

## Frequency of self-medication among medical students and their choice of medicine; a descriptive cross-sectional survey

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### Abstract

**Objective:** To find out the frequency and preference of self-medication among medical students of Karachi-Pakistan.

**Design and duration:** Descriptive cross sectional study, from May 2016 to August 2016.

**Setting:** undergraduate students of four (4) medical colleges, Jinnah Medical and Dental College, Karachi Medical and Dental College, Sir Syed Medical College, Liaquat National Medical college.

**Participants:** A 376 participants from first year to final year were included by systemic random technique every fifth student from their respective attendance sheet was selected.

**Methodology:** Data was collected on a preformed questionnaire. Results were compiled and compared with national and international literature.

**Results:** During this study period, 376 students of four medical colleges were participated and questioner was filled. in the study were 376, among them 101 were studying at Jinnah Medical and Dental college, 123 were of Karachi Medical and Dental college, 65 were of Sir Syed Medical college, and 87 were of Liaquat National Medical college. Among all participant male to female ratio was 1:3. The mean age of the respondents was 22 years. The frequency of self-medication was found to be 65.2%. The mostly used form of medicine was allopathic 66.2%. The most common reason for not consulting the doctor was 'illness was mild' & 'easy availability'. The most common symptoms for self-medication was sought were headache (56.6%), fever (50.3%), and cold/flu (44.1%). Among the participants (52%) agreed that self-medication was dangerous.

**Conclusion:** Frequency of self-medication was high among medical students and most common used were allopathic medicine, despite the fact that majority found aware of its harmful effects.

**Keywords:** self-medication, medical students, frequency

### Introduction:

According to William Osler, a great feature which distinguishes man from animals, is the desire to take medicine.<sup>1</sup> Self-medication is a component of self care and it is considered as primary public health resource in health care system.<sup>2</sup> Self-medication involves the use of medical products by the individuals to treat self-recognized disorders or symptoms, or the intermittent or continuous use of a medication prescribed by physician for chronic or recurrent disease or symptoms.<sup>3</sup> Self medication increases the chances of illicit use of drug and drug dependency along with masking

the signs and symptoms of underlying disease resulting in complications, creating drug resistance and delaying diagnosis.<sup>4</sup> In 1995, WHO expert committee on National drug policies stated; self-medication is widely practiced in both developed and developing countries. However, the prevalence is higher in low and middle-income countries because of lack of regulation on prescription requirement, high expense of doctors and ignorance of severity of diseases. Previous research showed that literate people tend to practice self-medication more than illiterates.<sup>5</sup>

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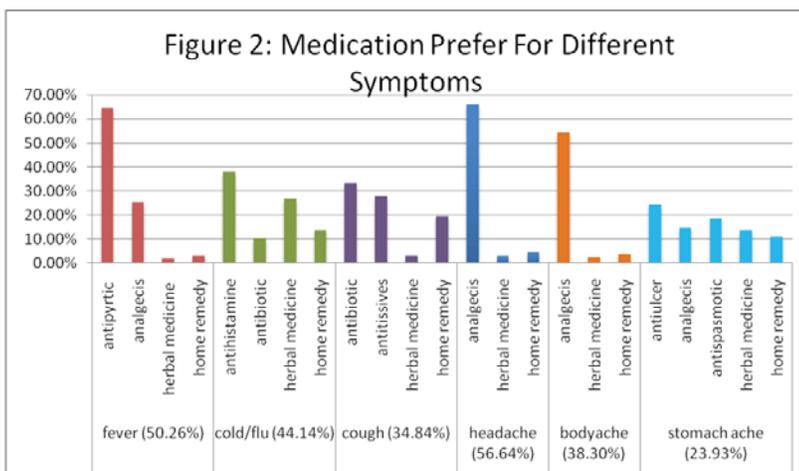
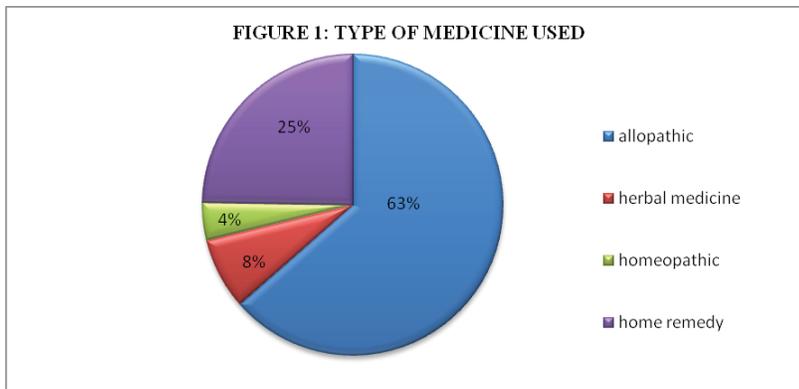
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College, all affiliated with Karachi University. A sample of 376 participants from first year to final year were included by systemic random technique every fifth student from their respective attendance sheet was selected. Student doing BDS and Pharmacy were excluded. Verbal consent was taken; data collection was done by self-administered questionnaire. Confidentiality was ensured to the students as no personal questions were asked. The questionnaire was divided into two parts, one assessed the frequency and practice of self-medication, and second assessed why self-medication was preferred and thought dangerous or not.

After the data was collected serial numbers were given to it according to colleges. Any missing questionnaire was excluded from the study. Data management and analysis was done on SPSS version 16.0. Descriptive analysis was conducted by calculating frequency and percentages and presented.

**Results**

Total respondents in this study were 376, out of which 245 preferred self-medication while 127 did not. According to analysis the prevalence of self-medication is 65.15% among medical students. The minimum age of the participants were 18 years old, maximum age were 26 years old with mean age of 22 years. According to the age in years self-medication was most prevalent in age group of 21-23 (68.26%), while 63.63% in 18-20, and 61.90% in 24-16. The number of females who responded were 264 and males were 84. Out of which 68.18% females and 58.33% of males did prefer self-medication. In relation to the years in which the students were studying, self-medication was most prevalent in final year which was about 74.19%. However in fourth year the prevalence was 73.68%, in first year was 63.0%, second year 60.60% but the least use of self-medication was found to be in third year which was about 55.55%.

Further in the analysis the mostly used form of medicine by the students was allopathic 66.2%, while the rest is showed in figure-1.

Table-1: : Reasons for not consulting a Doctor (n=367)

Factors	Count	%
Illness was mild	176	46.80%
Time saving	55	14.62%
Prior experience	94	25%
Urgent	46	12.23%
Cost effective	16	4.2%
Easy availability	76	20.2%

This study was aimed:

1. To find out the preferences of different kinds of medicines used (herbal, allopathic, homeopathic medicines, home remedies).
2. Reasons for not consulting the doctors

**Methodology:**

A cross sectional survey was conducted during the May to August 2016 among the undergraduate students of four (4) medical colleges, namely Jinnah Medical and Dental College, Karachi Medical and Dental College, Sir Syed Medical College, Liaquat National Medical

In this study the symptoms for which self medication was used includes, headache (56%), fever (50.3%), cold/flu (44%), body ache (38.3%), cough (34.8%), and stomach ache (23.9%) as shown in Figure II.

The common practice in self-medication was seen among the family members (68.9%), neighbor-hood 19.7%, others 10.9% and in institute 8.8%.

Table I shows, the most common reasons for self medication were mild illness (46.8%) and prior experience (25%). Participants who stopped taking medication on their own were (60.3%) while (91.5%) opted for medical advice. About 52.39% of the participants agreed that self-medication can be harmful.

### Discussion

This study demonstrates that about 65.2% students practice self medication, while a recent study with similar objectives reported it to be 78.6%.<sup>6</sup> On the other hand, frequency of self reported medicine amongst university students in Turkey is 45%.<sup>7</sup> A study conducted in developing country, showed the prevalence of self medication to be 25.4% however, in Ethiopia it is 43.2%<sup>8,9</sup> and 55.3% in Pakistan.<sup>10</sup> This study showed that the self medication was observed to be higher among females; similar observations were made in study from India,<sup>11,12</sup> and abroad.<sup>13</sup> The majority of participants followed allopathic system of medicine in this study which is similar to the observations made in other studies.<sup>6,14,15</sup> Figure II shows the most common reason for self medication reported were; illness being too mild and prior experience of the symptoms, similar observation were reported in other study studies.<sup>9,12,16</sup> The study shows, self-medications were common in final year 74.2% and fourth year 73.7% medical students who feel confident of their knowledge about the drugs. However, use of self-medication in third year medical students was comparatively less among the rest of the years 55.5%. Though it is surprising but it may be because of sufficient knowledge, similar observation was found in study conducted at India.<sup>6</sup>

Headache, fever, flu, body ache and cough were the most reported complaints for which drugs were taken shown in Table I. The participants in earlier reported published literature<sup>17</sup> practiced self-medication for similar pattern of ailments. In contrast to earlier studies<sup>17,18</sup> sleep problem and use of sleeping pill was not found in this study. This could be due to various reasons particularly, participants may have sleeping problems; majority is coping or had deliberately under reported the use of sleeping pills.

Analgesics and antipyretics were the most common drugs used by majority of the participants in the study, similar observations were made in other studies.<sup>8,10,12,19-21</sup> Antihistamines were self-medicated by majority of participants shown in Table I. In contrast to other study<sup>6</sup> the use of antibiotic as self-medication was reportedly low in this study, while some participants use antitussives, home-remedies and herbal medicine for symptoms of cough.

In the present study 52.4% of the participants agreed that self-medication is harmful, whereas 60.3% stopped taking medication on their own. For the choice of next medical advice 91.5%, participants opted going to the doctor. The irrational use of drugs is a cause of public and professional concern,<sup>22</sup> self-medication as part of self-care can be justified only when there is a judicious use of medicines. There is always a risk of using expired drugs, sharing them with friends and family or taking medicine that have been originally prescribed for some other problem. Irrational use of drugs may result in accidental drug poisoning. Other problems related to self-medication are wastage of resources and serious health hazards such as drug dependence, adverse reaction and prolonged suffering.

Drug resistance is another problem worldwide particularly in developing countries where antibiotics are often available without a prescription.<sup>23</sup> Lack of general knowledge on correct antibiotic use has been observed among students in a study from Portugal.<sup>24</sup> In a telephone based population survey in the USA, it was observed that 58% of participants were not aware of the

possible health danger associated with antibiotic use.<sup>25</sup>

### Conclusion:

We conclude frequency of self-medication was high among medical students and most common used were allopathic medicine, despite the fact that majority found aware of its harmful effects.

**Conflict of interest:** None

**Funding source:** None

### Role and contribution of authors:

Dr. Sheena, Assistant Professor, Department of Obstetrics and Gynecology, Jinnah Medical College and Teaching Hospitals, critically review the article and made the necessary changes

Dr. Afshan Aslam, House Officer, Jinnah Medical College and Teaching Hospitals, initial writ-up

Dr. Mahrukh Aslam, House Officer, Jinnah Medical College and Teaching Hospitals, collected the data and references

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