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Original Article

Health facility-related factors contributing to antibiotic misuse among youths aged 18-30 years. Across sectional study of Bunamwaya Village, Makindye Ssabagabo, Wakiso District.

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Abstract.

Background:

The aim of this study was to assess the health facility-related factors contributing to antibiotic misuse among youths aged 18-30 years in Bunamwaya Village, Makindye Ssabagabo, Wakiso District.

Methodology:

The researcher used a descriptive cross-sectional design, employing quantitative methods of data collection. A self-administered questionnaire was used to collect data from 50 respondents who were randomly sampled. Data was analyzed using the Microsoft Excel program, and data was presented in the form of tables, pie charts, and graphs.

Results:

The study showed that the majority of the participants, 23(46%), were aged between 23 and 27 years, with close to 31(62%) of the respondents being males, and 16(32%) had attained a primary level of education. Almost all participants, 46(92%), mentioned that they had ever experienced medicine shortages at healthcare facilities. In addition, 31(62%) of the respondents said that the lack of effective control and regulatory mechanisms for medicine use influences antibiotic misuse. On the other hand, about 42(84%) of the respondents mentioned that they had ever obtained antibiotics without a prescription and from those who obtained antibiotics without prescription, most 26(61.9%) mentioned that they did it because of unnecessary costs of physician visits and 33(66%) of the respondents stated that they did not have adequate health workers at the facility.

Conclusion:

The established health facility factors were: medicine shortages, inadequate control and regulatory mechanisms, and limited access to healthcare services.

Recommendations:

The policymakers should fund public health campaigns to raise awareness about the appropriate use of antibiotics and the risks of misuse among the community, especially targeting youth populations.
The health workers should collaborate with regulatory authorities to monitor antibiotic prescribing patterns and report instances of inappropriate antibiotic use for effective surveillance and intervention.

Keywords: *Health facility, youth aged (18-30), Wakiso district, antibiotics misuse.*
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Background.

Globally, antibiotic misuse is alarmingly prevalent, with a substantial portion of antibiotics being prescribed and consumed unnecessarily. (Sulis, 2021). A study carried out in Kenya in Kisumu on Antibiotic use in the selected households during the previous month, 70% reported getting the antibiotic through a prescription, whereas the rest did not consult a doctor for the antibiotic prescription. Further examination in the households that reported self-medication revealed that antibiotics were either used based on previous experience (76%) or on the advice of friends (26%) (Karimi et. al., 2022).

In some Asian countries, especially China and Vietnam, it is indicated that 80% of antibiotics are purchased from private pharmacies without a prescription, and this is attributed to the commercialization of the public health sectors. This has led to antibiotic misuse, and many people can access these drugs without a prescription. (Sakeena et. al., 2018). Further examination in the households that reported self-medication revealed that antibiotics were either used based on previous experience (76%) or on the advice of friends (26%) (Karimi et. al., 2022).

The overuse and misuse of antibiotics has led to the development of bacteria that are resistant to these drugs, making it difficult to treat these infections, particularly in rural areas, where access to healthcare is limited, and people often rely on traditional healers or over-the-counter antibiotics. This has led to the widespread use of antibiotics

without proper diagnosis or prescription, contributing to the development of antibiotic-resistant bacteria. Therefore, the aim of this study was to assess the health facility-related factors contributing to antibiotic misuse among youths aged 18-30 years in Bunamwaya Village, Makindye Ssabagabo, Wakiso District.

Methodology.

Study design and rationale.

A descriptive cross-sectional design was adopted, with a quantitative method of data collection. This helped to ease and quicken the data analysis process. A cross-sectional design enabled the collection of data at a single moment in time.

Study setting and rationale.

The study was carried out in Bunamwaya village, Makindye-Ssabagabo sub-County, Wakiso District. Nearby sub-counties include: Kyengera to the West, Makindye division to the East, Lubaga to the North, and a section of L. Victoria to the South. The distance of the study area is about 11.7km from Kampala via Wankulukuku and old Masaka roads. The health facility in the area is Bunamwaya Health Center II. The economic activities in Bunamwaya include small-scale retail businesses, boda-boda, and many other entities. The study area was chosen because of the increased microbial resistance to antibiotics in the area, as reported by health workers.

Study population.

The study was carried out among youths aged 18-30 years in Bunamwaya Village, Makindye Ssabagabo, in Wakiso District.

Sample size determination.

The sample size was determined using Roscoe's (1975) recommended criteria. Roscoe's guidelines state that a sample size ranging from more than 30 to less than 500 is suitable for most behavioral studies. The sample size of 50 participants was chosen since it enabled the researcher to collect data on time, and it suited the resources available for data collection.

Sampling technique.

Data was collected using a simple random sampling method. This was defined as a sampling procedure that gives each person in the study population to be selected. On each day of data collection, papers labeled "Yes" or "No" were put in a box and shaken. Any participant who picked the paper with a Label "Yes" was enrolled in the study. This procedure was considered because of its ease and accuracy of representation; selecting subjects completely at random from the larger population produced a sample that was a representative of the group being studied. This was repeated until the desired sample size of 50 respondents was reached.

Inclusion criteria.

The study included only youths aged 18-30 years in Bunamwaya Village, Makindye Ssabagabo, in Wakiso District who were present at the time of data collection and consented to the study.

Exclusion Criteria.

The study excluded those who were sick, hence unable to participate in the study.

Study variables.

Independent variables

The independent variable was health facility-related factors contributing to antibiotic misuse.

Dependent variables

The dependent variable was antibiotic misuse among youths aged 18-30 years.

Research instruments.

The researcher developed a self-administered questionnaire, which was used as the data collection method for study participants. This tool provided individuals with autonomy, maintained their privacy, and confidentiality. The questionnaire comprised a mix of both open-ended and closed-ended questions in the English language, which were translated by the researcher to respondents during data collection in the local language (Luganda).

Data collection procedure.

After obtaining an approval letter from the Research and Ethics Committee of Kampala University School of Nursing and Health Sciences, the researcher went on to seek permission from the local authority of Bunamwaya village. During this process, the researcher provided a comprehensive explanation of the study's purpose. The village leaders introduced the researcher to the study participants. Before commencing the study, the researcher ensured that the study objectives were clearly explained to the respondents, and their consent to participate in the study was obtained. This promoted efficiency and upheld the privacy of the participants during the data collection phase. Once permission and consent were secured, the researcher continued with data collection.

Data analysis.

Analysis of data was done manually using pen and paper. During this phase, data were reviewed, organized, coded, tallied, and tabulated. Subsequently, it was transferred to a computer using Microsoft Office applications, specifically

Microsoft Excel. The data was presented in the form of tables, graphs, and pie charts, allowing for a thorough validation of the information's accuracy. Following this, the data was subjected to interpretation.

Data management.

Data management procedures involved a thorough examination of all completed questionnaires. Coding and editing were conducted on-site before departing the study area to identify and rectify any errors or blank spaces, thus reducing the likelihood of errors during data entry. To ensure the security and confidentiality of the collected data, the questionnaires were securely stored and accessible only to the researcher.

Ethical considerations.

After the approval of the research proposal, the Research and Ethics Committee of Kampala University School of Nursing and Health Sciences provided an introductory letter to the researcher. This letter was then taken to the authority of Bunamwaya village, who then introduced the researcher to the respondents. The study officially began once the research objectives had been clearly explained to the respondents, ensuring their comprehension and voluntary consent to participate in the research.

Results.

Demographic data of the respondents.

Table 1: Shows demographic data of the respondents. (n=50*).*

Variable	Category	Percentage (%)	Frequency (f)
Age (years)	18-22	17	34
	23-27	23	46
	28-30	10	20
	Total	**50**	**100**
Gender	Male	31	62
	Female	19	38
	Total	**50**	**100**
Level of education	Non-formal	10	20
	Primary	16	32
	Secondary	15	30
	Tertiary	09	18
	Total	**50**	**100**
Employment status	Employed	15	30
	Not employed	24	48
	Student	11	22
	Total	**50**	**100**

Source: Primary data, 2024.

Table 1 shows that 23(46%) of the respondents were between 23 and 27 years of age, while at least 10(20%) were between 28 and 30 years of age. Regarding gender, the majority, 31(62%) of the respondents were males, whereas the least were 19(38%) females. Concerning the level of education, most 16(32%) of the respondents had a primary level of education, whereas the least 9(18%) had a tertiary level of education. About employment status, most 24(48%) of the respondents were not employed, while the least 11(22%) were students.

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Table 2: Shows the Health facility factors contributing to antibiotic misuse among youths aged 18-30 years (n=50).

Variable	Category	Frequency (f)	Percentage (%)
Ever experienced medicine shortages at healthcare facilities	Yes	46	92.0
	No	04	8.0
	Total	**50**	**100**
Lack of effective control and regulatory mechanisms for medicine use influences antibiotic misuse	Yes	31	62.0
	No	15	30.0
	Not sure	04	8.0
	Total	**50**	**100**
Ever obtained antibiotics without a prescription	Yes	42	84.0
	No	08	16.0
	Total	**50**	**100**
Reasons for obtaining antibiotics without a prescription	Lack of awareness about risks.	06	14.3
	Long waiting times at healthcare facilities.	10	23.8
	Unnecessary costs of physician visits.	26	61.9
	Total	**50**	**100**
An adequate number of health workers at the facility	Yes	17	34.0
	No	33	66.0
	Total	**50**	**100**

Source: Primary data, 2024.

Table 3 shows that the majority, 46(92%), of the respondents had ever experienced medicine shortages at healthcare facilities, while the minority, 4(8%), mentioned that they had not. In addition, 31(62%) of the respondents said that the lack of effective control and regulatory mechanisms for medicine use influences antibiotic misuse, while at least 4(8%) were not sure. On the other hand, the majority, 42(84%) of the respondents mentioned that they had ever obtained antibiotics without a prescription, while a minority, 8(16%) mentioned that they had not. From those who obtained antibiotics without a prescription, most 26(61.9%) mentioned that they did it because of the unnecessary costs of physician visits, while the least 6(14.35) mentioned that it was because of a lack of awareness about risks associated with the behavior. Furthermore, most 33(66%) of the respondents stated that they did not have adequate health workers at the facility, while the least 17(34%) stated that they had adequate health workers.

Discussion.

Health Facility factors contributing to antibiotic misuse among youths aged 18-30 years in Bunamwaya Village, Makindye Ssabbagabo in Wakiso District.

According to the study results, the majority, 46(92%), mentioned that they had ever experienced medicine shortages at healthcare facilities. This indicated systemic challenges in accessing essential medications, including antibiotics. This could lead individuals to seek antibiotics from alternative sources, such as informal vendors or pharmacies without prescriptions, contributing to inappropriate antibiotic use. This finding is in agreement with Bekele et. al., (2016)In Ghana, in Ghana who showed that around 50% of patients fail to take their medicines correctly, and factors such as medicine shortages were associated with misuse of antibiotics since patients would seek drugs in pharmacies without a prescription.

In addition, 31(62%) of the respondents said that the lack of effective control and regulatory mechanisms for medicine use influences antibiotic misuse. This indicated deficiencies in the healthcare system's oversight of antibiotic prescribing and dispensing practices, facilitating antibiotic misuse within the community. This finding is in line with Malik and Bhattacharyya, (2019) In China and Vietnam, who showed that the lack of effective control and regulatory mechanisms for medicine use was associated with antibiotic misuse.

On the other hand, the majority, 42(84%) of the respondents mentioned that they had ever obtained antibiotics without a prescription, and from those who obtained antibiotics

without a prescription, most, 26(61.9%) mentioned that they did it because of the unnecessary costs of physician visits. This indicated economic barriers to accessing healthcare services. This revealed the interplay between economic factors and healthcare-seeking behavior, where financial constraints drive individuals to resort to self-medication or seek antibiotics from informal sources. This finding is in line with Bekele et. al. (2016), in that 50% of patients fail to take their medicines correctly and would seek drugs in pharmacies without a prescription. Also, the above finding is in line with Gebretekle and Serbessa (2016). In Ethiopia, who reported that unnecessary and high costs of physician visits were frequently mentioned reasons by their customers to demand antibiotics without a prescription.

Most 33(66%) of the respondents stated that they did not have adequate health workers at the facility. This indicated challenges in delivering quality healthcare services, including appropriate antibiotic prescribing and patient education. This finding is in line with Alhomoud et. al., (2018)In Saudi Arabia who showed that the frequency of participants' self-medication with antibiotics in the past 2 years was high, and this was due to inadequate health workers.

Limitations of the study.

The study was constrained by the allotted time frame for completing the research, which was relatively short, given the researcher's other commitments, such as family and job commitments.

Reluctance among some respondents to provide information stems from personal reservations or expectations of financial incentives for their participation in the study.

Conclusion.

The findings revealed the pervasive influence of health facility factors contributing to inappropriate antibiotic use within the community, these were: medicine shortages, inadequate control and regulatory mechanisms, and limited access to healthcare services.

Recommendations,

The policymakers should enhance regulatory mechanisms to monitor antibiotic prescribing and dispensing practices, ensuring adherence to guidelines and preventing over-the-counter sales.

The policy should allocate resources to address medicine shortages, improve healthcare facilities, and enhance staffing levels to provide quality healthcare services.

The health workers should ensure adherence to antibiotic prescribing guidelines, avoiding unnecessary antibiotic prescriptions and promoting judicious use based on evidence-based practices.

The health workers should collaborate with regulatory authorities to monitor antibiotic prescribing patterns and report instances of inappropriate antibiotic use for effective surveillance and intervention.

Youth should seek professional healthcare services rather than resorting to self-medication, emphasizing the importance of consulting healthcare providers for proper diagnosis and treatment.

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List of abbreviations.

et al.:	And others
MOH:	Ministry of Health
WHO:	World Health Organization.

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Conflict of interest.

The authors declare no competing interests.

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