Self-medication Practice among patients living in Soba-Sudan

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Abstract

Self-medication, the use of medicines without prescription to treat self-diagnosed disorders, symptoms, or continuous use of the prescribed drug for chronic symptoms. It affected by factors such as education, family, community, availability of medicines and exposure to the public and medical advice or advertisements. **Objectives:** The study was undertaken to evaluate prevalence and various aspects of self-medication in people.

Methods: A randomised, cross-sectional study, was conducted from December 2018 to January 2019. The target population of this study was 340 people out of 3000 people at Soba, Khartoum, Khartoum state. Khartoum. Data were analysed using SPSS version 22, and analysis was conducted with descriptive analysis procedures.

Results: In this study it was found that 340 (100%) respondents practiced self-medication. The principal for seeking self-medication included Malaria as reported by 165 people (17.4%) followed by diarrhea (162 people) (17.1%). Drugs commonly used for self-medication included antibiotics (35.9%) followed by analgesics (31.8%). Among reasons for seeking self-medication, About 237 person (50.0%) cited cost-effectiveness as the primary reason, as well as flexibility of pharmacies in place and time, 251 (37.9%) found pharmacists his sources of medicine information, followed by doctors176 (26.5%). For this reasons 214 (62.9%) used repeated prescriptions, some people go to herbal remedy, included cough as reported by 137 (20.12%), followed by cold (17.9%).

Conclusion: This study concluded that self-medication is widely practiced among the study population and antibiotics are the most common medication used without prescription. The cost of doctor visit is the most common reason for self-medication practice. Unfortunately, the majority of the study population have no enough knowledge about the mediations they use; however, pharmacists are the most common source of information.

Introduction

Self-medication is the use of drugs without a prescription to treat self-diagnosed disorders, symptoms, or continuous use of the prescribed drug for chronic symptoms [1]. Self-medication affected by such factors likes education, family, community, availability of medicines and exposure to the public and medical advice or advertisements [2], the use of ineffective medicine is a significant problem to ensure effective and safe drug [3]. Self-therapy is a behavioural response to human; any individual uses medication to treat symptoms or minor self-diagnoses order to do good as well as harm it because it involves the use of drug, It is widely practised throughout the world in urban and rural area including developing countries such as India. Because many non-prescription over-the-counter medicines are available and provide a low-cost alternative to peoples. In developing country like SUDAN, people depend more on pharmacies due to expediency, shorter waiting time, cost reduction, availability of flexible opening hours.

A significant problem in self-medication is the lack of clinical evaluation of the condition by a trained medical, which could lead to the wrong result, diagnosis and delay inappropriate treatment [1]. Governments and health authorities have to ensure that only safe drugs are made available over the counter (OTC) [2], the practice of self-medication must depend on medical information to avoid irrational use of drugs(3). Self medication assumes a significance among the medical students as they are the future medical practitioners and have a role in counselling the patients about the irrational use. Medical students also differ from the general population in the knowledge about diseases and drugs. Irrational use leads to wastage of resources, the resistance of pathogens, adverse drug reaction and prolonged morbidity [4].

The role of the pharmacist has been changing over the past two decades. The pharmacist is not just a supplier of, but also a team member involved in the provision of health care whether in the hospital, clinic and the community pharmacy [5,6].

Self-medication is an especially important significance among medical students [4]. Macrolide antibiotics have commonly been used in the treatment of upper and lower respiratory infections (7). In Sudan, there is a feeling that self-medication is high. A reason for this is the fact that in Sudan, most drugs can be obtained from pharmacies and drug stores without prescription. Self-treatment of malaria is common following self-diagnosis. Self-medication with antimicrobials has the potential to harm society and individual patient [8]. Appropriate self-medication can solve medical problems and save time waiting to see a doctor; this can save money and even lives in acute conditions [2].

The prevalence rates are high all over the world; up to 68% in European countries, while higher in the developing countries, with rates going as high as 92% in Kuwait, 76% in Karachi [9].

Over the counter, medicines can be purchased without a prescription; this is to save time, money and get relief immediately. Examples of conditions treated by self-medication, Headache, cough cold, constipation, acidity, and so on. People get information from pharmacists, friends, relatives, TV advertisement, etc., [10]. The current work is conducted to estimate the prevalence of self-medication in Khartoum, Khartoum State, Sudan as well as factors evaluation associated with self-medication [11,12].

Methodology

Type of Study Design

This was a cross-sectional study conducted at Soba, Khartoum state, Sudan, in which the prevalence of self-medication in Khartoum, Khartoum State, Sudan as well as factors evaluation associated with self-medication were determined.

Geographical Area

Sudan / Khartoum State / Khartoum, Soba local community Area.

Study Collections

Data were collected using a predesigned pretested questionnaire to include the study variable.

Study period

Data were collected during the period from January to February 2019.

Sample size

Sample size is calculate according to equations

Sample size = $Z^2 * P(1-P)/E^2 / 1+ Z^2 * P(1-P)/E^2 * N$, Where

Z = value of confidential level, (1.96)

P = Proportional percentage, (0.5)

E = margin of error in percentage. (0.05)

N = population size (3000).

Where population size (N) = 3000 peoples

$\{(1.96)^2 * 0.5(1-0.5)/(0.05)^2 / 1+(1.96)^2 * 0.5(1-0.5)/(0.05)^2 * 3000\}$

384.16 / 1 + (0.9604/7.5)

384.16 / 1 + 0.12805

384.16 / 1.1280 = **340** questionnaire was filled by people.

Data collection

Informed verbal consent was acquired from every participant.

Data were collected using a predesigned pretested questionnaire. These questionnaires went through a pilot phase in which 30 people who conformed to the inclusion criteria were given these questionnaires to fill. Data were collected by face to face interviews with eligible subjects, using a structured questionnaire in the local Arabic language, to include the study variables.

Data analysis and interpretation

The data were entered using SPSS version 22, and the same software was used to employ data analysis and data management. A descriptive analysis was performed, and frequency tables were tabulated to calculate the prevalence of self-medication. The same descriptive analysis was used to calculate frequency and percentages for the reasons which led to use of self-medication.

Ethical consideration

Permission was obtained from the National University ethics committee for conducting the study. The purpose of the study was explained to the participating peoples and confidentiality was ensured. Informed consent was obtained from every person before filling the questionnaire.

Results

The demographic characteristics of participants, 66.2% of whom were males and 33.8% were females. The majority of patient's population (40.1%) were fell in the age range of 20 to 29 years. As presented in Figure 1.

45.9% of the study population were university graduate. As presented in Figure 2.

When patients were distributed according to the occupation, it was found that 68.5% of the participants in the study were employed while the others were students or unemployed. As presented in Table 1.

Half of the participant is with no insurance, while 27.6% has the governmental one 21.5% have private insurance. As presented in Table 2.

37.9% of participants were taking drug-related information from pharmacists, 26.5% were taking drug-related information from doctors, while 11.5% from their relatives. As presented in Table 3.

50% from the participants and the patients, did not counsel doctors because their cost was high, while 30.4% of patients perceived that the distance to the doctors' clinics is the primary barrier. As presented in Table 4.

The most commonly used medicine out prescription was antibiotics (35.9%), followed by analgesics (31.8%). As presented in Table 5.

17.4% of the participants treated by self-medication from malaria, 17.1% from diarrhoea and 14.7% from headache. As presented in Table 6.

54.7% of the participants have no information about the medicines they used and their effects. As presented in Table 7.

72.1 % of the participants stated that they could accept the substitution of medicines. As presented in Table 8.

55% of the participants have medicines stored in their home, in excess. As presented in Table 9.

32.1% of participants stated that they did not check expiry date medicines. As presented in Table 10.

Only 8.5% of the participants had no health practitioner as a member of the family. As presented in Table 11.

67.4% of patients did not know about administration and/ or duration of therapy. As presented in Table 12.

64.1% of participants were self-prescribed herbal remedies. As presented in Table 13.
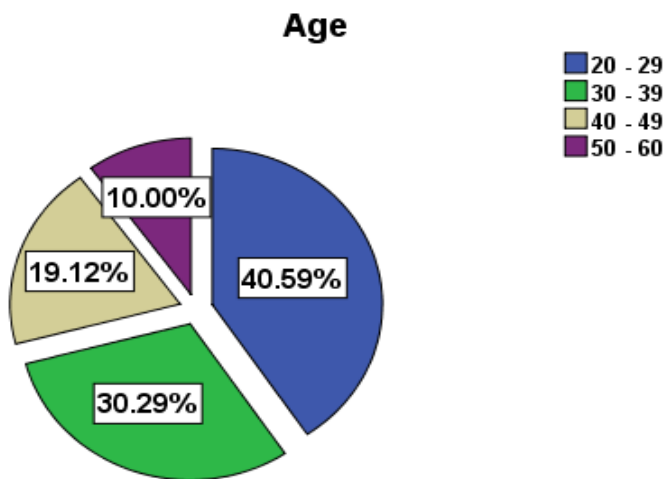
Age

Figure 1. Represent the age range of the participants in the study
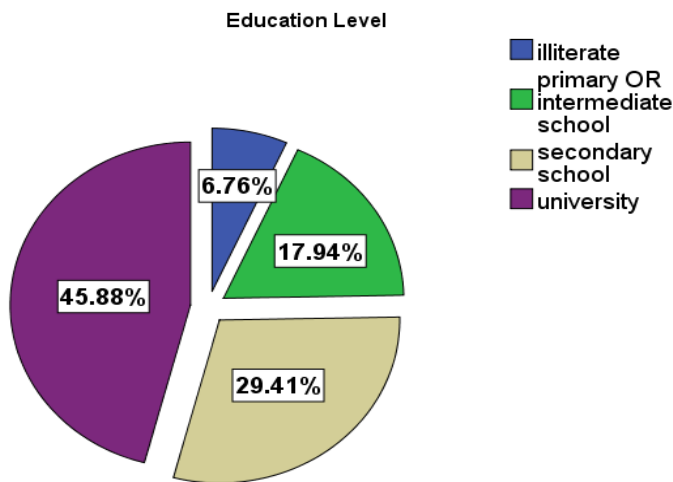
Education Level

Figure 2. Represent the education level of the participants in the study

Table 1. Represent the Occupation of the participants in the study

Occupation	Per cent
At work	68.5%
At home/students	31.5%
Total	100.0%

Table 2. Represent the insurance type of the participants

Type of insurance	Per cent
Private	21.5 %
Government	27.6 %
With no insurance	50.9 %
Total	100.0 %

Table 3. Represent the source of medical information

	Responses	
	N	Per cent
Pharmacists	251	37.9%
Nurse	28	4.2%
Doctors	176	26.5%
Medical student	24	3.6%
Friends	51	7.7%
Relatives	76	11.5%
Multimedia	57	8.6%
	663	100.0%

Table 4. Represent the reasons for the participants is not counselling the doctors

Reasons for not counselling doctors	Per cent %
Cost	50 %
Distance	30.4 %
No time	19.6 %

Table 5. Represent the most commonly used medicines from the patients without prescription

Non-prescription	N	Per cent
Antibiotic	237	35.9%
Analgesic	210	31.8%
Vitamins	94	14.2%
Cough syrup	119	18.0%

Table 6. Represent the conditions treated by self- medication

	Responses	
Conditions	N	Per cent
Malaria	165	17.4%
Pneumonia	41	4.3%
Diarrhoea	162	17.1%
Tonsillitis	73	7.7%
Burns	50	5.3%
Menstrual pain	57	6.0%
Insect bites	60	6.3%
Uti	48	5.1%
Acidity	87	9.2%
Headache	139	14.7%
Joint pain	65	6.9%

Table 7. Represent the information's of the participants about the medicines used by them and their effects

	Frequency	Per cent
No	186	54.7 %
Yes	154	45.3 %

Table 8. Represent the acceptance of the participants about the substitution of medicines

Acceptance of substitution	Per cent
No	27.9 %
Yes	72.1 %

Table 9. Represent the availability of unused medicines at home

Availability of medicine at home	Per cent
No	45.0 %
Yes	55.0 %
Total	100.0 %

Table 10. Represent the expiry date checking of home medicine by participants

Checking expiry date	Per cent
No	32.9 %
Yes	67.1 %

Table 11. Represent the presence of health practitioner in the participants' family

Presence of health practitioner	Per cent
No	91.5 %
Yes	8.5 %

Table 12. Represent the knowing of the participants about administration and / or duration of therapy

Administration and Duration of therapy	Per cent
Yes	32.6 %
No	67.4 %

Table 13. Represent the self-prescription of herbs remedies by participants

Self-prescription	Per cent
No	35.9%
Yes	64.1%

Table 14. Conditions for which herbal remedies were self-prescribed by participants that take herbs remedies

Diseases	Per cent
Cough	20.1%
Cold	17.5%
Hypertension	7.8%
Diabetes	3.5%
Diarrhoea	15.6%
Constipation	10.9%
Malaria	9.0%
Asthma	2.9%
Abdominal colic	12.6%

20.1% from participants use herbs remedies for cough, 17.5% for cold while 15.6% for diarrhea, 12.6% for abdominal colic, 10.9% for constipation and 9% for malaria. As presented in Table 14.

Discussion

In developing countries like SUDAN, most cases are treated by self-medication due to easy availability of medications. It is more likely to be inappropriate without complete knowledge, although it is becoming a routine practice these days [1-3].

A significant problem in self-medication is self-medication with antibiotics due to bacterial resistance. Antibiotics resistance is a big problem in the world; particularly in developing countries [8].

The demographic characteristics of participants, 66.2% of whom were males and 33.8% in females. Of the people, 68.5% were at work, and 31.5% were at home or students. Age from [20 to 29] is about (40.1%) of people filled the questionnaire, and about education level, 45.9% were at university level.

The source of medical information, (37.9%) people depend on pharmacists, followed by doctors (26.5%), relatives (11.5%), also for this reasons some people do not counsel the doctors, 237 people (50.0%) for high cost, while (30.4%) for distance, and (19.6%) saving time. Moreover, in the study was done in medical college Jabalpur on 2017 the primary reason for self-medication disease is simple (56.5%), and the most common source was pharmacists (78.42%), and that because most people depend on flexibility of pharmacy locations, availability of time, and free counselling. And also most people commonly used repeated prescriptions, (n=214) (62.9%), while (n=126) (37.1%) used new prescriptions, 186 (54.7%) of 340 people don't have enough information of medicine and the most commonly used medicine without prescription is antibiotic, whom 237 (35.9%) followed by analgesic 210 (31.8%), cough syrups 119 (18.0%), and multivitamins 94 (14. 2%). That lead to antimicrobial resistance, increase comorbidity, and difficulty the therapy. Moreover, a lot uses of analgesic lead to abdomen pain and ulcer and may lead to toxicity if use overdose like liver toxicity with paracetamol and prolong hospitalization.

The study revealed that the prevalence of self-medication was 69.32 per cent. Headache (59.6%), fever (60%), cough (51%) and toothache (25%). The most common reason for resorting to self-medication practice was the previous experience of successfully treating a similar illness. (56.2%) people have no any idea of possible harmful effects of using antibiotic, while (n=179) (52.6%) people have an idea of possible harmful effects of using analgesic, and (n=226) (66.5%)from patient doesn't ask about harmful effect of medicine before using it, as well as (n=229) (67.4%) don't know the administration and / or duration of therapy, people continue in self-medication, and there don't know the big problem related to antibiotic uses without prescription, the big problem with self-medication with antibiotics is the resistance of drug, antimicrobial resistance is a current problem in the world, delay the healing and effect on diagnoses.

A study was done in INDIA; Self-medication was significantly more in rural owing to non-availability of doctors (62.01%) when compared with urban residents (38.14%). Self-medication was time-saving and, for minor illnesses. The most important source of drug information for self-medication was family members and relatives (32.30%).

Some people use herbal therapy instead of medicine, 218 (64.1%) of people self-prescribe herbal remedies, (20.1%), (17.5%), (15.6%) cough, cold and diarrhoea respectively.

It is widely believed that social malpractices such as incomplete dosing/courses and random medicine use have contributed to the spread of antimicrobial resistance. Consumers require access to accurate information concerning the potential benefits and risks associated with the use of medicine, including self-medication. To reduce self-medication and help clinical and laboratory consultation includes public education [8].

Limitation

1. The main limitation of this study is that it was a cross-sectional survey. Therefore, it illuminates the current situation

2. Moreover, although the people were encouraged to complete the questionnaire independently, the mutual influence between the persons could not be entirely ruled out

3. The results of the study would have been more generalised if it could involve people from different areas

4. A longer timeframe could have been considered instead of two months as different illnesses come in cycles [4].

Conclusion

This study concluded that self-medication is widely practised by the study population and antibiotics are the most common medication used without prescription. The cost of the doctor visit is the most common reason for self-medication practice. Unfortunately, the majority of the study population have no enough knowledge about the mediations they use; however, pharmacists are the most common source of information.

Due to the high risk of using medicine out of medical control as well as out prescription, there is an extreme need for strict law enforcement to limit purchase of medicines without prescription; it is a time to raise awareness of people general on self – medication as general and improving communication with referral system between pharmacists, patients and physicians. Community awareness programmes, educational interventions should be conducted about the side effects of self-medication.

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