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Research Article

Knowledge, Attitudes, and Practice of Self-Medication among Medical Students at Sudan International University, Sudan

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ABSTRACT

Background: Self-medication is a practice or action taken by individuals for themselves in order to achieve and maintain health, as well as to avoid and protect against disease. The aim of this study is to evaluate the knowledge, attitudes, and practice of self-medication among medical students at Sudan International University.

***Subjects & Methods*:** This was a prospective study that involved 288 out of 1000 students in the Faculty of Medicine at Sudan International University. Data were collected using a self-administered questionnaire from January to March 2022 to evaluate the self-medication knowledge, attitude, and practice among first, second, and third-year medical students.

***Result*:** The age groups of this study were arranged as follows; 197(17-20 year), 72(21-23 year) and 19(>23 year). Regarding the sex of the study population, the female group was 215(74.7%) while the male group was 73(25.3%). The classification of the population according to their academic levels; as follows; first year 124 (43.1%), second year 52 (18.1%) and third year 112(38.9%). The prevalence of self-medication was found to be a common practice by the majority of the students, since 279 (96.9 %) of the study group practiced self-medication, in contrast to only 9 (3.1%), who did not deal with any self-medication. Also, the result showed that the most common drugs were; vitamins 183 (65.6%) and analgesics 176 (63.1%) followed by antibiotics 172 (61.6%). Regarding the illnesses described by the student as an indication of self-medication, they are as follows; headache is the most common (93.2%), followed by common cold and cough 211(75.6%). Concerning the source of information used by the studied population for self-medication, pharmacists were found to be the main source of information 122 (42.4%) followed by parents of the students 102 (35.4%). Furthermore, the results revealed that the main reason given for practicing self-medication by the study group was that the illness was not serious is (69.5%).

***Conclusion*:** Self-medication was found to be widely practiced in 96.9% of cases, and the main reasons for self-medication were that the disease was not serious.

Introduction

Self-medication is common practice everywhere; it occurs when a patient thinks they can treat their illness without the help of a doctor (1). Traditionally, self-medication is defined as taking medication or home remedies by an individual, or by consulting an experienced person, without consulting a doctor (2). Recent studies conducted in different countries differ in their estimate of the percentage of patients who practice self-medication, with prevalence rates ranging from approximately 16.1% to 83.3% (4). Many countries promoted self-medication to reduce health care costs (3). Many factors contributed to the wide spread of self-medication, like family members' sympathy for the illnesses, a lack of time, a lack of access to health care, financial considerations, misinformation and false beliefs, as well as heavy drug advertising (5). Students at universities self-medicate and make diagnoses based on internet information, advice from parents and friends, or occasionally by ignoring symptoms (6). Acute conditions that require limited care and simple treatment to relieve symptoms are referred to as minor conditions (7). According to a study of 431 university students, around 70% self-medicate because they believe they don't need to see a doctor for minor ailments. Cough and cold were experienced by 82% of study participants (8). Family, friends, pharmacists, extensive information from internet services and specialist journals are possible sources or advice on self-medication. Self-medication can be deadly, similar to how nonsteroidal anti-inflammatory drugs (NSAIDs) increase the risk of stroke (9). It is common among people in countries with poor health care that some people used to have first medicines at home like traditional medicines and antibiotics bought from local pharmacies, which are often not the right medicines and without knowledge of the right uses of drug doses (10). Self-medication is defined by the WHO as the selection and use of drugs by individuals to treat a self-identified disease or symptom (11). It is human behavior in which a person uses non-prescribed medications to treat undiagnosed medical ailments (12). Self-medication is currently interpreted as people's desire and ability to participate in the choice and treatment of their health condition (13).

Subjects and Methods

This study is prospective study; it was done to evaluate the Self Medication Knowledge, Attitude and Practice among students in the 1st, 2nd and 3rd year students in the faculty of medicine at Sudan International University. The study was conducted in faculty of Medicine at Sudan International University during the period from January to March 2022.This study was carried in 288 out of 1000 students (1st, 2nd and 3rd year) in the faculty of Medicine at Sudan International University, the study was included those who agreed to be a participant in this research. The sample size was calculated according to the following formula:

- N = 1000٪1+1000×(0.05)2 = 288, N= Sample size, Degree of precision = 0.05, The sample size is 288 students

The study data were collected using a self-administered questionnaire. Verbal consent was ensured before applying the questionnaire. The collected data was analyzed with Computer program SPSS version 16. The mean and standard deviation were estimated for quantitative data, and frequency and % were calculated for qualitative data. The results presented in shape of tables and figures. This research was approved by the Research Ethics Committee of Sudan International University. All students were briefed on the research goals and procedures during the interview period. Oral consent was obtained from all participants.

Results

This study was carried on 288 out of 1000 students in the 1st, 2nd and 3rd years in the faculty of medicine at Sudan international university. Their age group arranged as 197(17-20 year), 72(21-23year) and 19(>23year). The results showed that most of the population was distributed within the age group (17-20 year). The results showed that the majority of the study population was female 215 (74.7%). The classification of population according to their academic levels, the results showed that the majority of study population in the first year 124(288).

Table 1: Distribution of the study population according to age group, sex, and academic year

Age group by years	**Frequency**	**Percent %**
17-20	197	68.4
21-23	72	25.0
>23	19	6.6
Total	288	100.0
Sex	**Frequency**	**Percent%**
Male	73	25.3
Female	215	74.7
Academic year	**Frequency**	**Percent%**
First	124	43.1
Second	52	18.1
Third	112	38.9
Total	288	100.0

Self-medication was a common practice among the majority of students, as 279 of 288 (96.9%) respondents had used self-medication in the past year and 9 of 288 (3.1%) had not practiced self-medication, as shown in Figure 1.

It has been shown that vitamin 183 (65.6%), analgesics 176 (63.1%), followed by antibiotics 172 (61.6%) were the most common drugs taken without a prescription, and anti-acid 50 (17 .9%) was found to have the lowest ingestion rate Table 2.

Headache is the most common illness among the 260 students (93.2%), followed by cold and cough 211 (75.6%), fever 207 (74.2%), nausea and vomiting 111 (39.8%) Table 3.

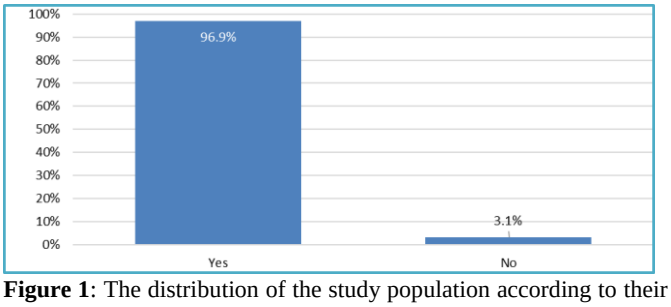

Figure 1: The distribution of the study population according to their practice of self-medication

Table 2: Distribution of drug practice by study population

Drug	Percent%		Total (100%)
	Yes%	No%	
Antibiotic	172 (61.6)	107 (38.4)	279
Antimalarial	87 (31.2)	192 (68.8)	279
Antacid	50 (17.9)	229 (82.1)	279
Vitamins	183 (65.6)	96 (34.4)	279
Analgesic	176(63.1)	103(36.9)	279
Antidiarrheal	89 (31.9)	190 (68.1)	279
Herbal remedy	128 (45.9)	151(54.1)	279
Food supplements	108 (38.7)	171(61.3)	279

Table 3: The most common illnesses that encountered by the study population:

Illnesses	Yes %	No%	Total 100%
Headache	260 (93.2)	19 (6.8)	279
Fever	207 (74.2)	72 (25.8)	279
Common cold &cough	211 (75.6)	68 (24.4)	279
Constipation	74 (26.5)	205 (73.5)	279
Nausea and vomiting	111 (39.8)	168 (60.2)	279
Heart burn	79 (28.3)	200 (71.7)	279
Skin disease and injury	71(25.4)	208 (74.6)	279
Eye disease	59 (21.1)	220 (78.9)	279
Ear disease	40 (14.3)	239 (85.7)	279
Malaria	102 (36.6)	177 (63.4)	279
Typhoid	44 (15.8)	235 (84.2)	279

Of the displayed reasons for practicing self-medication, not serious illness was found the most common reason in (56.1%), followed by prior experience with the taken medicine in (42.3%) Figure 2.

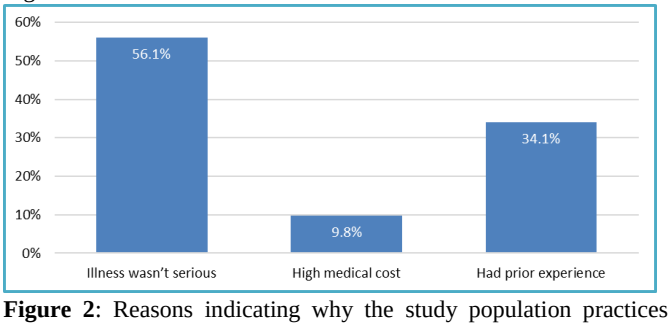

Figure 2: Reasons indicating why the study population practices self-medication instead of seeing a doctor

The majority of the study population practiced self-medication more than 3 times in the past year. Overall (10.8%) of the study group always went to the hospital when they felt sick, while (61.3%) found that they sometimes went to the hospital. Table 4.

Table 4: Frequency of times that the study population practiced self-medication during the past year

Number of times	Frequency	Percent%
Never	20	7.2
1-2 times	97	34.8
More than 3 times	162	58.1
Total	279	100.0

Frequency of times towards the Hospitals	Frequency	Percent%
Always	30	10.8
Rarely	78	28.0
Sometimes	171	61.3
Total	279	100.0

Regarding the source of information on self-medication, the pharmacist was given as the main source of information 122 (42.4%), followed by the parents of the students 102 (35.4%) table 5.

Table 5: Distribution of the population according to the source of information for self-medication

Source of information	Selected%	Not selected%	Total (100%)
From parents	102 (35.4)	186 (64.6)	279
From another person	36 (12.5)	252 (87.5)	279
From society	34 (11.8)	254 (88.2)	279
From internet	36 (12.5)	252 (87.5)	279
From pharmacist	122 (42.4)	166 (57.6)	279

The results showed that self-medication is commonly used in the families of the study group (73.8%), and 68.8% properly use the prescription, while 65.2% of the students discontinue the drug on feeling improvement. Also (31.2%) the prescriptions were not applied correctly Table 6.

Table 6: The behavior of the study population towards the use of drugs

Questions	Percent%		Total (100%)
	Yes %	No%	
Is self-medication commonly used in your family?	206 (73.8)	73 (26.2)	279
Did you properly use the prescription?	192 (68.8)	87 (31.2)	279
Did you discontinue the drug after feeling improvement?	182 (65.2)	97 (34.8)	279
Did you stop the treatment early without feeling improvement?	108 (38.7)	171(61.3)	279
Did you repeat the prescription without seeking medical advice?	153 (54.8)	126 (45.2)	279
Did you increase the dose without medical advice?	51 (18.3)	228 (81.71)	279
Did you have any side effects?	78 (28.0)	201 (72.0)	279
Did you feel interactions between drugs when you use more than one ?	61 (21.9)	218 (78.1)	279

Discussion

The prevalence of self-medication in this study was (96.9 %) reported by 279 out of 288, which represents a high prevalence when compared to another local study that indicated (79.5%) practicing self-medication (14). It was low in contrast with another study that showed a 98% prevalence among 1581 Palestinian students at medical and nonmedical universities (15).

This study determined that self-medication practices were reported by (96.9 %) of the surveyed students. The findings of the study showed that the most common medications used by the students were vitamins (183, (65.6%) followed by analgesics 176 (63.1%) and antibiotics in 172 (61.6%). In comparison to another study done at Ain shams in Egypt, the results indicate that analgesic drugs is the commonest one of drug used in self-medication (87.2%), followed by antibiotics (58.8%) and vitamins (54.4%) (16). Also, a study done in Pakistani student denoted that analgesic (53.3%) was on the top of the drug practiced followed by antibiotic (23.3%) (17). Concerning the source of information obtained for self-medication, our study found that pharmacists 122 (42.4%) were first source of consultations, followed by parents information 102 (35.4%). In contrast to a study done in Malaysian public university, which declare that the main source of information, was existed from parents of the students in about (63.7%), followed by doctors consultations in (59.9%), internet in (57.9%), pharmacists in (33.9%) and finally from friends (33.5%) (18). In the current study findings, the common illnesses described by students for seeking self-medication were arranged as follows; headache (93.2%), then common cold and cough (75.6%) and lastly fever (74.2%). These findings were consistent with another study done at Mekelle University in Ethiopia, where headache was found to be the commonest illness (51.56%), followed by cough and the common cold (44.8%) with variations in the percentage(19). Besides, another consistence findings found headache is commonest at Bahrain gulf university in 70.9% (6). and Pakistani study in 40% of their subjects (17). Also, this study showed that (58.1%) of surveyed group were practicing self-medication during past year, (10.8%) of them are always going to hospitals when feeling illness, while (61.3%) sometimes go to hospital. The self-medication is common practice in study group families in (73.8%), and (31.2 %) were not properly use the prescription. Additionally, in this obtained result, the most reason for practicing self-medication has been answered that illness wasn't too serious (69.5%) to sake doctor visit, followed by prior experience of take drugs (42.3%), in accordance to study done in Eritrea, the main reasons for using antibiotic is previous experience (34.4%) and then illness was not so serious to seek medical care (25.7%) (20).

Conclusion

The study group mentioned that the source of their information was pharmacists and that self-medication was also a family practice. The reasons for self-medication were that the disease was not serious. Universities' departments should be involved in increasing knowledge about malpractice in medical services.

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Conflict of Interest

No conflict of interest

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