



ASSESSMENT OF PHARMACISTS TOWARD SELF-MEDICATION

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ABSTRACT

Background: Self-medication means the use of medications to treat a disorder or illness that we diagnose ourselves. Although self-care medications are one way to reduce health care costs, inadequate self-medication can involve a variety of risks, including medication side effects, recurrence of symptoms, drug resistance and more. The aim of the study was to investigate knowledge of pharmacists towards self-medication. **Methods:** This study was conducted at King Hussein Hospital during July 2021. A total of 100 pharmacists were included. A three-part questionnaire developed by researchers is designed to answer pharmacists' knowledge. Statistical analysis was performed in SPSS 25 software. **Results:** The results showed that self-medication was higher among female (65%). Cough were the most common self-healing disease (93%) and antibiotics (74%) were the most common medications. The main source of information used by those was previous prescription (47%). There was a statistically significant relationship between the level of drug information and the propensity for self-medication ($P = 0.005$). Recurrence was the most common negative complication of self-care. **Conclusion:** It is necessary to give pharmacists continuous education programs about self-medication and its negative effects. The high prevalence of self-treatment and misuse of antibiotics can cause a serious risk to drug resistance.

INTRODUCTION

Self-medication is defined as the use of self-medications for an illness or disease. Excessive use (especially in children or the elderly) of medications prescribed by the physician for himself or other family members is also included in the definition of self-medication.^[1] Prescribing medications without expert advice can lead to many side effects, including drug resistance and side effects.^[2]

Responsible self-medication includes the use of OTC medications and relatively low-risk medications to prevent minor illnesses and reduce medical costs through self-diagnosed disorders or symptoms.^[3] To use prescription drugs safely and effectively, consumers must accurately identify symptoms, set treatment goals and use medications, dosages and the appropriate duration of treatment. In addition contraindications, comorbidities, possible side effects and finally should be closely monitored.

The prevalence of self-medication varies from country to country. For example, in Spain,^[4] Chile,^[5] Vietnam,^[6] China,^[7] and India,^[8] the prevalence of self-treatment was 12.7, 75%, 40-60, 32 and 71% respectively. In Iran, the percentage is relatively high, much of which is self-care.^[9] Factors such as sex, income, and medication data may affect the desire for self-treatment.^[10]

Pharmacists and physicians play a vital role in helpful counseling for the safe and effective use of medications. Therefore, the aim of this study was to evaluate the knowledge self-medication among pharmacists.

METHODS

A descriptive cross-sectional study was conducted during July 2021 among pharmacists at King Hussein Hospital in Jordan. A questionnaire prepared by the researchers was used to collect data. Assessments for the evaluation of knowledge, approach and performance were divided into three sections.

The first section focus in demographic The second section focus in pharmacists residences and specialists acknowledge toward self treatment. The final section contain questions that focus in attitude of pharmacists residences and specialists toward self treatment.

Statistical analysis

25 SPSS for data analysis software was used. And many variables and standard deviation is explained in the percentage of adjustment. The distribution of variables were to be estimated by the Kolmogorov Smirnov test. According to the law by collecting a number of variables to use t-test (to compare of two groups) and, one way ANOVA (to compare more than three group) and agreement between the qualitative variables to these

groups through a square-test. A value of $P < 0.05$ was statistically significant.

RESULTS

Demographic information

In this study, 100 pharmacists were interviewed, of whom 35(35%) were men and 65 (65%) were women, all

of whom completed the survey. The average age of the students was 26.92 ± 1.8 years. Among the participants, 63 (63%) and 29(29%) were residence students and pharmacist specialist in pharmacy. Demographic information is displayed in the table 1.

Table 1: Demographic features of 100 pharmacists.

		N
Gender	Male	25
	Female	65
Field of study	Clinical pharmacy residency	31
	Pharmacy supply residency	32
	Clinical pharmacy specialists	14
	Pharmacy supply specialists	15
	general	8

Students' knowledge and attitudes toward self-medication

When participants were asked to name three over-the-counter medications (e.g., OTC medications), 45% were able to give completely correct answers. The majority of clinical pharmacists have moderate awareness toward self medication as shown in table 2. The minority of supply pharmacists have poor level of knowledge among

pharmacists regarding self-medication as shown in table 2.

The majority of respondents have agree that the important of self-medication as shown in table 3. also, the majority of supply pharmacist have good awareness toward OTC medication as shown in table 2. Further results are shown in table 2 and table 3 below.

Table 2: The level of knowledge among pharmacists regarding self-medication.

		Good Awareness	Moderate	Poor
Gender	Male	25 (25)	50 (50)	25 (25)
	Female	34 (34)	38 (38)	27 (27)
Field	Clinical pharmacy	15 (15)	49 (49)	35(35)
	Supply pharmacy	53 (53)	33 (33)	12 (12)

Table 3: Pharmacists attitudes toward self-care treatment.

	Completely agree N (%)	Agree	No Idea	Disagree
Treatment your self is important section	11 (11)	30 (30)	24 (24)	27 (27.)
Do you advice OTC to others?	5 (5)	14 (14)	26 (26)	33 (33)
Need to continuous education program of OTC Treatment?	6 (6)	7 (7)	18(18)	31 (31)

Pharmacists' performance regarding self-medication

Colds, headaches and muscle spasm were the most common self-healing disorders with an incidence of 93%, 60% and 42% respectively (Table 4).

Table 4: Most common diseases treated with self-medication among pharmacist.

Disease	Percentage
Cough	93%
Headache	60%
Muscle spasm	42%
Diarrhea	30%
Nausea and vomiting	25%
Herpes	20%
Stomach ache	15%
Allergy	10%

Drugs used for self-medication

Antibiotics were the most common drugs used for self-medication with a prevalence of 74%. Analgesic (59%) and antiallergy (48%) were another most commonly used drugs (Table.5). Further results are shown in table 5 below.

Table 5: Most common drugs used by pharmacists for self-medication.

Drugs	Percentages
Antibiotic	74%
Analgesic	59%
Antiallergy	48%
Antiacid	60%
CNS drug	10%
Anticough	60%
Multivitamin	30%

Sources of information for self-medication pharmacists are shown in Figure 4. Most respondents (47%) used their past dispensing medication and 39% used their scientific knowledge as shown in table 6.

Table 6: Information sources used by pharmacists to self-care medication.

Prescribed prescription	47%
Academy	39%
Friends	2%
Internet	10%

DISCUSSION

The number of self-medication in Iran and other countries is very different in different population groups. For example, a similar study of medical and pharmacy students in Ethiopia reported a prevalence of 38.5%.^[11]

Meanwhile, 44.8% of the Bahrain,^[12] 78.6% of the Indians,^[13] and 55.2% of Egyptian pharmacists,^[14] reported of OTC medications.

A study conducted among the adult population in Spain also reported a 45% prevalence of self-medication for capital therapy.^[15] A study conducted among German youth showed that the prevalence of self-medication was 8%,^[16]

In another study of patients with GERD in France, 17% of the participants reported self-medicated.^[17]

The results of this study reported that the prevalence of self-medication was more than in developed countries, but similar to developed countries.

In general, the prevalence of self-medication in developed countries is higher than developed countries.^[18]

This may be due to differences in happiness and per capita income, which indicate higher ability to pay for health services, as well as better health services and effective medication monitoring programs in developed countries.^[19]

This may be due to various reasons such as high medical and clinical knowledge of pharmacists better access to the internet and media that promotes drug products, and users benefit from self-medication for them.^[21]

The proportion of pharmacists specialists who had good knowledge in this field was significantly higher than that of residents pharmacists ($P < 0.001$).

In addition, residents pharmacy (educated for two years or more) had more knowledge than general pharmacist ($P = 0.002$).

These observations may indicate differences in training courses in these areas.

Similarly, in a survey of pharmacy students in Addis Ababa, Ethiopia, 47.3% of students were unfamiliar with OTC drugs. In this study, participants' results scores are divided based on the method presented by Isacson and Bingforse.^[11]

Overall, 26.5 of the pharmacists received a poor grade, but 43.5 and 30 respectively, achieved mediocre and good.

At the same time, older resident pharmacists (2 years and older) had higher drug information than younger residents pharmacists (one year old), indicating the effect of training courses on pharmacists' knowledge of drugs.

In this study, the only variable that significantly influenced the approach was the field of study, so that general pharmacists had a more negative attitude than residents pharmacy. This may be due to the extensive knowledge of pharmacists regarding medications. In fact, pharmacists with higher medical knowledge had to take care of themselves. However, there is no statistically significant difference in the prevalence of self-medication between residents pharmacist and specialized pharmacists.

In our study, male pharmacists received more self-medication than female pharmacists. This observation was different from the other two studies that treated women more than men.^[13,14]

In a series of studies; Moreover, there is no significant difference between men and women in this context.^[12,14] A study conducted among students reported that the history of self-medication is related to age, sex, age and field of study.^[22]

In general it seems that many variables affect self-medication and it seems that knowledge is the main factor.

Antibiotics (74%) and painkillers (60%) were the most common self-medication of our pharmacists. In other studies, NSAIDs,^[23,25] antibiotics,^[22,25,26] painkillers,^[22,23] as well as flu medications,^[22] and malaria medications,^[22] were the most common medications used for self-care.

In two previous studies, paracetamol,^[22] and penicillin,^[26] have been reported as the most common drugs for self-care. In a study conducted in Pakistan, OTC drugs were considered to be the most common drugs (98%) used by medical students.^[27]

The use of antibiotics for self-medication in developed countries is very low compared to developed countries.^[28] In a study by Aljinović et al. In Croatia, researchers found that the use of antibiotics for self-medication was higher among health workers than in the general population.^[29] confirming our observations in our study.

In general, the amount of antibiotics of self-medication available here is similar to most studies in Iran and more than reported in other regions of the world. Therefore, the risk of antibiotic resistance may pose a serious threat to our society in the future.

In terms of student performance, coughing and colds along with headaches were the most common illnesses they treated themselves. In a study of 360 Iranian women, fever, fatigue and anxiety were the most common self-management disorders.^[24] In another study conducted on 570 students in Rwanda with colds, fever and cough were the main causes of self-medication.^[26]

Therefore, these results were consistent with the results of many similar studies.^[14,29,30] The most important reason for self-care is the non-acute nature of the disease. It is based on a previous report.^[31]

Economic deficiencies and insurance problems have been reported as other causes of self-medication.^[24,32] In a study conducted in Brazil, nursing students corrected self-medication and found that they were unaware of the effects of this complication and its possible side effects.^[25]

In another report, the poor behavior of health professionals, clinics that are far away and the low effectiveness of medications are an excuse for self-medication among students.^[22] Another reason people encourage self-medication is to store medications at homes.

Adverse drug interactions, drug dependence, and incorrect drug selection due to misdiagnosis are among

the factors that endanger the health of people treated with self-medication.^[33]

The importance of self-medication side effects is becoming clear, and it is clear that people cannot follow the correct medication instructions, overdose or even use prescription and over-the-counter medications, which can increase health risks. Complications.^[23]

Therefore, it seems that pharmacists need more education about the dangers of irresponsible self-medication.

CONCLUSIONS

Responsible self-medication is one of the main ways to reduce the costs of medical care, so the role of pharmacists in this field is of particular importance.

Therefore, pharmacists should be considered as key partners in the public health system, and residents pharmacists, potential health professionals, should learn more about good practices of pharmacists and responsible self-medication.

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