Research Article

Self-Medication Practice among Albanian Students of Medical Sciences

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ABSTRACT

Self medication is one of the most practiced worldwide issues and can cause both benefits and also side effects at a time, when if it is not properly mentored by drug experts. The aim of the survey was to determine the prevalence, knowledge and practice of self medication among students of an Albanian Medical University. A cross-sectional survey on self-medication was conducted among students of medical sciences, with a standardized questionnaire distributed to a total of 250 students attending third – fifth year of pharmacy and dentistry as well as first - third year of nursery. The prevalence of self-medication has resulted 79.3%. Principal morbidities for seeking self-medication were headache 31.49%, flu/cold/cough 39.39% and fever 23.76%. Regarding the major reasons for seeking self-medication, previous experience with health problem 45.86%, mild illness 35.91%, knowledge about the drug and disease 18.23% and self decision 15.47%. The most used medicines were NSAIDs (analgesics and antipyretics) 44.19%, antibiotics 34.81%, and antihistamines 13.26%. According to this survey the source of information for self medication were previous experience 35.6%, previous prescription 34.7% and consulting with pharmacists 17.1%. Prevalence of self-medication has resulted high in the students included in this survey. There is an urgent need to enforce the law on over the counter drug sale and to educate the youth to ensure safe practices.

Keywords: Self-medication; university student; community pharmacy, over the counter.

INTRODUCTION

Self-medication as defined by World Health Organization (WHO) is the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms [1]. As per WHO guidelines "responsible self medication can help prevent and treat diseases that do not require medical consultation and reduce the increasing pressure on medical services for relief of minor ailments especially when resources are limited" [2].

Self medication is a pattern obtaining and consumption of drugs without the proper guideline of physicians by diagnostic or other medical procedures [3]. Self medication is widely practiced worldwide and can cause both benefit and harm at a time if it is not properly mentored by experts of drugs [4]. About the self medication World Health Organization has pointed out the accurate and responsible self medication can help to prevent or treat diseases only which don't require physicians' consultation or can be used as over the counter drugs [5]. This self prescribing practice is predominant in the developing countries as it allows the low cost alternative for those people who are not financially stable enough to access the doctors for proper consultancy [6].

Researchers have shown that inappropriate self-medication practices may lead to many unexpected and health hazardous condition like adverse drug reactions, drug induced disease, drug interactions, antibiotic resistance and waste of public expenditures, physical dependence, misdiagnosis, abuse to drug resource etc. [7-11].

Self-medication has its benefits and risks at the same time, regular use of medicines during self medication can save scarce medical resources from being wasted on minor conditions, reduce the burden on health care facilities, and decrease the cost and time people spend to visit health care facilities for minor symptoms [4]. However, inappropriate self-medication can have a number of potential risks for example delay in seeking appropriate medical advice, failure to recognize or self-diagnose contraindications, interactions with prescribed medicinal products, failure to report current self-medications to the prescribing physician (risk of double medication and/or harmful interaction) inappropriate duration of use of medicine, risk of dependence and abuse etc. [12].

Studies have shown that self-medication patterns vary among different populations. It has been also shown that self-medication is much more common among physicians, nurses, pharmacists and medical students than among general population [13].

Previous research has demonstrated that usage of analgesics and antibiotics are the main subject of self-medication [14,15,16,17]. Irregular use of analgesics is hazardous to health due to their toxic and harmful side effects [15].

The other most commonly observed mode of irrational drug use around the world is self-medication with antibiotics, which may lead to masking symptoms,

treatment failure and development of drug resistance by bacteria [16]

Some published studies in the field of rational drug use and associated factors have shown that self-medication and irrational drug use habits are related with the level of education and people who have higher levels of education tend to indulge in self-medication more [17,18,19,20].

This study was aimed to determine the prevalence of self-medication and to identify the sources and reasons for self medication among medical students.

MATERIALS AND METHODS

A cross-sectional study was conducted to determine the pattern of self-medication among students of ALDENT Medical University between March - June 2018. The study population consisted of medical students within the age group of 18–25 years. Students were selected for the study by a randomized sampling method.

A standardized questionnaire was carried out to collect information on demographic data, years of study, the practice of self-medication of the participants, as well as concerning their attitude and perception regarding self-medication. The questionnaire was assessed via a pilot survey done among 30 subjects.

The collected data was analyzed using SPSS (Statistical Packages for Social Sciences) version 21.

RESULTS AND DISCUSSION

A total of 250 questionnaires were distributed to be filled by students, 229 were filled completely and collected, which gives the response rate of 91.60%.

Socio demographic data of those who had episodes of illnesses in the specified period is shown in table 1. Among them 74 (32.31%) were students of pharmacy, 73 (31.44%) students of dentistry and 82 (36.25%) students of nursery. There were 103 (44.98%) male and 126 (55.02%) female.

Table 1: Socio-demographic data of respondents

Socio-demographic factors		Number of students	%
Gender	Male	103	44.98
	Female	126	55.02%
Age groups	18 - 21	158	68.99%
	22 - 25	71	31.01%
Department/branch	Pharmacy	74	32.31%
	Dentistry	73	31.44%
	Nursery	82	36.41%
Year of study	First year	30	13.10%
	Second year	49	21.40%
	Third year	79	34.50%
	Fourth year	43	18.78%
	Fifth year	28	12.22%

The prevalence of self medication was found to be 79.04% (n=181). The classes of drugs that were commonly used were NSAIDS (antipyretics and analgesics) (44.19%), antibiotics (34.81%), antihistamines (13.26%) general tonics (syrups) (12.71%), eye/ear drops (9.94%) and some potentially harmful drugs were also used, such as sleeping pills (1.66%) (Figure 1).

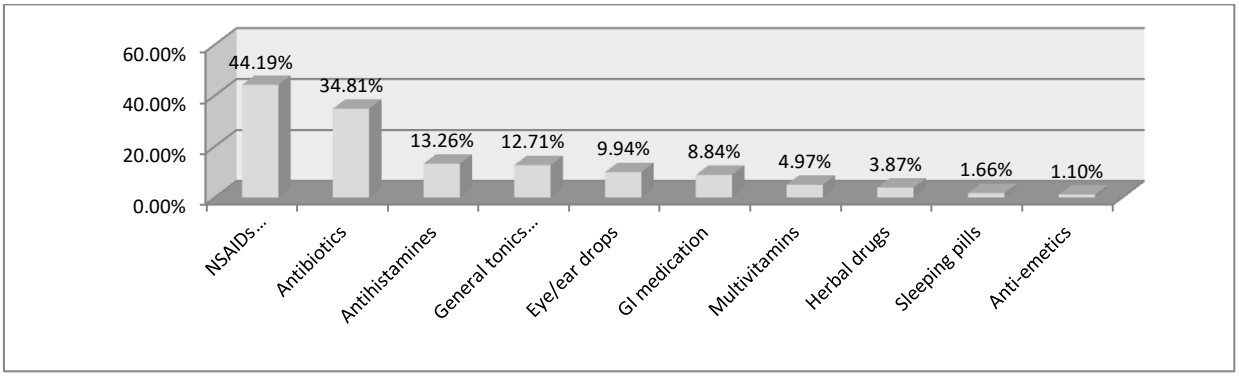

Figure 1: Frequencies of drug classes commonly used for self-medication

Among the various indications for self-medication reported by the students (Figure 2), headache was the most common (31.49%), followed by flu/cough/cold (30.39%) and fever (23.76%).

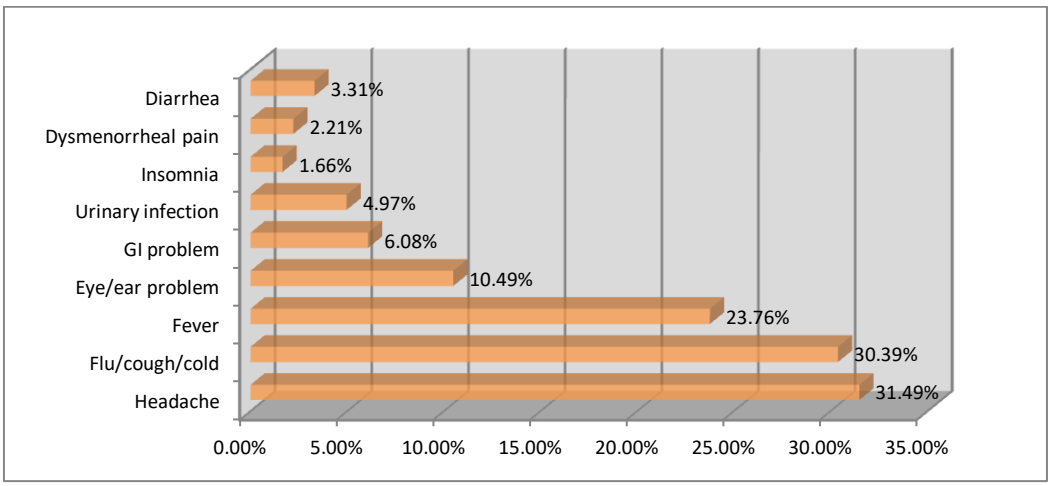

Figure 2: Frequencies of common ailments for which medicines were used

The most common factors that led to self medication were having a previous experience with the health problem (45.86%), believing that the problem is minor (35.91%), having sufficient medical information for self-diagnosis (18.23%) and self decision (15.47%)

Table 2: Reasons for self-medication practice

	N (%)	
Previous experience with the health problem	83	(45.86%)
Mildness of illness	65	(35.91%)
Patients knows about the drug and disease	33	(18.23%)
Self decision	28	(15.47%)
In emergency use	20	(11.05%)
Treatment cost is high in clinics	12	(6.63%)
Lack of trust in medical service	9	(4.97%)

The most common sources of information for self-medication were previous experience with disease (35.56%), previous prescribed medicines (34.81%), consulting local pharmacist (17.13%) and other sources such as relatives, friends, leaflets and mass media.

Table 3: Sources of information/recommendation for self medication

Source of information	N (%)	
Previous experience	68	(37.56%)
Previous prescription	63	(34.81%)
Consulting pharmacist	31	(17.13%)
Consulting family members and friends	30	(16.57%)
Leaflet	28	(15.47%)
Mass media	8	(4.42%)

Self-medication is a general practice all over the world by mass populations although the causes may be different. In developing countries, this practice is expected to be higher than in developed ones. This may be due to limited number of health care facilities available to the public. Self-medication is also expected to be even more practiced among health science students, [21].

Self-medication has been an active area of research because of its rising global prevalence, and associated problems like incorrect self-diagnosis; inadequate treatment of a disease leading to disease progression and adverse events, drug interactions, antibiotic resistance and most importantly waste of public resources [22].

Many studies have been administered to assess the prevalence and practices of self-medication. There has been variation in the measures of self-medication practices as depicted by survey questionnaires from various studies. This variation can give rise to confusion for health researchers at the same time some variation reflects differences in research focus i.e., developing a specific questionnaire to assess self-medication in specific therapy area, age group, or among specific occupation.

Our survey demonstrates that about 79.3% of university students self-medicate. As such survey has never been reported in Albania, there is no data for comparison on a national level. Self medication amongst university students has been found to be up to 45% in Turkey [23] 88% in Croatia [24] and 94% in Hong Kong [25]. The prevalence discovered by our survey is also quite high and needs to be taken seriously.

In studies conducted in some developing countries, the prevalence of self-medication in medical students was shown to be 25.4% and 43.2% in Ethiopia [26, 27], 92.3% in Slovenia [28], 55.3% in Pakistan [29], 55% in Egypt [30], 56.9% in Nigeria [31] and 80.9% in Malaysia [32].

Other studies conducted on health science students in different parts of the world have also reported higher prevalence of self medication practice [33, 34, 35].

Gender is considered as an important factor in self-medication patterns among young adults including students. The prevalence of self-medication was observed to be higher among females in our survey. Similar observations were made in studies published in scientific journals [36, 12].

In our survey it was noticed that the classes of drugs that were commonly used were NSAIDs (analgesics/ antipyretics) 44.19%, antibiotics 34.81%, antihistamines 13.26% and general tonics 12.71%. Multiple studies conducted to assess the practice of self-medication in some countries also reported analgesics as the most widely consumed OTC drugs in self care [37, 33, 38, 32, 39, 7, 40, 14].

Analgesics (non-narcotics) especially NSAIDs were the most common class of medication used in self-medication practice. This is because such drugs are used to treat simple common illness, example, headache, fever and pain. These results were similar to other studies conducted in other countries [29, 26]. There may be some problems regarding self-medication with analgesics. The first problem is the possible risk of hepatic dysfunction and renal failure as well as gastrointestinal complications.

Antibiotics were the second most widely medication used for self medication resulted from this survey. Its prevalence was 34.81% and is considered high. Self-medication with antibiotics can lead to the emergence of the dangerous worldwide problem of antibiotics resistant microorganisms. The usage of antibiotics without the physician's prescription in self-medication is associated with their cost and toxicity.

Moreover, literature argue that people may abuse antibiotics by using them for such wrong indications as common cold or infections of non-bacterial origin[41]. This indicates the belief among the community that antibiotics can treat and eradicate any infections irrespective of their origin.

Thus, possible interventions must be developed by both drug regulatory and health authorities to create awareness among students about the consequences of self-medication with antibiotics.

Antibiotics were also reported in many studies as commonly used drugs in self-medication [33, 42, 35, 43, 44, 8]. One review article indicated that the overall estimate of antimicrobial self-medication in low- and middle-income countries was 38.8% [45].

The problem of resistance to antibiotics is a well known problem in scientific literature [46, 47, 48]. A major problem with self-medication with antibiotics is the emergence of drug resistance particularly in developing countries [49, 50, 51].

The World Health Organization recently reported alarming levels of resistance to antibiotics in many countries causing by irrational use of antibiotics in self medication (WHO, 2014) The misuse of antibiotics poses a serious risk to infectious disease control and public health in general [52, 51].

Major health problems that provoked practicing self-medication included headache, followed by flu/ cold/cough, and fever, respectively. These health problems were similar to those reported in other studies. In one study headache was reported by a majority of students followed by cough, cold and sore throat [7]. Similarly, headache was reported by a majority of university students in Pakistan [29] followed by flu and fever, respectively. In contrast, the most common health problem that was reported by among medical students was cough and common cold followed by diarrhea, fever and headache, respectively [36].

The main causes for practicing self-medication, according to current survey, were previous experience with the disease, followed by believing that the problem is minor, assuming they have enough medical knowledge for self-treatment, getting advice from a friend or relative, and to avoid waiting at clinics. Mild illness and previous experience as well as time saving were also reported as frequent reasons for self-medication [7, 36, 54]. Similar to other studies, problem urgency, no trust in physicians, high cost of physician consultation, and ineffective previously prescribed medicines were reported as infrequent reasons for self-medication [28, 55, 56]. The most common information source for self-medication reported in current survey was previous experience, followed by previous prescription and consulting with pharmacists.

Previous experience and previous prescription for the same illness was reported as the most common source of information about the drugs used for self-medication in the present survey which was similar to observation made in other studies [57, 58]. In other studies, textbook were reported the most common source of information[11, 26]. Other studies have reported that the most common information source for self-medication was self-decision, family/friends, media and reading material and consult with community pharmacist [27, 59].

The strength of this survey which is the first study carried out in Albania, is that it provides baseline information on self care and self medication among Albanian medical students. Future studies might compare knowledge level, perception and practice of self-medication among medical students in different medical universities, with our results, to provide a more comprehensive overview of self medication practice.

The limitations of this survey were the absence of a comparative group, such as students from another medical university or another field, as well as the limited number of interviewed students.

CONCLUSIONS

The results of this study have shown that self-medication is very common among medical students, facilitated by the easy availability of drugs, and high self-care

orientation. Analgesics/antipyretics and antibiotics were the most commonly used drugs, whereas the common ailments for the listed medicines used were headache, flu/cold/cough and fever.

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