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Knowledge about post-exposure prophylaxis among clinical officer students in Kampala School of Health Sciences, Wakiso District. A cross-sectional study.

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ABSTRACT

Background:
HIV/AIDS is a leading cause of death in sub-Saharan Africa (SSA), with at least two-thirds of the world's HIV infected people living in this region. The study aims to determine the knowledge towards Post Exposure Prophylaxis among clinical officer students in Kampala School of Health Sciences, Wakiso district.

Methodology:
The study employed across sectional study design with a simple random sampling technique. Data was collected on a sample size of 50 respondents using semi-structured questionnaires. Data analysis was done manually using tally sheets, pens, and paper, and entered in excel computer program and presented in tables and figures.

Results:
(52%) of the respondents were within the age range of 20-25 years, while the least (16%) were above the age of 35. All the respondents (100%) had heard about PEP. Most of the respondents (48%) obtained the information from clinical training. (65%) reported that PEP is found in health care services. 56% of the respondents had never attended a training on PEP. The majority of the respondents (52%) reported that the regimen used for PEP is TDF+3TC+DTG, (18%) reported that the regimen used is ABC+3TC+DTG. The majority of the respondents (82%) reported that the maximum time to delay PEP is 72 hours. The majority of the respondents (82%) said that PEP should be taken for 28 days, (8%) said that the duration of PEP is 8weeks.

Conclusions:
Participants had adequate knowledge of post-exposure prophylaxis in view of the fact that all of them had ever heard about PEP (100%), and obtained knowledge from classroom lectures.

Recommendations:
The administrators of Kampala School of Health Sciences should organise training about PEP for the clinical officer students so that they improve on the knowledge on how to handle the situation in case of an exposure.

Keywords: *Knowledge, Post-Exposure Prophylaxis, Clinical officer students, Kampala School of Health Sciences.*
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Background
HIV/AIDS is a leading cause of death in sub-Saharan Africa (SSA), with at least two-thirds of the world's HIV infected people living in this region (Beyera GK et al, 2014). Healthcare provision, especially in resource-limited settings with a profound burden of infectious diseases, including HIV/AIDS, poses a high risk of occupational exposure to Healthcare Workers (HCWs) via different routes. For instance, percutaneous injuries like needle-stick or other sharp injuries, human infected blood, mucocutaneous injuries (splash of blood or other infective body fluids), or other contacts (Mathewos et al, 2013).

In Ethiopia, studies by Betelhem Anteneh, Sewunet Admasu Balechew, Alem Endeshaw et al (2019) among medical and health science students' knowledge, attitude, and practices on the antiretroviral-based HIV post-exposure prophylaxis (PEP) results showed that among 220 participants, only 66 (30%) had adequate knowledge about HIV PEP. Assessments among Clinical Students on awareness and use of pre-exposure prophylaxis as an occupational health and safety measure showed that of 203 participants, 83.3% of the students were knowledgeable. Mohammed Shamil, Nanati Legese, and Yohannes Tadiwos (2019) findings among health care professionals in Ethiopia on knowledge, attitude, practices, and associated factors towards Post Exposure Prophylaxis for HIV/AIDS results showed that of 217 participants, 35.02% had inadequate knowledge about PEP. Studies in Bhutan by Kezang Tshering, Kinzang Wangchuk, and Zimba Letho (2020) among nurses on knowledge, attitude, and practice of post-exposure prophylaxis results showed that the majority of the participants had poor knowledge regarding PEP for HIV.

Studies in Nigeria by Bilkisu Zubairu Iliyasu, Taiwo Gboluwaga Amole, Hadiza Shehu Galadanci et al (2020) among Medical and Allied Health Students results showed that among 273 participants, only (26%) had adequate knowledge about PEP. A study in Karnataka by Kumar Aswin, Ratnaprabha G.K. (2019) among students of a nursing college from central Karnataka on awareness about HIV and post exposure prophylaxis results showed that of the 108 participants that 86.1% of the participants were not aware of the duration of PEP. The study aims to determine the knowledge towards Post Exposure Prophylaxis among clinical officer students in Kampala School of Health Sciences, Wakiso district.

METHODOLOGY

Study design

A cross-sectional descriptive research design in nature was used in this study. The design was considered favourable because it helped the researcher to use various survey methods to gather quantitative data within a reasonable period of time.

Study area

Kampala School of Health Science is a private school located in Buloba, Semunyanya, Wakiso district, approximately 25 km from Kampala. The school was founded with four years' development plan, which started in 2013 as a clinical school offering a diploma in clinical medicine and community health. The school started offering courses like diploma in biomedical engineering, diploma in HIV/AIDS counseling, diploma in Public health, certificate in pharmacy, diploma in medical records and health informatics, certificate in medical records and health informatics and other courses. Kampala School is accredited by the Allied Health Professions Council, the National Council for Higher Education, and the Uganda Business and Technical Examinations Board. The school has a total population of 537, comprising male and female students.
The school takes an obligation to attach its students to different hospitals in Uganda, like Butabika National Referral, Kayunga Regional Referral, Kawolo General Hospital, Rubaga Hospital, and Wakiso Health Centre IV for practicum every semester.

Study population

The study population refers to a large group of people possessing one or more characteristics in common on which a research study focuses. Therefore, the study targeted a population of clinical officers who attended hospital practicum and were present during the period of data collection in the selected area of 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 day
O- Maximum time taken on each respondent per day.
Values: Q= 10 days
R=5 respondents.
O=1 hour
Therefore, n= QR/O
N = (10x5)/1
=50 Respondents
Therefore, 50 respondents were used in the study.

Study variables

Dependent Variable

The dependent variable in this study was post-exposure prophylaxis.

Independent Variable

Independent variables were knowledge about post-exposure prophylaxis among clinical officer students.

Selection criteria

Inclusion criteria

This was composed of clinical officer students who went on hospital attachments by the school, which included students of the second year and third year of the Kampala School of Health.
Scientists who were present during the period of data collection.

Exclusion criteria

Clinical officer students of Kampala School of Health Sciences who were present during the period of data collection, but did not attend the hospital attachments, were excluded from the study.

Sampling technique

A simple random sampling technique was used to select respondents from the source population. This technique was preferred because it ensures freedom from human bias, and each member of the target population had an equal and independent chance of being included.

Data collection tool

A semi-structured questionnaire was designed and used by the researcher to collect data from respondents. The questionnaire was designed according to the specific objectives of the study with open and closed questions, written in English. The questionnaire was preferred because it was suited to collect data from a larger sample, considering the nature of the study population.

Pretesting of the questionnaire

For uniformity of the data collection, pretesting of the questionnaire was done among 15 clinical officer students in Kampala School of Health who attended hospital practicum, in order to ensure that questions were easily understood by all the respondents, and the pretested

instruments helped to identify questions that might have caused ambiguity and contradiction.

Data collection procedure

A permission letter was obtained from the Principal of Kampala School of Health Sciences. The researcher was then granted permission to collect data from the institute. The researcher was assisted by a trained research assistant who was knowledgeable in the field of research. After the data was collected, it was checked for completeness and accuracy. The questionnaires that were not completed or correctly filled out were completed before the respondents left. The forms were then kept in a locked cupboard so as to maximise confidentiality and ensure access to the research team only.

Quality control

The right respondents were selected through the inclusion and exclusion criteria.
All activities regarding data collection were done under the monitoring and supervision of the research assistants.
The research team met after data collection to review the collected data and cross-check the filled questionnaires for correctness and completeness.
Standard operating procedures for coronavirus were also followed and maintained for the purpose of protecting the study participants and data collectors from risks of coronavirus.
Therefore, quality control was done to ensure the accuracy and validity of the data collected.

Data analysis and presentation

Data was analysed manually using tally sheets and entered into a computer using the Microsoft Excel computer program to generate tables, pie charts, and bar graphs for easy presentation of findings.

Ethical considerations

The researcher introduced the topic, purpose, and significance of the study to the respondents. The respondents were assured of confidentiality in the study as no names were used, and thereafter agreed to sign a consent form. No respondent was forced to participate in the study. Each respondent was interviewed alone, and information got from any respondent was not shared with other colleagues. The data collected was kept in a locked cupboard.

Results

Demographic data.

Table 1 shows the distribution of respondents according to demographic data.

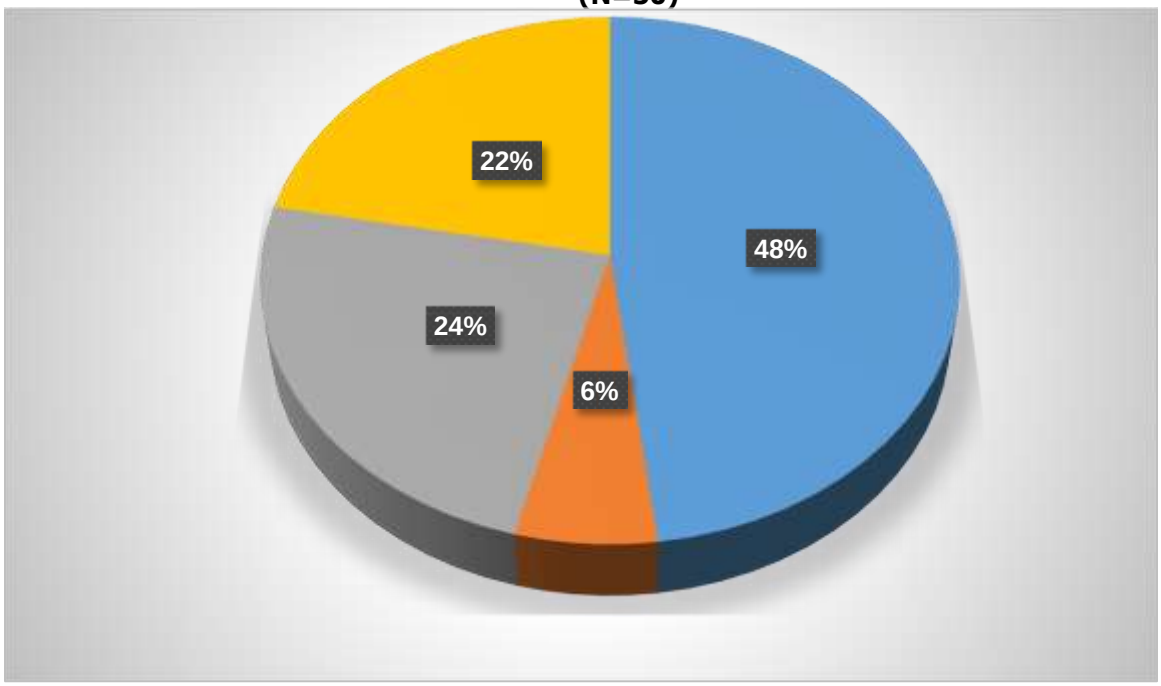
Variables	Response	Frequency (f)	Percentage (%)
Age of respondents	20-25 26-35 >35	26 16 8	52 32 16
Total		50	100
Sex	Male Female	28 22	56 44
Total		50	100
Marital status	Single Married Cohabiting	29 8 13	58 16 26
Total		50	100
Year of study	Year 2 Year 3	15 35	30 70
Total		50	100

Table 1, more than half (52%) of the respondents were within the age range of 20-25 years, while the least (16%) were above the age of 35.
In regard to sex, the study found that more than half (56%) of the respondents were males, and the least (44%) were females.
The study discovered that more than half (58%) of the respondents were single, while the least (16%) were married.
The study further revealed that the majority of the respondents (70%) were from year 3, whereas the least (30%) of the respondents were in year 2.

Knowledge towards post-exposure prophylaxis among clinical officer students.

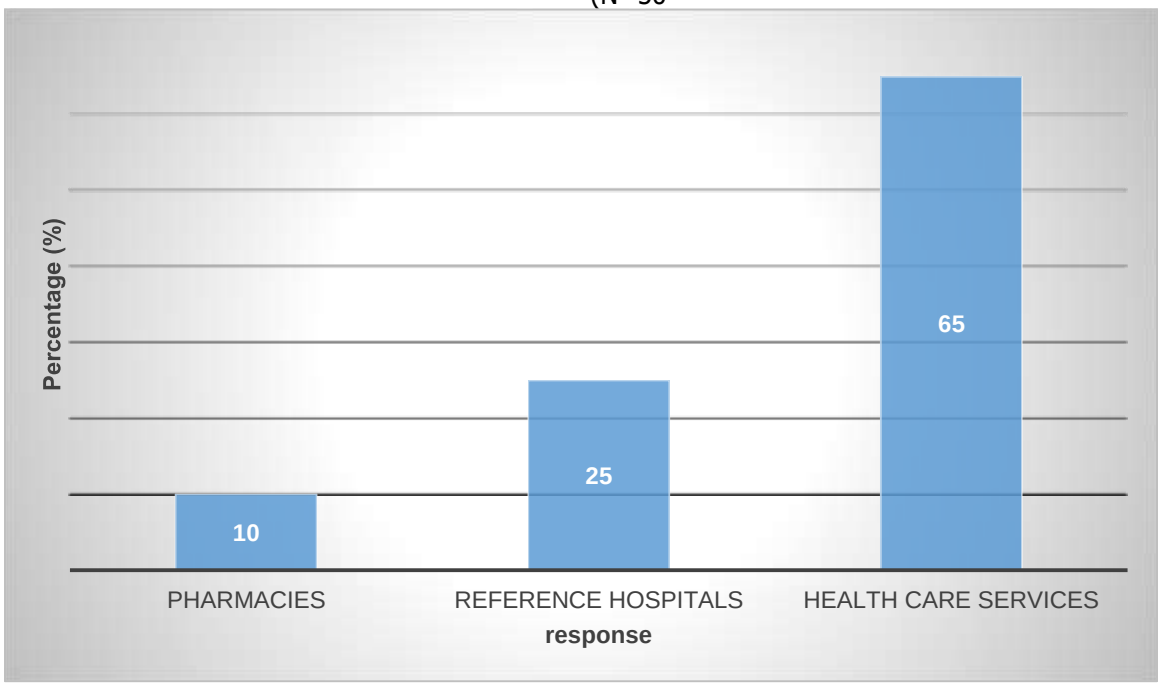
Regarding whether the respondents had ever heard about PEP, all the respondents (100%) had heard about PEP.

Figure 1: Shows the distribution of respondents according to their source of information (N=50)



Most of the respondents (48%) obtained the information from clinical training, while the least (6%) from mass media.

Figure 2: Shows the distribution of respondents according to where they think PEP is found. (N=50



The majority of the respondents (65%) reported that PEP is found in health care services, and the least (10%) of the respondents said it's found in pharmacies.

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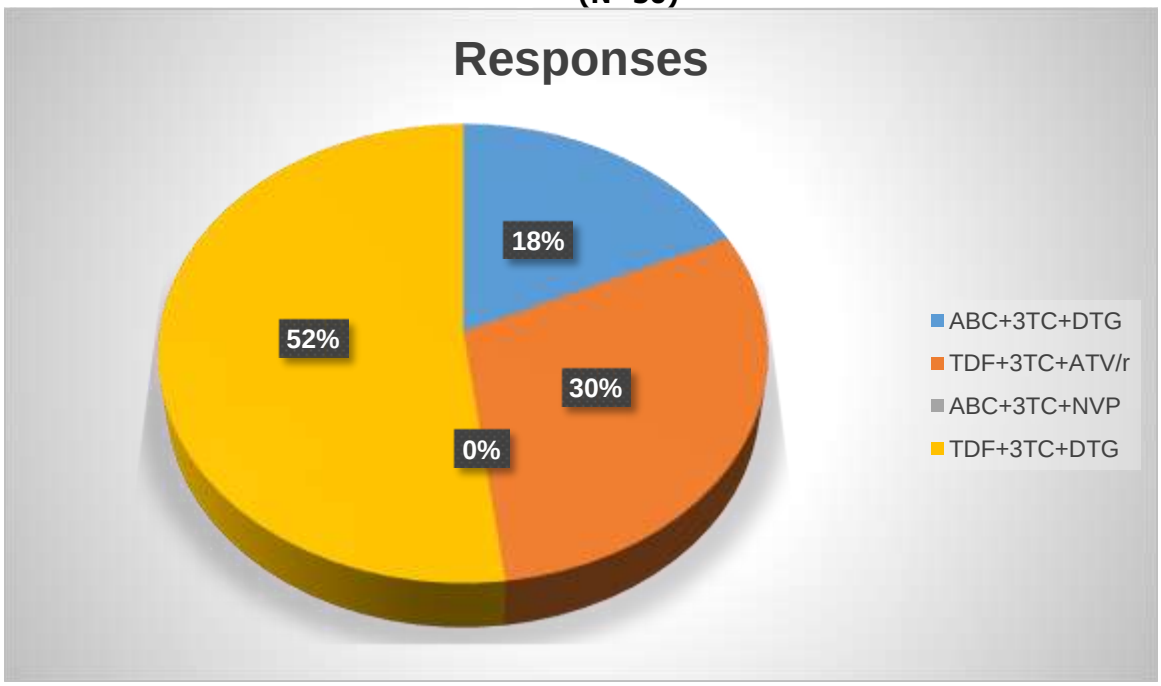
Table 2: Shows the distribution of respondents according to whether they had ever attended any training about PEP (N=50)

Response	Frequency	Percentage (%)
Yes	22	44
No	28	56
Total	50	100

56% of the respondents had never attended a training about PEP, while at least 44% had ever attended.

Figure 3: Shows the distribution of respondents according to which regimen is used for PEP (N=50)



The majority of the respondents (52%) reported that the regimen used for PEP is TDF+3TC+DTG, while the least of the respondents (18%) reported that the regimen used is ABC+3TC+DTG.

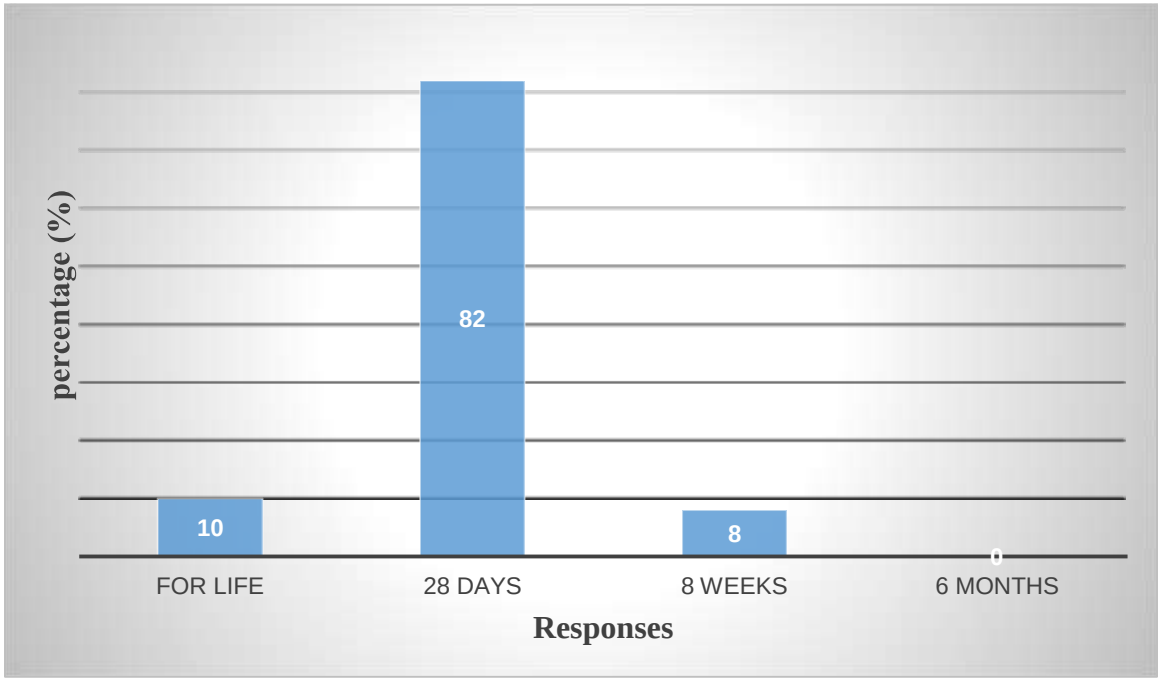
Table 3: Shows the distribution of the respondents according to what is the maximum delay to take PEP (N=50)

Response	frequency (f)	Percentage (%)
12 hours	0	0
24 hours	5	10
48 hours	0	0
72 hours	41	82
I don't know	4	8
Total	50	100

The majority of the respondents (82%) reported that the maximum time to delay PEP is 72 hours, whereas the least of the respondents (8%) didn't know it.

Table 4: Shows the distribution of the respondents according to what they think is the duration of taking PEP

(N=50)



The majority of the respondents (82%) said that PEP should be taken for 28 days, whereas the least of the respondents (8%) said that the duration of PEP is 8weeks.

Discussion

Findings found the current study, from a sample of 50 respondents, showed that all the respondents (100%) had ever heard about PEP. This means the respondents were knowledgeable about PEP. Additionally, most of the respondents (61%) obtained information about PEP from classroom lectures. This is attributed to the fact that within schools, tutors provide information about personal protection and medical information, and the probability of being the most considerable source was expected. The study results were in line with Bethlehem Antenna et al (2019), where students ranked classroom lectures as the major source of information regarding HIV PEP.

The study further revealed that the majority of the respondents (65%) knew health care services as a place to find PEP. This could be because the government of Uganda provides

ARV drugs right from small health care service centres.

In view of the study findings, more than half of the respondents (56%) had never attended a training on PEP. This could be attributed to the fact that their institution has not done enough to raise awareness of PEP through conducting training sessions. This is in disagreement with a study that was done by Mohammed Shamil et al (2019), where 95% of the health care professionals agreed to have taken training on PEP.

In regards to the right regimen for PEP, the majority of the respondents (70%) failed to identify the right regimen used for PEP per current guidelines. This implies that respondents were not aware of the current PEP guidelines, which could affect the quality of care. The study results were consistent with Kezang Tshering et al (2020), where 89.6% of the nurses failed to identify the right drug used for PEP.

The majority of the respondents (82%) knew the maximum delay to take PEP, which implied that respondents were aware of the right period during which it is effective for one to take PEP. Study results were in disagreement with Bilkisu Zubairi Iliyasu et al (2020), where 36.6% of the students reported the correct maximum time to delay PEP as 72 hours.

The study discovered that the majority of the respondents (82%) knew that the duration of taking PEP is 28 days, and therefore, this denotes that a significant number of the study participants knew the right duration to take PEP. The study findings were consistent with Kumar Aswin et al (2019), were 86.1% of the students strongly agreed that the duration for taking PEP is 28 days.

Conclusions

The study established that study participants had adequate knowledge toward post exposure prophylaxis in view of the fact that all of them had ever heard about PEP (100%), obtained knowledge from classroom lectures (61%), knew where to find PEP (65%), (44%) had ever attended a training about PEP (44%), knew the right regimen used for PEP (30%), knew the maximum delay to take PEP (90%) and (82%) knew the duration of taking PEP.

Study limitations

Some respondents didn't have enough time to fill out the whole questionnaire due to more time required for the longer study.

The study encountered financial constraints in running the study since research is a lengthy process.

The study faced a problem of bias of the respondents since it is a sensitive study, as some never wanted to be involved in the study.

Recommendations

The administrators of Kampala School of Health Sciences should organise training about PEP for the clinical officer students so that they improve on the knowledge on how to handle the situation in case of an exposure.

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Conflict of interest

The author did not declare any conflict of interest.

Data availability

Data is available upon request.

Author contribution

Lovinsa Nakasolya collected data and drafted the manuscript of the study

Mubangizi Prosper supervised the study

Author biography

Lovinsa Nakasolya is a student of a diploma in Clinical Medicine and Community Health at Kampala School of Health Sciences.

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