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Publications 2023

OPEN ACCESS
ISSN: 2992-5479

NEWPORT INTERNATIONAL JOURNAL OF PUBLIC HEALTH AND PHARMACY (NIJPP)
Volume 3 Issue 2 2023

Self-Medication Practices among Senior Students attending Bachelor of Medicine and Surgery at Kampala International University Western Campus Uganda.

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ABSTRACT

Self-medication, as one element of self-care, is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms. It is use of non-prescription medicines by people on the basis of their own initiatives. Although, over the counter drugs are meant for self-medication and are of proven efficacy and safety, their improper use could have serious implications both on health care professionals and their patients or clients. Social work is one of the caring professions which involve promoting and protecting the welfare of individuals and the wider community. Since, health care professionals are also segments of the community they can also be potential candidates for social work intervention. This study aimed to assess self-medication practice among senior medical students of Kampala International University Teaching Hospital. Facility based cross-sectional study was conducted among senior medical students selected using stratified random sampling technique. Sample size was calculated to be 294. Data was collected and entered in to Epi-info version 3.6 and analyzed using SPSS version 20. Descriptive statistics was employed. Statistical significance was declared at p-value<0.05. The findings indicated that 90% of the respondents utilize self-medication and 60% of them practice self-medication for headache/ fever. And painkillers were the most widely used type of medicine. The major reason the respondents practice self-medication was found to be mild illness. In the multivariate analysis, age and sex were associated with self-medication practice. The findings of the study have implication on policy that there is a need to reevaluate drug and health policies of the country and formulate rules and regulations regarding drug use.

Keywords: Self-medication process, Painkillers, Patients, Health care professionals, Drugs.

INTRODUCTION

Throughout human history the dominant paradigm of healthcare was individual self-care in the family and local community. People themselves were responsible for their own health, and that of their families. Self-care is probably not only as old as mankind but also most widely used [1]. Self-care may be defined as the care taken by individuals towards their own health and wellbeing, including the care extended to their family members and others [2-3]. It is what people do for their own selves to establish and maintain health, prevent and deal with illness. It is a broad concept encompassing hygiene, nutrition, lifestyle, environmental factors, socio-economic factors and self-medication [4]. Self-medication, as one element of self-care, is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms. It is use of non-prescription medicines by people on the basis of their own initiatives [4]). Husain and Khanum [5] also defined self-medication as obtaining and consuming medication without professional supervision regarding indication, dosage, and duration of treatment. However, self-medication is not necessarily meaning the consumption of modern medicines but also of herbs [6-9]. In most illness episodes,

self-medication is the first option which makes it a common practice worldwide. In the treatment of minor illness, when problems are self-limited, self-medication can be used [10]. The type and extent of self-medication and the reasons for its practices may vary from country to country but it is widely practiced in both developed and developing countries. In economically deprived countries most episodes of illness are treated by self-medication. In a number of developing countries including Uganda, many drugs are dispensed over the counter without medical supervision. In this case, self-medication provides a lower cost-alternative for people who cannot afford the cost of clinical services and for government institutions, this can reduce costs while allowing health professionals to focus on more serious health problems [11]. However, the easy availability of a wide range of drugs and in the case of developing countries, the inadequate health services result in increased proportions of drugs used for self-medication compared to prescribed drugs [6]. Self-medication in Uganda is becoming alarming, it is imperative to assess the associated factors a study was done by Sulayman Ademola A, in 2017 to determine the prevalence and factors associated with self-medication among University students in Kampala.

METHODOLOGY

Study Design

A facility-based cross-sectional quantitative and qualitative study design was used to assess self-medication practice among senior students attending Bachelor of Medicine and Surgery at Kampala International University Western Campus Uganda.

Area of Study

The study was done at Kampala International University School of Health Sciences (KIUSHS.

Sample Size Determination

The sample size was determined using single population proportion formula for cross sectional survey as follows:

$$n = \frac{(z\alpha/2)^2 pq}{d^2} + \text{Non-response rate}$$

Assuming that:
Proportion of self-medication practice among health care professionals P=77.6% [12]
q= (1-p) =22.4%
Confidence level = 95% = 1.96
Desired precision (d) = 0.05
Non-response rate= 10%
The total required sample size was 294.

Study Population

The study population was the undergraduate senior students; both residents and non-residents. This is an ideal group because they spend most of their time in their respective rotations, therefore are accessible. The students were sampled from their different rotations to give a representative sample.

Inclusion Criteria

- Undergraduate senior students.
- Students who give Informed consent.

Exclusion Criteria

- Post graduate students.
- Undergraduate junior students.
- Students who refuse0 to give consent.

Sampling Technique

Stratified sampling technique was employed to allocate samples and to select eligible study participants from the list of students. We divide the total number of students by total sample size to get the interval (k) =1267/294=4.3≈4. So, the questionnaires were given for every 4th student during the data collection period based on the list from each class. And the first sample was selected using lottery method.

Data Collection Procedure

Data collection tools was distributed and later on collected by the principal investigator. Respondents were approached at their respective class. Verbal consent was taken and questionnaires was given to study participants. After they responded to the questions, questionnaires were gathered by the principal investigator.

Data Analysis

SPSS version 20 for windows was used for analysis. The first step before analysis was data exploration to visualize the general feature of the data to be analyzed. At univariate level, analysis of descriptive statistics was first carried out to have percentage values, frequency, mean and median to describe the study participants by socio-demographic,

behavioral and health service factors. And then, bivariate analysis to test the strength of association between variables computed using odds ratio. After this bivariate logistic regression analysis was done to identify the relationship each independent variable has with the dependent variable. Then, variables which have association with the dependent variable was taken into multivariate logistic analysis to find out which of them have factorial association with the dependent variable. Statistical significance was declared at p-value< 0.05. Variables having p values less than or equal to 0.05 in multivariate analysis was considered as having a statistically significant association with self-medication practice.

Ethical Considerations

Ethical clearance was obtained from institutional review board (IRB) of Kampala International University-western campus. After ethical clearance received, permission to conduct the research was asked from administrative body of Kampala International University-western campus. Information sheet was prepared and given to all eligible participants of the study to obtain informed verbal consent. All participants were informed the aim and purpose of the study and their participation was voluntarily. Name of the participant was omitted from the questionnaire; instead code number was used to ensure confidentiality throughout the study period. The researcher will make sure that there is no harm or risk on the respondents for being participants of the research.

RESULTS

A total of 268 respondents with response rate of 91.2% participated in the study. The median age of respondents was 27 years with the minimum and maximum age of 24 and 39 years respectively. From the respondents, 153 (57%) were females, 209(78%) of the respondents were Christians and 185 (69%) of the study subjects were single.

Table 1: Socio-demographic characteristics of respondents, Kampala international university Western Campus Bushenyi, Uganda (n=268)

Characteristics	Frequency	Percentage
Age		
20-29	142	53
30-39	126	47
Sex		
Male	115	43
Female	153	57
Religion		
Muslim	54	20
Catholic	180	67
Protestant	29	11
Other	5	2
Marital status		
Single	185	69
Married	83	31

When asked about the time when they got sick recently 142 (53%) of the study participants said a week ago. Concerning the immediate action taken when they got sick, 241 (90%) responded they self-medicated of which 108 (43%) said they self-medicated once for their last illness (Table 2). Among those who practice self-medication, 151 (60%) did so for headache/fever whereas, 10 (4%) mentioned other reason which is back pain. Regarding the question

which asks what type of medication they use for self-medication, 193 (77%) said painkillers and 1 (0.4%) said other type of medication which is folic acid (Table 2).

Table 2: Self-Medication practice among students

Variables	Frequency	Percentage
Last time of sickness recently (n=268)		
Week ago	142	53
Month ago	67	25
Three months ago	29	11
Six months ago	3	1
≥Year ago	27	10
Immediate Action (n=268)		
Consulted a doctor	11	4
Self-medicated	241	90
Ignored	16	6
Frequency of self-medication (n=251)		
Once	108	43
Twice	50	20
Three times	45	18
Four times	3	1
≥ Five times	45	18
Type of disease* (n=251)		
Respiratory tract infection	118	47
Eye disease	20	8
Gastro intestinal symptoms	85	34
Headache/Fever	151	60
Skin disease/Injury	25	10
Maternal/Menstrual pain	63	25
Others (back pain)	10	4
Type of Medication* (n=251)		
Painkillers	193	77

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ISSN: 2992-5479

Antibiotics	83	33
Cough Syrup	45	18
Antacid	45	18
Oral Contraceptive Pills	10	4
Vitamins	25	10
Other (folic acid)	1	0.4

*Note: due to multiple responses for type of disease and type of medication is possible, sum of percentages >100'

The major reason mentioned by the study participants who practice self-medication was mild illness 180 (67%) and 3 (1%) of the respondents mentioned other reasons like I do not trust the medical person's skill, I know the disease and because the pain was severe 177 (66%) of the respondents said that they got the medicines for self-medication from pharmacy followed by work place 105 (39%), friends 32 (12%) and drug retail shops 21(8%) respectively (Table 3).

Table 3: Reasons for practice of self-medication and place of access of drugs among students

Variables	Frequency	Percentage
Reasons for self-medication*		
Emergency use	126	47
Mild illness	180	67
Less expensive	54	20
Saves time	126	47
Prior experience	88	33
Ease of access	86	32
Peer influence	21	8
Stressful conditions	46	17
Privacy	13	5
Other	3	1
Place*		
Work place	105	39
Pharmacy	177	66
Drug retail shops	21	8
Friends	32	12

*Note: Due to multiple reasons for practice of self-medication and place where to find the drugs is possible, sum of percentages >100.

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ISSN: 2992-5479

Of all study participants 233 (87%) responded self-medication has negative consequence on the health professional. Of which 163 (61%) said drug resistance as a consequence on health care professionals.

Table 4: Consequence of self-medication on health care professionals

Effect of self-medication	Frequency	Percentage
Negative consequence		
Yes	233	87
No	38	14
Consequence on HCPs		
Drug dependence	153	57
Drug resistance	163	61
Drug reaction	91	34
Worsening of disease	51	19

Note: Due to multiple responses for reasons for not self-medicated is possible, sum of percentages >100.

Concerning the reasons for study participants who had no practice of self-medication 10 (39%) said it's because the illness was self-limited meaning it gets resolved by itself without any intervention (Table 5).

Table 5: Reasons for not self-medicated

Reasons for not self-medicated * (n=26)	Frequency	Percentage
Self-limited	10	39
Severe pain	4	14
Hate medicines	4	14
Prefer hospital	8	29
Side-effects	8	29

Note: Due to multiple responses for reasons for not self-medicated is possible, sum of percentages >100.

DISCUSSION

Self-medication behavior has become a global trend that has been internationally reported as being on rise and can have positive as well as negative impacts. It has been noted that the increased trend of self-medication practice is not only detected in countries with advanced economy but also in developing countries [13]. In this study, the prevalence of self-medication practice of medical students was examined. According to the result, high percentage (90%) of the respondents practiced self-medication as an immediate action for their recent illness. This finding is in agreement with a study done in Malaysia among health care professionals [14], in Karachi Pakistan among pharmacists and non-pharmacists [15], in India among nurses and midwives [16], in United Arab Emirates among pharmacists [13] and in Ghana among doctors and pharmacists [17]. However, this current study included medical students and not specific to the professionals these reviewed studies included. In the multivariate analysis it was found that respondents who are females were found to be more likely to practice self-medication than their male counterpart. This is in accordance with another study done among medical students of a private institute in Nagpur, India [18] and a study done on university students in Arsi University, Ethiopia [19]. This might be related to the physiological difference they have and how they react to pain. Females have more disease burden than males including pains related to maternal and menstrual effects. However, this issue has to be explored further to reach for possible explanatory reasons. Based on the results of the study, the most common illness the study participants

said they practice self-medication for is headache/fever. This is in line with a study conducted in United Arab Emirates in which headache and fever were the most common symptoms for practicing self-medication [13]. Again in another study done in North India [20-23] headache was the most common symptom for self-medication practice. Concerning the type of medicine they use for self-medication, the majority (85%) of the respondents said painkillers (analgesics) followed by antibiotics. This result has similarity with other studies conducted at different places.

Majority of the respondents who said they do not practice self-medication mentioned the illness was self-limited meaning the disease condition was diminished/ resolved by itself without Self-medication practice among health care professionals and its effect among patients/ clients any intervention as the main reason for not practicing self-medication followed by fear of the side-effects. This is similar with a study done among medical students in Nepal and health care professionals in Malaysia in which they responded risk of adverse reaction as a reason against self-medication [14].

CONCLUSION

In this study self-medication practice among senior medical students was found to be high (90%). From the total respondents, 60% of them responded they practice self-medication for headache or fever. And painkillers were the most widely used type of medicine for self-medication followed by antibiotics. This is a serious problem which needs a better focus and intervention keeping in mind the alarming rate of antibiotic resistant pathogens. The finding of this study showed that 'mild illness' is the major reason for self-medication practice mentioned by the study participants. And concerning the place of access of drugs for self-medication the majority said from pharmacy followed by their work place. Access of drugs from work place is mentioned in the second place. This might mean that they are taking from what is supposed to be accessed by the clients/patients at the health institution.

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Ruzindana David Cozens (2023). Self-Medication Practices among Senior Students attending Bachelor of Medicine and Surgery at Kampala International University Western Campus Uganda. *NEWPORT INTERNATIONAL JOURNAL OF PUBLIC HEALTH AND PHARMACY (NIJPP)* 3(2): 68-75.