

ORIGINAL ARTICLE

Prevalence, Awareness Level and Attitude of Self-Medication Among Student Nurses

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ABSTRACT

Self-medication is an alternative for high cost medicines. Inappropriate practice of self-medication wastes resources, increases drug resistance, and poses a major health risk. The goal of this study was to look at nursing students' understanding, attitudes, and behavior about self-medication. This research was conducted among nursing students of mayo hospital of Pakistan in 2021. This survey comprised 301 student nurses in total. The students' knowledge, attitude, and behavior of self-medication were assessed using a three-part research based questionnaire. SPSS software was used to conduct the statistical analysis. According to the results majority of students of first year are with age group 20-23 years old involved in self-medication. Among all year students 94.02% were single and ratio of using self-prescribed medicines (32.89%) 2-3 times in last six months. 95.02% preferred oral route of administration and highest percentage (76.08%) experience no side effects. Results depicted relatively excessive use of antibiotics and other drugs which may lead to drug resistance and other adverse health effects, thus clinical research students should be educated about this. A legislation restricting free access to drugs must also be implemented and enforced by the government both at national and international level.

INTRODUCTION

Self medication has become the most trending phenomenon that perils the world with potential threats of antibiotic resistance. Self medication is defined as selection and taking of medicines by a number of individuals without proper consultation or prescription of a health care professionals. They do so just on the basis of self-diagnosed signs and symptoms [1-3]. Medicines for self medication are often called Non-prescribed or Over the Counter (OTC) and are available without a doctor's prescription through pharmacies. The most common and easily available over the counter medicines are usually pain killers, cough and cold remedies, medicines used against various types of allergy, some kinds of vitamins and tonics are used for energy purposes. Self medication is now increasingly being considered as component of self-care [4, 5]. However inappropriate use may result in health hazards such as prolong suffering, adverse drug reaction and increase in antimicrobial resistance [6]. Irrational use of medicines especially antimicrobial agents can result into severe consequences including undue therapy, hindrance and delay in treatment, resistance to various drugs and increased number of cases would be more threatening. The adverse consequences of these practices always created a distress in community [2]. A number of factors urge the individuals for self medication. These include: urge of self care, poverty, ignorance to harmful effects of drugs, extensive and tempting advertisement for medicine, quacks, availability of drugs, lack of awareness for medical professionals, attitude of health care institutions. The

prevalence of self medication differs among various age groups such as infants, children, adults and older also depends upon the type of disease and severity [7]

We use a number of popping pills that give us instant relief but the concern point is that it causes number of side effects. Some time a patient using prescribed medicines for various different infections that may be severe and self medication can be resulted into adverse effects. The adverse effects may be due to interaction of different drugs and if this result into more adverse effects, ultimately death can occur in many cases. Expired medicines have less potency and doesn't work effectively as they must be and they are not safer to use and unable to relieve from severe symptoms because a chemical reaction can take place in some cases that lead severe consequences. Sometime people take medicines without knowing the real cause of disease and these unchecked medicines can cause more complications as in case of persistent fever, headache, vomiting, and nausea and heart burn. Antibiotics are those medicines that kill pathogenic bacteria and their misuse has threatening effects that is antibiotic resistance that has become the most alarming issue worldwide.

Health workers also have the habit of self medication both at home and sometime at hospital. They have easy access with different medicines and prefer self medication. Their inappropriate use of medicines can mask the progressive disease and that may become more troublesome when explored later [8]. Knowledge of over the counter medicines is very useful for patient who manages a number of common diseases which reduces time and high cost of therapies. Though over the counter medicine are very useful but there are some harmful effects which reduces opportunities for counseling from medical

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health care professionals and better lifestyle therapies (e.g. exercise and diet).

This research was conducted to analyze the prevalence of self-medication among hospital nurses because they have easy access to the medicines and patients. For this prevalence we conducted a survey at nursing students of all four years, enrolled with school of nursing Mayo hospital, King Edward Medical University Lahore with consent of all administrative authorities.

MATERIAL AND METHOD

This was a questioner-based cross-sectional survey done among Pakistani nurses working in hospitals. It was carried out during a three-month period (February to April 2021). The poll consisted of 32 questions divided into three sections. The demographic and medical information of the respondents' age and gender were provided in the first section of the questionnaire. The self-medication practice was the topic of the second half of the questionnaire. The third section was primarily concerned with increasing awareness and knowledge of the risks associated with self-medication. The questionnaire requested participants' agreement at the time of incorporation and informed them that their responses would be kept secret and anonymous.

The sample size was estimated using the Raosoft online sample size formula with a 5 percentage standard deviation and a 95 percentage confidence level of 301 student nurses. Before getting their agreement, the respondents were informed about the research's nature, participating level, purpose of the research, and confidentiality problem.

The data for the research participants was subjected to descriptive statistical analysis. Continuous data were summarized using mean and standard deviation (SD), whereas categorical data were summarized using proportions. Age, gender, marital status, academic year were all used to compare and contrast self-medication characteristics. The data was analyzed using SPSS after the questionnaires were self-administered. The Chi-square test was used to establish the significance level of unique variance in cross-tabulated variables, with a p-value of less than 0.05 serving as the specified threshold of significance.

RESULTS

This study includes 301 female participants belonging to different age groups and involved in self-medication by dint of diverse factors. Students with age 20-23 years (54.84%) were doing self-medication while above 30 years age least percentage (0.33%) was calculated. Student participants were belonging to different academic year and percentage of self-medication of first year was 30.56%, second year (20.27%), third year (19.93%) and fourth year (29.24%). Among all 94.02% were single and 5.98% were married they used self-prescribed medicines with 32.89% 2-3 times in last 6 months while ratio of using once in 6 months, once in a month and once in a week was 16.94%, 21.59%, 7.97% respectively. 19.93% did not use medicines 0.66% used medicines on a daily basis and most of them were using medicines without knowing the deleterious effects on health. Approximately 95.02% preferred oral route of administration other routes were least preferred

including intramuscular, intravenous and topical. 76.08% experienced no side effects after their use while 23.92% experienced mild to severe effects. Out of 301 participants 133(44.19%) get complete recovery from infection 159(52.82%) get partial recovery. 1.33 % experienced complications and 1.66% did not get any recovery or deleterious effects.

Further, analysis was extended by question-wise responses of participants to know the reasons of self-medication. 59.14% were in agreement that self-medication is cheap and easily available. 54.49% knows that it interferes with natural healing process and 51.16% responded that it may lose effectiveness when used continuously. 49.17% disagreed that self-medication is not better than prescribed medicine. 49.83% were agreed that self-medication is dangerous and 45.51% result in dependency and addiction. Participants with highest percentage 31.56% were not satisfied with self-medication while on the other hand 30.56% were satisfied with self-medication 32.23% responded that it's better to consult a doctor rather than to use self-prescribed medicines and suggested that no one should ever take any drug if severity of disease increases.

Survey was also analyzed on the basis of different age groups and academic year students. On the basis of age factor, 99 participants (highest value among different age groups) with age 20-23 years and overall 178 out of 301 (p value 0.899) were agree that self-medication is cheap and easily available and 164 with same group responded that its involved in natural healing process and 154 responded that it lose effectiveness. 148 participants with age group 20-23 were disagree on a point that self-medication is better than prescribed medicine with p value 0.033 and significance level is because they know its consequences that result in adverse effects and can be dangerous especially with addiction and excessive dependency on it. Most of them were not confident and it's not good practice to take more drugs if pain or severity of disease increases. 196 participants strongly agree that it's better to consult a doctor for taking new medicines.

When the survey was analyzed on the basis of academic year, first year students were more in agreement on a source of self-medication which is cheap and easily available and they are well aware that self-medication is dangerous. In contrast, fourth year students have more information that self-medication is dangerous to the point that they can make us dependent and addicted. However, they are confident that self medication is better for treatment. They disagree that never take more medicine if the previous one did not heal and is practice to consult a doctor for new medicines.

When analysis was done on why participants are doing self-medication 91.69% did due to unavailability of consultation fee and 85.71% had a shortage of time. 69.77% used medicines without prescription because they have only minor illness 10.63% did not have suitable transport. That's why 31.56% did self-medication for the urgency of the problem and sought advice from friends or used previous experience. They did self-medication for showing symptoms of fever, headache, cold, cough, gastrointestinal disturbance, pain, allergy and sleep

problems. Table shows the highest percentage of self-medication was done for headache.

Factors behind self-medication

Among all factors minor illness leads to self-medication as students did not prefer to visit doctor for their minor illness. Majority of the participants used self-prescribed medicines on basis on previous experience.

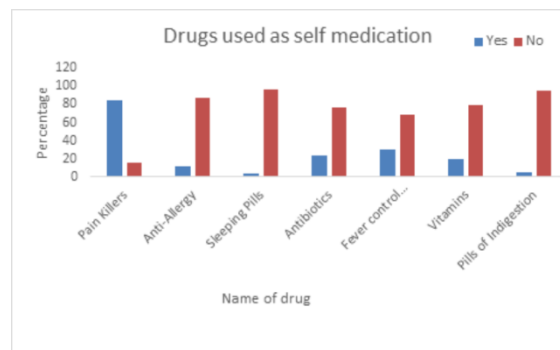
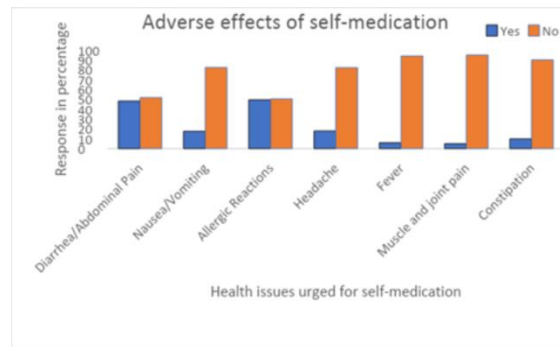
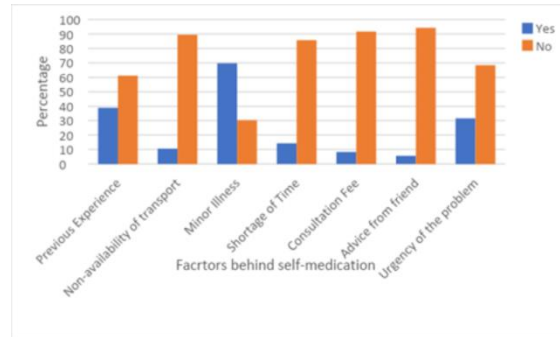
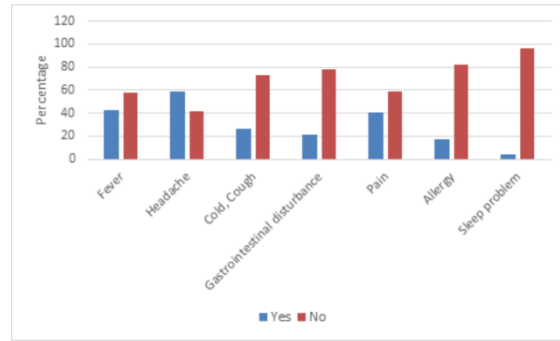
Most of the drugs used were pain killer, anti-allergic, sleeping pills, antibiotics, fever control medicines, vitamins and pills of indigestion. Most commonly used drugs include pain killers. Most of participants (58.14%) used with previously provided prescription of consultant. They also get help from physicians, pharmacist, family/friend, media and internet.

Different adverse effects were experienced in consequence of self-medication and allergic reaction has highest percentage (49.50%) among all. 48.17% used for treatment of diarrhea or abdominal pain, 17.94% for fever, 17.61% for nausea or vomiting, 5.98% for fever, 9.97% for constipation, 4.98% for muscle and joint pain.

Table 1. Demographic characteristics/opinion of participants (N=301)

Characteristics	Frequency (n)	Percent (%)
Age (years)		
Below 20	122	40.53
20-23	165	54.82
24-30	13	4.32
Above 30	1	0.33
Gender		
Male	00	00.00
Female	301	100.00
Education		
First Year	93	30.56
Second Year	61	20.27
Third Year	60	19.93
Fourth Year	88	29.24
Marital Status		
Single	283	94.02
Married	18	5.98
Have you used any over the counter (OTC) drug (self-medication) in last 6 months?		
Once	51	16.94
2-3 times	99	32.89
Once a month	65	21.59
Once a week	24	7.97
No	60	19.93
Daily	2	0.66
Were you aware about side effects of self-medication?		
Yes	126	41.86
No	76	25.25
Partly	99	32.89
Did you check expiry date before use of medicine?		
Yes	282	93.69
No	19	6.31
Which route do you prefer for self-medication?		
Oral	286.00	95.02
I/V	10.00	3.32
Topical	1.00	0.33
I/M	4.00	1.33
Did you experience any adverse effect of self-medication?		
Yes	72.00	23.92
No	229.00	76.08
What was the end result of self-medication?		
Complete recovery	133	44.19
Partial recovery	159	52.82
Complication developed	4	1.33
No recovery	5	1.66

Symptoms/disease behind self-medication (percentage) (N=301)



DISCUSSION

Self-medication practice is public health problem and on the rise globally that results into severe health issues among community and university students. The usual practice of self-medication among university students is due to the minor illness and with believes that milder illness did not require consultation. They prefer self-medication by seeking advice from friends and on previously provided prescription which saves time [9].

In the recent study, the main reasons behind using self-medication were headache, cold and cough, gastrointestinal disturbance, fever, pain, and allergy and sleep problem. This research is identical to many other preexisting studies [9]. The current study revealed that urgency of self-medication is based on common health issue including headache, pain, fever, cold and cough. This is in accordance with prior research works, which have indicated headache and fever to be most prevalent reasons for self-medication. However, some other studies has different reasons of self-medication including common cold and headache. Current study also has other reasons for self-medication including allergy, gastrointestinal disturbance and sleep problem. Some other studies revealed that self-medication was practiced for relieving pain and stress especially among youngsters[10].

In previous studies, it was analyzed that students involved in self-medication practice used over the counter medicines between last 6 months. They also prescribe these to others if they have similar health issue. About 66.25% were involved in practice of self-medication while majority (68.67%) of them responded that they use it sometimes. According to recent study the previous prescription was cheap and easily available source of information for self-medication. However, many other previous research works revealed that source of medication was internet, easily available medical books and friends of different years.

In previous study, nearly all the participants including in research have complete awareness about expiry date, dosage of self-prescribed drugs and frequency of medicine. However, adverse effects of these drugs were also considered by higher number of students approximately 75.84% of students. According to this study majority of the students considered that self-medication is safe (47.75%) and they can take care of themselves more easily. This encourages them and others to use these medicines again in future. Similarly in recent study, students with age 20-23 years(54.84%) were doing self-medication and 30.56% were belonging to first year with single marital status(94.02%). Students considered that self-medication is cheap and easily available and 91.69% did this owing to unavailability of consultation fee and 85.71% due to shortage of time. They did self-medication for showing symptoms of fever, headache, cold, cough, gastrointestinal disturbance, pain, and allergy and sleep problems. Adverse effects were also confronted in response to self-medication

and most of unfavorable reactions results were of allergic medicines. Self-medication against diarrhea, fever, nausea, constipation and muscle and joint pain also resulted into adverse effects[10].

CONCLUSION

In Pakistan, self-medication is very common among health science students. It is necessary to educate not just nursing students but also the general public about the perils and concerns of self-medication. Apart from those pharmaceuticals that are safe to use in the general population, it is critical to adopt rules and regulations that allow people to buy medicines from pharmacies without a prescription.

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