Original Research Article

A Study on Self-Medication Among Adult Living in Vingunguti Ilala in Dar Es Salaam

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ABSTRACT

Globally, self-medication (SM) is a significant public health issue. This study aims to evaluate self-medication practices among individuals in Vingunguti, Dar es Salaam, assess their knowledge, and uncover predictive variables of potentially inappropriate drug use. The predominant symptoms justifying self-medication pertained to Headaches, fevers, and stomach discomfort prompted 57% of participants to select self-medication; sore throats, coughs, and flu symptoms affected 25% of participants, while 15% chose self-medication owing to vomiting and diarrhoea, and 3% self-medicated for other symptoms. The results reveal that 78% of participants were unaware to the medicines they were consuming, whereas 22% were aware of the drugs. Our study indicates a significant prevalence of self-medication, approximately 78%, among people residing in Vigunguti Ilala, Dar es Salaam.

Keywords: self-medication, non-prescription medicines, drugs

INTRODUCTION

The World Health Organisation characterises self-medication as the rare or continuous utilisation of medications recommended by a healthcare expert for chronic or recurrent disorders or symptoms, in addition to the usage of drugs to treat self-diagnosed conditions or symptoms [1]. Self-medication can also be impacted by using medicines that are already in the home, such as leftovers from previous prescriptions, or sharing medications with others [2]. Self-medication includes any actions that influence a physician's prescription, such as acquiring or using medicines from home or other sources, discontinuing or prolonging a therapy, or altering the prescribed dosages [3]. The concept of responsible self-medication is based on the use of over-the-counter medicines to address illnesses and afflictions, as they are safe and effective when taken according to instructions [4].

Significant factors that facilitate self-medication behaviours worldwide encompass prior drug prescriptions, the presence of moderate symptoms, insurance complications, insufficient awareness, readily available drugs, and a conducive cultural and socio-economic environment [5]. Several studies have shown that self-medication practices are implemented to mitigate a variety of perceived health problems, such as migraines, common colds, fevers, coughs, and respiratory tract infections [6].

Self-medication (SM) with either over-the-counter pharmaceuticals or prescribed

medications, including antibiotics, is a prevalent practice in many developing nations and to some extent in several developing countries. This results in pathogens developing a higher level of antibiotic resistance, which can lead to severe health consequences, including protracted suffering and adverse reactions. Antimicrobial resistance is a pressing global concern, especially in underdeveloped nations where antibiotics are accessible without a prescription [7]. Self-medication is often considered less effective than obtaining expert medical counsel, with an alarming 98% of cases resulting in negative side effects and 96% fostering drug resistance [8].

This study presents a comprehensive analysis of the pertinent data and findings while examining a number of facets of the topic. The study is structured to provide clarity and insight into the topic, allowing them to understand its inherent complexities.

MATERIALS & METHODS

Design and Study Population

The study was conducted at Vingunguti, located in Dar es Salaam city, United Republic of Tanzania. Data was collected from the residents (participants) from the age of 15, occupation, gender, and other details were collected. Participants were interviewed face to face. The participants consisted of males and females aged 15 years or older visiting the pharmacies to get their medicines. A voluntary informed consent was required for enrolment in the study.

Sample Size Calculation

Sample size was calculated from the formula.

Sample size (N) = $\dfrac{Z^2 \, P \, (100-P)}{E^2}$

Where N = minimum sample size required, Z = Standard normal deviation set at 1.96 (corresponding to confidence level of 95.0 %), P = from the previous research, P is 14.8 %, E = maximum errors allowed, assumed to be 5.0 %. Therefore,

$$N = \dfrac{1.96^2 \times 14.8 \,(100 - 14.8)}{5^2} = 100$$

-Sample size was 100

Data Collection

The study questionnaire comprised three sections, each with 20 questions. The research included a pretest conducted on a sample of 100 people for validation purposes. The aim was to ensure that the questionnaire was entirely accessible to the public. The first section of the questionnaire comprised enquiries regarding sociodemographic variables, including age, gender, occupation, level of education, and marital status. The second section focused on the participants' medical histories, chronic illnesses, and prescribed medicines. Participants were subsequently interrogated about how they were involved in self-medication activities. The third part pertains solely to those engaged in self-medication, with the predictors of self-medication practices derived from sections B and C.

Data Analysis

Data processing and analysis were conducted using SPSS Version 25. Respondents were categorised into two groups: those who practice self-medication and those who do not (Yes/No). Frequencies and percentages of knowledge and practice were used to present descriptive statistics. The Chi-square test was conducted to assess the differences in sociodemographic characteristics between the two groups.

Ethical considerations

The college research and ethical committee (CREC) at the St Joseph University College of Health and Allied Sciences (SJUCHAS) approved the research protocol. Written consent to participate in the study was obtained from all the participants. The aim and the scope of the study were explained prior to soliciting the consent of participants.

RESULT

A survey was conducted involving 100 adults, comprising 62.0 % females and 38.0 % males. Approximately 49% of participants were aged between 30 and 40, followed by 38.0 % in the 18-29 age range, while the minor group constituted just 3.0 % (Table 1).

Table 1: Age distribution of the respondents

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18-30	38	38.0	38.0	38.0
30-40	49	49.0	49.0	87.0
41-50	10	10.0	10.0	97.0
51-60	3	3.0	3.0	100.0
Total	100	100.0	100.0	

Table 2: Education level of participants

Educational Level	Frequency	Percent	Valid Percent	Cumulative Percent
Not attended	7	7.0	7.0	7.0
Primary	34	34.0	34.0	41.0
Secondary	35	35.0	35.0	76.0
College/university	24	24.0	24.0	100.0
Total	100	100.0	100.0	

The majority of the study participants attained secondary school education (Table 2). with this study, around 72.0% of individuals are experienced with and engage in self-medication. Table 3 illustrates the correlation between independent variables and the dependent variable (SM practice). Two variables have a significant correlation with the dependent variable: age and education level of the individuals (p-values 0.052 and 0.001, respectively).

Table 4 clearly shows that a majority of participants (58.0 %) sourced their medications from pharmacies, while 29.0 % relied on friends and family, and 13.0 % procured them from local shops. The data in Table 5 outlines the symptoms that prompted participants to self-medicate. Headaches, fevers, and abdominal pain led 57.0 % of participants to choose self-medication; sore throats, coughs, and flu symptoms influenced 25.0 % of participants, while 15.0 % opted for self-medication due to vomiting and diarrhoea, and 3.0 % self-medicated for other symptoms. The findings indicate that 78.0 % of participants were unaware of the medications they were using, with only a small group of 22.0 % being informed about the medicines. Additionally, the study highlights that antipyretic analgesic drugs are predominantly used without prescriptions, followed by antimalarials and antibiotics (Table 6).

Table 3: Characteristics of the study population

Characteristics	All Participants (N -100)		Practicing self-Medication		Not Practicing Self-Medication		p-Value
	N	Percentage (%)	N	Percentage (%)	N	Percentage (%)	
Sex							
Male	38	38.0	30	78.9	8	21.1	0.2257
Female	62	62.0	42	67.7	20	32.3	
Age							
18-30	38	38.0	22	57.9	16	42.1	0.0052
30-40	49	49.0	43	87.8	6	12.2	
41-50	10	10.0	6	60.0	4	40.0	
51-60	3	3.0	1	33.3	2	66.7	
Education							
Not attended	7	7.0	6	85.7	1	14.3	0.001
Primary	34	34.0	30	88.2	4	11.8	
Secondary	35	35.0	26	74.3	9	25.7	
College/University	24	24.0	10	41.7	14	58.3	

Table 4: Source of Medicine used to self-medicate by participant

Sources	Percentage
Pharmacy	58.3%
Friends and Family Members	29.1 %
Shops	12.5

Table 5:Common symptoms made for Selft medications

Clinical Symptoms	Percentage of self-medication
Head Ache/Fever/Abdominal Pain	56.9 %
Sore Throat/Cough/Flu	25.0 %
Vomiting and diarrhoea	15.2 %
Other Symptoms	2.7 %

Table 6: Types of Drugs/Medicine Randomly Used Without Prescription

Types of Drugs/Medicine Used	Percentage of usage without prescription
Antipyretic and Analgesic drugs	43.1 %
Antimalarial and Antibiotics	41.6 %
Cough Suppressants	12.5 %
Anti emetics & Nutritional Supplements	2.7 %

The participants indicated that the primary reason for self-medication was the easy access to medicines and advice from friends, accounting for 50.0 %. Additionally, 39.0 % cited financial constraints and time limitations as contributing factors, while 11.0 % mentioned the distance and lack of nearby healthcare centres as reasons for their self-medication practices.

DISCUSSION

The current study reveals that among the participants, the self-medication rate stands at 72.0 %, in accordance with observations noted in sub-Saharan Africa. The occurrence of self-medication in African countries like Kenya, Nigeria, and Togo was observed to increase during the COVID-19 pandemic, attaining rates of 41.0 %, 36.2 %, and 34.2 %, respectively. Various studies have reported that the prevalence of self-medication in Tanzania stands at 58.0% in the SIHA district and 57.2% among university students concerning antibiotic use [9].

Notably, this study has shown that there are substantial knowledge gaps on possible side effects, pharmacological interactions, dose regimes, contraindications, and adequate administration. The results emphasise the importance of implementing more comprehensive educational initiatives and awareness programs to enhance the understanding of individuals regarding the appropriate use of medication.

The findings indicated that a significant portion of participants, approximately 60.0 %, did not have health insurance. This observation aligns with the outcomes of a previous investigation conducted in the United States [10]. Understanding possible risks linked to self-medication is a crucial component of responsible self-care. Nonetheless, investigations reveal that people frequently downplay the dangers and adverse effects associated with over-the-counter medications. A study conducted in Jordan revealed that participants possessed limited awareness regarding possible adverse effects and interactions with other medications [11]. Comparable results have been documented in various nations, indicating the necessity of tackling this gap in understanding. A variety of elements influence the awareness of self-medication practices. Factors related to social demographics, including age, educational attainment, and income, have been shown to affect knowledge acquisition. Research indicates that people with elevated educational attainment and socioeconomic standing generally possess greater awareness regarding self-medication [12].

The availability of healthcare resources and information sources is also significant. Individuals with access to healthcare professionals or trustworthy drug information sources tend to possess greater levels of knowledge. The capacity to acquire, comprehend, and apply health information for making informed choices is a vital factor influencing awareness of self-medication practices. Insufficient health literacy correlates with diminished knowledge and a heightened likelihood of improper self-medication practices. People with limited health literacy might find it challenging to comprehend medication labels, interpret medical information, or evaluate the reliability of sources [12]. Interventions in education have demonstrated a significant impact on enhancing understanding of self-medication practices. Research has shown that focused educational initiatives, such as the distribution of written resources, engaging workshops, and consultations with chemists, can improve individuals' awareness and comprehension of suitable self-medication practices.

CONCLUSION
Socio-demographic factors, health literacy, and access to healthcare resources influence knowledge levels. Addressing these knowledge gaps through educational interventions and promoting health literacy can contribute to safer and more effective self-medication practices. Future research should focus on evaluating the effectiveness of educational interventions tailored to specific populations and contexts to further enhance knowledge and promote responsible self-medication practices.

Declaration by Authors
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