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A cross-sectional study on factors associated with self-medication among residents in Kasubi parish, Kampala district.

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Abstract

Background.

Self-medication is the use of therapeutically active substances by people on their initiative or on the suggestion of others without consulting a qualified health care professional. Self-medication is considered one of the components of self-care. This study assessed factors associated with self-medication among residents in Kasubi parish, Kampala district.

Methodology.

The study employed a descriptive cross-sectional quantitative research design because it allows the collection of data from a population that differs in the variable of interest and shares other characteristics for a short period. Data was tallied and analyzed using Microsoft Excel and Word and presented in the form of pie charts, tables, and bar graphs.

Results.

The majority of the respondents 40(80%) were females, 22(44%) were aged between 18-27 years, 29(56%) were married,23(46%) attained tertiary level, 30(60%) strongly agreed that income levels influenced their decision to self-medicate, 75% indicated that self-medication was harmless,35(70%) indicated availability and ease of medications make it easier to self-medicate, 40% indicated that pain was the most condition that leads them to self-medicate,42(84%) indicated they self-medicated at home and 40(80%) indicated that kasubi had health facilities and (50%) indicated that illness was too small to consult a doctor.

Conclusions

The study found, individual factors, many reported to have kept some medication at home.
Health care system-related factors included: no medicines in the health facilities.
Socioeconomic factors indicated that many residents were charged too much for health care.

Recommendations

The Ministry of Health should design and implement health care policies that will ensure proper handling of medicines in both public and private health facilities.

Keywords: *Self-medication, Over-the-counter drugs, Access to healthcare, Drug misuse, Kasubi parish, Kampala district.*
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Background

Self-medication is the use of therapeutically active substances by people on their initiative or on the suggestion of others without consulting a qualified health care professional. Self-medication is considered one of the components of self-care. Self-medication can lead to interactions between drugs, which would be prevented had the patient sought care from licensed medical practitioners (Selvaraj et al., 2014). According to a study published by the World Health Organization (WHO), approximately 50% of medications worldwide are prescribed, dispensed, or sold inappropriately, and 50% of patients fail to take them correctly. The rise of the internet has further fueled this practice, with over 70% of people in a 2019 global survey reporting that they research health-related information online before consulting a healthcare professional. This global trend has contributed to the alarming increase in antimicrobial resistance (Ahmed et al., 2024).

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In Nigeria, for example, a national survey reported that 60% of the population engaged in self-medication, particularly for malaria and other febrile illnesses. The availability of medications without a prescription is a significant driver, with informal drug markets accounting for up to 80% of pharmaceutical sales in some African countries. This practice is further compounded by limited access to healthcare services, where the average doctor-to-patient ratio in Sub-Saharan Africa is approximately 1:5,000, far below the WHO-recommended ratio of 1:1,000. Sub-regional Perspective. (Ocean *et al* 2015). Self-medication can provide benefits to some individuals due to reasons that include: SM saves time spent queuing up for medical consultations, saves scarce medical resources from being used on minor conditions, reduces the workload of doctors, decreases health costs, and absenteeism from work. Despite these potential benefits obtained from practicing SM, many undesired outcomes may result from inappropriate self-medication.

In East Africa, self-medication is a public health concern; more than half of adults were found to be victims of self-medication. In Uganda, specifically, the prevalence was found to be 63%, with common conditions treated including respiratory infections, headaches, and gastrointestinal disorders. The widespread use of traditional herbal medicines in East Africa also plays a significant role, with approximately 80% of the population relying on traditional remedies either exclusively or in conjunction with modern medicine. In rural areas, the lack of healthcare infrastructure exacerbates the issue, leading to higher self-medication rates as residents opt for locally available drugs and traditional remedies (Mahomoodally, 2013). This study assessed factors associated with self-medication among residents in Kasubi parish, Kampala district.

Methodology.

Study design

A cross-sectional descriptive quantitative research design was employed during the study. This is because it allows data collection in a population that differs in the variable of interest and shares other characteristics for a short period of time.

Study area

The study was conducted at Kasubi parish, Rubaga division, Kampala district, in the central Buganda region, Uganda. It's a settlement of the population of the working class and residents.

Study population

The study population was done on residents practicing self-medication with pharmaceutical medications.

Sample size determination

The minimum sample size was calculated accurately using Burton's formula (1965);

Where;

n = Sample size,

Q = population estimate,

R = Number of household heads

O = Time spent on each respondent

Q=40, R=25, and O=20minutes

n =50

The sample size is 50 respondents.

Therefore, a sample size is 50 respondents will be required.

Sampling technique.

The simple random sampling method was applied to select the respondents to participate in the study. The sampling technique is chosen because it offers all members the same probability to be selected, is resource-saving, is easy to administer, eliminates biases, and is time-saving.

Sampling procedure.

Participants were chosen randomly by the researcher using the selected sequence until the required sample of 50 respondents was obtained. Written papers equivalent to their number were employed. The youths who picked the papers having numbers from 1-5 per day will be enrolled in the study, and the rest will not be considered in the study. The study will take 5 weeks.

Data collection methods

The method of data collection used is the questionnaire method since it is cheap and easy to implement.

Data collection tool

The data collection tool used was a semi-structured questionnaire with open and closed-ended questions because it is effective, most affordable to gather quantitative data, and it is inexpensive and flexible.

Data collection procedure

An introductory letter was obtained from the Kampala Institute of Health professionals that was used to seek permission from the Local council to allow the collection of data. The LC chairperson took the researcher to the remaining staff, who briefed the households/community

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and introduced the researcher to the community. Data was collected using questionnaires, which were administered for filling out after obtaining informed consent. A total of 50 questionnaires were administered to households within the Kasubi parish by well-trained research assistants. Filled questionnaires were kept under key and lock and crosschecked in the evenings for completeness. Incomplete questionnaires were filled out immediately.

Study variables.

The dependent variable is self-medication in the community.
The independent variable is the factors contributing to self-medication.

Quality control.

The questionnaire was double-checked for completeness of information to ensure reliability and kept safely under lock and key, only accessible by the chief researcher. Questionnaires were translated verbally into the Luganda language for participants who were not able to understand English.

Pretesting the research tool

A pretest of the questionnaire was done to ensure the accuracy, reliability, and validity of the research findings. Adherence to standard operating procedures to maintain consistency, reliability, and uniformity throughout the research process. Detailed SOPs were developed for every aspect of the research process, including participant recruitment, questionnaire administration, data management, and analysis.

Piloting the study

A pilot testing of the questionnaire on a small sample of 10-15 respondents of residents similar to Kasubi but not within Kasubi. The evaluation was done on the effectiveness of the questions and the ease with which respondents understand and answer them. Feedback was focused on the clarity and revision of the questions and the overall length and flow of the questionnaire.

Training and supervision of research assistants

Before the commencement of the study, research assistants were trained to ensure the effectiveness and consistency of study objectives, methodology, and ethical considerations, enabling informed consent with confidentiality and the capability to administer the questionnaire. Detailed instructions were administered, which included how to explain the purpose of the study to the respondents, handle sensitive questions, and record responses accurately.

Inclusion criterion

Clear inclusion criteria ensured the study sample accurately represented the target population, and the data collected were relevant to the study objectives. All residents of any age willing to take part in the study and have lived in Kasubi for one year, self-medicated within the last 12 months.

Exclusion criterion.

Ample time for data collection
Given the ample time that ensured that the data would be collected systematically at the right time, which allowed accurate quality data, 25 minutes was dedicated to each respondent, and data was collected for 4 hours daily for 12 days.

Data analysis and presentation

Data was immediately analyzed after collection-aided editing, and then correctly entered into the computer. The descriptive statistics and analysis were carried out, and data were presented in the tables& figures.

Results.

Socio-demographic characteristics of the respondents

Table 1: Shows distribution of respondents by socio-demographic characteristics (n=50)

Variables	Response	Frequency(f)	Percentage (%)
Age	18-27	22	44
	28-37	10	20
	38-47	11	22
	>48	7	14
	Total	**50**	**100**
Gender	Male	10	20

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	Female	40	80
	Total	**50**	**100**
Qualifications	Primary	6	12
	Secondary	20	40
	tertiary	23	46
	others	1	2
	Total	**50**	**100**
Religion	Catholic	14	28
	Moselim	10	20
	Protestant	10	20
	Others	16	32
	Total	**50**	**100**
Marital status	Married	29	56
	single	15	30
	Divorced	2	4
	Cohabiting	4	8
	Total	**50**	**100**

Table 1 shows that most of the respondents, 22(44%), were aged between 18-27 years,38-47 reported with a percentage frequency of 11(22%), 28-37 with 10(20%) responses, and >48years responded with 7(14%). Majority 40(80%) were female whereas the least 10(20%) were men
Regarding qualifications, tertiary 23(46%) responded with the highest number, secondary with 20(40%), primary with 6(12%) and others with 1(2%) respectivity. Regarding religon majority were others with 16(32%), catholic with 14(28%), moslims and protestant responded with 10(20%). Marital status, married respondants attained the highest with 29(56%), single with 15(30%), cohabiting 4(8%) and divorced with 2(4%)

Individual factors contributing to self-medication among Kasubi parish residents

Figure 1 shows respondents' responses on themselves to self-medicate (n=50)

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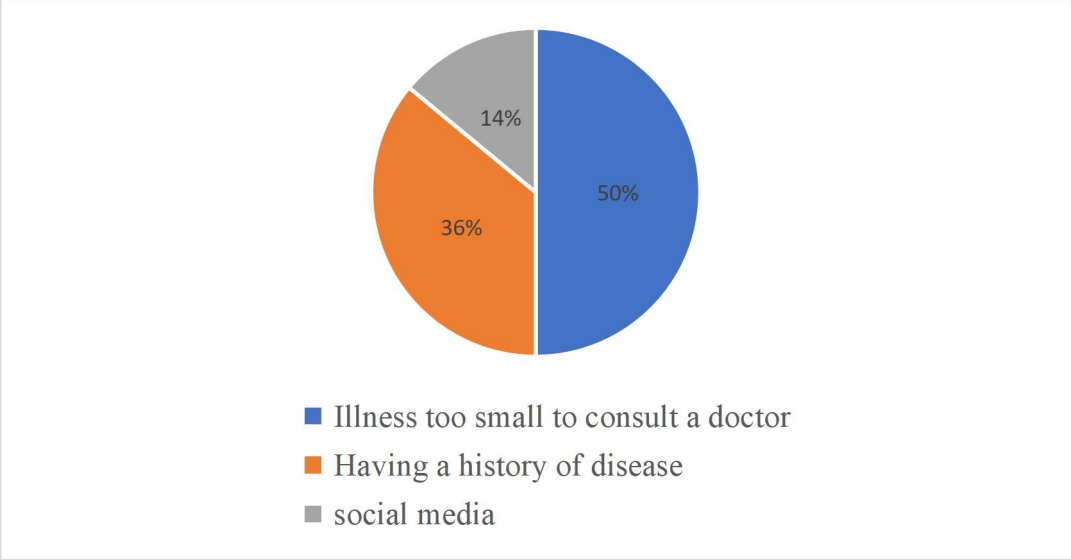

Figure 1 shows that half of the respondents, 25(50%), reported they had self-medicated, thinking the condition was too small to consult a doctor, while 18(36%)had a history of the disease, and 7(14%) followed social media.

Table 2Shows results of respondents on whether they always self-medicate at home. (n=50)

Variables	Response	Frequency (f)	Percentage (%)
Do you self-medicate at home?	Yes	42	84
	No	8	16
	Total	**50**	**100**

Table 2 shows that, majority, 42(84%) of the respondents self-medicated at home, while 8(16%) repeated that they did self-medicate at home.

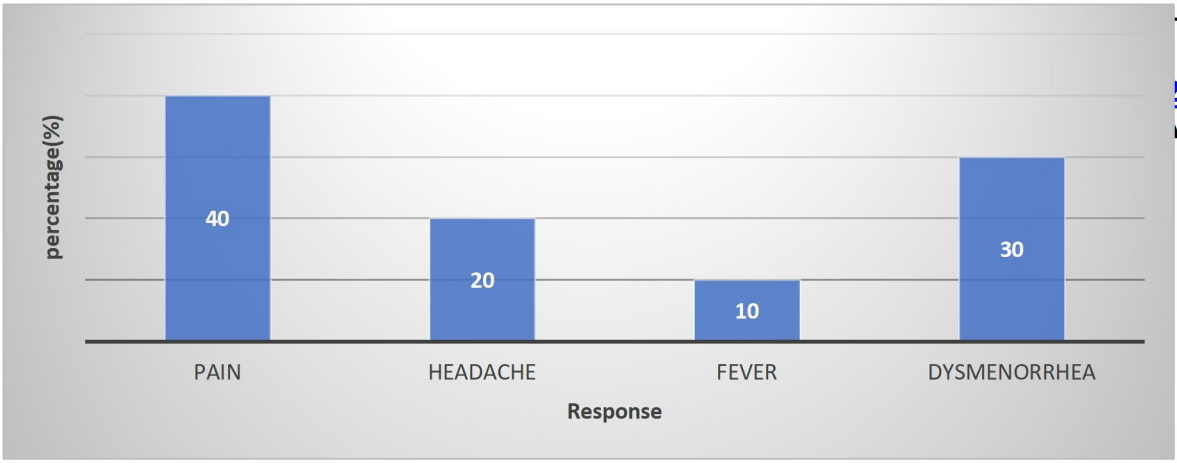

Figure 2Shows respondents' responses on the medical condition that influences them to self-medicate (n=50).

Figure 2 shows that, most 20(40%) of respondants self medicate due to pain ,15(30%) females due to dysmenorrhea,10(20%) due to headache amd 5(10%)due to fever.

Figure 3Shows respondents' responses on whether self-medication is harmless (n=50).

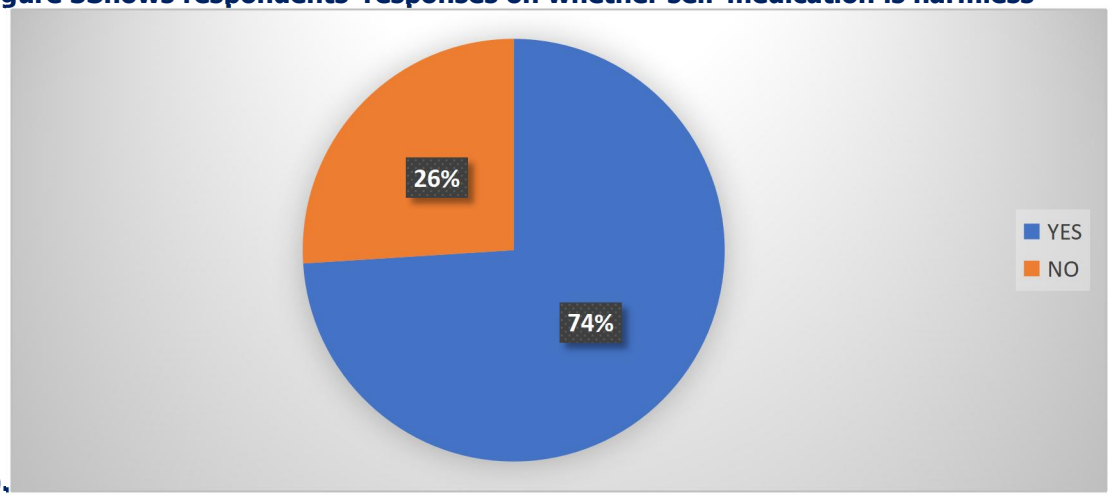

Figure 3 shows that, majority, 37(74%) of respondents think self-medication is harmless, while a minority, 13(26%) think self-medication is harmful.

Health care system-related factors contributing to self-medication among Kasubi parish residents.

Table 3 Shows respondents' responses on whether they have health facilities within their location. (n=50).

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

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Table 3 indicates that the result showed 40(80%) of the respondents agreed with their health facilities, and 10(20%) disagreed with them.

Figure: 4 Shows respondents' responses on whether medicine was present in their health facilities. (n=50).

Figure 4 shows that, results showed the majority, 40(80%), agreed that there are no medicines in the health facilities, while a minority, 10(20%), agreed there was medicine in the health facilities.

Socioeconomic factors contributing to self-medication among Kasubi parish residents.

Table 4 Shows respondents' responses on many health facilities for drugs.

Variable	Response	Frequency (f)	Percentage (%)
How much does a health facility charge you for the drugs	Too much money	30	60
	Much money	10	20
	Not much	10	20
	Total	**50**	**100**
Does the cost of healthcare services	Yes	35	70

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influence your decision to self-medicate?	No	15	30
	Total	**50**	**100**

Table 4 shows that most of the respondents 30(60%) agreed that health facilities charge too much money for the drugs,10(20%) agreed to be charged much money, and 10(20%) agreed not to be charged much money.

Regarding whether the cost of healthcare services influences residents to self-medicate majority, 35(70%), agreed, and the minority, 15(30%), disagreed with the statement.

Discussion of results.

Individual factors contributing to self-medication among residents of Kasubi Parish, Kampala District

This study revealed that the majority (84%) of the respondents self-medicate at home. This is probably because (50%) of respondents thought that their illness was too small to consult a doctor, having a history of the disease reported at (36%), and social media reported at (14%)%. It further revealed that (50%) thought that their illness was too small to consult a doctor, which was the most common cause for their self-medication. This study agrees with that of (Muhammad *et al,*2018), where the finding indicated that (47.8%) of the participants assumed their illness was too trivial to consult a doctor, indicating maladaptive coping mechanisms for stress, coping skill training to control emotions, and increased access to medications.

It was evident that (74%) thought self-medication was harmless, as shown in Figure 3, probably due to the qualifications attained by the residents, with the majority tertiary level at (46%) and others at only (2%). This relates to the findings of (Mahmoud *et al,*2019) among women in Iran, which revealed that perceiving self-medication as harmless was (41%) of the most common reason for self-medication, implicating individuals to use medication to alleviate symptoms of underlying conditions.

Results of the study also revealed that (40%) of the respondents self-medicated due to pain,(20%) due to headache and (30%) dysmenorrhea, and (10 %) due to fever. This confirms that individual factors contribute to self-medication. The study findings correlate with the findings of Segenet *et al* (2020) that the most common types of diseases for self-medication were headache (47.9%), gastrointestinal infection (44.31%), and respiratory tract infections (28.74%). Analgesics (56.28%) and antibiotics (35.9%) were the leading classes of medicine used in self-medication, indicating self-awareness and self-regulation of access to medication to treat conditions.

Socioeconomic factors contributing to self-medication among residents of Kasubi Parish, Kampala.

The study showed that the majority (60%) agreed their income levels influenced their decision to self-medicate, 20% agreed, and 20% disagreed concerning how much the health facility charges them. This indicates that improvement in socio-economic standards answers the reason for self-medication. This is in line with studies by Ocan *et al.* (2024) which showed a correlation between lower income levels and higher rates of self-medication, highlighting the economic constraints faced by many individuals, 65% of residents in Kasubi parish cited financial difficulties as the primary reason for SM according to a study by Lubega and Smith 2020 thus leading to increased access for over counter pain medication indicating that economic standards of residents should be lifted to address the problem.

Findings revealed that most of the respondents (70%) had availability and ease of self-medication before they attended a public health facility. These findings are attributed to the fact that individuals found it convenient to buy medications from pharmacies and drug shops without prescriptions. This is probably because the resident is not sensitive to patience when seeking health care. This is in line with the study conducted in the Uganda Wakiso district by (Haque et al., 2019), where findings revealed that (93.2%) of the individuals self-medicated because of long waiting hours at the hospital, implying that most people opted for pharmacies and drug shops where they are sure they pay and leave with drugs implicating affected people need quick services to their health problems.

Health care system-related factors contributing to self-medication among residents of Kasubi parish, Kampala district.

Almost all the respondents (80%) agreed that their health facilities were within Kasubi parish. This is attributed to the fact that many of these respondents agreed availability and ease of medication, which makes it easier to self-medicate, and reported 70% as indicated in Table 4. These findings indicate that individuals who self-medicate do so

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to avoid long queues and waiting times at healthcare facilities

The study results were in line with the results of a study conducted by (Montastruc et al., 2016) that revealed 68% carried out safe medication. Theoretically implying access to healthcare infrastructure contributes significantly to self-medication practices. In urban settings like Kampala, where healthcare facilities are available but overcrowded, long waiting times and the inconvenience of visiting a clinic or hospital have driven SM to access affordable healthcare and the cost-effectiveness of some integrated treatment approaches.

The study further revealed that more than half of the respondents (80%) had health facilities within Kasubi parish. This could have been attributed to the fact that many individuals have self-medicated for a long time. These findings indicate that healthcare providers should be engaged in continuous medical education, follow medical ethics, and not prefer money as the main reason for practicing medicine. The study results were in agreement with the study conducted (Tusingwire, 2018) carried out on the factors contributing to self-medication among OPD patients at Kabwohe Health Center IV, which revealed that the reasons for self-medication were the nonavailability of doctors at the health facility as the main factor for self-medication at (95%), knowledge of diagnosis (84%), lack of time (75%) and financial problems (74%) thus most of the respondents (38%) would spend between 30-60 minutes before they are attended to especially in public health facilities. A study conducted in the Uganda Wakiso district by Wu et al. (2023), where findings revealed that 93.2% of the individuals self-medicated because of long waiting hours at the hospital. From the findings, the majority of the respondents (52%) had never left a public health facility without receiving treatment. This could have been highly attributed to the fact that most people opted for pharmacies and drug shops where they were sure they would be left with drugs.

In the study, the majority of the respondents (65.4%) self-medicated because they did not find medicines at the public health facility. This could have been attributed to the fact that they opted for private facilities like pharmacies.

Theoretically, this could have been attributed to the fact that individuals found it convenient to buy medications from pharmacies and drug shops without prescriptions, hence the high levels of safe medication.

Conclusions

Results on individual factors to self-medication showed that self-medication was (80%) of the respondents had kept some medications at home, (84%) had someone self-medicating at home, (74%) thought self-medication was harmless, (40%) self-medicated more with painkillers.

Socioeconomic factors contributing to self-medication were quite agreeable since (60 %) strongly agreed that income levels influenced their decision to self-medicate, (70%) had availability and ease of medication that made it easier to self-medicate.

The study also established the health-related factors contributing to self-medication, indicating the presence of self-medication since (80%) had health facilities around their homes, (80%) had medicines with their health facility without treatment.

Overall, the researcher concluded that the majority of the respondents had never self-medicated due to it being time-saving, accessible, and economical.

Recommendation

The Ministry of Health should design and implement health care policies that will ensure proper handling of medicines in both public and private health facilities.

Health workers should be further trained in medical ethics through continuous medical education to prevent the mishandling of patients and provide a conducive environment for patients.

Community sensitization programs should be conducted to create awareness of the dangers of self-medication among individuals by the government through the local councils.

Acknowledgment

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May blessings follow you in your lifetime.

List of abbreviations.

ASM: Adherence to self-medication
KIHP: Kampala Institute of Health Professionals
MOH: Ministry of Health
OTC: Over-the-counter
PC: Personal Care
POM: prescription-only medicine
SM: self-medication
WHO: World Health Organization.

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Conflict of interest.
No conflict of interest was declared.

Availability of data.
Data used in this study are available upon request from the corresponding author.

Authors contribution
DS designed the study, conducted data collection, cleaned and analyzed data, and drafted the manuscript, and EM supervised all stages of the study from conceptualization of the topic to manuscript writing.

Ethical consideration.
An introductory letter was obtained from the Kampala Institute of Health Professionals - Kampala, Research Committee, which introduced the researcher to the local council and was used to seek permission for data collection.

Informed consent.
The informed consent of all participants was sought before they participated in the research. A statement with the stated aims of the study and the proposed use of the information to be collected was to be presented and explained to the respondents before the interviews. None of the participants was subjected to stigmatization as a result of the statement. All participants were given the right to decline their participate in answering the questionnaires. The results of the questionnaires were kept anonymous. Data was collected and recorded anonymously, and the participants were assured of confidentiality for whatever they discussed

Authors biography.
Douglas Sebaggala is a student of a diploma in pharmacy at Kampala Institute of Health Professionals.
Enoch Musudo is a research supervisor at the Kampala Institute of Health Professionals.

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