Original Research Article

Knowledge, Attitude and Practice of self-medication among Pharmacy Students in North Cyprus

Aim: The aim of our study is to assess the attitude, knowledge and practice of self-medication among fifth year Pharmacy Students at Near East University in Northern Cyprus.
Study design: A cross sectional study.
Place and Duration of Study: The study was conducted in faculty of pharmacy in Near East University in Northern Cyprus on December 2018.
Methodology: Self-administered questionnaires was conducted using which comprise 7 parts among fifth year pharmacy students who were available during the study time.
Results: A total of 77 questionnaires were distributed to be filled by respondents, all of them were filled completely and collected. Among the participants, 39 (51%) with the prevalent age group of 22-26 years old and most of students in our study were from Turkey 42 (58.3%). 25.7% of students are visiting a physician when they have a disease however 25% of them don't comply with physician prescription. Headache (16.8%) and common cold (14.0%) were the most frequently reported illness for which self-medication was taken. Analgesic medicines (37.4%), followed by vitamins (29.7%) and antibiotic (13.5%), are used commonly as self-medication. Nearly all of students 95.9% know the meaning of OTC and prescription only drugs. About 30.7% of students medicate themselves because of it isn't a serious disease. The main source of information about self-medication for students was taking the advice from pharmacist (29.7%). 26.8% of students were agree that pharmacists are good source of information for minor medical problems, 23.0% and 18.2% were agree that self-medication is acceptable for pharmacy students however 4.1% accept that self-medication is not acceptable at all and it would be harmful.
Conclusion: The practice of self-medication is prevalent amongst fifth year pharmacy students even with adequate knowledge and awareness about the consequences. Proactive pharmacist may contribute in management of minor illness and rationalized self-medication.

Keywords: self-medication; pharmacy students, self-care;, prevalence, clinical pharmacy, North Cyprus

1. INTRODUCTION

Self-medication is a global component of self-care practice and can be defined as "the selection and use of medicines/medicinal products, including herbal and traditional products on one's own

initiative, or on the advice of another person, without consulting a physician either for diagnosis, prescription or surveillance of the treatment [1, 2].

The practice of self-medication is a growing trend [3] which generally involves over-the-counter (OTC) medications which are available without prescription in pharmacies but also includes prescription-only medicines (POM) [4], reutilizing/resubmitting a previous prescription, sharing medications with relatives or members of one's social circle, consuming leftover medicines already available at home, fail to comply with prescribed recommendations either prolonging it or interrupting it too early or decreasing or increasing the originally prescribed dose [5].

Self-medication has both benefits and risks. If done appropriately, self-medication can readily relieve acute medical problems, save scarce medical resources from being wasted on minor conditions, reduce the burden on medical services, decrease the time spent in waiting to see the physician, and save cost especially in economically deprived countries with limited healthcare resources [6,7]. On the contrary, inappropriate self-medication can lead to irrational drug usage, wastage of resources, increased chances of microbial resistance to antibiotics, increased risk of adverse reactions, drug interactions, drug addiction and prolonged morbidity [6, 8].

Self-medication patterns vary among different populations and are influenced by various features such as age, gender, income, self-care orientation, educational level, medical knowledge, previous experience, satisfaction, and seriousness of illnesses [9].

Self-medication is widely prevalent worldwide, especially in developing countries [10] like Northern Cyprus where not only OTC drugs, even most of the prescription only medicines (POM) are also easily accessible without prescriptions in community pharmacies. A published study in 2014 in Northern Cyprus reported that 87% of patients bought unprescribed medication at least once during their life and most commonly used medications are painkillers (32.9%) and antibiotics (29.3%) [11].

Studies have also shown that, self-medication is much more common among physician, nurse, pharmacists and medical students as compared to general population [12]. There are many factors that influence their self-medication practice like easy availability of drugs, advertising of drug manufacturers, previous experiences with symptoms or disease, self-confidence about accurate drug knowledge, home-kept prescription drugs and easy access to information [13].

Pharmacy students are future pharmacists who have a potential role in counselling the patients about the advantages and disadvantages of self-medication. The academic curriculum of pharmacy students teaches them about rational use of medicines and consequences of irrational use but there was a lack of understanding of disease diagnosis [9]. Hence, it is important that the various patterns of self-medication be studied in them. This study aims to assess the knowledge, attitude, and practice (KAP) of self-medication among pharmacy students of Near East University in Northern Cyprus.

2. MATERIAL AND METHODS

2.1 Study Setting

A cross-sectional survey study conducted using self-administered questionnaires among pharmacy students (fifth year) in Near East University on December 2018. The study population consisted of all fifth-year pharmacy students that were available at the time of the study.

2.2 Data management system

2.2.1 Data collectors

The self-administered questionnaires were distributed and collected by the investigators from the students' class rooms, after providing an explanation regarding the study purpose and impact.

2.2.2 Data collection tool and Sampling

Questionnaires prepared in English and translated to Turkish which consists of 7 parts were distributed to collect all relevant data. The questionnaires include; demographic information's which includes gender, age and nationality, the second part consists of disease or symptoms frequently self-treated by the students, procedures taken for the illness, source

of information for self-medication and finally the students' attitude of towards self-medications. Descriptive statistics were used to describe the frequency of variables contained in the questioner.

Convenient sampling technique was used because we took all fifth-year pharmacy students [14].

2.2.3 Data analysis

Data were analyzed using SPSS and Microsoft Excel. Descriptive statistics were used to describe demographic information as well as variables contained in the questioner in order to assess practice, attitude, and knowledge of self-medication practice among pharmacy students.

2.2.4 Ethical issues

A detailed explanation of the aim and objectives of the study was given to obtain the consent of students prior to data collection. They were also informed that participation is confidentiality and voluntary and would be maintained throughout the study.

3. RESULTS AND DISCUSSION

A total of 77 questionnaires were distributed to be filled by respondents, all of them were filled completely and collected.

The study was composed of 38 (49%) males and 39 (51%) female pharmacy students from fifth year. Most of the respondents were in the age 22-26 years (88%).

Also most of our sample were from Turkey 42 (58.3%), and the second higher percentage were from KKTC 14 (19.4%), and other nationalities like Iraqi (11.1%), Syrians (5.6%), Nigerian (2.8%), Lebanese (1.4%), and Egyptian (1.4%).

Regarding to procedures taken for the illness between the students, 25.7% of students are visiting a physician when they have a disease, while 20.9% are taking medicines from the pharmacy without prescription and 19.4% take medicine that remained from previous use. From 25.7% of students who usually visit a physician, about 25% of them don't comply with physician prescription. [Figure 1]

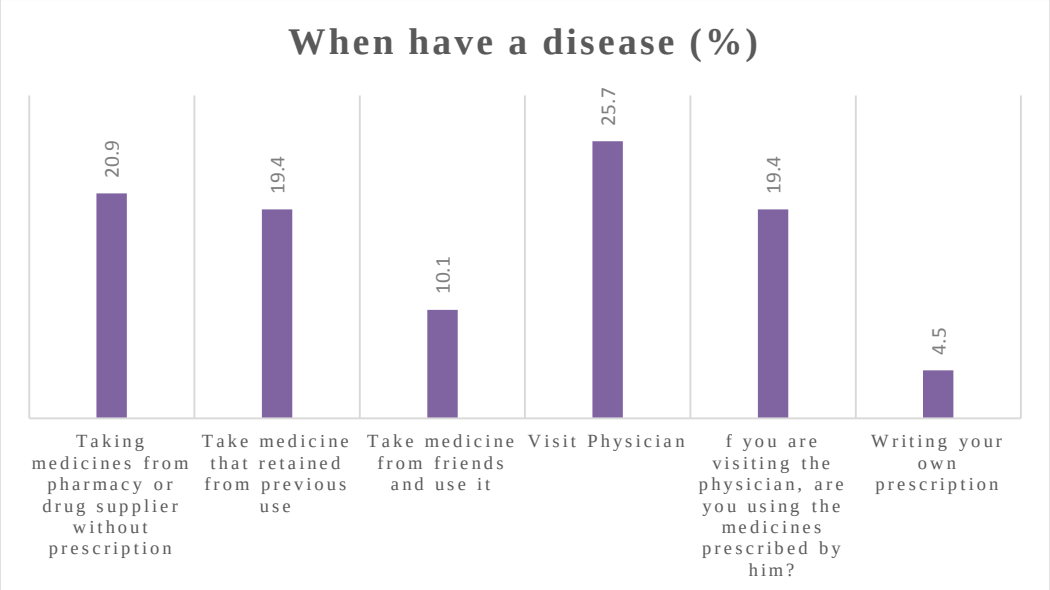

Figure 1: What are you usually doing when you have a disease

And for the diseases that the students were medicate themselves, the highest percentage was for headache (16.8%) and common cold (14.0%) and 10.3% constipation, 6.3% for vomiting, and a very small ratio for other diseases, which are: skin disorder, chest pain, ear disease, eye disease, and chest pain. [Figure 2]

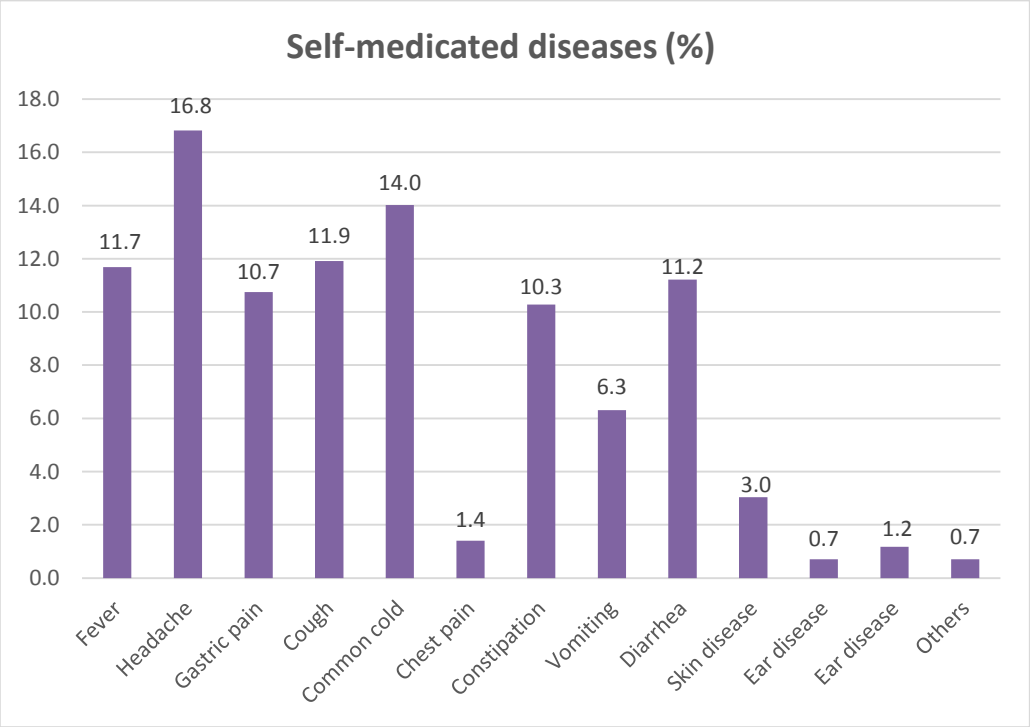

Figure 2: In which of the following diseases do you medicate yourself

When we asked about the medicines which are used commonly as self-medication, we found that the highest percentage was for Analgesic medicines (37.4%), followed by Vitamins (29.7%), Antacid (16.5%), antibiotic (13.5%), and other medicines like aspirin and metformin where used in (3.3%) as self-medication among the students. [Figure 3]

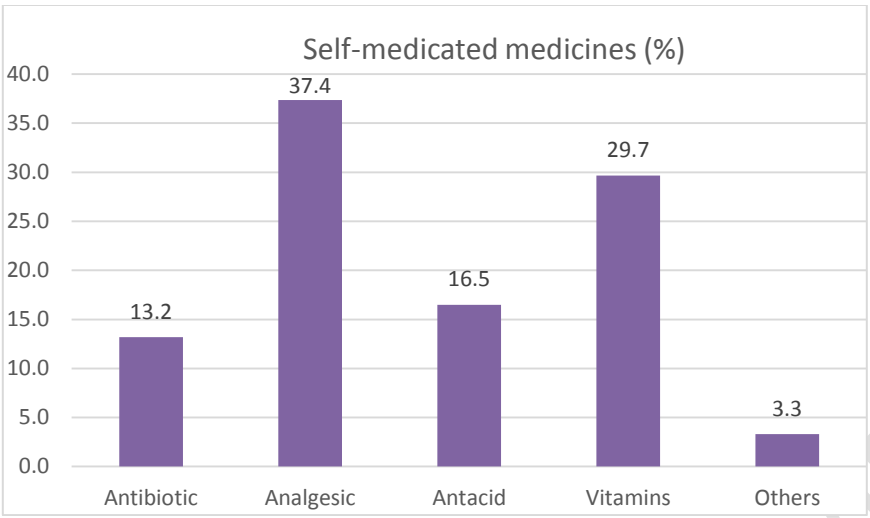

Figure 3: According to you, which of the following medicines do you usually use to medicate yourself?

And from our sample, 95.9% of our sample differentiate OTC and prescription only drugs, while 4.1% didn't. [Figure 4]

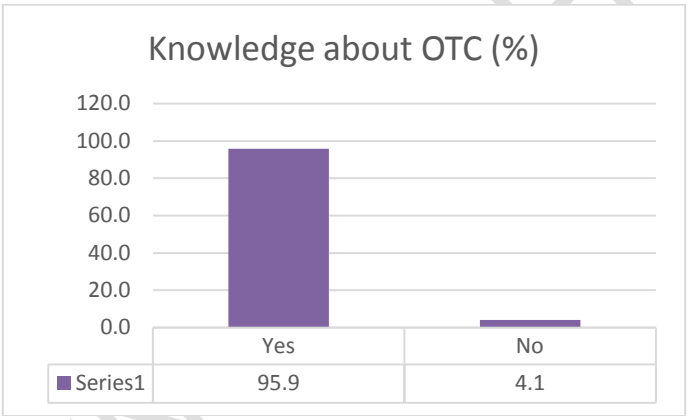

Figure 4: Knowing the medication classification "Over the Counter OTC and prescription only drugs"

The reasons for self-medicated between the students was shown as, 30.7% of students said that the disease is not serious, 24.3% of them had self-medicated because his prior experience while 19.6% answered "ease and convenience''. [Figure 5]

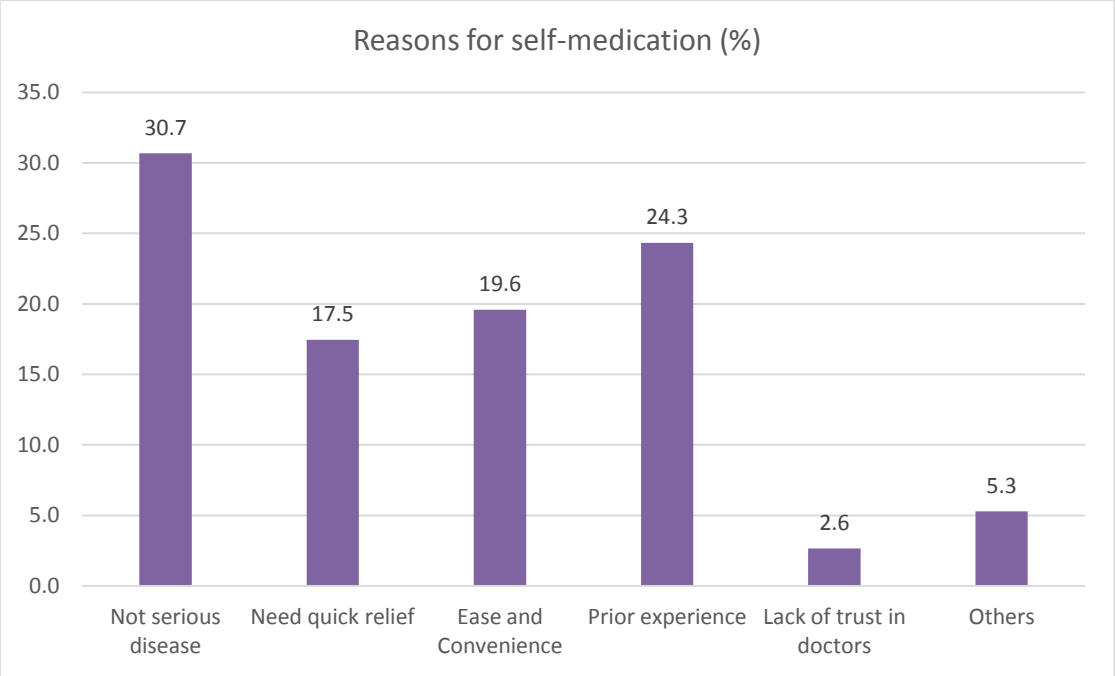

Figure 5: The reason(s) for medicating yourself

For the students' sources of information about self-medication were 29.7% taking the advice from pharmacist, while 23.6% were ask the physician but without taking prescription and 21.8% depend on their own experience. [Figure 6]

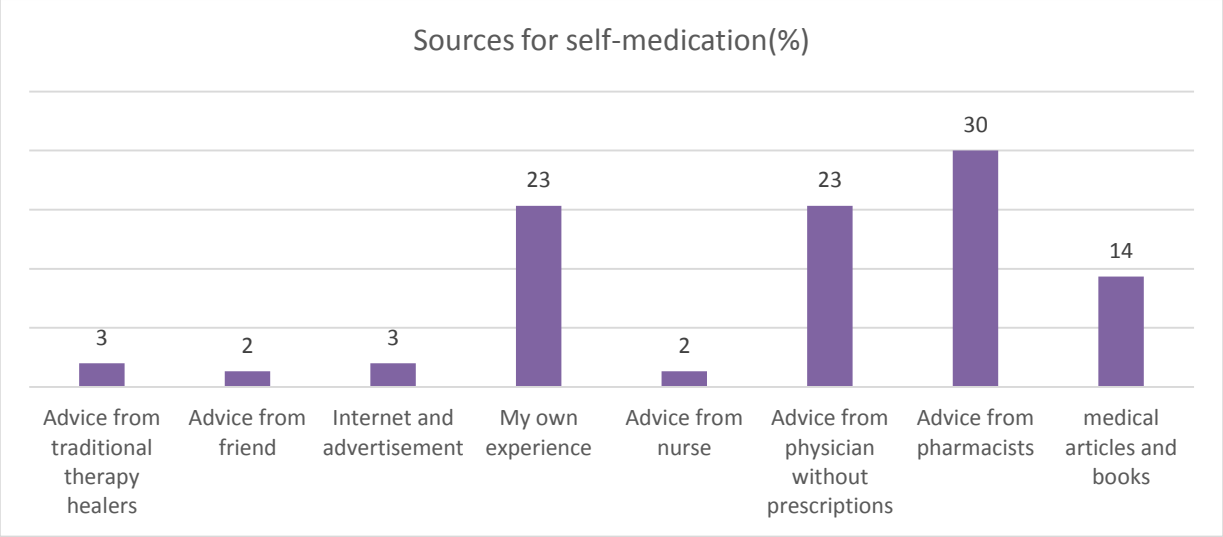

Figure 6: The source(s) of information for medicating yourself

Data regarding attitude toward self-medication was 26.8% of students agreed that pharmacists are good source of information for minor medical problems, 23.0% were agree with completing the course of medicines although the symptoms improved and 18.2% were agree that self-medication is acceptable for pharmacy students. [Figure 7]

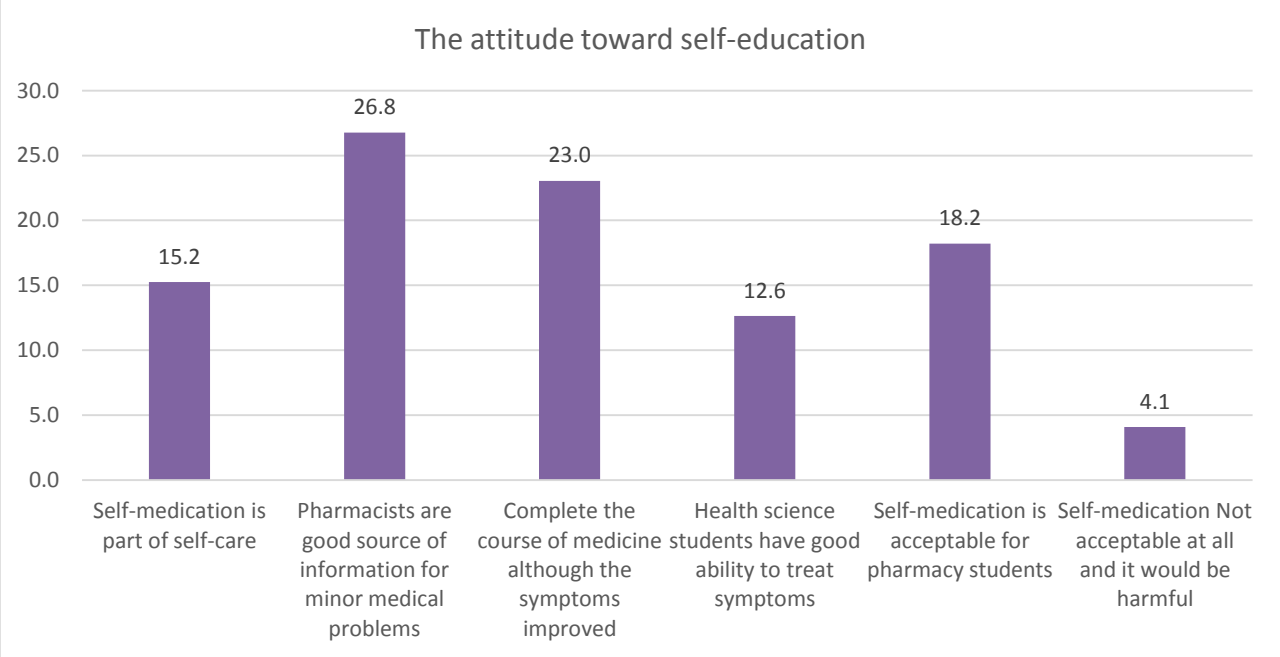

Figure 7: What do you think about self-medication practice?

DISCUSSION

The study was conducted among fifth year pharmacy students in Near East University in Northern Cyprus. Frequency of self-reported medication is highly variable in different parts; these results are may be due to the differences in study subjects, working definition of self-medication and tool used to collect the response of the participants [16].

People have always been very cautious about their personal health status and for this they have used self-medication, a feature of healthcare, from ancient times. Although self-medication has many pros and cons it depends on who uses it and how it is used for self-treatment. We focused on pharmacy students because they have adequate knowledge of medicine in theory and are more cautious about the safety of drugs which is lacking in other student groups or in the general population. Thus a pharmacy student's view on the self-medication practice can be considered as a major factor to judge the characteristics of their future prescription pattern [13]. In Turkey and North Cyprus the duration of undergraduate pharmacy education has increased to five years, consisting of more clinical contents making a good opportunity for further implementation of the concept [15].

The students of our study frequently use self-medication, and gender difference has not been shown to have any influence on the practice of self-medication. The reason behind insignificant gender differences in the overall exercise of self-medication may be the study format that allowed the respondents to select drugs by themselves.

In our study we found that about 68% of the students self-practice different types of medication. A similar type of study was conducted by Kumar et al. in coastal south India and signified that the amplitude of self-medication practice was 78.90% among medical students. Other similar studies also demonstrated the prevalence rate of self-medication ranged between 57.1% and 92% among the medicals students in India.

Several research works carried out in other developing countries revealed that the prevalence of self-medication was 38.5% and 43.2% among medical, pharmacy, and health science students in Ethiopia, 51% among citizens in Slovenia, 55.3% and 55% among medical students in Pakistan and Egypt respectively, 56.9% among medical undergraduate students in Nigeria, and 80.9% among female university students in Malaysia. The major influential reason behind the higher propensity of self-medication might be the unregulated easy availability of all categories of medicine without prescription [13].

Similar to some previously published articles, headache, common cold, fever, and vomiting were the most common symptoms for self-administration of medications mentioned by the respondents. It was quoted in our research report that the most common causes for self-treatment with drugs were that they see it not a serious disease and the insignificance of the illness which did not require a doctor's visit. Similar outcomes were reported by the study conducted in India.

As stated earlier, antipyretics, analgesics, antacids, and anti-diarrheal drugs were the most common classes of drugs self-prescribed for treatment by almost all of the respondents in our study[17][18][19].

Almost identical observations were found in the studies conducted in India, Pakistan, Iran, and Ethiopia where these common classes of drugs were frequently used by medical students.

Furthermore, the use of antibiotics was different to that of analgesics and antipyretics.

This tendency is because of the knowledge of pharmacy graduates on the resistance and side effects of antibiotics. It is well known that proper medicinal knowledge can promote a good prescribing pattern of pharmacists. However, at the same time inappropriate or irrational use of these drugs can lead to various hazardous effects including the reduction in the capability of microbial flora to resist detrimental microorganisms, the development of multidrug resistance, addiction, toxicity, and other related syndromes. Therefore, such kind of practice should be discouraged [13].

We found from our study that the key factor for self-medication practice by the participants was their adequate pharmacological knowledge which they had gathered from their academic courses, and they trust themselves as pharmacists. These findings are similar to those from studies conducted in Nepal, India, Malaysia, Ethiopia, and Pakistan. The second major source of information on self-prescribed drugs was from previous prescriptions for the same illness and this result was analogous to the findings of the study conducted in India. Further, other researches conveyed in India and Ethiopia reported the internet as another common source of knowledge on self-prescribed medicines which was the third common source of information in our study results [13].

About 15.2% of the students believed that self-medication is a part of self-medication this is less than studies conducted in India, Ethiopia, and Pakistan. Self-medication can only be considered a part of self-care if legitimate use of medicaments can be ensured. It may lead to accidental drug toxicity as there is always a risk of using expired drugs and also sharing with friends or taking medicines that have been actually prescribed for other problems. [13][18]

And 26.8% of these students considered the pharmacists as a good source for self-medication; it is similar to some studies that were done in Ethiopia, which considered pharmacists a very trustful source for self-medication.

23% of our sample was agreed with completing the course of medicines although the symptoms of the illness were improved, 18.2% were agree that self-medication is acceptable for pharmacy students, 15.2% consider self-medication as a part of self-care, 12.6% were agree with acceptability of self-medication for pharmacy students, but 4.1% accept that self-medication is NOT acceptable at all and it would be harmful.

Our study had some limitations and we faced some complications during it. First of all, we covered only fifth year pharmacy students in Near East University due to shortage of time for the research work. So, if we had conducted the study among more years we would have got a more extensive scenario on the self-medication practice. Second, we couldn't reach the hall number of students because the semester was almost finished and the lectures had been finished, so collecting data from them was slightly difficult. Third, we did the study in just one university (Near East University), though if we conducted it among many universities, we would get more comprehensive results. Finally, social desirability bias may have impacted the responses since the interviews were done in personally.

Also, the survey didn't differentiate between the uses of OTC drugs in self-medication vs. prescription drugs such as antibiotics and may have resulted in misunderstanding and confusion among respondents.

4. CONCLUSION

The practice of self-medication is prevalent amongst fifth year pharmacy students even with adequate knowledge and awareness about the consequences.

The high prevalence of self-medication is driven by multi factors, some of them cannot be modified easily as healthcare. Proactive pharmacist may contribute in management of minor illness and rationalized self- medication.

COMPETING INTERESTS

Authors declare no competing interests.

ETHICAL APPROVAL

The study was approved by the Near East Institutional Reviews Board (IRB) of Near East University Hospital that assigned this research as an observational study.

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