

Magnitude and factors associated with anti-malarial self-medication practice among residents of Kasulu Town Council, Kigoma-Tanzania

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Abstract:

Background: Anti-malarial self-medication practice in Africa is very common. It is considered as an alternative way for people who cannot afford the cost of health care services. This study was conducted to assess the magnitude and factors associated with anti-malarial self-medication practice among residents of Kasulu Town Council.

Materials and methods: The study was a descriptive cross sectional study. Two hundred and eighty consenting respondents were selected by systematic random sampling and interviewed with the aid of a semi structured questionnaire to assess anti-malarial self-medication practice. A p value of less than 0.05 was considered statistically significant, at 95% confidence interval.

Results: Prevalence of anti-malarial self-medication was (69.6%). Majority of the respondents (83.1%) reported that, they did not get better after self-medication. About 36% of the respondents mentioned time taken in health facilities as the main factor for self-medication.

Conclusion: This study revealed that, self-medication practice is very common among community members in Kasulu district. The main reasons identified for self-medication was long time taken to get treatment in health facilities.

Keywords: Anti-malarial, Self-medication, Practice, Kasulu, Tanzania.

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Introduction

Self-medication can be defined as “the taking of drugs, herbs or home remedies on one's own initiative, or on the advice of another person, without consulting a prescriber¹. Self-medication is practiced world-wide, in some cases it is an alternative way for people who cannot afford the cost of health care services². Medicines which are commonly used for self-medication include analgesics, anti-malarials, antibiotics and cough syrups³. Perception

of illness is one of the factors that has increased the prevalence of self-medication, which accounts for about 2.9-3.7 % causes of death in hospitals as a result of drug-drug interactions⁴. The variation in the prevalence of self-medication among developing and developed nations can be caused by disparities in health care systems such as reimbursement policies, access to health care, and drug dispensing policies⁵.

Malaria is still of public health concern in sub-Saharan Africa where over 500 million episodes of malaria occur yearly, predominantly in children under five years of age, resulting in the death of approximately a million of these children⁶. Antimicrobial resistance and the development of parasite resistance to anti-malarial drugs that has been reported in several countries are likely to be associated with irrational use of antibiotics and anti-malarial drugs^{7,8}. Anti-malarial self-medication practice in sub-Saharan Africa, Tanzania in particular is very common. People are treating themselves with any medicine or any

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substance they may think of without considering its toxic or harmful effects which may arise⁹. Analysis of reasons for self-medication revealed that, 25% felt that the illness was too mild and did not require the services of a doctor¹⁰. It was also observed that, 19% of the respondents had previous experience in treating a similar condition and believed that, even if they went to the doctor they would be prescribed similar medicines¹⁰.

The abuse of anti-malarial self-medication has resulted in people delaying to seek hospital intervention, thereby complicating their illnesses, self-medication may treat the symptoms but not the underlying disease since there are some diseases like typhoid which have similar symptoms to malaria¹¹. Socio-cultural, poverty, lack of knowledge on the impact of self-medication, previous experience with similar symptoms, high charges by hospitals, lack of time to go to the health facility, lack of accessibility to health care facility, distance to the health facility, urgency of the problem, bureaucracy, overcrowding in hospitals, stock outs of drugs in most public health facilities and minor illnesses are the factors associated with self-medication^{2,12}. Self-medication with anti-malarial drugs has been widely practiced in different countries including Tanzania^{13,14}. The individual's chronological age, level of formal education and occupation are determinants of the knowledge on malaria while gender, level of formal education and individual's occupation are factors that influence self-medication¹⁵. Currently, there are few studies on self-medication practice which have been conducted in Tanzania. Therefore this study aims to assess factors and magnitude of anti-malarial self-medication at Kasulu Town Council Kigoma-Tanzania.

Methodology

Study design

A descriptive cross sectional study was designed to capture quantitative data.

Study setting

The study was conducted in randomly selected household of Kasulu District. This district is one of the six districts of the Kigoma Region of Tanzania. It is bordered to the north by Burundi, to the east by Kibondo District, to the south by Uvinza District, to the west by Kigoma District and to the northwest by Buhigwe District. According to the 2012 Tanzania National Census¹⁶, the population of the Kasulu Town Council was 225,660. Kasulu Town

Council is predominantly occupied by the "Waha" ethnic group. It comprises 108 streets and 15 wards. The study was conducted between April and August 2016.

Sampling and data collection

The sample size was 280 households which were calculated using Kish Leslie formula (Proportion of self-medication being 76%). Systematic random sampling was used to select household and only one head of the family available at the time of the study was interviewed about self-medication history of any family member aged above 6 years of age who suffered from malaria six months prior to the date of the interview.

We adopted the method used by Awad et al², semi-structured questionnaire consisted of both open-ended and closed ended questions was used to assess anti-malarial self-medication practice among the community members. The questionnaire was used to collect information about the magnitude of self-medication practice and factors associated with anti-malarial self-medication practice. The questionnaire prepared in English and then translated into Swahili, which is the most widely spoken language of the community.

Data analysis

All the collected data were counter-checked for their clarity and validity. The coded data were analyzed using Statistical Package for Social Sciences (Version 20.0) computer analysis software. Prevalence and factors associated with self-medication in the community were reported as percentage. A p value of less than 0.05 was considered as statistically significant, at 95% confidence interval.

Ethical consideration

Ethical clearance was sought from the Ethical Review Board of the Catholic University of Health and Allied Sciences (CUHAS) and from District Executive Director of Kasulu. Participants were asked for consent before the interview.

Results

Demographic characteristics of respondents

The respondents mean age was 30.6 and ranged between 18-64 years. Out of the 280 subjects interviewed, males were 10% (28) while females were 90% (252). Those who did not attend any formal education were 4.3% (12) and tertiary level were 3.9% (11).

Table 1: Demographic characteristics of respondents

Variable		Frequency (n)	Percentage (%)
Mean age= 30.6 ranged between 18 and 64 years		280	
Sex	Male	28	10
	Female	252	90
Educational background	No education	12	4.3
	Primary	205	73.2
	Secondary	52	18.6
	Tertiary	11	3.9
Occupation	Employed	140	50
	Unemployed	140	50

Magnitude of anti-malarial self-medication practice 69.6%; among the respondents who practiced self-medication, 83.1% did not improve.
 The prevalence of anti-malaria self-medication was

Table 2: Magnitude of anti-malaria self-medication

Variable		Frequency (n)	Percentage (%)
Ever given anti-malaria medicine without prescription	Yes	195	69.6
	No	85	30.4
Health outcome after using un-prescribed medicine	Improve	32	16
	Did not improve	162	83
	Died	1	1
Frequency of using anti-malarial without prescription	Frequently	118	60.5
	Occasionally	58	29.7
	Rarely	19	9.8

Factors influencing anti-malarial self-medication practice Majority of respondents (36.4%) mentioned time taken at health facility as the main factor for self-medication.

Table 3: Factors influencing anti-malaria self-medication practice

Factor	Frequency (n)	Percentage (%)
Emergency illness	44	22.5
Distance to health facility	20	10.3
Proximity of pharmacy shop	40	20.5
Takes time at health facility	71	36.4
No medicine in health facility	20	10.3

Magnitude of anti-malarial self-medication based on social-demographics

Majority of females (70.2%), Uneducated (91.7%) and unemployed (73.6%) practiced self-medication.

Table 4: Demographic factors associated with self-medication

Factor		Used un-prescribed medicine		p-value
		Yes	No	
Sex	Male	18(64.3%)	10	0.516
	Female	177(70.2%)	75	
Educational background	Uneducated	11(91.7%)	1	0.013
	Primary	148(72.2%)	57	
	Secondary	32(61.5%)	20	
	Tertiary	4(36.4%)	7	
Occupation	Employed	103(73.6%)	37	0.153
	Unemployed	92(65.7%)	48	

Discussion

This study was conducted to assess the magnitude and factors associated with anti-malarial self-medication practice among residents of Kasulu town Council. The prevalence of anti-malarial self-medication in Kasulu is high, more than two third of the population. This finding is similar to that of a study done in Dar-es-Salaam, Tanzania where the prevalence for anti-malaria self-medication was 71.7% (13). Another study conducted in Kenya found that about three quarter of the participants reported self-medication for perceived malaria illness¹⁷. In this study, it was found that more than eighty percent of re-

spondents who used anti-malarials without prescription did not get any improvement. This implies that, possibly they were suffering from other diseases with similar symptoms as malaria. Treatment seeking behavior for malaria in sub-Saharan Africa is complex, usually depending on the local health system, society and culture¹⁸.

From this study it was revealed that the level of education is significantly related to self-medication where more than 90% (Table 4) of uneducated respondents were found to use anti-malarial without prescriptions. This finding is in line with results reported by Awad et al in 2005 who found that, less educated respondents were more likely to use anti-malaria without prescriptions².

There are several factors that contribute to self-medication. The current study found that, the main factor for self-medication was the time taken at health facilities (Table 3). Proximity to the drug shops and out of stock of anti-malaria in health facilities were other factors mentioned to contribute the use of medicines without prescription. Studies found that, factors influencing self-medication include the perception that drug shops are comparatively cheaper than other health care facilities, which charge consultation and laboratory fees¹². Also, patients who had previous experience with similar ailments have confidence to use medicines without prescriptions².

Conclusion

This study revealed that, self-medication practice is very common among community members in Kasulu district. The main reasons identified for self-medication was long time taken to get treatment in health facilities. Level of education was found to be associated with self-medication, thus there is a need to create awareness to the rural community especially to the less educated group on the potential risks of self-medication.

Conflict of interest

Authors declare no conflict interests.

Authors' contributions

SM,DK and CR designed the study; CR collected the data; OM and CR analyzed the data; SM and DK drafted the first manuscript; SM and OM critically reviewed the manuscript.

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