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Original Article

BARRIERS ASSOCIATED WITH HIV SELF-TESTING AMONG LIRA UNIVERSITY STUDENTS. A CROSS-SECTIONAL STUDY.

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Abstract

Background

HIV continues to be a significant public health concern, particularly among the young population in our communities, determining the barriers associated with HIV self-testing is very crucial for effective HIV prevention. Therefore, this study aimed to determine the barriers associated with HIV self-testing among the students of Lira University.

Methodology

This study employed a descriptive cross-sectional design, stratified simple random sampling was used, where faculties acted as strata, and then systematic sampling was used to obtain the participants from each year of study. Quantitative data was collected using self-administered questionnaires.

Results

According to the findings, 174 respondents participated in this study, 90(51.7%) were males while 84(48.3%) were female. The age category 20-25 had 145(81.6%) respondents while 31-40 had 25(14.4%) respondents, single respondents were 154(88.5%), Year one had 92(52.9%) respondents, and Year Two had 30(17.2%) respondents, Education Faculty had 59(33.9%) respondents, and the Faculty of Management Sciences were 11(6.3%) respondents. The barriers to the use of HIVST services included Lack of Knowledge 113(64.9%), Concerns about the accuracy138 (79.8%), and Lack of counseling and support services 114(65.5%). Participants with less knowledge were less likely to use HIV self-testing services compared to those who had ever heard about HIVST services cOR: 6.438, p<0.001 also those lacking counseling and support services were less likely to have ever used HIVST services compared to those who had ever attended counseling and support services aOR: 13.265 p<0.001.

Conclusion

The study found that the majority of the respondents were year-one single males from the faculty of education, and their less knowledge of self-testing hindered the use of HIVST services.

Recommendation

Education Programs should be carried out to disseminate information and knowledge about barriers to HIVST services among students.

Keywords: *HIV Self-testing, HIV Self-testing Stigma, Lira University, HIV Prevention*
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Background of the study

HIV continues to be a significant public health concern, particularly among young people. According to the World Health Organization (WHO), in 2020, an estimated 38 million people were living with HIV globally, with 1.5 million new infections and 680,000 deaths due to HIV-related illnesses.

In 2019, 20.7 million people were living with HIV (PLHIV) in sub-Saharan Africa. However, more than 25% of adults in the region still do not know their serostatus (Mphande et al., 2021). A study conducted in seven countries in the sub-Saharan region found that only 14% of young people had ever used an HIV self-test (MacPherson et al., 2019). Similarly, another study conducted in sub-Saharan Africa found that HIVST was more acceptable than traditional testing methods among young people aged 16-24 years. The study also found that HIVST was associated with increased testing frequency and improved linkage to care. In Malawi, only 42% of the adult population tested for HIV within the past 12 months, with 35% of men having never tested for HIV (Mphande et al., 2021).

In Uganda, there is an ambitious vision to reach 95-95-95 testing and treatment targets by 2025 across all population groups and maintain the current momentum in testing and ART scale-up. According to the World Health Organization (WHO), HIVST can increase the uptake of HIV testing among key populations, including young people, who may face barriers to accessing traditional testing services (WHO, 2019). The Uganda national HIV prevalence rate among adults (aged 15-49) was 5.7%, down from a peak of 15% in the early 1990s (Mukora-Mutseyekwa et al., 2022). However, HIV prevalence remains much higher among certain populations, such as sex workers, men who have sex

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with men, and people who inject drugs. The men felt that just picking up an HIV self-test kit would invite unwanted scrutiny from their work colleagues (Muwanguzi et al., 2021). In Uganda, where HIV prevalence among young people aged 15-24 years is estimated at 3.5%, there have been efforts to scale up HIVST services. Additionally, there are concerns about the accuracy and reliability of self-test kits and potential issues related to privacy and confidentiality. This study aimed to determine the barriers associated with HIV self-testing among Lira University students.

Methodology

Study Design

This was a cross-sectional study that utilized only quantitative methods of data collection.

Study Site and Setting

This study was conducted at Lira University located in Ayere Ward, Lira City West Division. Lira University sits on approximately 500 acres of land, about 13 kilometers by road, northwest of Lira city, off the Lira Kampala Road. The coordinates of the University campus are 2015'04.0N,32049'16.0''E (Latitude: 2.25111; Longitude:32.821111).

Study Population

The target population were University students in Uganda and the study population were Lira University undergraduate students

Sample Size Determination

The sample size was determined using the Kish Leisley (1965) formula of sample size determination.

$n = Z^2 PQ/e^2$

Where: n=the sample size (respondents to be interviewed)

e =the precision of the study (5%)

Z=the standard normal deviation corresponding to 95% CI which is 1.96

P=level of use of HIV testing services in Uganda = 0.89 (UNAIDS, 2018).

Thus: At 95%, Z=1.96

e =5%=0.05

P =0.89

Q = 1-P=1- 0.89=0.11

Hence

N= (1.96 × 1.96 × 0.89× 0.11)/ (0.05 × 0.05)

n=150.44≈151

Considering an estimated 10% non-response rate (0.1 × 151) = 15.1≈16

Therefore, the total sample size= 151+16= 167

Sampling Technique

The study employed Stratified simple random sampling, where the different faculties acted as strata, and the participants from each faculty were proportionate to its size (population). Then systematic random sampling was used to obtain the participants from each year of study, using the class lists obtained from the class coordinators. Participants were picked at an interval of ten that is 1700 enrolment divided by a sample size of 167 undergraduate students. Emails were then sent to the selected individuals letting them know they had been chosen to participate in the study including any other information.

Eligibility Criteria

Inclusion criteria.

To be included in the study, one had to be a University Undergraduate Student.

Exclusion criteria

University students who were absent by the time of data collection, those who were not willing to give information freely, students who were too sick to give information, and the mentally ill.

Data Management

Data collection method and instrument

Quantitative data was collected using interviewer interviewer-administered semi-structured questionnaire, the survey questionnaire was administered to the selected students.

Data entry and cleaning

The data was entered into SPSS version 25 software with the variables in the Variable View and their values in the Data View. After entering the data, the statistical command (list) under the analyzed data by the SPSS

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software was used to identify the missing data at entry. Mistakes at the entry were identified through validation and corrected by recalling the questionnaire using its unique identifier. However, if the participant left the item blank or answered incorrectly, the Replace Missing Values functional SPSS under the Transform option was used to obtain a value to replace the missing data point though this was much avoided as the questionnaire shall be interviewer-administered.

After the entry of the whole questionnaire was complete, the soft copy of each questionnaire was cross-checked with its hard copy to avoid missing values, outliers, and other inconsistencies before analysis.

Data analysis

Univariate analysis was done to obtain frequencies, proportions, means, and ranges. At the bivariate level, the Chi-square test was used to assess the relationship between the dependent and independent variables and a P value ≤ 0.05 indicates significant associations.

Thematic content analysis was conducted for qualitative data, first by familiarization, coding, theme generation, review of themes, defining themes, and finally writing up.

Quality Control (Validity and Reliability)

The questionnaire was designed and pretested in the area in which the study was not to be conducted to check for ambiguity, irrelevant, and redundant questions then adjusted accordingly. Piloting was done to enable the researcher to improve data reliability and validity. The questionnaires were sorted, reviewed and responses sorted and summarized based on the study themes before being entered into the computer. Data was checked for correctness and completeness at the end of every day. Two attempts were made to contact the participants for any missing data. Data was managed by a single researcher. The data was double-entry by two different people to ensure that it was correct for quality and uniformity. Changes were made according to the results. Great care was taken when coding, entering, verifying, and cleaning data.

Ethical Considerations

Approval

The proposal was presented before the faculty of public health research committee for approval and thereafter to the Lira University Research and Ethics Committee (LU-REC). Once passed by LU-REC, an approval letter was issued and then taken to the respective authorities for permission to be granted to conduct the study.

Consent

Written informed consents were sought from all the participants after sharing with them the objectives of the study, possible benefits and risks, and the length of time it was expected to take. The data collected was to be used for this study only and the participants will be informed about it.

Privacy

Interviews were only conducted in places deemed private enough by the interviewer and respondent.

Confidentiality

The researcher did not use identifiers like names, or actual places of residence, in questionnaires or any publications. The data was kept under lock and key and only accessible by the investigator. The information got in the field was coded and fed into a computer with passwords.

Measures on How to Overcome the Limitations

Guidance was given where necessary in filling out the questionnaire

The respondents were briefed well before starting the interviewing process so that they give the right information.

Results

Socio-demographic characteristics associated with using HIV self-testing services among students of Lira University, Lira District. (n=174)

About half of the participants were males 90 (51.7%). The majority of the respondents were in the age category 20-25, the lowest proportion were in the 31-40 age group, and the mean age was 23.94 years, while the majority of the participants were single 154(88.5%). Most participants were from Year one of study 92(52.9%), and the least proportion from Year Two 30(17.2%). The majority of the participants were from the Faculty of Education 59(33.9%) while the minority came from the Faculty of Management Sciences 11(6.3%).

At bivariate analysis, the study found out that females were more likely to have used HIV self-testing services compared to males cOR: 1.925 p=0.042. Married participants were more likely to have used HIV self-testing services compared to the single participants and significantly associated cOR: 1.925 p=0.046.

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VARIABLE	FREQUENCY (PERCENTAGE)	Use of HIV Self-Testing services		cOR (95% CI)	P-VALUE
Socio-demographic`		Yes	No		
Age					
20-25	142(81.6)	42(79.2)	100(82.6)	Ref	
25-30	25(14.4)	10(18.9)	15(12.4)	2.520(0.294-21.579)	0.399
31-40	7(4.0)	1(1.9)	6(5.0)	4.000(0.416-38.454)	0.230
Sex					
Male	90(51.7)	20(37.7)	70(57.9)	Ref	
Female	84(48.3)	33(62.3)	51(42.1)	1.925(0.466-2.834)	0.042
Marital status					
Single	154(88.5)	46(86.8)	108(89.3)	Ref	
Married	20(11.5)	7(13.2)	13(10.7)	3.101(0.296-4.111)	0.046
Year of study					
One	92(52.9)	24(45.3)	68(56.2)	Ref	
Two	30(17.2)	10(18.9)	20(16.5)	0.706(0.061-8.140)	0.780
Three	49(28.2)	18(34.0)	31(25.6)	1.000(0.081-12.399)	0.987
Four and higher	3(1.7)	1(1.9)	2(1.7)	1.161(0.098-13.725)	0.906
Faculty					
Public health	23(13.2)	3(5.7)	20(16.5)	Ref	
Midwifery	13(7.5)	2(3.8)	11(9.1)	0.390(0.079-1.917)	0.247
Medicine	50(28.7)	19(35.8)	31(25.6)	0.473(0.076-2.935)	0.421
Education	59(33.9)	29(37.7)	39(32.2)	1.594(0.490-5.180)	0.439
Management	11(6.3)	4(7.5)	7(5.8)	1.333(0.416-4.269)	0.628
Computing	18(10.3)	5(9.4)	13(10.7)	1.486(0.299-7.389)	0.629

Table 1 shows socio-demographic characteristics associated with the use of HIV self-testing services among Lira University students.

Barriers to the use of HIV self-testing services among Lira University students.

According to the study findings, the key barriers to the use of HIVST services among Lira University students included; Lack of Knowledge 113(64.9%), Concerns about the accuracy138(79.8%), and Lack of counseling and support services 114(65.5%).

According to the study findings, participants with less knowledge were less likely to use HIVself-testing services compared to those who had ever heard about HIVST services cOR: 6.438, p<0.001 and also those lacking counseling and support services were less likely to have ever used HIVST services compared to those who had ever attended counseling and support services aOR: 13.265 p<0.001.

The table 2 shows the bivariate analysis of the barriers to using HIV self-testing services among Lira University students.

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Variable	Category	Frequency (%)	Use of HIV Self-Testing Services		cOR (95% CI)	P-Value
Barriers to the use of HIV self-testing services			**Yes**	**No**		
Stigma/Discrimination	Yes	112(65.5)	36(67.9)	76(64.4)	Ref	
	No	59(34.5)	17(32.1)	42(35.6)	0.854(0.429-1.702)	0.655
Lack of Knowledge	Yes	113(64.9)	7(13.2)	106(87.6)	Ref	
	No	61.0(35.1)	46(86.8)	15(12.4)	9.438(7.753-21.473)	0.000
Concerns about the accuracy	Yes	138(79.8)	44(83.0)	94(78.3)	Ref	
	No	35(20.2)	9(17.0)	26(21.7)	0.740(0.320-1.710)	0.480
Difficulty in accessibility	Yes	111(63.8)	31(58.5)	80(66.1)	Ref	
	No	63(36.2)	22(41.5)	41(33.9)	1.385(0.713-2.689)	0.336
Cost of self-testing kit	Yes	99(57.2)	28(52.8)	71(59.2)	Ref	
	No	74(42.8)	25(47.2)	49(40.8)	1.294(0.675-2.480)	0.448
Lack of privacy for testing	Yes	68(39.5)	20(37.7)	48(40.3)	Ref	
	No	104(60.5)	33(62.3)	71(59.7)	1.115(0.573-2.170)	0.747
Lack of counseling and support services	Yes	114(65.5)	14(26.4)	100(82.6)	Ref	
	No	60(34.5)	39(73.6)	21(17.4)	13.265(6.137-14.362)	0.000
Lack of trusting self - testing kit	Yes	113(65.3)	30(56.6)	83(69.2)	Ref	
	No	60(34.7)	23(43.4)	37(30.8)	1.720(0.883-3.352)	0.111

Source; Primary data from the students of Lira University.

Discussion

Barriers to the use of HIVST services

The study findings showed that participants with less knowledge were less likely to use HIV self-testing services aOR: 6.438, p<0.001 compared to those who knew. This was similar to the study that was carried out among the health science college students in Nairobi, Kenya where previous knowledge of HIVST (aOR 1.22,) was associated with the use of HIVST services among the participants(McHugh et al., 2023). This similarity could have been due to the limited educational campaigns about using HIVST services among students in higher institutions accounting for the similarity in both study areas. Individuals who are not well-informed about how HIV self-testing works may be hesitant to use the services because they lack knowledge about the testing procedures, including how to perform the test correctly and interpret the results hence may feel overwhelmed or unsure about using self-testing kits (Shafik et al., 2021). This implies that when individuals do not have sufficient knowledge about HIV testing options, they may delay getting tested, leading to delayed diagnosis and potential progression of the disease without appropriate medical intervention. Individuals living with HIV may miss out on timely access to treatment and care, which are crucial for managing the disease effectively and improving health outcomes. Addressing the barriers posed by lack of knowledge regarding HIV self-testing is essential for promoting early detection, reducing stigma, and improving overall public health outcomes related to HIV/AIDS (Vara et al., 2020).

Conclusion

Less knowledge hindered the use of the services.

Study Limitations

Refusal of the study participants to participate in the study for factors like no financial gain.

Lack of knowledge of some respondents on some of the questions in the questionnaire

Fear of giving the right information.

Recommendation

To the Ministry of Health

Integration of HIVST services into existing healthcare services at the facilities to make them more accessible to males and single individuals. This could involve training healthcare providers on how to offer self-testing services and ensuring that testing kits are readily available.

Research and Data Collection to understand the barriers that prevent males and single individuals from using HIV self-testing services. By collecting data on attitudes, beliefs, and behaviors related to testing, targeted interventions can be developed.

To the University

Collaboration with Health with local health centers to provide easy access to HIV testing services on campus. This partnership can include organizing testing drives, distributing self-testing kits, and promoting a culture of regular testing among students.

To the Students

Utilize Campus Resources: Students should take advantage of any resources provided by the university or local health centers for accessing self-HIV testing services. Being proactive about one's health includes seeking out available testing options.

Encouraging open conversations about self HIV self-testing and reducing the stigma surrounding can create a more supportive environment for those considering self-testing. Students can play a role in normalizing discussions around sexual health.

To the Community

Establishing peer support groups for individuals who have undergone HIV self-testing can provide a platform for sharing experiences, addressing concerns, and encouraging others in the community to get tested.

Acknowledgment

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List of Abbreviations

AIDS: Acquired Immunodeficiency Syndrome
HIVST: HIV self-testing
MOH: Ministry of Health
PLHIV: People living with HIV
PMC: Project Monitoring and Control
SPSS: Statistical Package for Social Sciences
UNICEF: United Nations Integrated Children Fund
WHO: orld Health Organization

Source of funding

The study was not funded.

Conflict of interest

No conflict of interest declared.

Author Biography

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References

1. MacPherson, P., Lalloo, D. G., Webb, E. L., Maheswaran, H., Choko, A. T., Makombe, S. D., ... & Corbett, E. L. (2019). Effect of optional home initiation of HIV care following HIV self-testing on antiretroviral therapy initiation among adults in Malawi: A randomized clinical trial. JAMA, 321(16), 1530-1540. (2019)

2. McHugh, G., Koris, A., Simms, V., Bandason, T., Sigwadhi, L., Ncube, G., Munyati, S., Kranzer, K., & Ferrand, R. A. (2023). On Campus HIV Self-Testing Distribution at Tertiary Level Colleges in Zimbabwe Increases Access to HIV Testing for Youth. Journal of Adolescent Health, 72(1), 118–125. https://doi.org/10.1016/j.jadohealth.2022.09.004

3. Mukora-Mutseyekwa, F., Mundagowa, P. T., Kangwende, R. A., Murapa, T., Tirivavi, M., Mukuwapasi, W., Tozivepi, S. N., Uzande, C., Mutibura, Q., Chadambuka, E. M., & Machinga, M. (2022). Implementation of a campus-based and peer-delivered HIV self-testing intervention to improve the uptake of HIV testing services among university students in Zimbabwe: The SAYS initiative. BMC Health Services Research, 22(1), 222. https://doi.org/10.1186/s12913-022-07622-1

4. Shafik, N., Deeb, S., Srithanaviboonchai, K., Ayood, P., Malasao, R., Siviroj, P., Musumari, P.

M., & Wood, M. M. (2021). Awareness and Attitudes Toward HIV Self-Testing in Northern Thailand. International Journal of Environmental Research and Public Health, 18(3), Article 3. https://doi.org/10.3390/ijerph18030852

5. Vara, P. A., Buhulula, L. S., Mohammed, F. A., & Njau, B. (2020). Level of knowledge, acceptability, and willingness to use oral fluid HIV self-testing among medical students in Kilimanjaro region, Tanzania: A descriptive cross-sectional study. AIDS Research and Therapy, 17(1), 56. https://doi.org/10.1186/s12981-020-00311-1

6. World Health Organization. (2019). Guidelines on HIV self-testing and partner notification: Supplement to consolidated guidelines on HIV testing services. (2018)

7. Mphande, M., Campbell, P., Hoffman, R. M., Phiri, K., Nyirenda, M., Gupta, S. K., Wong, V., & Dovel, K. (2021). Barriers and facilitators to facility HIV self-testing in outpatient settings in Malawi: A qualitative study. *BMC Public Health*, *21*(1), 2200. https://doi.org/10.1186/s12889-021-12213-6

8. Muwanguzi, P. A., Bollinger, R. C., Ray, S. C., Nelson, L. E., Kiwanuka, N., Bauermeister, J. A., & Sewankambo, N. K. (2021). Drivers and barriers to workplace-based HIV self-testing among high-risk men in Uganda: A qualitative study. *BMC Public Health*, *21*, 1002. https://doi.org/10.1186/s12889-021-11041-y

9. MacPherson, P., Lalloo, D. G., Webb, E. L., Maheswaran, H., Choko, A. T., Makombe, S. D., ... & Corbett, E. L. (2019). Effect of optional home initiation of HIV care following HIV self-testing on antiretroviral therapy initiation among adults in Malawi: A randomized clinical trial. JAMA, 321(16), 1530-1540. (2019)

10. McHugh, G., Koris, A., Simms, V., Bandason, T., Sigwadhi, L., Ncube, G., Munyati, S., Kranzer, K., & Ferrand, R. A. (2023). On Campus HIV Self-Testing Distribution at Tertiary Level Colleges in Zimbabwe Increases Access to HIV Testing for Youth. Journal of Adolescent Health, 72(1), 118–125. https://doi.org/10.1016/j.jadohealth.2022.09.004

11. Mukora-Mutseyekwa, F., Mundagowa, P. T., Kangwende, R. A., Murapa, T., Tirivavi, M., Mukuwapasi, W., Tozivepi, S. N., Uzande, C., Mutibura, Q., Chadambuka, E. M., & Machinga, M. (2022). Implementation of a campus-based and peer-delivered HIV self-testing intervention to improve the uptake of HIV testing services among university students in Zimbabwe: The SAYS initiative. BMC Health Services Research, 22(1), 222. https://doi.org/10.1186/s12913-022-07622-1

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