SJ Public Health Africa
Vol. 1 No. 4 (2024): APRIL 2024 ISSUE
https://doi.org/10.51168/wz5j6657
Original Article

KNOWLEDGE, ATTITUDE, AND PRACTICES TOWARDS POST-EXPOSURE PROPHYLAXIS OF HIV AMONG HEALTH WORKERS AT IDIWA HEALTH CENTRE III, OBONGI DISTRICT.

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Abstract

Purpose of the study

The study was to assess the knowledge, attitude, and practices toward post-exposure prophylaxis of HIV/AIDS among health workers at Idiwa Health Centre III, Obongi District.

Study methods/design

The study employed a descriptive cross-sectional design among 50 respondents, a simple random sampling technique was used, A semi-structured questionnaire was used as a data collection tool, data was analyzed manually using tally sheets, presented as tables and figures (bar graphs and pie charts) using the micro-soft excel computer program.

Results

The majority of the respondents (90%) had ever heard about PEP to HIV, (52%) of the respondents obtained information about PEP to HIV from colleagues/seniors, (and 70%) of the respondents agreed that PEP is important in the prevention of HIV, (80%) of the respondents believed that PEP can reduce the livelihood of HIV progression and (70%) of the respondents never believed should be indicated for sharp injuries, (80%) of the respondents had ever received PEP after an exposure, (72%) of the respondents had completed the course of treatment while on PEP,(60%) of the respondents mentioned fear of the adverse effect as the major reason for their failure to compete their course of treatment and (86%) of the respondents reported that they always check the HIV status of the source where they get exposed.

Conclusion

Generally, according to the findings, the health workers at Idiwa Health Centre III had good knowledge and practices towards PEP to HIV however poor attitudes were noticed

Recommendations

The Ministry of health and NGOs through media should create awareness about PEP services and the CME department at Idiwa Health Centre III should continue to sensitize health workers about PEP through conducting CME.

Keywords: Post Exposure Prophylaxis, Prophylaxis, Human Immune Virus, Acquired Immune deficiency syndrome.
Submitted: 2024-01-16 Accepted: 2024-02-16

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Background of the study

Post Exposure Prophylaxis (PEP) is a short-term antiretroviral therapy (ART) given to reduce the likelihood of Human Immunodeficiency Virus (HIV) infection after a potential exposure (Rita Esi Suglo et al., 2021) This exposure can occur either occupationally, for example, a needle stick or cut with sharp object or contact with mucous membranes, or via nonintact skin with blood and tissue (Rita Esi Suglo et al., 2021). Other bodily fluids that are potentially infectious or through sexual intercourse (Rita Esi Suglo et al., 2021)

Globally, the pooled prevalence of exposures to sharp injuries is (44.5%) among HCWs with the highest prevalence in the South East Asian region at (58.2%) and (41.7%) in the African region. (Bouya et al, 2020)

The human immune deficiency virus (HIV) infection remains a public health concern, especially in sub-Saharan Africa (SSA) (Babanawo F, 2018). Out of the over 36 million people living with HIV (PLWHIV) worldwide, SSA alone has over 25 million (70%) making it the continent with the biggest disease burden. In Ghana, the average national prevalence of HIV infection reported in 2016 is 2.4%. The Volta and Brong Ahafo regions recorded the highest prevalence of 2.7% followed by the Ashanti and Eastern regions at 2.6% each (Babanawo F, 2018). The highest prevalence rate (4.2%) was reported in Agormanya, a town in the Eastern Region, and Sunyani, a town in the Brong Ahafo region. HIV transmission can occur through unprotected sexual intercourse, transfusion of contaminated blood and blood products, and mother-to-child transmission (Babanawo F, 2018).

For healthcare workers (HCWs), occupational exposure to HIV-infected blood and other bodily fluids is another cause of HIV acquisition (Babanawo F, 2018)

In Uganda, a previous study by Phoebe Hilda Alitubeera, 2016 among surgical staff at Mulago National Referral Hospital revealed an 82% prevalence of PIs, and another study done on nurses at the same hospital revealed a needle stick injury prevalence of 57% (Alitubeera, 2016).

General objective

To assess the knowledge, attitude, and practices towards post-exposure prophylaxis to HIV among health workers at Idiwa health center III, Obongi district.

Methodology

Study Design

A cross-sectional study design was employed with quantitative where data was gathered at only one point at a time. This design was preferred for this study because it considers issues for instant economy, rapid data collection, and the ability to understand the population from part of it.

Study area

Idiwa Health Centre III is located in Obongi district 446 kilometers from Kampala district. It has different departments which include maternity, antenatal, special clinics, inpatient wards, outpatient departments, and theatre and it receives an

average number of 100 patients on OPD daily. The study took 1 month that is to say July 2023.

Study population

The study population consisted of health workers in Idiwa Health Centre III who were willing to participate in the study.

Sample size determination

The sample size was determined using Burton's formula (1965) Sample size (n) = QR/O

Where,

Q- Total number of days taken for data collection

R- Maximum number of respondents who were interviewed per dayO- Maximum time taken on each respondent per day.

Values: Q= 10 days

R=5 respondents.

O=1 hour (Time duration was from 8 am- 1 pm each day) Therefore, n= QR/O

N= (10x5)/1

=50 Respondents

Sampling technique

Simple random sampling was used to select the sample from the source population. The technique was preferred because it ensured freedom from human bias and each member of the target population had an equal and independent chance of being included.

Sampling procedure

The researcher determined the population of interest by specific characteristics, a sample size of 70, created a sample frame, assigned numbers to the unit, and then selected random numbers from the sampling frame using a lottery and obtained the required sample size.

Data collection method

A semi-structured questionnaire was administered to the health workers. Each interview lasted for as long as necessary (enough time for the relevant questions).

Data collection tool

Semi-structured questionnaires consisting of both closed and open-ended questions written in English language and later translated into local language were used to collect data. The researcher considered questionnaires as the most convenient way of collecting data from respondents because it would be easy for the researcher to administer and obtain data within a short time from a large number of respondents.

Data collection procedure

An introduction letter was obtained from the Kampala School of Health Sciences and delivered to the head of research at Idiwa Health Centre III, Obongi district seeking permission to carry out the study. When permission was granted, two research assistants with good knowledge of the local language were trained on research methodology and study objectives before data collection. The researcher was guided by the health center in charge to access respondents to ease data collection using questionnaires. All those who fulfilled the inclusion criteria were interviewed for about 30 minutes in a quiet and private place, preferably at the community hall. The procedure was repeated each day until the sample size of 50 respondents was obtained.

Study variables

Both independent and dependent variables were used in the study.

Dependent variables

The dependent variables were knowledge, attitude, and practices of health workers towards PEP of HIV.

Independent variables

The independent variables were level of education and profession, age and working experience.

Quality control

The filled questionnaires were checked for completeness at the interview site before leaving the place. Partly filled questionnaires were handed back to the respective respondents for completion before being re-submitted to the supervisor.

Inclusion criteria

The inclusion criteria were composed of health workers in Idiwa health center III who consented voluntarily during the time of data collection.

Data analysis and presentation

Data was analyzed by use of tally sheets and a scientific calculator; systematically computed into frequency and percentages using Microsoft Excel to generate tables and figures for easy presentations.

Ethical considerations

Permission to collect and obtain data was sought with the help of an introductory letter from the Kampala School of Health Sciences from the head of research at Idiwa health center III; once permission was granted, the researcher explained the study objectives to the participants and a consent form was signed by each respondent before collecting data. Information obtained from the respondents was kept confidential. This was done to ensure that the research ethics were observed throughout the study.

Study Findings

Demographic Characteristics

From the table 1, majority of the respondents (60%) were female whereas the least (40%) were males, most of the respondents (42%) were aged between 25-34 years whereas the least (8%) were aged 18-24 years, more than a half of the respondents (52%) were Catholics whereas only (4%) were from other religious dominations, most of the respondents (42%) were single whereas the minority (8%) were cohabiting, majority of the respondents were nurses whereas the least (10%) were from other cadres and half of the respondents (50%) were Madi whereas the least (4%)were from other tribes.

Table 1: Shows distribution of respondents according to their demographic characteristics (N=50)

Bio-Data		**Frequency**	**Percentage (%)**
Sex	Male	20	40
	Female	30	60
	Total	**50**	**100**
Age	18-24	04	8
	25-34	21	42
	35-44	15	30
	45 and above	10	20
	Total	**50**	**100**
Religious denomination	Catholic	26	52
	Protestant	04	8
	Muslim	18	36
	Others	02	4
	Total	**50**	**100**
Marital status	Single	24	48
	Married	16	32
	Separated/ divorced	06	12
	Cohabiting	04	8
	Total	**50**	**100**
Cadre	Nurse	27	54
	Clinician	10	20
	Doctor	08	16
	Others	05	10
	Total	**50**	**100**
Tribe	Madi	25	50
	Alur	18	36
	Lugbala	05	10
	Others	02	4
	Total	**50**	**100**

Figure 1: Shows the distribution of respondents according to whether they had ever heardabout PEP

(N=50)

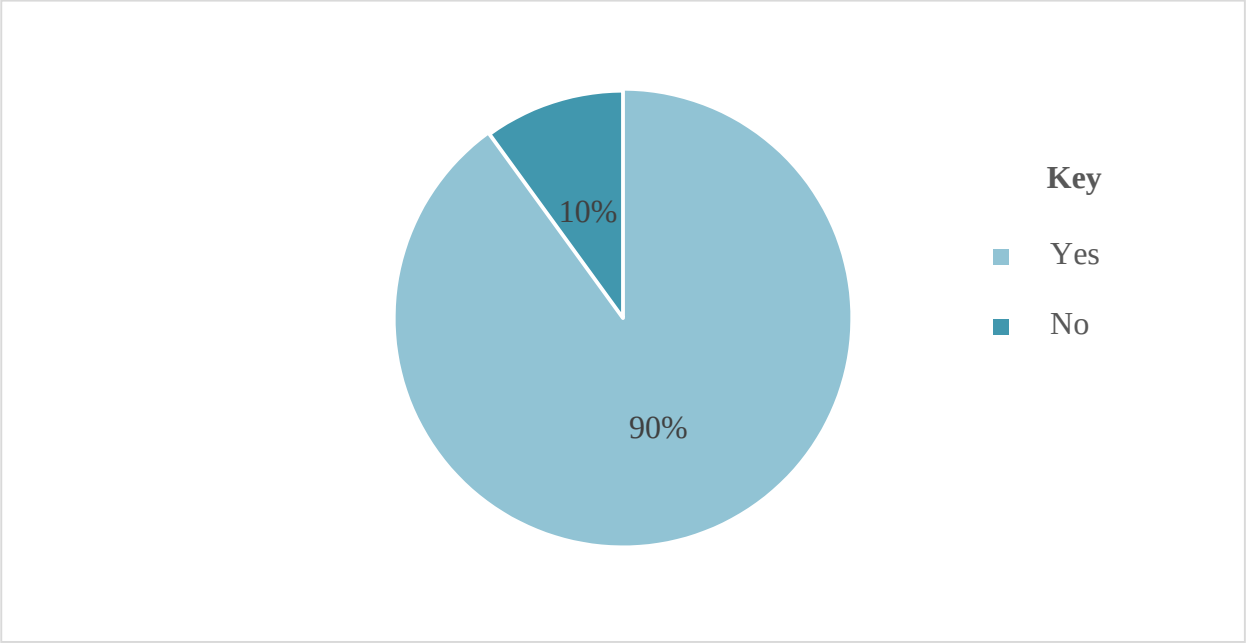

Table 2*:* Shows the distribution of respondents according to where they obtainedinformation about PEP from.

(N=50)

Respondents	**Frequency (f)**	**Percentage (%)**
College	10	20
Colleagues/ seniors	26	52
Seminars	14	28
Total	**50**	**100**

Knowledge towards pep to HIV among health workers

From the figure 1, majority of the respondents (90%) had ever heard about PEP whereasminority (10%) had never heard about PEP.

From the table 2, more than half of the respondents (52%) obtained the information about PEP from their colleagues/ seniors whereas the minority (20%) obtained the information about PEP from college.

From the table 3, more than half of the respondents (52%) mentioned PEP should be takenwithin 72 hours of exposure whereas the least (4%) mentioned other hours.

From the figure 2, more than half of the respondents (60%) knew that PEP should be takenfor 28 days whereas the least (4%) mentioned other durations.

From the figure 3, more than half of the respondents (52%) knew needle stick injury as anindication for PEP whereas minority (8%) mentioned other indications for PEP.

Table 3: Shows the distribution of respondents according to their knowledge about thehours one should take PEP to be effective

(N=50)

Response	**Frequency(f)**	**Percentage (%)**
24 hours	10	20

48 hours	12	24
72 hours	26	52
Others	02	4
Total	**50**	**100**

Figure 2: Shows the distribution of respondents according to their knowledge about howlong one should take PEP

(N=50)

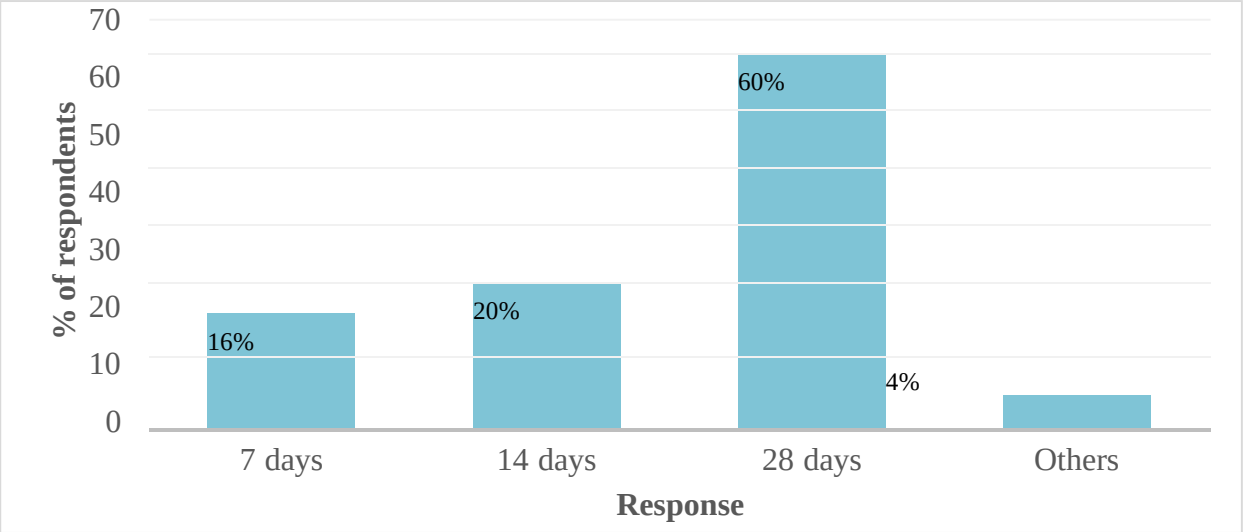

Figure 3: Shows the distribution of respondents according to their knowledge about thedifferent indications of PEP

(N=50)

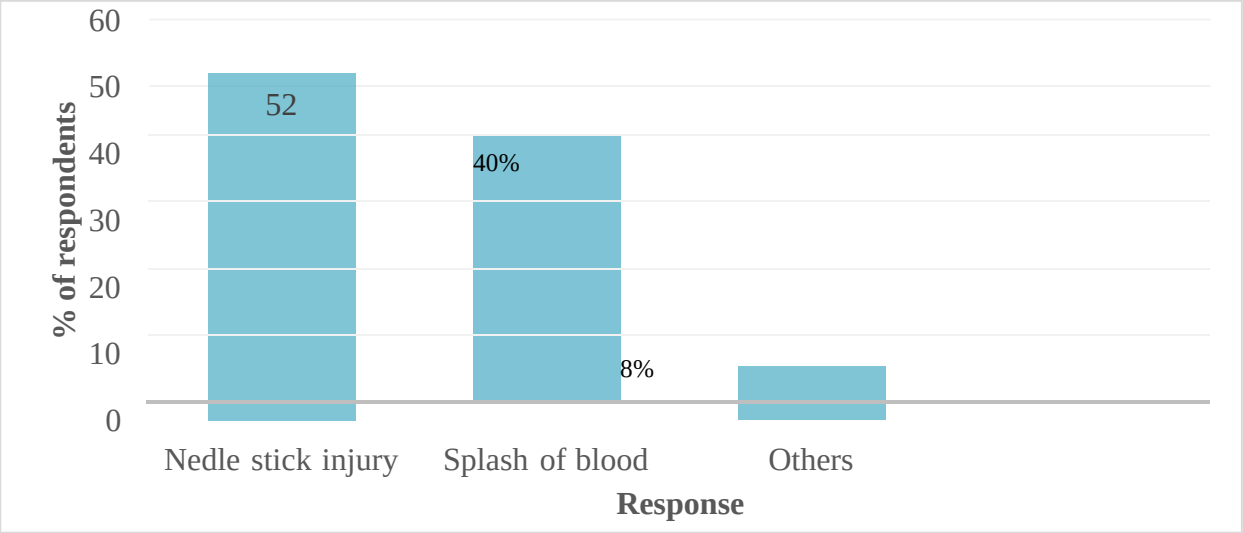

Table 4: Shows the distribution of respondents according to whether they agreed thatPEP is important

(N=50)

Response	**Frequency(f)**	**Percentage (%)**
Agreed	35	70
Disagreed	15	30
Total	**50**	**100**

Figure 4: Shows the distribution of respondents according to whether they believed that PEP can reduce the likelihood of HIV transmission
(N=50)

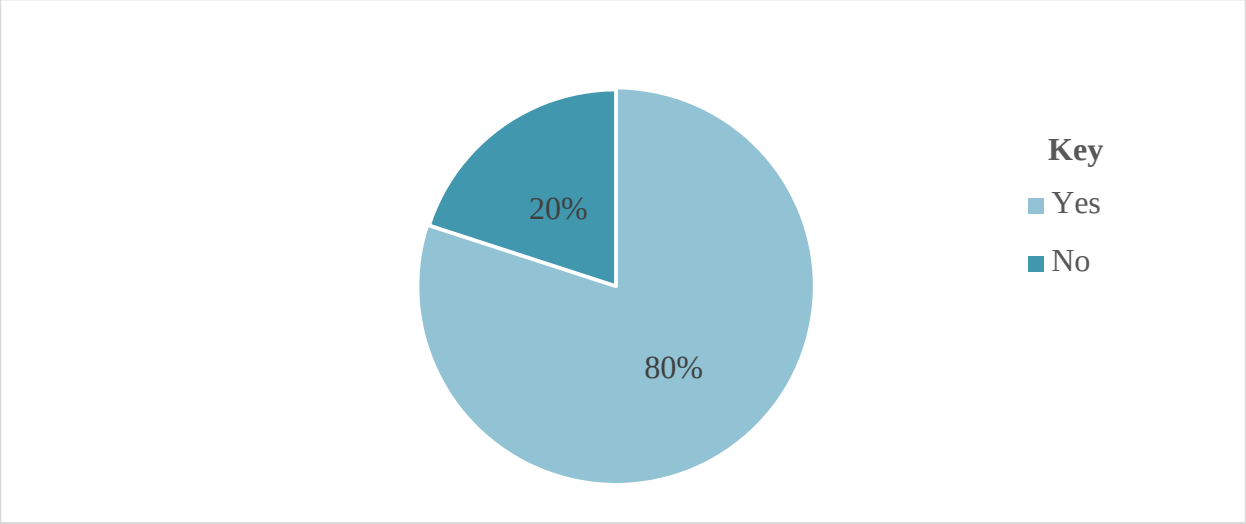

Table 5: Shows the distribution of respondents according to whether they believed thatreporting of needle stick injuries is important in HIV prevention
(N=50)

Response	Frequency(f)	Percentage (%)
Yes	20	40
No	30	60
Total	**50**	**100**

Attitude towards PEP to HIV among health workers

From the table 4, all most of the respondents (70%) agreed that HIV PEP is important whereasthe least (15%) disagreed that HIV PEP is important in prevention of HIV/AIDs.

From the figure 4, majority of respondents (80%) believed that HIV PEP can reduce the likelihood of HIV/AIDs progression whereas minority (20%) never believed that HIV PEP can reduce the likelihood of HIV/AIDs progression.

From the table 5, more than a half of the respondents (60%) reported that they did not believethat reporting needle stick injuries is important in HIV prevention whereas the least (40%) reported that it is important to report the needle stick injuries in HIV prevention

From the figure 5, majority of the respondents (70%) reported that PEP should not be indicated for any type of sharp injuries whereas minority (30%) believed that PEP should be indicated for any type of sharp injuries.

From the figure 6, more than a half of the respondents (52%) disagreed that PEP is the most effective way of protecting individuals from accidental transmission of HIV whereas the remainder (48%) agreed that PEP is the most effective way of protecting individuals from accidental transmission of HIV.

Practices towards PEP to HIV among health workers

From table 6, majority of the respondents (80%) had ever received PEP after an exposurewhereas the minority (20%) had never received PEP after an exposure

From the figure 7 most respondents (72%) had completed their course of treatment while onPEP whereas the least (28%) had not completed it.

From table 7, most respondents (60%) had stopped or

discontinued PEP due to fear of itsadverse effects whereas the least (10%) had stopped it because of negligence.

From Table 8, most of the respondents (86%) checked the HIV status of the source whenever they were exposed whereas the least (14%) reported that they did not check for the HIV status of the source when they were exposed.

Figure 5: Shows the distribution of respondents according to whether they believed thatPEP should be indicated for any type of sharp object injuries
(N=50)

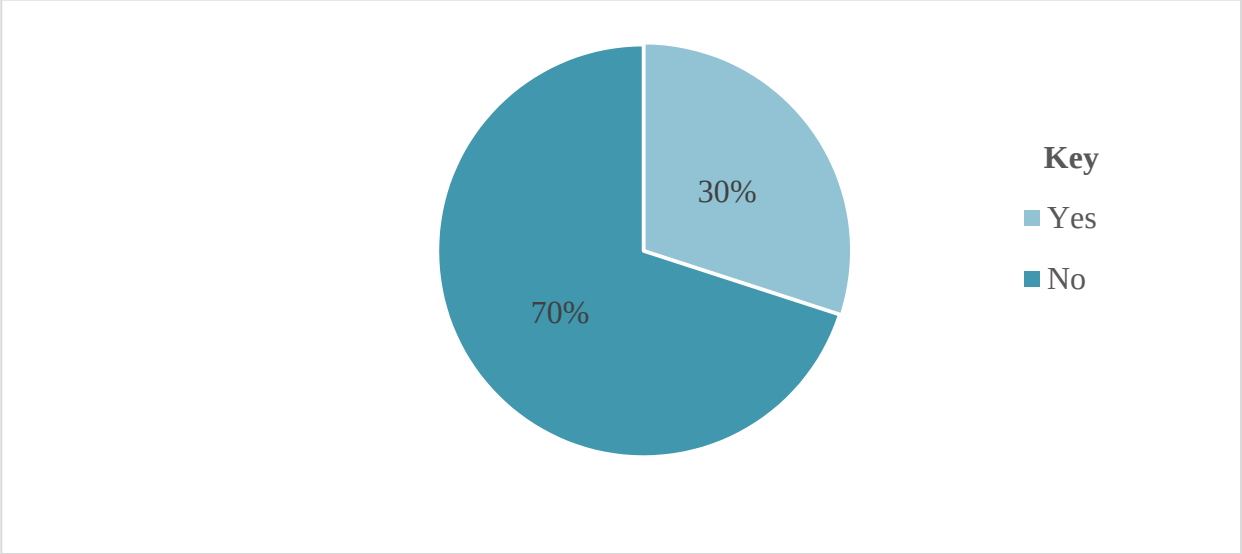

Figure 6: Shows the distribution of respondents according to whether they agreed that PEPis the most effective way of protecting individuals from accidental transmission of HIV
(N=50)

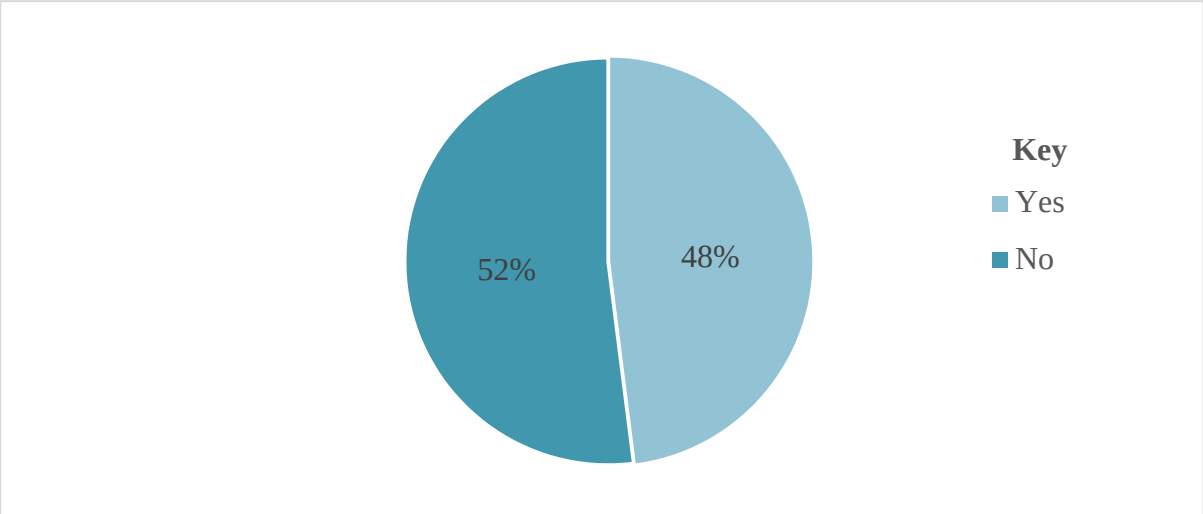

Table 6: Shows the distribution of respondents according to whether they had everreceived PEP after an exposure (N=50)

Response	Frequency(f)	Percentage (%)
Yes	40	80
No	10	20
Total	**50**	**100**

Figure 7: Shows the distribution of respondents according to whether they completed theircourse of treatment while on PEP (N=50)

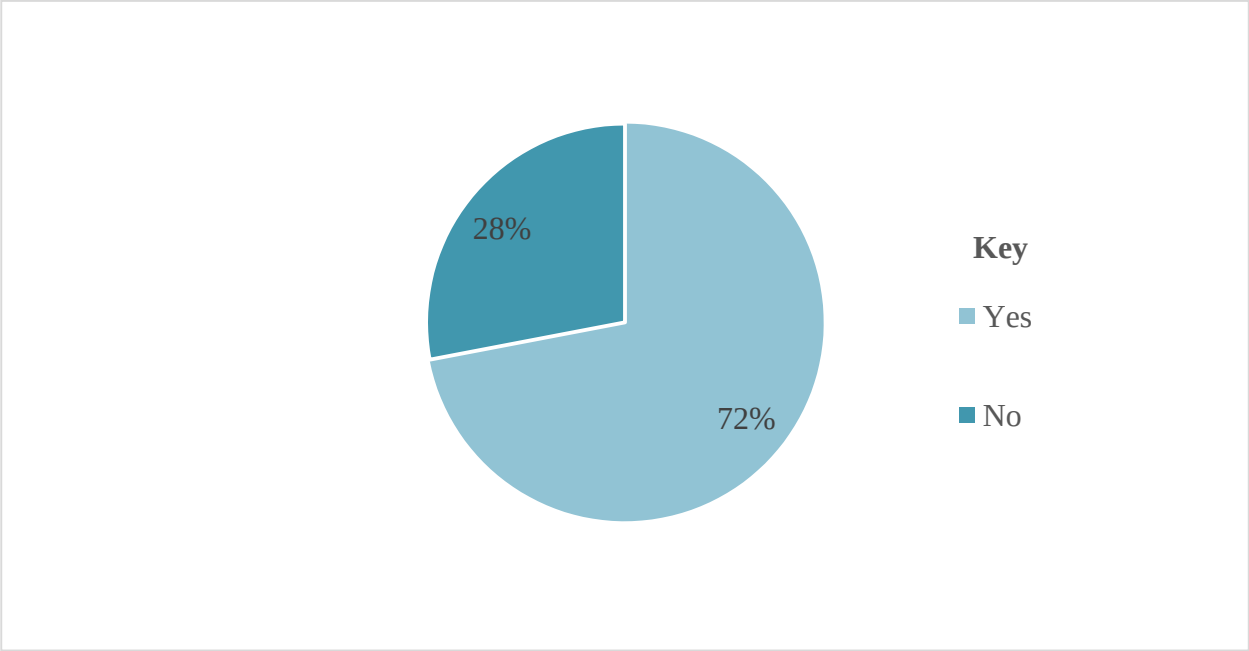

Table 7: Shows the distribution of respondents according to the reasons as to why they hadstopped or discontinued taking of PEP
(N=50)

Response	Frequency(f)	Percentage (%)
Fear of its adverse effects	30	60
Negligence	05	10
Others	15	30
Total	**50**	**100**

Table 8: Shows the distribution of respondents according to whether they checked for theHIV/AIDs status of the source when they get exposed
(N=50)

Response	Frequency(f)	Percentage (%)
Yes	43	86
No	07	14
Total	**50**	**100**

Discussion of the findings

Knowledge of PEP to HIV among health workers

Data generated from 50 respondents who participated in the study showed that almost all the respondents (90%) reported that they had ever heard about PEP. This could be attributed to the fact that all respondents were health workers. The study findings were in agreement with a study that was conducted in Ethiopia (Anteneh, 2019) where results showed that (97%) of the respondents were aware of HIV PEP.

The study also revealed that most of the respondents (52%) obtained information about HIV PEP from their colleagues/ seniors. This could be attributed to the time that health workers spend together while discussing different prevailing conditions on health matters. These results were not in correspondence with a study carried out in Ethiopia by Anteneh et al (2019) where most of the participants (50.9%) had received information about HIV PEP from classroom lectures.

Furthermore, the study showed that more than half of the respondents (52%) knew that HIV PEP should be taken within 72 hours after exposure for it to be effective. This is attributed to the fact that most of the respondents knew the pathogenesis of HIV since they were health workers. These current study findings were not in line with a study conducted in Bhutan (Tshering K, 2020) where (23.5%) of respondents reported that HIV PEP should be initiated within 72 hours.

To add on that, more than half of the respondents (60%) knew that the duration of HIV PEP should be 28 days. This could be because they had some knowledge of how HIV manifests in the human body. These results were in agreement with a study conducted in Dessie Hospital by (Ademe.S, 2020). Where (70.4%) of the participants knew that PEP medications should be taken for 28 days.

Findings from the study revealed that most of the respondents (52%) knew needle stick injuries as an indication of PEP. This could be attributed to the fact that mothers could have been educated on different forms of exposure. This current study's results are in line with a study that was carried out in Ghana (Babanawo F, 2018). Where (94%) mentioned needle stick injury as an indication for PEP.

Attitude towards PEP to HIV among health workers

From the study of 50 respondents, more than half (70%) of the respondents agreed that PEP is important in the prevention of HIV.This could be a result that some health workers had never heard of or witnessed fellow healthcare givers who had contracted the disease after the exposure. This was in line with the study conducted in an Ethiopian hospital (Anteneh, 2019). Where (90%) of respondents agreed that PEP is important in the prevention of HIV.

To add on that, the study also revealed that the majority of the respondents (80%) believed that PEP can reduce the likelihood of HIV progression. This could be attributed to the fact that health workers had witnessed their colleagues not contracting the disease after getting exposed by taking PEP. These results were in agreement with the study carried out in an Ethiopian hospital (Anteneh, 2019). Where results showed that almost all respondents (98.8%) strongly agreed that PEP can reduce HIV transmission.

Also, the study revealed that the majority of the respondents (60%) never believed that it is important to report needle stick injuries in the prevention of HIV. This could be attributed to the fact that health workers had feared the burden of taking PEP. These study findings were not in line with the study conducted in Bhutan (Tshering K, 2020). Where results stated that (74.7%)

of the respondents agreed that it is important to report needle stick injuries.

Furthermore, most of the respondents (70%) never believed that PEP should be indicated for any form of sharp injuries. This implies that most health workers had fears about taking PEP. The study findings were not in agreement with a study conducted at Dessie Hospital (Ademe.S, 2020). Where (78.9%) of the respondents believed that PEP should be indicated for any type of sharp object injury.

The study findings further revealed that more than half of the respondents (52%) disagreed that PEP is not the most effective way to prevent individuals from accidental transmission of HIV. This could be attributed to a lack of sensitization among health workers about the effectiveness of PEP. The study findings were in line with the study that was carried out in Ethiopia by Ousman Adal et al (2023) where (52.9%) disagreed that PEP is not the most effective way of preventing individuals from accidental transmission of HIV.

Practices towards PEP for HIV among health workers

From the study findings, the majority of the respondents (80%) had ever received PEP after exposure. This could be a result of good work done by other health workers teaching their colleagues the benefits of initiating PEP after exposure. These current findings were not in agreement with the study conducted in an Ethiopian hospital (Anteneh, 2019). Where less than half (48.6%) of them reported having had PEP after the exposure.

To add most of the respondents (72%) had completed their course of treatment while on PEP, this could be because they had feared contracting the disease. These results were inconsistent with a study carried out in an Ethiopian hospital (Anteneh, 2019). Where only (50%) of the health workers finished their course of treatment.

Based on the study findings, more than half of the respondents (60%) mentioned fear of the adverse effects as the major reason for their failure to complete the course of treatment, this could be because of the different myths about taking PEP. These results were in correspondence with a study conducted in an Ethiopian hospital (Anteneh, 2019). Where all respondents mentioned side effects of antiretroviral drugs as the major reason for their discontinuation of PEP.

The study also showed that the majority of the respondents (86%) reported that they always check the HIV status of the source whenever they get exposed, this could be attributed to the fact that they have some knowledge about precautions before a person takes PEP. These findings are in agreement with a study conducted in Bhutan (Tshering K, 2020). Where (67.4%) of the respondents checked the HIV status of their source.

Conclusion

From the overall observational remarks, the following conclusion were made: The study revealed that the knowledge towards post exposure prophylaxis of HIV among health workers was generally good; since almost all respondents (90%) had ever heard about PEP for HIV, among those (52%) obtained the information about PEP for HIV from their colleagues/senior.

About overall attitude was good, even though nearly all (70%) the respondents agreed that PEP is important in the prevention of HIV.

From the study findings, this study established that the majority of the respondents (80%) had ever received PEP after exposure and (72%) had completed their course of treatment while on PEP.

Recommendation

The Ministry of Health and NGOs through media should create awareness about PEP services.

The government through the Ministry of Health should improve on the availability of PEP in different health facilities.

The CME department, Idiwa Health Centre III should continue to sensitize health workers about PEP through conducting CMEs.

Another researcher should carry out a study to establish factors contributing to the low utilization of PEP services among health workers.

Acknowledgement

In particular, I give thanks and honor to the almighty GOD for giving me life and supporting me in the tough situations I underwent through the course of my academic journey.

I extend my sincere appreciation to my supervisor Ms. Atukuuma Cliffe for his valuable time, guidance, support, and encouragement in the preparation of my research.

I acknowledge the role played by the administration and staff of Kampala School of Health Sciences in guiding and developing me morally, socially, academically, and spiritually, especially the principal tutor Mr. Mubangizi Prosper.

My heartfelt gratitude goes to my dear parents Mr. Amasi Pataki and Mrs. Maneno Dawa and my brother Tumusiime Gilbert who supported me morally, socially, and financially.

I also acknowledge the role played by my friends Kenyi Scopas, Mr. Adriko Sunday, and Mangwi Philip who supported me morally, socially, and academically.

List of Abbreviations

AIDS: Acquired Immunodeficiency Syndrome

ART: Antiretroviral Therapy

CME: Continuous Medical Education

HCPs: Healthcare providers

HCWs: Healthcare workers

HIV: Human Immunodeficiency Virus

KAP: Knowledge, Attitude, and Practices

MoH: Ministry of Health

PEP: Post Exposure Prophylaxis

PI: Percutaneous injuries

UAHEB: Uganda Allied Health Examinations Board

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