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Original article

The level of self-medication with antimalarial drugs among residents of Kituuza village, Mukono district. A cross-sectional study.

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ABSTRACT

Background:

Self-medication with anti-malarial drugs is a common practice among many people across the world. This contributes to escalating health risks, including antimalarial resistance and adverse drug reactions. This study aimed at assessing the level of self-medication with anti-malarial drugs among residents of Kituuza Village, Mukono District.

Methodology:

The study employed a cross-sectional design to determine the prevalence of self-medication with antimalarial drugs. A sample of 80 comprising residents of Kituuza village, Ssaayi parish, Ntenjeru Sub County, and Mukono district was obtained through a systematic sampling technique, and data were collected using semi-structured questionnaires. Data was then analyzed using Microsoft Excel and presented in the form of tables and figures.

Results:

Out of 80 participants, the most, 35(45.75%) were aged (35-44) years, 50(62.5%) were female, 50(62.5%) had secondary education, 45(56.25%) earned between 50000- 100000 Ugandan shillings, while 35(43.75%) were single. The results show that self medication was high, 63%, with higher rates among females (62.5%) and majority of the respondents who practiced self medication had attained secondary education (62.5%) and therefore knew about different antimalarial drugs that they use for self medication such as quinine, Artemether and Lumefantrine and the suspected places where these drugs were obtained, were pharmacies, 31.25%, and community drug shops. Respondents self-medicated with antimalarial drugs to alleviate fever, headache, and cold.

Conclusion:

The level of self-medication with anti-malarial drugs was relatively high, especially among females. Community drug shops play a significant role in the provision of self-medicated anti-malarial drugs.

Recommendation:

People should visit the health facilities for examination whenever they are sick, and the health worker should make sure that antimalarial drugs are always available at the health facility for the population to access them easily.

Keywords: *Plasmodium species, Artemether and Lumefantrine, Antimalarial drugs, Kituuza village*
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BACKGROUND

Malaria is a severe disease that is caused by the parasite of the genus plasmodium which is transmitted to humans by a bite of an infected female Anopheles mosquito (Talapko et al., 2019). It remains the leading cause of mortality, with approximately 229 million cases and more than 400,000 deaths.

When not treated, malaria can cause complications like cardiovascular abnormalities, including myocarditis and acute coronary syndrome. (Holm et al., 2021). Malaria can also cause neurological complications, usually linked to the falciparum plasmodium species (Sweety et al., 2022). As a result, patients suffering from the disease tend to use anti-malarial drugs to treat this disease, which are reportedly got from private pharmacies, retail shops, and drug shops, while other reported sources are leftover drugs from the previous treatment, neighbors, friends, and relatives. In East Africa, a study in Tanzania reported that the prevalence of self-medication is valued at 55.7% (Debora et al., 2017), while in Uganda, a study conducted in Ishaka, Bushenyi in western Uganda, among 118 participants, 83.3% had used anti-malarial drugs (Birungi and Solomon, 2017). This study aimed at assessing the level of self-medication with anti-malarial drugs among residents of Kituuza Village, Mukono District.

METHODOLOGY

Study design

A cross-sectional study design was employed. It provided a better understanding of the factors associated with anti-malarial self-medication.

Study area
The study was conducted in Kituuza village, Ssaayi parish, Ntenjeru Sub-County, and Mukono district, which is located in central Uganda.

Study population
The study was targeting the residents of Kituuza village, Ssaayi parish, Ntenjeru Sub County, Mukono district, both male and female, who would have accepted.

Sample size determination
Considering the total population (N), the sample size (n) can be calculated using Mugenda's formula (1999).

N=N/ (1+N (e^2))

Where n is the estimated sample size, N is the total population (100), and e is the marginal error (0.05)
n=100/ (1+100(0.05^2) =80
Therefore, 80 residents participated in the study

Sampling technique
Systematic random sampling was used to obtain the sample size. Those who met the inclusion criteria were approached and randomly selected from the registry in the records department.

Sampling procedure
The enrolment was done between 9:00 am and 4:00 pm from Monday to Friday, among the residents of Kituuza village. Enrolment was systematic in nature until the required sample size was obtained. Using the registry at the records department, the first participant was randomly selected.

Data collection methods
Face-to-face interviews based on the pre-tested interview guide were conducted among the residents of Kituuza.

Data collection tools
The information was collected from the study population using already prepared questionnaires. The questionnaires were pretested in a similar population for authenticity.

Data collection procedures
Data collection instruments were developed and tested for appropriateness. With help from the assistants, data were collected from the participants using semi-structured questionnaires. This involved interviewer guidance for respondents who did not comprehend the questions in the questionnaires.

Quality control
The questionnaire was pretested amongst some participants with similar characteristics, before the actual study was done, in order to restructure and rephrase the questions.
Assistants were trained on the objectives and how to carry out data collection.
Any resident who was found at his /her home was included in the study as long as he or she consented and met the inclusion criteria.
All the residents who were found in their homes during data collection, but who didn't actually meet the inclusion criteria, were not included in the study.

Data analysis and presentation
Data was coded, cleaned, entered into Microsoft Excel, and analyzed using the statistical package for the social sciences (SPSS) version 20. Data was then presented in tables and figures, expressed as percentages and frequencies.

Inclusion criteria
The study included residents of Kituuza village, Ssaayi parish, Ntenjeru Sub-County, Mukono district who were presented and consented to the study.

Exclusion criteria
Those who were very sick, those with mental problems, children, and older adults older than 60 years.

Ethical consideration
An approval letter from the school (International Paramedical Institute Maya) was obtained.
Informed consent was obtained from each respondent using a consent form after explaining the importance of the study.
Confidentiality was maintained at all levels; in this regard, respondents were not required to write their names on the questionnaires, and they were to be kept safely.

RESULTS
Social demographic factors on self-medication with anti-malarial drugs, n=80.

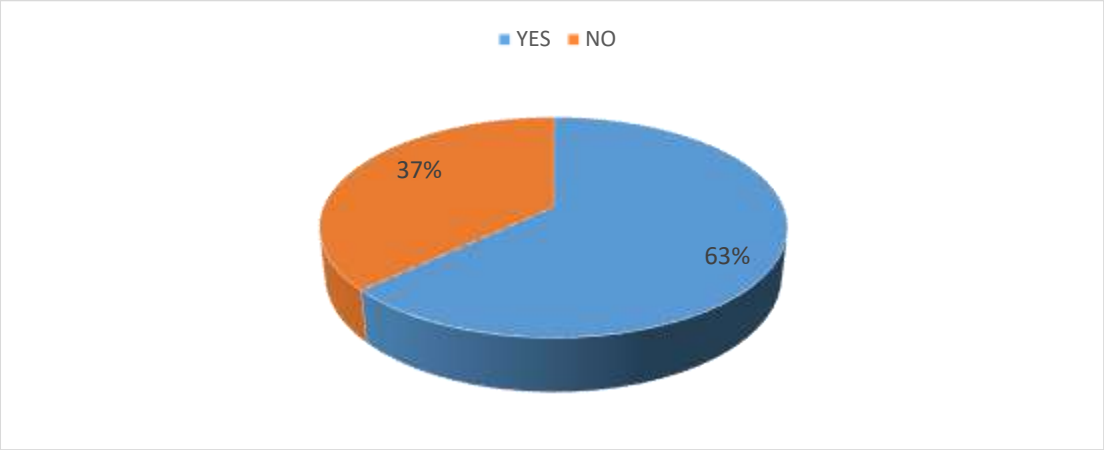
Table 1: Shows socio-demographic factors on self-medication with anti-malarial drugs, n=80.

Variable	Category	Frequency (n=80)	Percentage (%)
Age	18 -24 years	20	25
	25-24 years	15	18.75
	35-44 years	35	45.75
	45-60 years	10	12.5
Gender	Male	30	37.5
	Female	50	62.5
Education	Primary	20	25
	Secondary	50	62.5
	University	10	12.5
Income level (UGX)	<50000	15	18.75
	50000-100000	45	56.25
	>100000	20	25
Marital status	Married	20	25
	Single	35	43.75
	Divorced	15	18.75
	Widowed	10	12.5

The table 1 shows majority of the respondents who practiced self-medication were between the ages of 35-44 years 35(45.75%), Female 50(62.5%), had secondary education 50(62.5%), earning between 50000-100000 Ugandan shillings 45(56.25%), single 35(43.75%) and the minority of the respondents were between the age of 45-60 years 10(12.5), male 30(37.5%), had studied up to University Education 10(12.5%), Earning <50000 Ugandan shillings 15(18.75%) and widowed respectively.

The self-medication practices and prevalence of anti-malarial drugs.

Figure 1: Showing the response whether the respondents have ever used an antimalarial drug without consulting a healthcare professional, n=80.



Findings in Figure 1 show that the majority of the respondents, 50 (63%), use antimalarial drugs without consulting a health professional, while 30(38%) use antimalarial drugs after consulting a health professional.

Table 2: Showing how often the respondents self-medicate with antimalarial drugs, n=80.

Category	Frequency (n=80)	Percentage (%)
Always	50	62.5
Some times	20	25
Rarely	9	11.25
Never	1	1.25

Findings in Table 2 show that the majority of the respondents, 50(62.5%), always practice anti-malarial self-medication, and 1(1.25%) has never practiced anti-malarial self-medication.

Table 3: Shows where the respondents usually obtain anti-malarial drugs used for self-medication, n=80.

Category	Frequency(n=80)	Percentage (%)
Pharmacy	25	31.25
Hospital	15	18.75
Community drug shops	35	43.75
Street medicines	5	6.25

Table 3 shows majority of the respondents obtained anti malaria drug use for self-medication from community drug shops, 35(43.75%), and a minority obtained these drugs from street medicines, 5 (6.25%).

DISCUSSION

Socio-demographic factors.

According to the study, the majority of the respondents aged 35-44 years 35, 45.75%) showed higher self-medication with anti-malaria drugs. this because most of these respondents who belong to this age are always in their place of work, which makes them busy, and so they don't have enough time to visit the health facility to be first diagnosed before they are given medicines to take. As a result, these people tend resort to antimalarial self-medication because they lack time to go for testing whenever they fall sick. This study agrees with the study carried out in French Guiana that shows that self-medication was high among illegal gold miners because these people have no time to visit the health facility for checking whenever they become sick (Douine et al., 2018).

Furthermore, the study revealed that the majority of the respondents who practiced anti-malarial self-medication were females, having a higher percentage of 50 (62.5%), than men. This is because women are the most care takers homes, and so they may not have enough time to visit the health facility for medical check-ups, and so they decide to self-medicate with antimalarial drugs. This study is in disagreement with the study, which was carried out in Nigeria, 91 (60.7%) claimed that they had undergone malaria screening tests in the laboratory before treatment, but a few sought professional care treatment after the screening test (Iribhogbe & Odoya, 2021).

Additionally, the majority of the respondents who practiced self-medication had studied up to the secondary level of education. This is because the majority of these respondents had acquired enough knowledge and they know most of the medication when they become sick, such as quinine, Artemether, and Lumefantrine. This study is in disagreement with the study carried out in Northern Uganda that shows that the majority of the respondents were less educated and53.6% having attained primary education (Ocan et al., 2014).

The study also shows that the majority of the respondents who practiced self-medication were earning a monthly salary ranging from 50000 to 100000 Ugandan shillings. This is because these people tend to use this money to go and obtain antimalarial drugs for self medication fro the nearby drug shops, where they buy these drugs at a lower price than going to the hospital for a medical check-up before they get the medicines. These results disagree with the study that was carried out in Northern Uganda that most people who practiced self-medication earn between 10000 and 50000 Ugandan shillings (Ocan et al., 2014).

The prevalence of self-medication with anti-malarial drugs.

The study revealed that the majority of the respondents, 50 (63%), used anti-malarial drugs without consulting a health professional. This is because they know some of the symptoms of malaria, such as headache, fever, and body weakness. As a result, whenever they experience these symptoms, they tend to go and buy anti-malarial drugs from the nearby pharmacies and drug shops. This study agrees with the study that was carried out in Parakou in the Northern Benin, which found that fever (129% or38.51) and headache (93% or27.76%) were the conditions that caused these respondents to self-medicate with anti-malarial drugs. (Attinsounon et al., 2017).

In addition, findings show that the majority of the respondents, 50 (62.5%), always use antimalarial drugs. This is because most of these respondents have access to antimalarial drugs even when they do not have a prescription from a recognized doctor. This is why these people are always able to get anti-malarial drugs without a prescription. This study is in agreement with the study that was carried out in low and middle-income countries, which shows that most studies assessed non-prescription use of anti-malarial drugs, 14.7% (Ocan et al., 2015).

The results also show that the majority of the respondents obtained antimalarial drugs from community drug shops 35 (43.75%). This is because many people have access to these places where they get these drugs, and they do not have regulations that restrict them from obtaining these drugs from these places, and so they have a right to do whatever they want, and they get these drugs even without presenting a prescription. This study agrees with a study carried out in Cameroon, which revealed that the commonest anti-malarial providers were pharmacies (47.8%) and street medicine stores that include even the drug shops (30.19%). (LPF Kojom, et al., 2018).

LIMITATIONS

The study was limited to self-medication with anti-malarial drugs only and was confined to Kituuza village due to financial implications and time frame. The study was done in a relatively shorter period by involving more research assistants to facilitate quick data collection.

CONCLUSION

The level of self-medication with anti-malarial drugs among residents of Kituuza village, Ssaayi Parish, Ntenjeru sub-county, Mukono district, was relatively high, especially among females. Most self-medicated anti-malarial drugs were obtained from community drug shops.

RECOMMENDATION

The government, through the Ministry of Health, should regulate the sale of drugs without professional-guided prescriptions.

Health workers should be friendly to the people to ease accessibility to essential medications.

Health workers should make sure that anti-malarial drugs are available at the health facility at all times.

Residents of Kituuza village should always visit the health facility whenever they are sick in order to be examined, in order to know what they are suffering from, and receive proper prescriptions.

People should responsibly avoid self-medication with anti-malarial drugs even if they have access to these medicines.

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LIST OF ABBREVIATIONS

OPD: Outpatient Department.
SPSS: Statistical Package for Social Science.

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The study was not funded.

CONFLICT OF INTEREST
The author declares that there was no conflict of interest.

AUTHOR CONTRIBUTIONS
IM- Developed and investigated a study.
CS- Supervised the Study.
MMM- Supervised the study.

DATA AVAILABILITY
Data is available upon request.

INFORMED CONSENT
There was full disclosure; full comprehension, and respondents voluntarily consented to participate in the study.

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