

# Prevalence of Self-Medication and its Practice among the Medical and Non-Medical Students

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## ABSTRACT

**OBJECTIVE:** To determine the prevalence of self-medication among the medical and non-medical university students of Sindh (Pakistan).

**METHODOLOGY:** A Questionnaire-based cross-sectional study was conducted from Aug-Sept 2013. A convenient sampling of 400 (50% medical and 50% non-medical) students was done among universities of Sindh (Pakistan). Undergraduate students of age group (18-23) were included whereas postgraduate students, house officers were excluded. Data was analyzed using SPSS (Statistical Package for the social sciences) version 16.

**RESULTS:** Frequency of self-medication was found to be 80%. 81% of non-medical and 81% of male students were prone to self-medication. 45% of males and 47% of medical students are aware of the contra indications when compared to females (37%) and non-medical students (33%). 75% of males and 88% of medical students know about the uses of the medicine compared to females (67%) and non-medical students (54%). 39% males and 52% medical students have knowledge of the complications than to the females (38%) and non-medical students (25%). The commonest health problems for which students seek self-medication are headache (40%), fever (19.5%), flu (5.2%) .

**CONCLUSION:** Self-medication is significantly high in the educated youth. Male and non-medical students are prone to self-medication. Self-medication among males is found to be practiced more among the Muslim States.

**KEYWORDS:** Self-administration; students, medical; universities.

## INTRODUCTION

Self-medication is a common and regular practice of using medicines; without any medical supervision; by the people themselves for self-treatment considering it a part of self-care<sup>[1]</sup>. Self-medication also encompasses utilization of surplus and left over medicines at home, seeking advices of the surrounding people as friends and relatives for the medication and purchasing medicines from the pharmacy by resubmitting old prescriptions<sup>[2]</sup>. Easy availability of the medicines over the counter enhances self-medication. Medicines that are most commonly utilized for self-medication include analgesics, anti-malarial, antibiotics and cough syrups etc<sup>[3]</sup>. There are several complications that are associated with self-medication such as allergy, drug dependency, renal dysfunction, resistance against toxins and microbes etc<sup>[5]</sup>. Previous studies suggest that, self-medication has both positive as well as negative aspect for example inappropriate intake of medicines can bring about dreadful drug reactions, may lead to serious chronic ailment, cause resistance to pathogen etc. It also either covers or delays the symptoms, complicate the cause of the underlying disease delaying the diagnosis<sup>[4]</sup>. On the other hand, if it is adopted

appropriately, it can help relieve acute pain, save time, money and even rehabilitate a person in acute condition<sup>[1]</sup>. Medical students practice self-medication probably trying to implement their knowledge into practice for betterment<sup>[5]</sup>. It is estimated that women and people belonging to low socioeconomic background are more prone to self-medication<sup>[2]</sup>. The youth is more addictive to self-medication under the influence of advertisements and youth's exposure of inappropriate, unclear and incomplete knowledge of the medicines<sup>[2]</sup>. In Pakistan, many pharmacists prescribe the medicines on their own; medical students are also found involved in similar activity<sup>[6]</sup>. The incidence of self-medication among university students in previous studies found to be 76% in Karachi, 54% in Turkey, 88% in Croatia and 94% in Hong Kong<sup>[15]</sup>. This study was designed to find out the frequency of self-medication in medical and non-medical students and proportions were compared to find out the difference if any.

## METHODOLOGY

**Study area and period:** This study was conducted in 4 universities of Sindh province (Pakistan) and includes medical universities e.g. Liaquat University of

Medical and Health Sciences, Jamshoro (LUMHS) and Dow University of Health Sciences, Karachi (DUHS) and non-medical universities i.e Nadirshaw Eduljee and Dinshaw University of Engineering and Technology, Karachi (N.E.D) and The University of Sindh, Jamshoro. The study was conducted in Aug-Sept 2013.

**Study Design:** A Questionnaire based cross-sectional study.

**Study population and sample:** Four hundred students, 100 from each university (comprising of 200 medical students and 200 non-medical students) were randomly selected from the common rooms, cafeterias and classes. 176 male and 224 females' students of age group 18-23 were approached. The participants were informed about study objectives before data collection, and then their informed consent was sought. Questionnaires were filled in only by those who agreed to participate in the present study. All data were anonymzed.

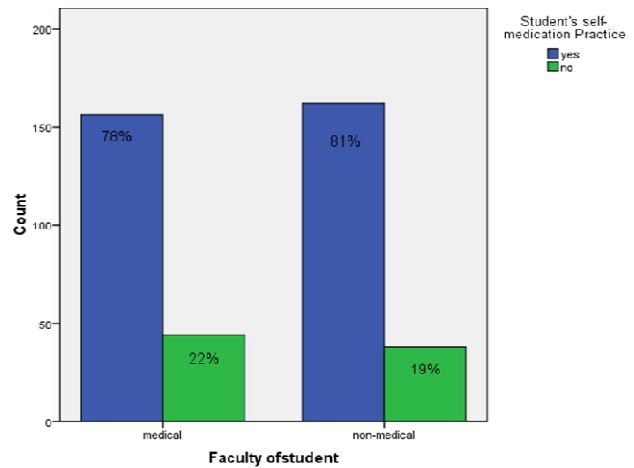
**Inclusion and exclusion criteria:** Undergraduate students of age group (18-23) were included whereas postgraduate students, house officers were not included.

**Data analysis, entry and interpretation:** Data was entered and analyzed on SPSS (Statistical package for the social sciences) version 16.

**RESULT**

Data revealed that 80% of students practice self-medication. Among the non-medical and male students, the frequency of self-medication was found to be 81% and 81% respectively. This study showed that 45% of males and 47% of medical students have more knowledge about the contraindications of medicines that they are taking as compared to females (37%) and non-medical students (33%) as shown in Table II. Present study also revealed that 75% among males and 88% among medical students are comparatively aware about the uses of the medicines than females (67%) and non-medical students (54%). According to this study 39% of males and 52% of medical students are aware of the complications that can arise after the use of medicines compared to the females (38%) and non-medical students (25%). Almost 30% students are influenced by the media for self-medication. The commonest problems for which students take medicines on their own are headache (40%), fever (19.5%), flu (5.2%), allergy (3%), body-ache (2.8%), cough (2.5%) and gastric acidity (2.2%) as mentioned in Table I.

**FIGURE I: FREQUENCY OF STUDENT'S (MEDICAL AND NON-MEDICAL) SELF-MEDICATION PRACTICE**



**TABLE I: THE FREQUENCY OF DIFFERENT SYMPTOMS SOUGHT FOR SELF-MEDICATION**

| Symptoms  | Percent symptoms used for self-medication by students |
|-----------|---|
| Headache  | 40%   |
| Fever     | 19.5%   |
| Flu       | 5.2%  |
| Allergy   | 3%  |
| Cough     | 2.8%  |
| Body ache | 2.5%  |
| Acidity   | 2.2%  |

**TABLE II: KNOWLEDGE OF UNIVERSITY STUDENTS REGARDING MEDICINES**

| Stratum of respondent                | Knowledge of indication of medicines (%) | Knowledge of the Contraindications of medicines (%) | Knowledge of the complications of medicines (%) |
|--------------------------------------|--|---|---|
| Male(both medical and non-medical)   | 75%                                      | 45%   | 39%   |
| Female(both medical and non-medical) | 67%                                      | 37%   | 38%   |
| Medical(both genders)                | 88%                                      | 47%   | 52%   |
| Non-Medical (both genders)           | 54%                                      | 33%   | 25%   |

## DISCUSSION

According to this study, 80% of both medical and non-medical students practice self-medication. This is comparable to a study from Pakistan which showed 76% incidence of self-medication<sup>[8]</sup>. The present study shows that males (81%) are more prone to self-medication but surveys conducted in Mexico revealed that (70%) females use un-prescribed medicines as compared to the males (39%)<sup>[7]</sup>. Similar results were produced in a study from Malaysia study which also stated the higher rate of self-medication among the females<sup>[9]</sup>. A study carried in Abu Dhabi (UAE) revealed that 69% males and only 39% females do self-medication<sup>[13]</sup>. In Saudi Arabia (UAE), males self-treat fever by their own more than females<sup>[14]</sup>. According to study conducted in Karachi (Pakistan); the incidence of self-medication in the medical and non-medical students is equal among both genders<sup>[4]</sup>.

It was noteworthy to find “no any” difference in the prevalence rate of self-medication amongst medical and non-medical students in this study. Our first thought is that apparently medical students would self-medicate more than non-medical students because of their comparatively more medical knowledge regarding use of medicines but this was not the case in our study. We find it difficult to explain the reason for this finding; however a probable explanation might be the fact that medicines used for self-medication are so common that their knowledge is evenly distributed among both medical and non-medical university students.

Another study from Karachi (Pakistan) showed that the headache (72%) is the commonest reason for self-medication followed by flu (66%) and fever (55%)<sup>[12]</sup>. The headache remain commonest symptom but comparatively less prevalent (40%) cause of self-medication in this study as well. However flu in contrast to the above mention study was the less common (6%) reason of self-medication in current study. In between these two, other reasons for self-medication in this study were fever (20%), cough (3%), flu (6%), and allergy (3%). The commonly used medicines used for self-medication include analgesics, antipyretics and antibiotics. The results of current study showed that 40% students consume Panadol®, 11% students take Ponstan®, 5% students use Disprin®, 3% use Arinac®, 3% use Paracetamol®, and 1.5% use Rigix®. Panadol® (acetaminophen) is being most frequently taken for relieving the pain. Panadol® (acetaminophen) is easily available over the counter and can be obtained without any prescription anywhere in Pakistan. Use of Panadol® is greatly enhanced by its advertisement which is displayed on different TV

channels. The rate of self-medication is also very high among the Iranian college students regarding analgesics<sup>[10]</sup>. Among analgesic, Paracetamol® (acetaminophen) is also frequently used in Egypt (87.3%) and Bahrain (81.3%)<sup>[11]</sup>.

## CONCLUSION

The prevalence of self-medication is at its alarming stage in the educated youth of the Pakistan due to its easy availability at the counter and role of media. It is found that males are more prone to the self-medication.

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