Medical and Pharmaceutical Journal

Volume 2 Issue 4

Med. Pharm. J. Original article

Evaluation of Knowledge, Attitude and Practice of Self-Medication among Pharmacy University Students: A Cross-Sectional Study in Zawia, Libya

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DOI: 10.55940/medphar202361
Submitted: 15- Jul-2023
Accepted: 21- Sep -2023
Published:26-Dec-2023

Abstract

Background: The term "self-medication" describes the practice of using pharmaceuticals to address illnesses that the patient has self-diagnosed without seeking medical advice. Self-medication and excessive drug usage have detrimental effects on the economy and public health.

Objective: the objective of this study is to assess the prevalence of self-medication practices and to evaluate the current knowledge, attitude, and behavior regarding self-medication among Pharmacy School students in Zawia- Libya.

Methods: A cross-sectional study was conducted in Pharmacy School students. Participants were asked to answer closed ended questions to evaluate their knowledge, attitude and practice of self-medication.

Results: This study comprised of 254 students. The students were divided into five groups according to their grades. This research comprised of 254 students. The students were divided into five groups according to their grades. The majority of students (93.70%) utilized self-medications, and the rest of the students (6.30%) didn't use it. The majority of students (N=171, 71.84%) who self-medicated offered arguments for when going to the doctor wasn't necessary for mild ailments. Headache accounted for 183 cases (76.89%) of symptoms for which self-medication was used, followed by cough, cold, and sore throat in 157 cases (64.96%) and hyperthermia in 107 cases (44.95%). Analgesics (74.70%), and antibiotics (51.2%) were the most common self-medicated drug groups. A large percentage of students stated that they were aware of the need of reading labels and package inserts and adhering to any directions that were included 199 (83.61%).

Conclusion: Students at Pharmacy School have a good knowledge and great perspective on self-medication and practice the right behaviors in self-medication.

Keywords: self-medication, Knowledge, Attitude, prevalence, use, university students, Libya.

INTRODUCTION

The term "self-medication" describes the practice of using pharmaceuticals to address illnesses that the patient has self-diagnosed without seeking medical advice. Self-medication and excessive drug usage have detrimental effects on the economy and public health [1]. It is the first option, which makes it a common practice worldwide and is a prominent feature of health care today [2].

According to the International Pharmaceutical Federation (FIP) and the World Self-Medication Industry (WSMI), self-medication is the use of non-prescription medicines by people on their own initiative.

Pharmacists have a vital role in providing patient information about drug usage, possible effects and side effects, and the proper usage of drugs; however, for many disease states, the patient should contact the doctor to ensure proper diagnosis of the disease [3]. One of the doctor's responsibilities is to diagnose a medical illness and provide information about the disease, drug, and treatment steps. It is like a chain doctor to diagnose the illness, and the pharmacist disperses the proper use of medication. This chain sometimes breaks when the patient is not in contact with doctors regarding the drugs and taking medication due to his knowledge; this step may be beneficial if he takes pharmacist advice regarding over-the-counter medication and may decrease the time and number of clinic visits and have positive feedback on patient Health when he and the health care providers work correctly [4]. Moreover, self-medication, when practiced appropriately, may have a role in the treatment and prevention of disease that does not require visiting physicians and has economic and health advantages to the patient. Moreover, this can increase health knowledge and awareness, and this builds strong confidence between the patients and health care providers [4].

On the contrary, A number of studies have shown that excessive self-medication wastes money, raises direct expenses (such as treatment and hospital stays), increases resistance to infections, and generally poses serious health risks like adverse drug reactions, food-drug interactions, medication-related problems (MRPs), extended suffering, and drug dependence. Additionally, it results in improper administration, misdiagnosis of oneself, choice of therapy, and concealment of serious illness [5-7] Moreover, it is a standard procedure, especially in nations where access to prescription medications is unrestricted and there are lax controls. Self-medication is common among people for a variety of reasons, such as the higher costs associated with health care, low socioeconomic status (SES) individuals, ignorance, lack of time, lengthy wait times at the doctor's office, lack of confidence in the doctor's medical expertise, prior experience with the medical condition and its treatment, and the absence or unavailability of nearby health facilities [8].

Taking charge of one's own health care, being responsible in avoiding or treating minor ailments, having access to chances for education on particular health concerns, convenience, and cost savings due to the reduction or avoidance of

medical consultations are some of the individual benefits of self-medication [9].

Effective self-medication can have a positive impact on the community by reducing the needless use of limited medical resources on minor ailments, lowering the cost of community-funded health care programs, decreasing worker absenteeism for minor symptoms, relieving pressure on medical services in situations where there is a shortage of medical personnel, and improving access to healthcare for those living in remote or rural areas [9].

Self-medication is much more common among physicians, nurses, pharmacists, and medical students than among the general population [10]. Many studies have found that literate people self-medicate more than illiterate people [11,12].

Given the biology and physiological characteristics of teenagers, it is expected that young adult students who self-medicate will have a low-risk perception, higher understanding of medicines and how to use them, and avoid seeing doctors for medical conditions [13,14].

The efforts that need to be done in their profession and training are required since the pharmacist plays a crucial role in teaching clients about how to utilize medications meant for self-medication [15]. Assuring the highest possible patient outcomes and quality of life requires pharmacists to recognize, address, and prevent drug-related issues. It is the duty and opportunity of ambulatory pharmacists to encourage the safe, appropriate, efficient, and economical use of all pharmaceuticals, especially those that patients select for themselves. Pharmacy owners must to counsel their clients to see a physician before beginning any self-medication regimen [16-18].

In addition, pharmacists serve as communicators, quality drug suppliers, trainers and supervisors, collaborators, and health promoters. Pharmacy students could become future pharmacists, advising patients on how to use medications safely. Because of this, trained practitioners are crucial to patient care, especially in this sector. Thus, it's crucial to comprehend the behaviors and attitudes related to self-medication in this demographic [18]. Self-medication is very common in Libya, and it is posing a new challenge to healthcare providers. This research will demonstrate the magnitude of the problem in the community, allowing the relevant authorities and the community to intervene. However, there are limited studies conducted in Libya regarding "self-medication." Moreover, the world needs to conduct this research for each period of time because of the development of the world; there have been several changes in human behavior, one of which is self-medication."

The aim of this research was to ascertain the prevalence of self-medication among University of Zawia Pharmacy School students. Additionally, the study aimed to evaluate pharmacy students' understanding and opinion of self-medication and its negative consequences, as well as the reasons behind not seeking medical advice and common ailments for which they resort to self-medication.

MATERIAL AND METHODS:

Study design: This study adopted a

survey questionnaire design to explore the use of self-medication among university students in the Faculty of Pharmacy - University of Zawia. A cross-sectional study was conducted among students, and the data was collected over a period of two months between March and April 2018.

Study questionnaire: A questionnaire was developed based on reported factors influencing individual choice of using self-medication therapy. The questionnaire consisted of 14 items that were divided into two sections as follows: demographic information and use of self-medication therapy. The questionnaire was written in English and Arabic language.

Study participants: A sample of 254 students were included in this study. The study sample represented students at the Faculty of Pharmacy at the University of Zawia. Students represented all academic years.

Analysis of data: Participants' responses to each question were assessed by calculating the frequency and percentage, which were done in Microsoft Excel 2013.

RESULT:

Socio-demographic characteristics:

The data from 254 students were analyzed. The study sample represented students at the Faculty of Pharmacy in University of Zawia. Students represented all academic years. The majority of sample consisted of females 236 (92.91%) while the male consisted of 18 (7.08%) and the age of the students in this study ranged from 18 years to 25 years as shown in Table 1.

Table 1. Socio-demographic characteristics of participants

Factor	Category	Frequency and Percentage
Student	First years	41 (16.14%)
	Second years	52 (20.47%)
	Third years	37 (14.56%)
	Fourth years	40 (15.74%)
	Foundation year	84 (33.07%)
Sex	Male	18 (7.08%)
	Female	236 (92.91%)
Age	18-20	125 (49.21%)
	20-22	52 (20.47%)
	22-23	37 (14.56%)
	23-25	40 (15.74%)

Use of self- medication

Figure 1 demonstrates the drug utilization by the university students. Out of 254 students a total of 238 (93.70%) students took self-medication, while the remaining 16 (6.30%) students have never taken self-medication.

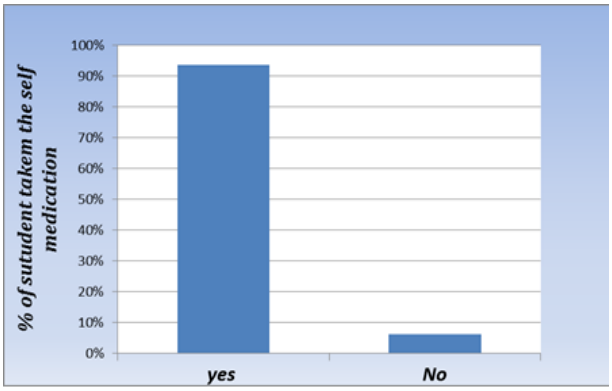

Figure 1: Percentage of self-medication taken by the students.

Students' experiences with self-medication

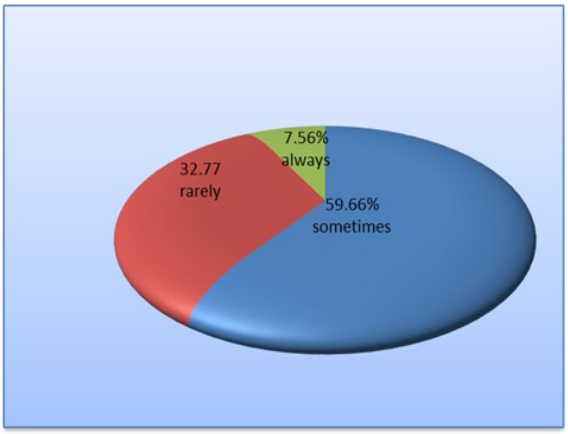

Figure 2: Students' experiences with self-medication

In Figure 2, the majority of students (n=142, 59.66%) used self-medication occasionally, and 32.77 % (n=78) of participants used self-medication rarely, while 7.56% (n=18) of respondents always used self-medication.

Sources of self-medication

Most of information about the drugs for self-medication was obtained from the pharmacy (n=169, 71%), followed by relatives/friends (n= 47, 19.74%), leftovers from previous drugs (n=42, 17.64%), textbook (n= 10, 4.20 %), and advertisement (n=6, 2.52 %) (Table 2).

Table 2. Sources of self-medication

Sources	Frequency and percentage
Pharmacy	169 (71 %)
Relatives/friends	47(19.74%)
Leftover from previous medicine	42(17.64%)
Textbook	10(4.20%)
Advertisement	6 (2.52%)

Reasons for using self-medication

In this study, the most common reasons for self-medication were perceptions of minor illness (71.84%), faster relief (27.23%), and prior knowledge about the medication (15.12%). In addition, many reasons for self- medication reported in the present study included time-saving, easy and convenient way, and poor-quality services.

The lack of nearby physicians, pharmacies, and health care facilities, as

well as the financial burden of a family, make self-medication a more viable option (Table 3).

Table.3 Reasons of self-medication

Reasons	Frequency and Percentage
No need to visit the doctor for minor illness	171(71.84%)
Quick relief	65(27.23%)
Time saving	24(10.08%)
Prior experience	36(15.12%)
Economical	13(5.46%)
Ease and convenience	27(11.34%)
Crowd avoidance	3(1.26%)
Poor quality services	12(5.04%)
Unavailability of physician, pharmacy and health care center near residence	9(3.78%)

Indication for Self-Medication

The overall prevalence of self-medication among undergraduate students was found to be high (93.70%), with headache accounting for the highest percentage (76.89%), followed by cough, cold, and sore throat (65.96%) and fever (44.95%). Other symptoms and diseases reported by self-medicated participants were menstrual symptoms (29.83%), stomachache (26.05%), and skin disease and injury (20.16%) as shown in Table 4.

Utilization of self-medication among the participants

Analgesics (74.7%) and antibiotics (51.2%) were the most commonly used medications for self-medication. The findings revealed that (25.6%) self-medicate with multivitamins, while (7.9%) using respiratory drugs (Figure 3).

Table. 4 Indication of self-medication among university students

Condition	Frequency and Percentage
Headache	183(76.89%)
Fever	107(44.95%)
Cough, cold , sore throat	157(65.96%)
Stomachache	62(26.05%)
Menstrual symptoms	71(29.83%)
Vomiting	21(8.82%)
Diarrhea	20(8.40%)
Constipation	32(13.44%)
Skin disease/injury	48(20.16%)
Ocular symptoms	6(2.52%)

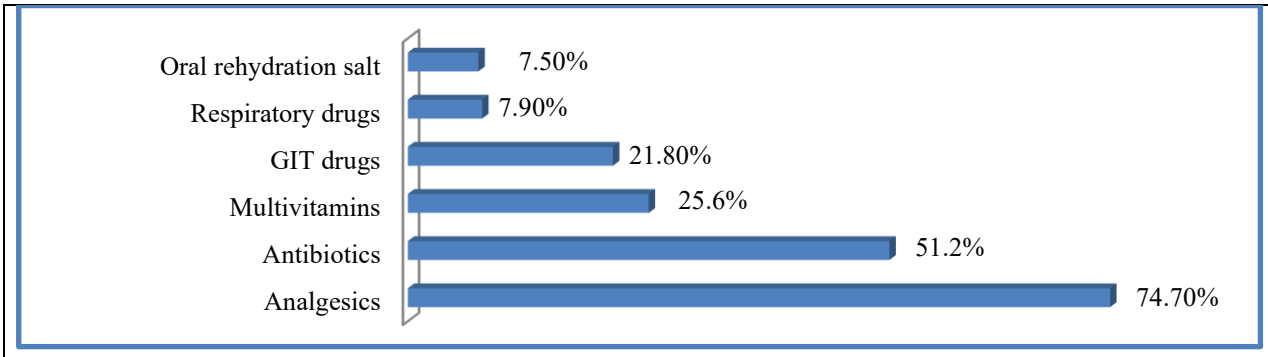

Figure 3: self-medication utilization by the participants

Perception about self-medication

Table 5 shows that participants were generally aware of self-medication practice. More than half of the students (53.78%) did not self-medicate if there was a risk of adverse drugs having a negative effect on their health, and approximately 50.42% of students denied taking any drugs if they lacked knowledge about medicines. The results show that the self-medication may increase the risk of using the wrong drugs (36.55%). Statistically high percentage of pharmacy students aware to read the package inserts and labels and followed the instructions written (83.61 %). Approximately 82.35% of participants were aware of the significance of medicine expiry dates (Table 6).

Table.5 Perception of self-medication

Factors	Frequency and Percentage
Lack of knowledge about medicines.	120(50.42%)
Risk of adverse effects	128(53.78%)
Risk of using wrong drugs	87(36.55%)
Risk of misdiagnosing	41(17.22%)
Risk of drug dependence	54(22.68%)

Table.6 Awareness of various aspects of self-medication

Parameter	Frequency and Percentage
Read package inserts and labels and followed the instructions written on them	199(83.61%)
Dose and frequency of a drug	184(77.31%)
Adverse effects of drug	169(71%)
Expiry date of drug	196(82.35%)
Importance of completing course of medicines	165(69.32%)

DISCUSSION

For minor illnesses, self-medication with full knowledge of the drugs and the condition to be treated may be beneficial. The risks, however, must not be overlooked. They include incorrect dosing and prolonged drug use. Furthermore, drug-drug interactions may be harmful to one's health. This study aimed to determine the prevalence and awareness of self-medication among pharmacy students at University of Zawia in Zawia city[16,17].

This study focused on college pharmacy students since, in contrast to other student groups or the general public, they possess sufficient theoretical understanding of medicine and exhibit greater caution regarding the safety of medications. Students employed self-medication at a very high rate; they also demonstrated appropriate behaviors when self-medicating, as well as excellent understanding and perspective about the practice[18].

Self-medication appears to be a common practice among students in the current study for non-serious health problems, with a prevalence of 93.70% (n=238) reported, which was similar to the 96.60% (n =144) reported in a study conducted in the UAE [19].

There is a notion that there is no correlation between the incidence of self-medication and educational attainment. Among healthcare practitioners, pharmacists possess the most knowledge and accessibility to prescription and over-the-counter pharmaceuticals and how to utilize them to treat a wide range of illnesses. These elements increase the likelihood of self-medication [20]. In terms of self-medication frequency, the majority of students (n=142, 59.66%) used self-medication occasionally, and 32.77 % (n=78) of participants used self-medication rarely, while 7.56% (n=18) of respondents always used self-medication. In addition to providing drugs, pharmacists also offer healthcare services. By giving patients knowledge about the many kinds of medications, they can have a significant impact on the decisions they make about self-medication. Pharmacists can also be very helpful in giving patients information about medications and dosages,

particularly for over-the-counter items. As part of their patient care services, pharmacists should give patients advice, educate the public about medical products, and give them comprehensive information about medication effects, dosages, durations, possible side effects, and drug interactions [20]. In this study, we found that the most common source of information regarding self-medication was pharmacy 169 (71%), followed by relatives/friends 47(19.74%), and other sources such as leftovers from previous drugs, textbooks, and advertisements. This is consistent with the findings of previous studies at the University of Dammam City in Saudi Arabia [21]. The majority of the students who used self-medication stated that some reasons in favor were that there was no need to visit the doctor for minor illnesses 171 (71.84%), it was quick relief 65 (27.23%), and they had prior experience.

The current study's findings (Table 4) were consistent with the previous study by Lemamsha et al. and Zafar et al. in that headaches are the most commonly reported reason (59.9% and 72.4%, respectively) for seeking self-medication [22,23] .In addition, Alshogran et al., have also reported that the most common reason for self-medication (81.9%) among Jordanian students was headaches [24,25].Symptoms for which self-medication was practiced include headache 183 (76.89%) followed by (cough, cold, sore throat) 157(65.96%), and fever 107(44.95%). This regard the Association of the European Self-Medication Industry, which reported that the most commonly used self-medicating drugs were antibiotics and pain relievers, and which listed common diseases in self-medication as pain, allergies, colds, sore throats, coughs, and diarrhea [26].

Even for seemingly little ailments, individuals need to be informed on when to seek medical assistance and when to self-medicate. Even though they were aware that using antibiotics for self-medication might lead to the development of bacterial resistance, over half of the participants in this research (51.2%) did so. More focus on this matter is necessary to educate the public and students alike on the responsible use of antibiotics. This result is in line with earlier studies [27-30].

Analgesics (74.70%) and antibiotics (51.2%) were the most commonly used self-medication drug groups. This is consistent with the findings of an Indian study, which found that participants used 91% of analgesics and 53.5% of antibiotics [31].

Based on students' knowledge about self-medication, the students show good knowledge for not taking self-medication that was a risk of adverse effects 128(53.78%), lack of knowledge about medicines 120 (50.42%), and risk of using wrong drugs 87 (36.55%). Similar findings were found in the study at the University of Sharjah [19].

The majority of students (83.61%) stated that they read package inserts and labels and followed the instructions on them. This finding supports previous research [29,30]. Furthermore, the findings of a previous study [23,33] show agreement with the current study regarding student awareness of the importance of completing medical courses.

CONCLUSIONS

Self-medication among students seems to be a common practice for non-serious health problems. Students at Pharmacy School have a good knowledge and great perspective on self-medication. All people should receive proper health education. We can have a huge impact on large segments of the population by consistently adopting an educational attitude. Adult education programs on the use and misuse of self-medication are needed, with a focus on pharmacists' roles in self-medication.

Acknowledgment

Funding

None

Author contribution

All authors contributed equally to this research

Ethical statement

This article is a survey article. There is no human or animal sample of biological substance in this research; however, we received ethical registration of this article from the ethical committee at our university. Each person who enrolled in this research was informed and (signed) that his survey would be part of the research.

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How to cite this article:
Smeda HA., Almagherbi NA, Hassan RS., Algool SM.. Evaluation of Knowledge, Attitude and Practice of Self-Medication among Pharmacy University Students: A Cross-Sectional Study in Zawia, Libya. Med. Pharm. J. 2023;2(4):193- 205.
DOI: 10.55940/medphar202361
Available from: http://pharmacoj.com/ojs/index.php/Medph/article/view/61