Prevalence and Factors Influencing Self-Medication among Adults (18-49) of Serere Town Serere District

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ABSTRACT

The practice of self-medication is the use of medications without a prescription from a health care professional. Globally, rates of self-medication practice range from 32.5% to 81.5%. The study aimed to: Determine the prevalence and factors contributing to self-medication in adults. A cross-sectional study conducted in Serere town focused on the prevalence and factors influencing self-medication in adults. A questionnaire consisting of open-ended and closedended questions was administered to respondents to collect data to determine the prevalence and factors influencing self-medication in adults. The data obtained were coded, edited, entered, summarized, and analyzed using Microsoft Excel 2013. Of the 100 participants surveyed with a response rate of 100%, the overall prevalence was 89% in number of people participating in the study. The most common non-prescription drugs used by respondents were Panadol (19.10%), followed by 16.85%, 14.61%, 12.36%, 11.24%, 10.11 %, 8, 99% and 6.74% for drugs such as Coartem, Vitamin C, Zinc, Azithromycin., Mebendazole, Covidex and Lasix respectively (Table 2). Factors significantly associated with self-medication are male gender, illiteracy, marital status, chronic disease, low wealth index, unemployment, accessibility to pharmacies, and very long distance between home and hospital. Age is an independent factor associated with self-medication. There was a high rate of self-medication among those surveyed. Male gender, illiteracy, marital status, chronic illness, low socioeconomic status, unemployment, accessibility to pharmacies, and very long distance between home and the nearest medical facility are factors significantly associated with self-medication practices. Age is an independent predictor of self-medication. More studies using larger sample sizes on the prevalence and factors influencing self-medication use among adults in Serere town using larger sample sizes should be considered.

Keywords: Self-medication practitioners, healthcare professionals, Adults, Non-prescription drugs, Healthcare facilities.

INTRODUCTION

Self-medication practice (SMP) is the use of medication without the prescription of health care professionals. The major problems associated with self-medication practice have been drug resistance, drug side effects, wastage of resources, and serious health hazards including death [1]. Globally, the prevalence of self-medication practice varied from 32.5% to 81.5%. The prevalence of self-medication practice among college students is high and previous studies have reported the prevalence of SMP as 94% in Hong Kong, 76% in Pakistan, 87% in India. 86.4% in Brazil. 98% in Palestine. 55% in Egypt, and 43.2% in Ethiopia. Based on such findings, participant's educational level, low income, job, absence of health insurance. and SMP experience. sex. residence, age, and men, were found to be the factors associated with self-medication practice [2]. SM has accounted for 67% of the global burden of disease [3]. In Sub-Saharan Africa, of the 1381 articles identified, 35 papers from 13 countries were eligible for inclusion. Most were quantitative crosssectional studies, two were mixed-methods studies, and one used qualitative method only. About half (n = 17) of the studies recorded a prevalence of OTC drug use above 70%, including non-analgesics. Headache and fever were the most common ailments for which OTC drugs were taken. Primary sources of OTC drugs were pharmacy and drug shops, and family,

INOSR APPLIED SCIENCES 10(3):13-24, 2023 friends and relatives as well as leftover drugs from previous treatment. The main reasons for OTC drug use were challenges in health service access, perception of illness as minor, and knowledge gained from treating a previous illness. Information self-medication came regarding from family, friends and neighbors, pharmacies and reading leaflets either distributed in the community or at institutions of learning. OTC drug use tended to be more commonly reported among females, those with an education lower than a secondary level, and participants aged ≥ 50 years [4]. In East Africa, a study done in Northern Tanzania showed the prevalence of self-medication among adults is 47.9%. Self-treatment with antimicrobials was associated with postprimary education, younger age (43.1 vs 48.7 years) and higher socioeconomic status score [5]. In Uganda, the prevalence of selfmedication is 22.2% in a cross-sectional study conducted among 279 patients at Kiruddu National Referral Hospital. Kampala. Male participants and Muslims more likely self-medicate. were to Employees and patients with tertiary education were less likely to practice selfmedication [6]. In Serere District, there is no published scientific research on the prevalence and factors influencing self-

Study design

A descriptive cross-sectional study design was used to collect data from the 100 respondents. The researcher used this study design because it captures a specific point in time, contains multiple variables at the time of the data snapshot, is not costly to perform and does not require a lot of time, the data can be used for various types of research. to prove and/or disprove assumptions, many findings and outcomes can be analvzed to create new theories/studies or in-depth research.

Area of Study

The study was conducted at Serere Town, Serere District. Serere District is one of the districts in Eastern Uganda and it is located approximately 400 KM east from Kampala capital city of Uganda.

Study population

The study population comprised of all the adults who are residence of Serere Town and

medication among adults. It is based on this background that the researcher has chosen to conduct a study on the prevalence and factors influencing self-medication among adults in Serere Town, Serere District. Self-medication is a global phenomenon and a potential contributor to human pathogen resistance to antibiotics. The adverse consequences of such practices should always be emphasized to the community and steps to curb them. Rampant irrational use of antimicrobials without medical guidance may result in a greater probability of inappropriate, incorrect, or undue missed diagnosis, therapy. delavs in appropriate treatment, pathogen resistance and increased morbidity. Due to lack of information, it can cause serious effects such as antibiotic resistance, skin problem, hypersensitivity and allergy [7]. The major problems associated with self-medication practices are drug resistance, drug side effects, wastage of resources, and serious hazards including health death [1]. However, this study is determine the prevalence and factors influencing selfmedication among adults at Serere Town, Serere District, in Eastern Uganda, so as to reduce the practice of self-medication among people of Serere.

METHODOLOGY

who consented to take part in the study.

Sample size determination

The sample size was determined by modified Kish and Leslie formula (Kish and Leslie (1965)

Sample size

$$n = \frac{Z^2 p q}{d^2}$$

Where;

n=sample size

Z=level of confidence at 95% confidence (1.96)

P= existing prevalence (since the information on the prevalence of self-medication is insufficient for the Ugandan population, an estimated prevalence of 50% was assumed);

p= 0.5.

d=maximum error =10 %(0.1)

q=proportion of adults who take prescribed medications (1-p)

$$n = \frac{1.96^2 x \ 0.5 x (1 - 0.5)}{0.1^2}$$

n= 96

For loss samples and non-responsiveness, the sample size was adjusted by 4%. Therefore, the final sample size of 100 participants was used.

Selection criteria

The selection criteria comprised the inclusion and exclusion criteria

Inclusion criteria

- All the adults who are residents of Serere Town and who consented to take part in the study.
- Adults who were residing at Serere Town within January 2022.

Exclusion criteria

- Individuals aged below 18 years were excluded from the study.
- Adults who did not consent to take part in the study.

Sampling technique

The study employed a simple random sampling technique. This sampling technique reduces bias and distributes participants with a given characteristic.

Sampling procedure

Sampling was based on the selection, where numbers was written on a small sheet of paper from 001-200 and placed in a box; whoever picked an even number was included until a total sample size of 100 is achieved. The numbers for each particular day was picked without replacement. The researcher sampled 10 respondents daily for 10 days to obtain a final sample size of 100.

Data collection method

Questionnaires which employed both open and closed-ended questions were used to collect descriptive qualitative data which was used to determine the prevalence, demographic factors,

socioeconomic factors and health-related conditions influencing self-medication among adults at Serere Town.

Data collection tools.

Questionnaires, Pens, and notebooks were used to conduct interviews. These tools were selected because it is easy to use, and it was administered by the researcher himself to each respondent.

Data collection procedure

The researcher obtained a letter of introduction from the research department of Kampala International University and submitted it to the district health officer who granted permission to allow the researcher to conduct the study. The researcher proceeded to Serere Town, gathered and introduced herself to the potential respondents. The researcher obtained consent from the respondents and thereafter administer а questionnaire comprising and closed-ended open questions to collect the data for establishing the prevalence, demographic factors, and socioeconomic factors associated with selfmedication among adults in Serere Town, Serere District.

Dependent variables Prevalence of self-medication. Independent variables

- Demographic factors.
- Socio-economic factors.

RESULTS
Demographic characteristics of the respondents

Table 1: Shows the demographic characteristics of the respondents (N=100)						
Variables	Frequency (f)	Percentage (%)				
Age in years						
18-25	27	27				
26-33	23	23				
34-41	30	30				
42-49	20	20				
Total	100	100				
Gender						
Female	53	53				
Male	47	47				
Total	100	100				
Education levels						
None	31	31				
Primary	25	25				
Secondary	24	24				
Tertiary and above	20	20				
Total	100	100				
Marital status						
Single	35	35				
Cohabiting	15	15				
Married	50	50				
Total	100	100				

Table 1. Shows the demographic characteristics of the respondents (N=100)

The recent study recruited 100 participants with a 100% response rate. The minimum and maximum age of the respondents were 18 and 49 years respectively. The mean age was 33.13 years with a standard deviation of 9.07 years. The median age of the respondents was 34 years with a modal age of 41 years. Majority (30/100) of the study participants were aged 34-41 years, followed by 27, 23 and 20 respondents aged 18-25 years, 26-33 years and 42-49 years respectively (table 1). Most (53/100) participants were females as compared to 47/100 males (table 1). Majority (31/100) of the participants were illiterate, followed by 25, 24 and 20 respondents who stopped at primary level, secondary level and at tertiary institutions and above respectively (table 1). Of the 100 participants interviewed, 50% (50/100) were married, followed by 35 and 15 respondents who were single and married respectively (table 1).





http://www.inosr.net/inosr-applied-sciences/ Arikod INOSR APPLIED SCIENCES 10(3):13-24, 2023 Figure 1: Shows knowledge on self- medications (n=100)

Of the 100 participants interviewed with a 100% response rate, 94% knew what self-

medications means and 6% didn`t know what self-medication means (figure 1).



Figure 2: Shows the prevalence of self -medications among respondents (n=100)

The prevalence of self-medication was 89% (89/100) among the respondents where they accepted to have practiced self-medications

while 11% (11/100) didn`t practice self-medications (figure 2).

Table 2: Shows the prevalence of self-medications among the study participants (n=100)					
Variables	Frequency (f)	Percentage (%)			
How do you always obtain your medications when you					
are sick?					
Through prescription by a health care worker	11	11			
Buy over the counter	75	75			
Use remnants of the drugs at home	14	14			
Total	100	100			
List the commonly un prescribed drugs you always					
take when you are sick.					
Panadol	17	19.10			
Coartem	15	16.85			
Mebendazole	9	10.11			
Azithromycin	10	11.24			
Zinc	11	12.36			
Vitamin C	13	14.61			
Covidex	8	8.99			
Lasix	6	6.74			
Total	89	100			
From where do you always get these drugs?					
Pharmarcy	21	23.60			
Drug shops	33	37.10			
Friends or peers	16	17.98			
Leftover medicines at home	19	21.35			
Total	89	100			
Clinical symptoms that lead to self-medications?					
Headache	28	31.46			
Fever	20	22 47			
Abdominal nain	10	11.24			
Cough	18	20.22			
Flue	13	14 61			
Total	89	100			
Why do you always take up prescribed drugs?	05	100			
Poor perceived quality of health care services	17	19.10			
High consultation fees	20	22 47			
Mild illness	23	25.84			
Previous knowledge about the drug	20	22.54			
	23	100			
10781	89	100			

Majority 89% (89/100) of the study participants took un prescribed drugs in which 75/89 obtain medications through buying over the counter and 14/89 use the remnants of the drugs at home while minority (11/100) obtain medications through prescription by health care worker (table 2). The most commonly un prescribed drugs taken by the respondents are Panadol (19.10%), followed by 16.85%, 14.61%, 12.36%, 11.24%, 10.11%, 8.99% and 6.74% for drugs such Coartem, Vitamin C, Zinc, Azithromycin, Mebendazole, Covidex and Lasix respectively (table 2). The main

sources for these unprescribed drugs are drug shops (33/89), followed by pharmacy (21/89), leftover medicines at home (19/89)and friends or peers (16/89) (table 2). Clinical symptoms that lead to selfmedications were headache (28/89),followed by fever (20/89), cough (18/89), flue (13/89) and abdominal pain (10/89) (table 2). The reasons for self-medication among the respondents were; previous knowledge about the drug (32.58%), mild illness (25.84%), high consultation fees (22.47%) and poor perceived quality of health care services (19.10%) (Table 2).

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Variables	Frequency (f)	Percentage (%)
Age in years?	• • • •	
18-25	22	24.72
26-33	20	22.47
34-41	28	31.46
42-49	19	21.35
Total	89	100
Gender?		
Female	44	49.44
Male	45	50.56
Total	89	100
Education level?		
None	26	29.21
Primary	23	25.84
Secondary	22	24.72
Tertiary and above	18	20.22
Total	89	100
Marital status?		
Single	31	34.83
Cohabiting	11	12.36
Married	47	52.81
Total	89	100
Do you have any chronic illness?		
Yes	12	13.48
No	77	86.52
Total	89	100
If Yes, which one?		
Diabetes	3	25
HIV/AIDS	2	16.67
Hypertension	6	50
Sickle cell disease	1	8.33
Total	12	100

Demographic factors influencing self-medication among adults Table 3: Shows the demographic factors influencing self-medication among the participants) (n=89)

Of the 89 respondents who practised selfmedication, the majority (31.46%) were aged 34-41 years, followed by 24.72%, 22.47% and 21.35% aged 18-25 years. 26-33 years and 42-49 years respectively (table 3). Most 50.56% (45/89) cases of self-medication were observed among males as compared to 49.44% (44/89) among females (table 3). The highest rates (29.21%) of self-medication were observed among illiterate, followed by 25.84%, 24.72% and 20.22% among respondents who stopped at primary levels, secondary levels and had tertiary and above education levels respectively (table 3). More than ½ (52.81%) of those who practised selfmedication were married, followed by 34.83% and 12.36% for the participants who were single and cohabiting respectively (table 3). Of the 89 respondents who practised self-medication, 13.48% (12/89) had chronic illnesses while 86.52% (77/89) had no chronic illnesses (table 3). Of the 12 respondents with chronic illnesses, there were 6, 3, 2 and 1 Respondent who had hypertension, diabetes, HIV/AIDS and sickle cell disease respectively (table 3).

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Socio-economic factors influencing self-medication among adults Table 4: Shows the socioeconomic factors influencing self-medication among the respondents (n-89)

respondents (n=05).		
Variables	Frequency (f)	Percentage (%)
What is the level of your monthly household wealth index?		
Low (<200,000 Ug Shs)	48	53.93
Moderate (200,000-500,000Ug Shs)	26	29.21
High (>500,000Ug Shs)	15	16.85
What is your employment status?		
Employed	39	43.82
Unemployed	50	56.18
Do you have access to the pharmacy?		
Yes	52	58.43
No	37	41.57
Distance between home and health institution?		
Near (1-2 kilometer)	19	21.35
Far (3-5 kilometers)	28	31.46
Very far (>5 kilometers)	42	47.19

The highest rates of (53.93%) selfmedication was observed among respondents with low wealth index. followed by 29.21% (26/89) and 16.85% (15/89) observed among the respondents with moderate and high wealth index respectively (table 4). More than ½ 56.18% (50/89) of the respondents who practiced self-medication were unemployed and the minority 43.82% (39/89) were employed (table 4). Most of the respondents who practised self-medication had access to a pharmacy 58.43% (52/89) while 41.57% (37/89) had no access to the pharmacy

(table 4). The highest rate of 47.19% (42/89) of self-medications was observed among the respondents who had a very far distance between home and the health institution, followed by 31.46% (28/89) and 21.35% (19/89) who had homes far and near the health institutions respectively (table 4). The highest rate of 47.19% (42/89) of self-medications was observed among the respondents who had a very far distance between home and the health institution, followed by 31.46% (28/89) and 21.35% (19/89) who had homes far and near the health institution, followed by 31.46% (28/89) and 21.35% (19/89) who had homes far and near the health institutions respectively (table 4).



Figure 3: Shows the effective ways of preventing self-medication among the study participants (n=89)

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Of the 89 respondents who practised selfmedication, the identified ways effective in preventing self-medication among the residents of Serere Town were, reducing the cost of consultation fees (22/89), improving

Prevalence of self-medication among adults

The objective of the study was to determine the prevalence of self-medication among adults at Serere Town, Serere District. Data analysis and interpretation revealed that the prevalence of self-medication was 89% (89/100) among the respondents where they accepted to have practiced self-medication while 11% didn't practice self-medication (figure 2). The most commonly unprescribed drugs taken by the respondents are Panadol (19.10%), followed by 16.85%, 14.61%, 12.36%, 11.24%, 10.11%, 8.99% and 6.74% for drugs such as Coartem, С, Zinc. Vitamin Azithromycin, Mebendazole. Covidex and Lasix respectively (table 2). The main sources for these unprescribed drugs are drug shops (33/89), followed by pharmacies (21/89), leftover medicines at home (19/89) and friends or peers (16/89) (table 2). Clinical symptoms that lead to self-medications were headache (28/89), followed by fever (20/89), cough (18/89), flue (13/89) and abdominal pain (10/89) (table 2). The reasons for self-medication among the respondents were; previous knowledge about the drug (32.58%), mild illness (25.84%), high consultation fees (22.47%) and poor perceived quality of health care services (19.10%) (Table 2). This is consistent with the findings from studies conducted by [2] which revealed that the prevalence of self-medication was 78.2%; the prevalence of SM was 75.5% of the 604 participants [8]. The prevalence of selfmedication in students was 67% [8]. The frequency of self-medication among the study sample reached 96% in a crosssectional study done in Ismailia, Egypt [9]. The prevalence of SMP was reported as 60.2%. Drug shops, previous knowledge or prescription, and consulting with peers (friends or relatives) were the most sought sources of SMP [10]. [11] revealed that the overall prevalence of self-medication in the quality of health care services (18/89), health education on self-medication (34/89) and construction of more government health facilities (15/89) (figure 3).

DISCUSSION

university students was 70.1% The recent study findings are not consistent with findings from studies conducted by [1] indicated that the overall prevalence of selfmedication was 35.9% [12] indicated that about 33.7% of the respondents had practised self-medication in the past 3 months. The overall prevalence of selfmedication practices among households in Gondar town was 50.2% [13]-[19]. These findings are lower than the prevalence of self-medication in the recent research study.

Demographic factors influencing selfmedication use among adults

The objective of the study was to determine the demographic factors influencing selfmedication use among adults. Data analysis and interpretation indicated that of the 89 respondents who practised self-medication, the majority (31.46%) were aged 34-41 years, followed by 24.72%, 22.47% and 21.35% aged 18-25 years, 26-34 years and 42-49 years respectively (table 3). Most 50.56% (45/89) cases of self-medication was observed among males as compared to 49.44% (44/89) among females (table 3). The highest rates (29.21%) of self-medication was observed among illiterate, followed by 25.84%, 24.72% and 20.22% among respondents who stopped at primary levels, secondary levels and had tertiary and above education levels respectively (table 3). More than ½ (52.81%) of those who practised self-medication were married, followed by 34.83% and 12.36% for the participants who were single and cohabiting respectively (table 3). Of the 89 respondents who practised self-medication, 13.48% (12/89) had chronic illnesses while 86.52% (77/89) had no chronic illnesses (table 3). Of the 12 respondents with chronic illnesses, there were 6, 3, 2 and 1 Respondent who had hypertension, diabetes, HIV/AIDS and sickle cell disease respectively (table 3) These findings indicated that male gender, illiteracy/lower education levels, married status and having

INOSR APPLIED SCIENCES 10(3):13-24, 2023 chronic illnesses were significantly associated with self-medication practices among adults. Age was independently associated with self-medication use among adults in Serere town. This was consistent with the findings from studies conducted by: [12] who revealed that female sex and higher educational level were the independent factors significantly affecting the practice of self-medication with drugs [2] found out that female gender was an independent predictor of self-medication practice [3] showed that married, illiterate (compared to having higher education) were associated significantly with selfmedication practices. The present study findings are not consistent with the findings from studies conducted by; [1] who indicated that unmarried status was found to be a demographic factor influencing selfmedication among adults. According to [11] found that female students self-medicated more often than male students.

Socioeconomic factors influencing selfmedication use among adults

The objective of the study was to determine the socioeconomic factors influencing selfmedication use among adults. Data analysis and interpretation indicated that the highest rates (53.93%) of self-medication were observed among respondents with a low wealth index, followed by 29.21% (26/89) and 16.85% (15/89) observed among the respondents with moderate and high wealth index respectively (table 4). More than ¹/₂ 56.18% (50/89) of the respondents who practiced self-medication were unemployed and the minority 43.82% (39/89) were employed (table 4). Most of the respondents who practised self-medication had access to a pharmacy 58.43% (52/89) while 41.57% (37/89) had no access to pharmacy (table 4). The highest rates 47.19% (42/89) of selfmedications was observed among the

There was a high prevalence of selfmedication among the respondents. Female gender, illiteracy, married status, chronic illness. low socioeconomic status. unemployment, accessibility of pharmacy, and very far distance between home and the nearest health institution were the factors significantly associated with self-

respondents who had a very far distance between home and the health institution, followed by 31.46% (28/89) and 21.35% (19/89) who had homes far and near the health institutions respectively (table 4). Of the 89 respondents who practiced selfmedication, the identified ways effective in self-medication among preventing the residence of Serere Town were, reducing the consultation cost for fees (22/89).improving on the quality of health care services (18/89), health education on selfmedication (34/89) and construction of more government health facilities (15/89) (figure 3). These findings indicated that low household wealth index, unemployment, access to pharmacy, and very far distance between home and the nearest health institutions were the socioeconomic factors significantly associated with selfmedication use among adults. This was probably because low wealth index and unemployment were linked to poverty making it impossible for the respondents to ford medical bills in health institutions. These findings were consistent with the findings from studies conducted by; [1] which indicated that accessibility of pharmacies was the factor significantly associated with self-medication practices [2] showed that monthly income (>500ETB). and distance of health institution (<30 min) were the independent predictors of selfmedication practice [12] revealed that higher educational level was an independent factor significantly affecting the practice of self-medication with drugs. The recent study findings were not consistent with the findings from studies conducted by; [2] who found that accessibility of pharmacy was an independent predictor of self-medication practice [12] indicate that low income was independent predictor for selfan medication practices.

CONCLUSION

medication practices. Age was an independent predictor of self-medication. Recommendation

More studies using a bigger sample size on

the prevalence and factors influencing selfmedications use among adults in Serere town using a bigger sample size should be conducted.

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