

Frequency and causes of self-medication among the medical students of Federal Medical College, Islamabad, Pakistan

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Objective: To determine the frequency and causes of self-medication among medical students of Federal Medical College, Islamabad.

Methodology: This was a descriptive cross-sectional study conducted on 292 medical students at Federal Medical College, Islamabad from August to October 2020. Pretested validated tool was used to collect data via random sampling. SPSS version 25 was used for data analysis. Chi-square test was used to determine the association between different study years and self-medication.

Results: Out of 292 students, 36% were males and 64% females. The frequency of self-medication was 80.9% and 92.1% used allopathic medicine while 5.1% used herbal medicines. 86% of students of age

between 22 – 25 years self-medicated in the last 6 months while only 77% of students of age between 18 – 21 years did the same. Fever (70%), headache (69%) and body ache (48%) were the most common indications for this practice. Paracetamol (89%), antibiotics (49%), NSAID's (49%) and antihistamine (45.5%) were the most commonly used drugs. Major factors favouring self-medication were quick relief (52%), time saving (46%), convenience (41%), physician will prescribe the same (38.5%) and emergency use (34%).

Conclusion: Self-medication is highly prevalent among medical students. This practice may contribute to adverse health outcomes among them.

Keywords: Self-medication, medical students, drugs.

INTRODUCTION

Self-medication is defined as the use of prescription medicines by people on their own initiative, resubmitting old prescriptions to purchase medicines repeatedly, or sharing medicines with members of one's social circle. It is practiced worldwide including Pakistan because drugs are dispensed over the counter without prescription.¹ This concept is deeply ingrained among medical students,² as more than 50% American and Canadian medical students indulged in this practice.³ About 80% of medical students practiced self-medication in a recent Serbian study.⁴ Several studies have reported 88 – 95% medical students using self-medication,⁵⁻⁷ with self-medication almost equal in both genders.⁶ This trend increased from first to final year of medical schools.^{6,7} Among the medicines opted for were mostly allopathic type.^{8,9}

Major symptoms for which the students self-medicated were headache (75.9%), cough and cold (52.5%), and fever (35.6%) and body pain (24.6%).^{10,11} Acne was also reported to be an indication for self-medication.¹¹ Similar prevalence of self-medication among medical students was reported from Iran.¹²

Most students used paracetamol (65.6%), antibiotics (44.7%), NSAIDS (34.7%) followed by antihistamines

(25.8%), gastrointestinal drugs (13.1%) and herbal medicines.^{6,13} A study from Karachi concluded that 52.1% students took antibiotics for self-medication and out of which only 42.1% completed the course.¹⁴

The factors that lead to self-medication included minor ailment (79.4%), emergency use (50.8%), timesaving (31.7%), quick relief (31.7%), economical (22.2%) and prior experience (61.9%).¹⁵⁻¹⁷ Family (45%), books (40.6%), and internet (35.3%) were the major sources of information for self-medication.¹⁶ Most students were aware of the adverse effects of irresponsible self-medication.^{11,16,17,18} The objective of this study was to evaluate the frequency and causes of self-medication among students of Federal Medical College.

METHODOLOGY

This descriptive cross-sectional study was conducted on medical students of Federal Medical College, Islamabad, Pakistan from August to October 2020. The sample size was 292 that was calculated by WHO calculator with confidence level of 95%. Students who were between 18 to 25 years of age were included in the study. Those who were suffering from any chronic disease and who recently had any surgical procedure

were excluded from the study. The sample was selected through simple random sampling (drawing lots).

A pretested validated tool was used, which has been used in a similar study.¹⁰ The Structured questionnaires were handed over to each participant and the same were collected on the next day. Ethical approval for the study was granted by the Ethical Review Board of Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad and an Informed consent was taken from all the participants.

Statistical Analysis: SPSS version 25 was used to analyze the data. Chi-square was applied to find the association between self-medication and different study years.

RESULTS

Out of 292 students, 36% were males and 64% females. The frequency of self-medication was 80.9% within the last 6 months. We observed that 84% of male and 79% of female students self-medicated in the last 6 months. Majority (92.1%) used allopathic medicine with 5.1% opting for herbal medicines. Fever and headaches were most common reason for self-medication (Fig. 1).

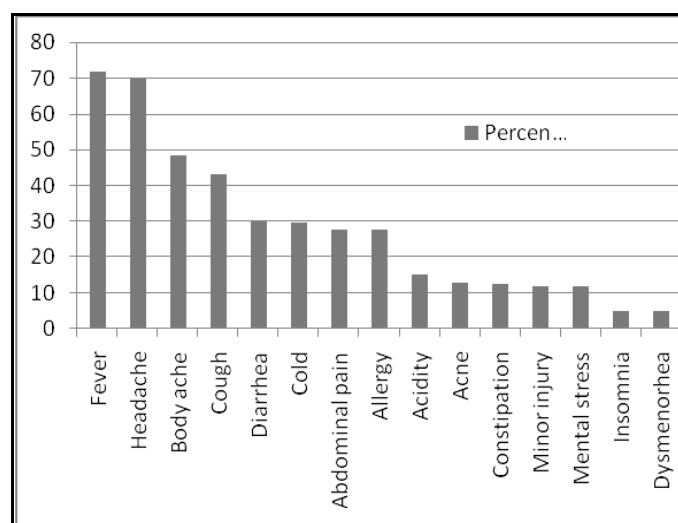


Fig. 1: Common symptoms for self-medication.

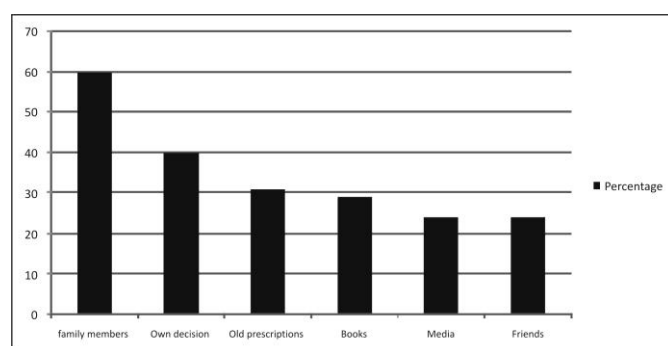


Fig. 2: Common sources for self-medication.

The drugs commonly used were paracetamol (89%), antihistamine (45.5%), antibiotics (49%), other NSAIDs (49%), psychotropic drugs (6%), GIT drugs (27%) and herbal medicine (14%). Out of the students who used antibiotics for self-medication, 82.6% stated that they used to complete their course. Family members were the most common source to self-medicate (Fig. 2). 77% of students of the age bracket 18 – 22 years and 86% of the 22 – 25 age bracket practiced self-medication in the last 6 months indicating greater percentage in older age (Table 1).

Table 1: Percentage of students who self-medicated in the last 6 months.

Study Year	Yes %	No %	P-value (Chi-square Test)
1 st year	75	25	0.005
2 nd year	78	22	
3 rd year	83	17	
4 th year	84	16	
5 th year	89	11	

DISCUSSION

In the present study, the frequency of self-medication among medical students was noted to be 80.9%, which is similar to studies conducted previously.⁴⁻⁷ We did not find significant gender difference, which is similar to a study from North India.⁸ It was observed that the trend of self-medication increased from first to fifth year, which is in line with studies from India.^{9,10}

Allopathic medicines were used by the majority students, as mentioned in earlier studies.^{10,11} Fever, headache, body pain, and cough were the most common symptoms for self-medication in this study. Insomnia and dysmenorrhea were less common reasons, which is similar to previous studies.¹³ Acne (12.7%) was among the less common reasons in our study as compared to 59.2% in a previous study.¹⁴

We found paracetamol, cough medicines, antibiotics, and antihistamines to be the most frequently used drugs, as reported by an earlier study.⁴ Six percent students admitted use of psychotropic drugs, which is comparable to the 5% usage found in another study.⁴

Quick relief, time-saving, physician will prescribe the same/prior experience and convenience were the prime factors favoring self-medication in the present study, similar to reported by multiple studies.^{4,16} Lack of healthcare facility was the least common cause for self-medication according to some studies.⁶

Most students self-medicated on the advice of their

family members and old prescriptions, which is relatable to other studies.^{6,10} Majority of the students displayed a positive attitude towards proper self-medication and were in picture of the demerits of excessive and irresponsible self-medication.¹³ This study was conducted in only one medical college. A recall bias is possible because students were asked about their practices in the last six months.

CONCLUSION

Self-medication among medical students is on the rise. Medical students being future doctors must be educated regarding the demerits of inappropriate self-medication.

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