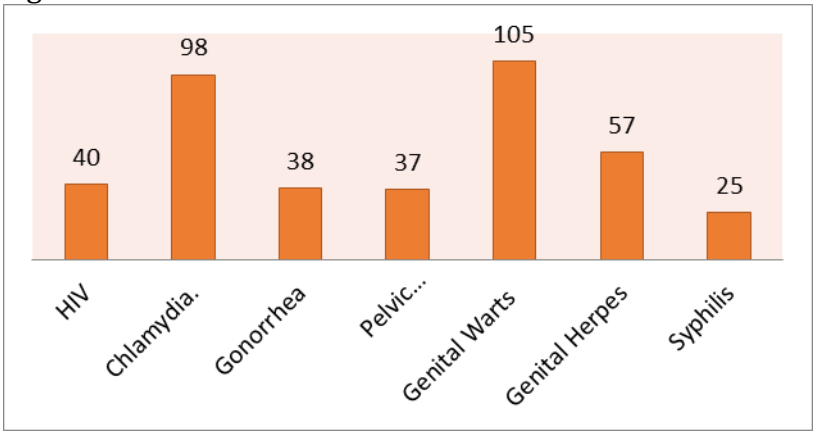

Figure 3: Knowledge of the respondents on causes of sexually transmitted infection

Figure 3 shows the respondents' understanding of the causes of STDs. Of the respondents, 40 (10.0%) mention HIV and AIDS, 98 (24.5%) mention chlamydia, 38 (9.5%) mention gonorrhea, 37 (9.3%) mention pelvic inflammatory disease, 105 (26.3%) mention genital warts and human papillomavirus, 57 (14.3%) mention genital herpes, and 25 (6.3%) mention syphilis.

Table 4: Source of information on sexually transmitted infection

Variable	Categories	Frequency	Percent
TV/radio	Yes	323	80.8
	No	77	19.3
Newspaper	Yes	369	92.3
	No	31	7.8
Public talks/seminars	Yes	361	90.3
	No	39	9.8
Billboards/posters	Yes	392	98.0
	No	8	2.0
Hospital/health workers	Yes	371	92.8
	No	29	7.3
Teachers	Yes	318	79.5
	No	82	20.5
Friends/relations	Yes	260	65.0
	No	140	35.0

Information on sexually transmitted infections is included in Table 4, while Table 323 (80.8%) mentions TV and radio. Newspapers are indicated by 369 (92.3%). 361 (90.3%) mention public lectures or seminars. 392 (98.0%) show posters or billboards. 260 (65.0%) identify friends or relationships, 318 (79.5%) suggest teachers, and 371 (92.8%) indicate hospital/health staff.

Table 5: Perception of the respondents to transmitted of HIV/AIDS

Variable	Categories	Frequency	Percent
From needles and syringes	Agree	400	100.0
Blood and blood product	Agree	392	98.0
	Disagree	8	2.0
Sharing the same plate with infected person	Agree	5	1.3
	Disagree	395	98.8
Unprotected sexual intercourse	Agree	400	100.0
From mother to child	Agree	400	100.0
From sharing the same toilet with an infected person	Agree	124	31.0
	Disagree	276	69.0
Exposure to cough and sneeze from infected persons	Agree	132	33.0
	Disagree	268	67.0

Table 5 shows the respondents' perceptions of how HIV/AIDS is spread. All respondents (100%) agree that needles and syringes, unprotected sexual contact, and mother-to-child are the three ways that HIV/AIDS is spread. 5 (1.3%) say they accept to eating a plate with an infected person, 124 (31.0%) say they agree to using a bathroom with an infected person, 132 (30.0%) say they consent to coughing and sneezing from infected people, and 392 (98.0%) say they agree to blood and blood products.

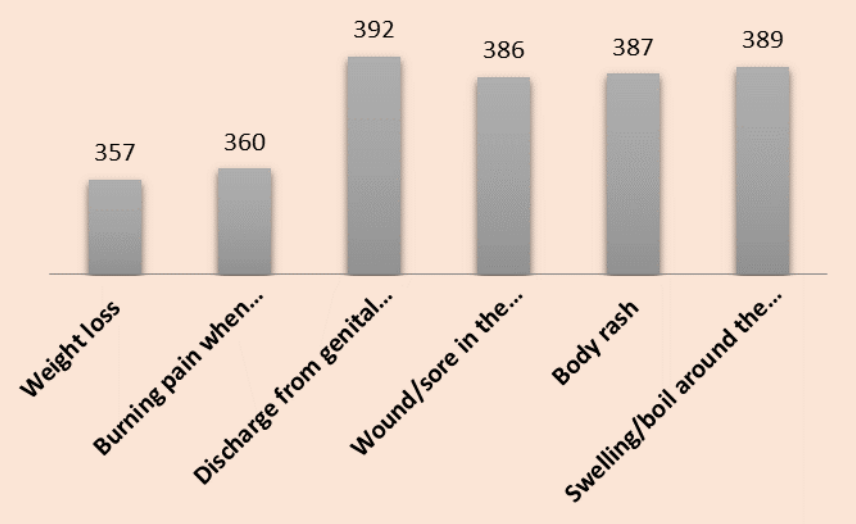

Table 7: Attitude of the respondents on post exposure prophylaxis for HIV/AIDS

Variable	Strongly agree	Agree	Strongly disagree	disagree
Do you believe that training of PEP is important for behavioral change	380(95.0)	13(3.3)	4(1.0)	3(0.8)
Do you think there should be PEP guidelines in work areas	336(84.0)	54(13.5)	5(1.3)	5(1.3)
Do you believe PEP reduce like hood of being HIV positive	381(95.3)	11(2.8)	6(1.5)	2(0.5)
do you believe PEP to prevent further infection	384(96.0)	11(2.8)	1(0.3)	4(1.0)
How do you see that PEP is indicated for any type of sharp injuries	380(95.0)	11(2.8)	5(1.3)	4(1.0)
What is your opinion on the believe that PEP is not important if the exposure is not with patient of known HIV positive	384(96.0)	5(1.3)	6(1.5)	5(1.3)
Do you believe that training of PEP is important for a behavioral change	386(96.5)	5(1.3)	5(1.3)	4(1.0)
Everyone should have access to PEP.	385(96.3)	6(1.5)	6(1.5)	3(0.8)
PEP can reduce the likelihood of HIV infection	381(95.3)	5(1.3)	9(2.3)	5(1.3)

Respondents' attitudes on post-exposure prophylaxis for HIV/AIDS are shown in Table 7, where 380 (95.0%) strongly agree with the statement, "Do you feel that teaching of PEP is

crucial for behavioral change and In your opinion, is PEP necessary for any kind of sharp injury? 336 (84.0%) say they strongly concur with Do you believe that work zones should have PEP guidelines? 381 (95.3%) respondents said they strongly agree with Do you think PEP can lower the risk of HIV infection and lower the chance of becoming HIV positive? 384 (96.0%) respondents strongly agree that PEP can stop infections from spreading. How do you feel about the idea that PEP is unnecessary if the patient is not known to be HIV positive? 386 (96.5%) respondents strongly concur with Do you think PEP training is necessary for changing behavior? 385 people, or 96.3%, strongly agree that PEP can lower the risk of HIV infection.

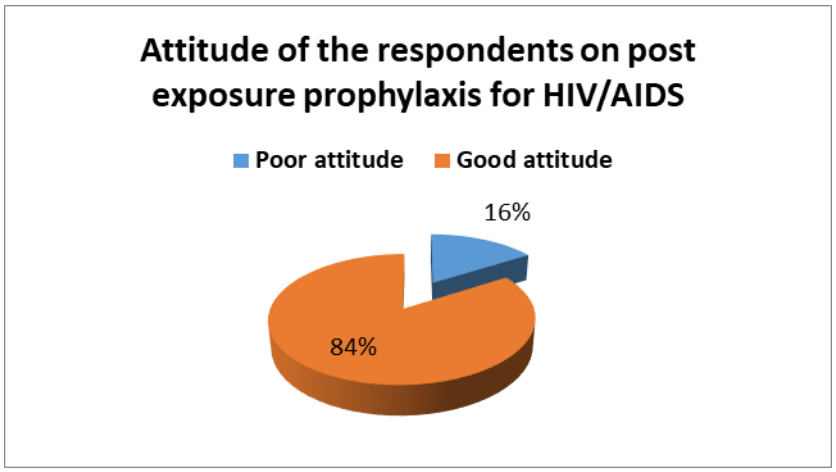

Figure 6: Attitude of the respondents on post exposure prophylaxis for HIV/AIDS

The respondents' attitudes about post-exposure prophylaxis for HIV/AIDS are shown in Figure 6; 336 (84.0%) had a positive attitude toward this measure, whereas 64 (16.0%) had a negative opinion.

Table 8: Association between socio demographic and attitude of the respondents on post exposure prophylaxis for HIV/AIDS

Variable	Categories	Poor attitude	Good attitude	Chi square (χ^2)	df	P-value
Age group	20 – 29	11(19.3%)	46(80.7%)	23.155	4	0.000
	30 – 39	6(6.2%)	91(93.8%)			
	40 – 49	18(15.5%)	98(84.5%)			
	50 – 59	26(30.2%)	60(69.8%)			
	60 – 69	3(6.8%)	41(93.2%)			
Sex	Male	35(16.1%)	183(83.9%)	0.001	1	0.974
	Female	29(15.9%)	153(84.1%)			
Religion	Christianity	49(23.0%)	164(77.0%)	25.914	3	0.000
	Islam	3(2.4%)	122(97.6%)			
	Traditional	3(15.0%)	17(85.0%)			

	Others	9(21.4%)	33(78.6%)			
Tribe	Yoruba	3(3.2%)	90(96.8%)	70.349	3	0.000
	Igbo	32(43.2%)	42(56.8%)			
	Hausa	29(19.9%)	117(80.1%)			
	Others	0(0.0%)	87(100.0%)			
Marital Status	Married	39(18.1%)	176(81.9%)	9.253	4	0.055
	Single	14(11.3%)	110(88.7%)			
	Separated	8(22.9%)	27(77.1%)			
	Widow	0(0.0%)	17(100.0%)			
	Divorced	3(33.3%)	6(66.7%)			
Year of Practice	>10years	17(34.0%)	33(66.0%)	21.973	3	0.000
	1year	12(21.8%)	43(78.2%)			
	2-3years	14(8.0%)	161(92.0%)			
	4-10years	21(17.5%)	99(82.5%)			

The sociodemographic variables based on age, religion, tribe, and year of practice show a significant association with post exposure prophylaxis for HIV/AIDS at (謙2=23.155, 0.000), (謙2=25.914, 0.000), (謙2=70.349, 0.000), and (謙2=21.973, 0.000) respectively, as p<0.05. Sex and marital status show a non-significant association. Table 8 displays the respondents' attitudes regarding post exposure prophylaxis for HIV/AIDS.

Table 9: Practices on infection prevention control on post exposure prophylaxis for HIV/AIDS

Variable	Yes	No	I don't know
Does your organization developed and distributed written policies for the management of occupational exposure	372(93.0)	11(2.8)	17(4.3)
Have you use personal protective equipment when anticipating contact with patient blood and body fluid	342(85.5)	48(12.0)	10(2.5)
Is hand washing in your practice routine after contact with infected patients	351(87.8)	34(8.5)	15(3.8)
Is there proper handling and disposing of sharp instrument after and before use	367(91.8)	23(5.8)	10(2.5)
Have you ever been placed on HIV PEP after needle stick injury	373(93.3)	9(2.3)	18(4.5)
Screening of patients are being done to detect colonization even if no evidence of infection	370(92.5)	18(4.5)	12(3.0)
Personal protective equipment are always accessible	371(92.8)	15(3.8)	14(3.5)
Our hospital monitors patients with urinary catheters for infection and gives feedback on urinary tract infection rates	350(87.5)	19(4.8)	31(7.8)
We shake linens out to release dust from the linen	353(88.3)	38(9.5)	9(2.3)

Have you been trained on IPC	336(84.0)	56(14.0)	8(2.0)
Do you have up to date knowledge on IPC	332(83.0)	49(12.3)	19(4.8)

The methods for infection prevention control on post-exposure prophylaxis for HIV/AIDS are shown in Table 9. Table 372 (94.0) shows that written policies for the treatment of occupational exposure have been prepared and disseminated. Personal protection equipment must be used when 342(85.5) anticipates coming into contact with patient blood or bodily fluids. Following interaction with infected patients, 351 (87.2) practice routines Sharp instruments should be handled and disposed of both before and after use, according to 367 (91.8). Following a needlestick injury, 373 (93.3) have been put on HIV PEP, and 370 (92.5) show that patients are being monitored for colonization even in the absence of infection. Personal safety equipment is always available, according to 371(92.8). 350 (87.5) show that the hospital provides information on the prevalence of urinary tract infections and keeps an eye out for infections in patients with urinary catheters. To remove dust from linens, shake them out (353; 88.3). 336 (84.0) have had IPC training, and 332 (84.0) possess current IPC knowledge.

Hypotheses testing

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Ho1: There is no statistically significant correlation between primary healthcare workers' opinions about occupational HIV post-exposure prophylaxis and their line of practice.

Table 10: Chi-square Analysis

Profession/Occupation	Poor attitude	Good attitude	Total	Pearson Chi-Square x^2	df	P-value
JCHEW	12	73	85	26.510	6	0.000
Lab Sc	6	40	46			
Medical Doctor	13	16	29			
Nurse	11	76	87			
Pharmacist	11	29	40			
Public Health Practitioner	4	43	47			
SCHEW	7	59	66			

***x^2*= Pearsons` Chi square, Df-degree of freedom, *P*-Probability value**

Inference: According to the above table, there is a statistically significant correlation between primary health care professionals' views about occupational HIV post-exposure prophylaxis and their profession (x2 = 26.510, P-0.000), evaluated at p<0.05. Therefore, the hypothesis that states that "the coefficient of association between primary health care workers' attitudes toward occupational HIV post exposure prophylaxis and their field of profession is not statistically significant" is accepted as p<0.05.

Ho2: Primary health care workers' opinions regarding occupational HIV post-exposure prophylaxis do not significantly correlate with their year of experience.

Table 11: Chi-square Analysis

	Attitude of the respondents on post exposure	>10 years	1 year	2-3 years	4-10 years	x^2	df	P-value
Attitude of the respondents on post exposure prophylaxis for HIV/AIDS	Poor attitude	17	12	14	21	21.973	3	0.000
	Good attitude	33	43	161	99			
Total		50	55	175	120			

x^2= Pearsons` Chi square, Df-degree of freedom, *P*-Probability value

Inference: According to the above data, primary health care providers' opinions about occupational HIV post-exposure prophylaxis and their year of experience are statistically correlated. (x2, P-0.000 = 21.973) examined at p<0.05 Therefore, the hypothesis that states that "Primary health care workers' attitudes toward occupational HIV post exposure prophylaxis and their year of experience do not statistically significantly correlate" is rejected since p>0.05.

Discussion

The World Health Organization estimates that 2.5% of all HIV diagnoses made by healthcare professionals worldwide originate from risky environments. Antiretroviral medications may reduce the incidence of HIV infection following viral exposure, according to research by Oche et al. Only the type of exposure determines how effective post-exposure prophylactics (PEP) are. As soon as possible—ideally within 72 hours—after exposure, the four-week PEP treatment regimen must begin. The findings showed that all respondents were familiar with the terms HIV PEP and UHC. This conclusion is consistent with anticipated outcomes when taking into account the educational and professional backgrounds of the respondents. The findings of this study are marginally inferior than those of Tebeje & colleagues (2013) and Mathewos et al.

According to Hailu (2010), 83.3 percent of the medical personnel at Lagos University Teaching Hospital had previously heard of PEP. These results are consistent with those of Tebeje and Hailu, even though 58.5% of participants were aware that they were at a higher risk of contracting HIV at work and 27.3% had been exposed to the virus there. They discovered that many doctors and nurses were aware of potentially dangerous HIV exposure scenarios. 11.9% of lab technicians, 4.9% of cleaners, and 11.3% of midwives reported having been exposed to HIV, HCV, or HBV. These disparities may be explained by environmental factors. Of the participants, 81% were clearly aware of the work being done by HIV/AIDS activists. Age, marital status, tribe, religion, and years of practice,

and it was shown that PEP knowledge was fairly highly correlated with sociodemographic characteristics (p=0.000 for age and tribe, p=0.001 for religion). In hospitals, adherence to safety protocols is essential to stopping the spread of HIV. Providing appropriate care to unwell individuals will aid in managing the

The World Health Organization estimates that 2.5% of all HIV diagnoses made by healthcare professionals worldwide originate from risky environments. Antiretroviral medications may reduce the incidence of HIV infection following viral exposure, according to research by Oche et al. Only the type of exposure determines how effective post-exposure prophylactics (PEP) are. As soon as possible—ideally within 72 hours—after exposure, the four-week PEP treatment regimen must begin. The findings showed that all respondents were familiar with the terms HIV PEP and UHC. This conclusion is consistent with anticipated outcomes when taking into account the educational and professional backgrounds of the respondents.

The findings of this study are somewhat less than those of Tebeje & Hailu (2010) and Mathewos et al. (2013), who found that 83.3% of the medical personnel at Lagos University Teaching Hospital were previously aware of PEP. These results are consistent with those of Tebeje and Hailu, even though 58.5% of participants were aware that they were at a higher risk of contracting HIV at work and 27.3% had been exposed to the virus there. They discovered that many doctors and nurses were aware of potentially dangerous HIV exposure scenarios. 11.9% of lab technicians, 4.9% of cleaners, and 11.3% of midwives reported having been exposed to HIV, HCV, or HBV. These disparities may be explained by environmental factors.

Of the participants, 81% were clearly aware of the work being done by HIV/AIDS activists. PEP knowledge was shown to be relatively highly correlated with age, religion, tribe, married status, number of years in practice, and sociodemographic characteristics ($p=0.000$ for age and tribe, $p=0.001$ for religion). Following safety requirements at hospitals is vital to preventing HIV from spreading. It will be easier to manage the sickness and prevent its spread if sick people receive the right care (Merchant, 2005). 84.0% of respondents had a clear picture of the item and were prepared to utilize it after their Kick expert interaction.

The 2019 Eticha and Gemeda study found that people were aware that PEP may prevent HIV transmission after contact, which is consistent with this finding. The poll's results show that 69.5% of participants, higher than in the Gondar University Hospital research, think that hospitals should make PEP recommendations public. In order to encourage behavioral changes, the study emphasized the necessity of PEP training and the use of PEP criteria in businesses. It was found that there was an inverse relationship between the theoretical understanding of PEP and its actual application. Physicians in less developed nations use PEP less frequently than those in wealthier nations.

According to a study conducted by Mathewos et al. in the Thika District of Kenya and the Mulago Hospital in Uganda, this discrepancy may be caused by those who don't know enough about PEP. 2013 has arrived. An individual's risk of contracting a blood-borne disease is increased by risky behaviors such as improper handling of contaminated needles or failure to sterilize them. Ninety percent of the approximately three million instances of inadvertent contact with human blood or fluids in medical settings occur in developing nations, according to Sagoe-Moses et al. (2001). When handling patients' blood and other bodily fluids, nearly all participants (93%) always wore protective gear. Additionally, the majority of participants were aware of the correct ways to dispose of sharp objects. However, a large number of people were unfavorable and ignored PEP, according to Eticha and Gemeda (2019).

Conclusion

The poll indicated that the majority of participants had a respectably high level of good PEP understanding, attitude, and practice. Every healthcare professional should be aware of the HIV PEP policy in hospitals. To help people understand and use HIV prophylaxis and treatment (PEP) and reduce their risk of contracting the virus at work, public health authorities must conduct health education programs. The opinions of primary healthcare providers about HIV post-exposure preventative measures at work are statistically significantly correlated with years of experience. PEP training should be completed by all healthcare personnel, regardless of rank. Biohazards should be properly controlled, exposures should be reported immediately, and PEP policies should be available and followed at every facility. Hospitals should take reasonable steps to reduce the prevalence of occupational exposures among healthcare workers. They should also use supportive supervision to ensure that infection control procedures are followed.

Recommendations

The research recommends concentrating on the accessibility of healthcare, learning new information on HIV prevention, and developing psychological intervention techniques. In order to stop the spread of HIV, it also urges greater participation from the government, primary healthcare providers, and nonprofit organizations. Additionally, it suggests that counseling programs conduct regular evaluations of knowledge and the effectiveness of interventions. Future studies have to employ a bigger sample size and stress the significance of ongoing medical education, occupational safety training, and the accessibility and application of HIV prevention and control strategies

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