

THE PREVALENCE OF SELF-MEDICATION PRACTICE AMONG NON-MEDICAL STUDENTS OF ALEPPO UNIVERSITY

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Received: 11 April 2017, Revised and Accepted: 21 April 2017

ABSTRACT

Objective: This study aims to evaluate the prevalence of self-medication among the non-medical students of Aleppo University and to assess the factors related to this practice.

Methods: A descriptive, cross-sectional questionnaire-based study was conducted among undergraduate students in different non-medical faculties within Aleppo University using pre-validated structured questionnaires.

Results: The prevalence of self-medication in this study was 59% with most frequently reported symptom being headache (95.2%) followed by fever (76.5%). The two main reasons for self-medication were the frequency of disease (79.8%) and knowing its treatment (39.5%). Antitussive (72%) and vitamin (65.3%) were the two most frequently consumed medications (92.1%) as pharmacy is the main source of drugs to practice self-medication.

Conclusion: The potential problems of self-medication should be emphasized to the students, and education on irrational use of drug should be advocated.

Keywords: Self-medication, Practices, Students, Questionnaire, Aleppo University.

INTRODUCTION

Every day, people throughout the world act on their own for their health; they practice self-care. In some instances, they do so through self-medication, which is now increasingly being considered as a component of self-care [1].

Medicines for self-medication are often called non-prescription or "over the counter" (OTC) and are available without the advice of a physician either for diagnosis, prescription, or surveillance of treatment. This includes acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle, or using leftover medicines stored at home [2].

Although OTC drugs are meant for self-medication and are about proving efficacy and safety, their improper use due to lack of knowledge of the correct dose, side effects, and interactions could have serious implications, especially in extremes of ages (children and old age) and special physiological conditions such as pregnancy and location [3,4]. Responsible self-medication is usually used to prevent and treat symptoms and ailments that do not need medical attention or consultation. This reduces the pressure on medical services, especially when these are limited. For those who are living in rural areas where the access to medical services would be difficult, patients are able to control their illness without the need to go to hospitals or other health-care providers. In addition, self-medication can reduce health-care costs [5-8].

Studies on self-medication show that these practices are influenced by many factors, such as education, family, society, law, availability of drugs, and exposure to advertisements [9-14]. A high level of education and professional status has been mentioned as predictive factors for self-medication [9,13]. The reasons for self-medication mentioned in the literature are mild illness, previous experience of treating similar illness, economic considerations, and lack of availability of health-care personnel [10,11,15-17].

Drugs that are prone to self-medication include analgesics, antimalarials, antibiotics, and cough syrups, among others [18]. Self-medication with antibiotics occurs in many developing countries where drugs are not well regulated. Hence, there is easier access to prescription or OTC medicines without prescription. Self-medication has many risks, it could cause bacterial resistance to such antibiotics, and it may precipitate the emergence of multiple-resistant organisms that would be difficult to treat and this has caused increased morbidity [19,20]. Moreover, there is always a risk of interaction between active ingredients of hidden preparations of OTC drugs and prescription medicines, as well as increased risk of worsening of existing disease pathology.

Good self-medication can also provide benefits such as lowering the costs of community-funded health-care programs and increase the availability of health care to populations living in rural or remote areas [21]. In a world of scarce government and in many countries, scarce individual resources, responsible self-medication should be a cornerstone of health-care provision and health policy [21].

Objective

This study aims to evaluate the prevalence of self-medication among the non-medical students of Aleppo University and to assess the factors related to this practice.

METHODS

Study design

This cross-sectional descriptive study was carried out at Aleppo University between November and December 2015. The questionnaires were distributed in the morning in nine different non-medical colleges where each participant replied directly to the questions and return it.

Study tool: The questionnaire

A pre-validated self-filled questionnaire containing 18 closed-ended questions was used for the study. The questionnaire consisted of four

sections. The first section contained questions regarding demographic information such as sex, type of college, and study year. In addition, participants were asked whether they have practiced self-medication in the past year. The second section of the questionnaire consisted of questions related to the therapeutic classes that respondents reported using in self-medication practices. Respondents were presented with a list of therapeutic classes from which to choose. The third section of the questionnaire focused on the health conditions that respondents would self-treat. In the fourth section of the questionnaire, respondents were asked to select and state the reason(s) for practicing self-medication. The fourth part also contained questions regarding who recommended the self-treatment of the respondent.

Statistical analysis

Data were coded, entered, and analyzed using the Statistical Package for Social Sciences program (SPSS) version 18. Descriptive results were expressed as frequency and percentage; Chi-square statistical analysis was used to test for significant associations between each variable and the self-medication practice.

RESULTS AND DISCUSSIONS

Characteristics and self-medication of the study population

Of the total of 640 questionnaires distributed to be filled by respondents, 608 were filled completely and collected, which gives the response rate of 97.97%. Moreover, 19 (3%) of the questionnaires were rejected due to incomplete information. Age, sex, college, and study year distribution are shown in Table 1. There were 39.6% males and 60.4% were females. Despite trying to distribute the questionnaires uniformly between students from different study classes, the lowest percentage of the participants in this research was for the fifth class, 69.6%.

The percentage of self-medication reached approximately 59% among studied sample of Aleppo University students; this percentage was similar to a study which was achieved in Saudi Arabia 64.8% [22], and in Pakistan 76% [23], whereas in Palestine, the percentage reached 98% [24]. Unfortunately, there was no available information about self-medication among the rest of Aleppo community which makes it difficult to compare the range of prevalence of self-medication phenomenon among the university students with the rest of the society. However, this study reflects the prevalence of this phenomenon in the

rest of society because the answers of students might be a reflection of what is happening in their families.

The males who practiced self-medication is more than females, without a statistical difference (p=0.06). This finding was similar to which was achieved in Saudi Arabia [22] and Palestine [24], while in India [25] and Nigeria [26], the difference was significant.

Health insurance did not affect significantly self-medication practice of participants (p=0.7). The students who have not subject to health insurance depend greatly on self-medication to reduce the cost of medical consultation.

Diseases/symptoms self-medicated

It was noticed that the most common symptom self-medicated by participants was headache (95.2%) (Fig. 1). This was in accordance with studies performed in Palestine [29], Saudi Arabia [27], Pakistan [28], and Ethiopia [27]. The second most common symptom was fever (76.5%) and then cough (74.2%), while fever was the most common symptom in India [25] and Nepal [28], followed by headache. In Egypt, the most common symptom was gastrointestinal problems and then headache [29]. It was noticed that the bronchitis and urinary infections self medicated rate were low in the current study, whereas in Palestine [24], the least common health situations in self-medication

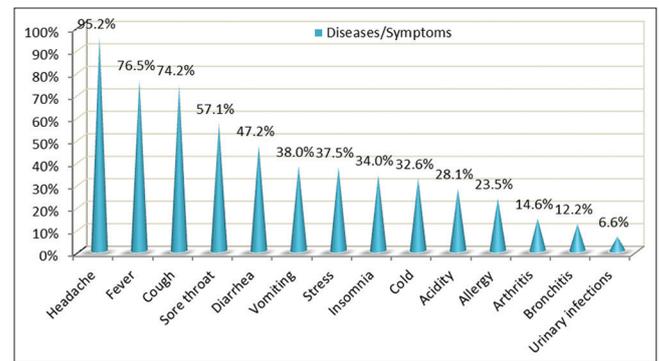


Fig. 1: Diseases/symptoms self-medicated by participants

Table 1: Self-medication of participants

Characteristics	Total	Self-medication		Chi-square (p value)
	N	No (%)	Yes (%)	
Gender				
Female	367	162 (44.1)	205 (55.9)	0.06
Male	241	88 (36.5)	153 (63.5)	
Faculty				
Science	90	33 (36.7)	57 (63.3)	0.9
Agricultural	60	24 (40.0)	36 (60.0)	
Engineering				
Law	61	26 (42.6)	35 (57.4)	
Literature	94	43 (45.7)	51 (54.3)	
Information Technology	57	28 (49.1)	29 (50.9)	
Technical Engineering	39	8 (20.5)	31 (79.5)	
Electrical Engineering	54	25 (46.3)	29 (53.7)	
Mechanical Engineering	53	27 (50.9)	26 (49.1)	
Faculty of Economics	100	36 (36.0)	64 (64.0)	
Year of study				
1 st year	114	40 (35.1)	74 (64.9)	0.3
2 nd year	140	64 (45.7)	76 (54.3)	
3 rd year	149	57 (38.3)	92 (61.7)	
4 th year	154	63 (40.9)	91 (59.1)	
5 th year	51	26 (51)	25 (49)	
Health insurance				
Yes	136	58 (42.6)	78 (57.4)	0.7
No	423	172 (40.7)	251 (59.3)	
Partial	49	20 (40.8)	29 (59.2)	

were losing weight (6.1%) and respiratory (8.7%), and in Saudi Arabia, the gastrointestinal problems were the least common symptom (5.9%) [27].

Therapeutic classes used

This study showed that the most drugs categories used by participants in self-medication were cough relievers and then vitamins (Fig. 2). Using cough drugs for self-medication is very alarming because the use of dry cough antitussive by a patient suffering from a productive cough may cause asphyxia. About 45% of participants used antibiotics without prescription which indicates the insufficient awareness of the health consequences of antibiotic misuse, bacterial resistance, and its harm to the individual and the community. A similar result was achieved in Egypt [29]. The lack of awareness on correct usage of antibiotics has been recorded before in Aleppo (2015) as 54% of participants were using antibiotics without prescription for adults, and the percentage came down to about 35% for using antibiotics without prescription for children [30]. In comparison, the usage of antibiotics for self-medication was relatively low in Palestine, India, Ethiopia, and Nepal [24,25,27,28]. Analgesics were the most drugs used in self-medication in Palestine [24], Saudi Arabia [27], Pakistan [8], and Ethiopia [27], whereas antipyretics were the most used in India [25].

Aspects of self-medication

Knowing the disease and treatment was the most common reason pushed the participants to self-medication, followed by having proper medical information by participants (Table 2). This is similar to a study in Palestine [24] and India [25]. In Saudi Arabia [27], Pakistan [28], and Ethiopia [27], having experience was the first reason that leads to self-medication.

The pharmacist's advice (47.4%), directing by a family member (41.3%) and previous prescription (37.3%) were the important principles that the students depended on to choose the drug used in self-medication (Table 3).

The students of non-medical colleges depended more on a pharmacist's advice to choose the drug and this emphasizes the role of the pharmacist in the medical care and the positive directing of individuals of society

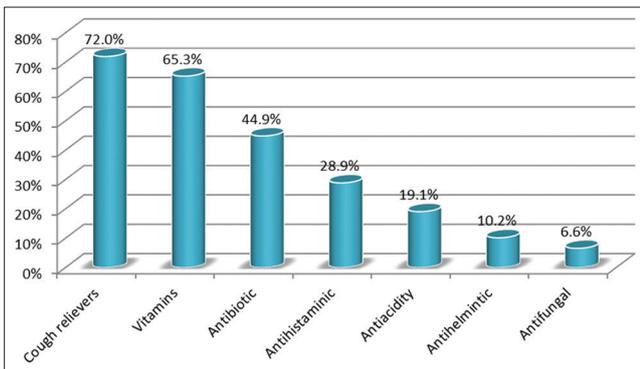


Fig. 2: The drugs used for self-medication

Table 2: The reasons that pushed participants to practice self-medication

The reasons that pushed the participants to practice self-medication	The number of students (%)
The disease is frequent and its treatment is known	485 (79.8)
Having proper medical information	240 (39.5)
Saving time	145 (23.8)
Saving money paid to the doctor	133 (21.9)

who practice self-medication. However, in Ethiopia [27] and Saudi Arabia [27], the participants depended on their experience to choose the drug used in self-medication.

The most common resource of drugs used in self-medication is buying the drug from the pharmacy (92.1%) while about only (18%) of participants depended on remaining drugs from a last prescriptions, while in India [25] and Egypt [29] the greatest dependence was on drugs remaining of a last prescriptions (Table 4).

The results show that in spite of most participants keep drugs at home to reuse when they need them and which enhances the prevalence of recorded self-medication phenomenon in our study, but it was practiced positively by participants because of their reading the enclosed leaflet and the interest of knowing the side effects of drug as well as determining the dose through it (Table 5).

CONCLUSIONS AND RECOMMENDATION

The practice of self-medication is high (59%) among Aleppo University non-medical students, irrespective of their gender, colleges, the year of study and having health insurance. Headache, fever, and cough were the most common symptoms, which were self-medicated. Analgesics and cough drugs were the most commonly reported types of medications consumed in self-medication. Antibiotics were also common in self-medication practice (45%). The most important reasons behind self-medication practice were the frequency of disease and knowing its treatment. The use of antibiotics in self-medication calls for urgent health policy intervention. Thus, the potential problems of self-medication should be emphasized to the students and education on irrational use of drug should be advocated.

Table 3: How to choose the drug used for self-medication

Principles that are depended on to choose the drug used in self-medication	The number of students (%)
A pharmacist's advice	288 (47.4)
Directing by a family member	251 (41.3)
Previous prescription	227 (37.3)
Self-experience	186 (30.6)
A friend's advice	52 (8.6)
Written or visible advertisement	22 (3.6)

Table 4: The resource of the drug used in self-medication

The resource of the drug used in self-medication	The number of students (%)
Buying from the pharmacy	560 (92.10)
Remaining from the last prescriptions	110 (18.10)

Table 5: Information related to the using of drugs during the self-medication

Question	Yes (%)	No (%)	Sometimes (%)
Do you read the enclosed leaflet when you buy a drug?	73.40	8.60	18.10
Do you commit to the required dose which is on the leaflet?	67.80	14.60	17.60
Are you interested in knowing the side effects of the drug you take?	75.20	12.20	12.70
Do you keep the drugs at home to use when you need them?	80.80	5.90	13.30

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