

Perceptions and Attitudes Regarding Self-Medication among Undergraduate Students of Islamabad



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Abstract

Background: Self-medication, a common human behavior, involves individuals self-administering treatment without professional oversight to alleviate illness or conditions. This study aimed to evaluate perceptions and attitudes and identify associations between sociodemographic variables and self-medication among undergraduate students.

Methods: A descriptive cross-sectional study was conducted at the National University of Medical Sciences, Islamabad, from June to August 2022. A sample of 200 undergraduate students across various disciplines (Public Health, Social Sciences of Health, Human Nutrition & Dietetics, Biological Sciences, and Psychology) was determined using the open epi calculator. Inclusion criteria comprised students willing to participate and available during data collection, with exclusion based on major comorbidities. Chi-square tests explored crude associations between categorical outcome variables and related factors.

Results: Out of the 200 students, 42 (21%) were boys, and 158 (79%) were girls. Most students (94%) had pursued F-Sc (Pre-medical) for secondary education. A majority (117) of students had highly educated fathers. Over 75% strongly disagreed with obtaining medicines without a prescription. More than half agreed that dosing rules should be more lenient. Father's occupational status ($p=0.001$), respondent's place of residence ($p=0.040$), and respondent's secondary education ($p=0.0372$) were significantly associated with self-medication practices.

Conclusion: Significant associations were identified between the father's occupational and educational status, the respondent's secondary education, and self-medication practices among undergraduate students.

Keywords: Perceptions, self-care, Low Middle Income Country.

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Introduction

Self-medication is a human behavior in which an individual uses a substance to self-administer treatment without professional supervision to relieve an illness or a condition (1). According to the WHO's definition, self-medication is the self-usage of certain drugs and medicine to treat different disorders or symptoms or in some cases the irregular or continued use of a prescribed drug for any chronic or recurrent diseases or symptoms by themselves (2). Self-medication is a widely prevalent practice and therefore it has global implications. It plays a significant role among medical students they are going to be future doctors but now days every university students are practicing this(3).

Self-medication is deliberated as an element of self-care (4). However, self-medication can be beneficial or harmful as it includes the use of drugs. The World Health Organization (WHO) has considered that proper self-medication can help in prevention and treatment of those diseases that do not require any medical consultation and thus proves to be cheaper for treating common illnesses (5).

Authentic medical information should be the basis of self-medication otherwise unreasonable usage of drugs can result in inappropriate consumption of resources, drug reactions, increased antibiotic resistance and duration of disease (6).

In developing countries, self-medication is a very commonly practiced as it is very cost effective for people who have affordability issues. Another reason for this is that many drugs are easily available without a proper medical prescription from a doctor (7).

It is very common among students to practice self-medication when they feel sick or have any disease symptoms. Proper self-medication is beneficial and can treat minor illness as well manage acute emergency+ while incorrect self-medication can have harmful effects on health (8).

As self-medication has certain benefits as it can save medical resources from being wasted on treating minor illnesses, reduce the patient load on health care facilities, cost effective for people having affordability issues (9,10). However, inappropriate self-medication can have several risks for example delay in seeking proper medical guidance; drug

interactions, unable to recognize drug contraindications, irregular duration of usage of medicines and risk of drug dependence and abuse. Moreover, in case of continued illness, approaching medical practitioner can result in failure to report current self-medications to the prescribing physician (risk of double medication and/or harmful interaction) (9).

There are many factors, which regulate the frequency of self-medication: age, level of education, advertising of drug manufacturers, legislation regulating dispensing and sale of drugs and previous experiences with the symptoms or disease (11). Depression and anxiety may also be connected with self-medication (12).

Now days, self-medication has become a common practice in every university students which is a very alarming situation as those students lacks the required knowledge regarding common medicines(13). In many under developed countries like Pakistan, medical stores are dispensing even the medicines, which cannot be sold without proper medical prescription, and pharmacy and public may give priority going to the medical store for buying medicines as it is less expensive and time taking and they can also avoid paying consultation and other charges (14).

Recent studies have revealed that self-medication practices are more common among medical students and the occurrence was high in medical colleges of South India (92%) (15), Karachi (76%) (16) and Egypt (55%) (17). The reason behind this high incidence is that medical students have good background knowledge and information of medicines and disease (18). Due to this knowledge, they are very confident about self-medication and assumes that they can practice responsible self-medication.

In some circumstances, self-medication is unavoidable like in common cold and occasional headache, so people tend to practice responsible self-medication (19). Self-medication by students is an important issue and need to be added to the curriculum of undergraduate students and raise the community awareness about the hazards and delirious results of inappropriate practice. Medical students who are future doctors and medical practitioners, with good background knowledge about self-medication could promote, encourage, and convey essential knowledge to their patients, which can help them in practicing responsible self-medication. Furthermore, doctors should be more careful and well informed about the high incidence of self-medication practice in the public so that before prescribing medicines they could investigate about self-medication from their patients. This could help them in improvement of treatment and avoid drug-drug interactions

Self-medication practices among university students have been surveyed in various parts of the world; in Slovenia, (94.1%) (20) in Ethiopia (38.5%) (21) were found to be self-medicating. This study will help in documenting the prevalence and the reasons for the use of self-medication in the non- medical university students of Pakistan. Therefore, by keeping in view all of this, the purpose of this study should be to find out the practices and reasons of self-medication in non-medical students. This will consequently give us an outline of the developments and details of self-medication in non-medical students in our region and eventually from that data; we can produce

solutions to control this problem. The objectives of this study were to assess the perceptions and attitudes regarding self-medication amongst undergraduate students and to determine the association between sociodemographic variables and self-medication amongst undergraduate student.

Methodology

A descriptive cross-sectional study was conducted among undergraduate students of National University of Medical Sciences, Islamabad in 12 weeks (June 2022 to August 2022). The sample size of 190 undergraduate students of all disciplines (Public Health, Social Sciences of Health, Human Nutrition & Dietetics, Biological Sciences and Psychology) was calculated by the open epi calculator. By using non-probability consecutive sampling technique with anticipated frequency 50%, 95% Confidence Interval and 5% margin of error and with a total of 10% inflation, total sample size was 200. All undergraduate students who are willing to participate and available at the time of data collection were included in the study. Students who are not willing to participate or not available at the time of data collection and students with any major co-morbidities were excluded.

A pretested, structured, self-administered questionnaire (mixed type) with open and close-ended questions was used for data collection. The Questionnaire comprises of undertaking by the researcher and consent of the respondents. It has four sections:

Section A: Demographic information of the students.

Section B: Questions regarding Practice and Knowledge of self-medication

Section C: It included statements regarding attitudes of students towards self-medication.

After getting ethical approval from Ethical Review Committee of National University of Medical Sciences, Islamabad and consent of the respondents, questionnaires were distributed among undergraduate students of NUMS through google forms. Ethical considerations were followed according to the recommendations of ethical review board, including informed consent for a voluntary participation in survey while ensuring confidentiality and privacy of their response. Data analysis was done on Statistical Package for Social Science Version 21 (SPSS version 21). Frequencies and percentages were computed, descriptive and inferential statistical analysis was done. Results presented in the form of text, frequency tables, bar and pie charts.

Results

A total of two hundred (200) students were included in the study with 42 boys (21 %) and 158 girls (79%) (Table-1). About half of the respondents lie in 20 years and above age group. Majority 182 (94%) of the students had done F-Sc (Pre-medical) as their secondary education. Regarding their place of residence, slightly more than half of the students were day-scholar. The majority (117) of the student's fathers were highly educated.

Table 1. Sociodemographic Profile of the Respondents

Sociodemographic Variable	Frequencies (N)	Percentages (%)
Gender Distribution		
Male	42	21
Female	158	79
Age of the Respondents		
Less than 20 Years	93	46.5
20 Years or more	107	53.5
Marital Status of the Respondents		
Married	6	3
Single	194	97
Secondary Education of the Respondent		
F-Sc (pre medical)	182	91
FA	0	0
Others(A-Levels)	18	09
Discipline of Education of the Respondent		
Public Health	97	48.5
Social Sciences of Health	17	8.5
Biological Sciences	48	24.0
Nutrition and Dietetics	28	14
Psychology	10	5
Place of Residence of the respondents		
Hostelite	83	41.5
Day scholar	117	58.5
Educational status of the Father		
Primary	4	2
Middle	26	13
Intermediate	55	27.5
Graduation	65	32.5
Post- Graduation	50	25
Occupational status of the Father		
Own Business	57	28.5
Private job	40	20
Other	103	51

Table 2. Knowledge and Perception of the students regarding Self-medication

Variables	Yes % (n)	No % (n)
Knowledge about drug interactions	54.5(109)	45.5(91)
Knowledge about the hazards of over-dosage	94.5(189)	5.5(11)
Read the leaflets of medicines used without a prescription	65(130)	35(70)
Take proper dose for proper time duration	80(160)	20(40)
Store medicines at home	84(168)	16(32)
Think self-medication can harm your health	77(154)	23(46)
Feel confident enough to diagnose the underlying condition, you may be suffering	48.5(97)	51.5(103)
Feel confident enough to treat yourself for the condition, you may be suffering	43.5(87)	56.5(113)

Regarding knowledge and perception of the students regarding self-medication, majority (95%) of the students were well aware of the hazards associated with over dosage

of drugs. Slightly less than half (48% & 43%) of the respondents were confident to diagnose and treat themselves for the condition they might be suffering from.

Table 3. Attitudes of the students regarding Self-medication

Variable	Strongly disagree (%)	Disagree (%)	Not sure (%)	Agree (%)	Strongly Agree (%)
People must have a right to buy medicines as they wish.	74 (37)	64 (32)	39 (19.5)	23 (11.5)	0 (0)
Pharmacists should have a right to issue medicines without a prescription	70 (35.0)	82 (41)	35 (17.5)	12 (6)	1 (0.5)
Any drug/substance should be acceptable to use prior to sports events	65 (32.5)	83 (41.5)	47 (23.5)	3 (1.5)	2 (1.0)
Rules and regulations regarding dosing should be more liberal	26 (13)	59 (29.5)	41 (20.5)	58 (29.0)	16 (8.0)
Penalties should not be strict for use of drugs without supervision from a doctor	36(18)	46(23)	19(9.5)	29 (14.5)	9 (4.5)

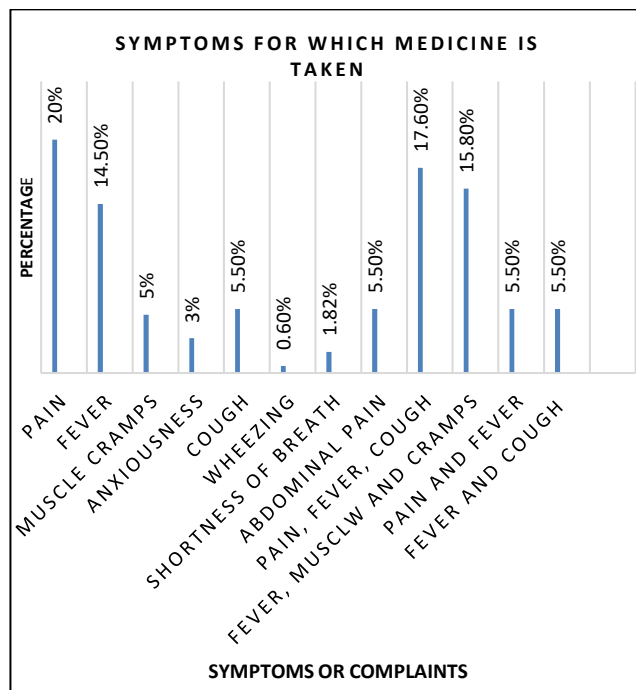


Figure 1: Symptoms or Complaints for which the medicine was taken

Majority (71%) of the students were taking self-medication for pain, fever and cough.

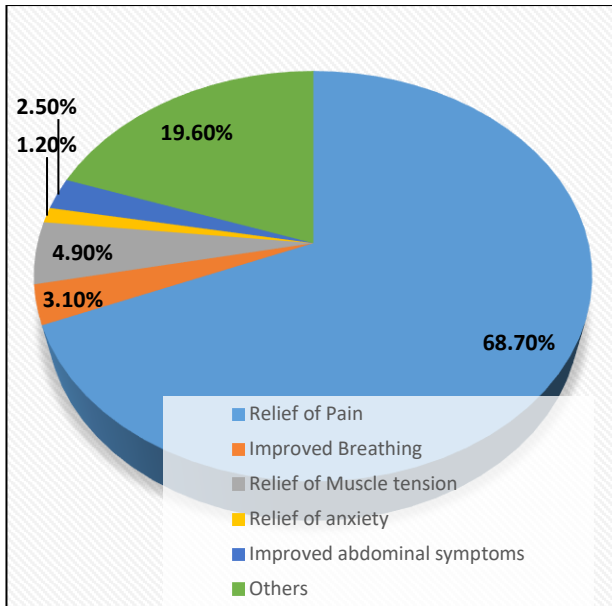


Figure 2: Effects of Medicine taken for the relief of symptoms

About 69% of the students stated that their pain relieved after taking the medicines.

Table 4: Association between Sociodemographic variables and Self-medication Practices among Undergraduate students

Socio demographic variable	Self-medication practices of students		
	Yes	No	p-value
Gender of the Respondents			
Male	1	22	0.127
Female	15	60	
Age of the respondent			
< 20 Years	5	11	0.432
> 20 Years	11	42	
Secondary Education of the respondent			
F-Sc (Pre Medical)	16	73	0.0372*
F-Sc (Pre Engineering)	0	0	
Others (A-Levels)	0	9	
Discipline of Education of respondents children			
Public Health	8	41	0.158
Social Sciences of Health	1	5	
Biological Sciences	2	21	
Nutrition Sciences	2	14	
Psychology	3	1	
Place of Residence of the respondent			
Day Scholar	14	48	0.040*
Hostelite	2	34	
Marital status of the respondent			
Married	1	3	0.582
Un married	15	79	
Educational Status of the Father			
Primary	0	4	0.181
Middle	2	24	
Intermediate	9	46	
Graduation	5	60	
Post-graduation	0	50	
Occupational Status of the Father			
Own Business	32	25	0.001*
Private Jobs	17	23	
Others	49	53	

Occupational status of the father ($p=0.001$), Place of residence of the respondent ($p=0.040$) and Secondary Education of the respondent ($p=0.0372$) were significantly associated with self-medication practices among undergraduate students.

Discussion

This study revealed that the most common conditions encouraging self-medication were pain, fever and cough. This is in contrast from another study in which common cold was found to be most common cause followed by fever and headache (22). This finding is in line with a study held in Rawalpindi where most of the students were taking medication for the relief of pain (23).

The study found that painkillers, antibiotics, antipyretics, anti-allergic, and anxiolytics were the most commonly used drugs to treat minor illnesses, listed in descending order. This result differs from the findings of another study, in which the most commonly used drugs were antipyretics, painkillers, anti-allergic, and antibiotics (24).

This study revealed that the most common causes for self-medication were that the public assumes that the illnesses were not serious enough to go and see a doctor. Other than that, they also think that self-diagnosing and self-treating will save their time and cost of going to medical practitioner. This finding is similar to another study in which most common reasons for self-medication were minor illnesses (82%) and time constraints to see a doctor(11%)(25). Similarly, this is in line with another study in which it is stated that it is impractical to consult a doctor for a minor problem and will definitely help in saving their time (26).

Our study showed that majority (95%) of the students were well aware of hazards of the over dosage and took medicines for proper time duration. This is similar to a study held in Lahore in which adverse effects of self-medication were considered by 75.84% of students (27).

Regarding attitudes of the students, majority of them had positive attitudes about rules & regulations of the pharmacy and issuing of the medicines without prescription. While another study held in Nepal, only few of the students were in favor of implementation of firm rules and s fines for those who breaks rules & regulations (28). Seventy seven(77%) of the respondents feels that that self-medication can harm themselves and were not beneficial. Unlike in the current study, many other studies also revealed positive attitudes by the respondents towards self-medication practices in other studies. About 76.90% of participants in Bahrain (29), 85% in India (30) and 55.50% in Gondar(21) had showed progressive attitudes towards self-medication practices. As self-medication is one of the vital element of self-care, more information and knowledge should be spread to practice responsible self-medication among not only medical students but other undergraduate students of universities as well.

In this study, significant association was seen between secondary education of the respondent and self-medication practices. This may be due to the reason students who had some medical background knowledge were more into practices of self-medication. Another study

held in Karachi showed no significant difference in self-medication practices of medical and nonmedical students (16). In our study, no significant difference was seen in self-medication practices between male and female students. This is in line with the study held in Abbottabad, Pakistan, in which no significant association was found between male and female university students in self-medication practices (24).

In order to decrease Self-medication practices, the government has to play significant role in implementation of rules and regulations in pharmacies and medical stores in uncontrolled buying and selling of medicines. In addition, various awareness programs should be introduced in institutions to raise awareness among students to address benefits and risks associated with self-medication in order to improve their attitudes towards responsible and appropriate Self-medication.

Conclusion

Besides having positive attitudes towards self-medication, knowledge of the students regarding Self-medication remains poor. Significant association was found between occupational status & educational status of the father, secondary Education of the respondent and self-medication practices among undergraduate students. As incorrect medication can cause harm not only to the students but to the community also, it is important to spread awareness and education among undergraduate students regarding self-medication

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