

*Original Research Article***CONDITIONS, FREQUENCIES, AND SOCIODEMOGRAPHIC FACTORS LEADING SELF MEDICATION PRACTICE IN SARGODHA AREA OF PUNJAB PAKISTAN****Sonia Imtiaz\*, Nabila Abdus Salam, Kamran**

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**ABSTRACT:**

**Objective:** To assess the prevalence, attitude, awareness and practice of self medication amongst students of Sargodha University, Pakistan.

**Methods:** A descriptive cross –sectional study was conducted in the period from the beginning of January 2013 to April 2013 in Sargodha University, Pakistan. Convenience sample was selected. Data was analyzed using SPSS.

**Results:** The prevalence rate of self medication in study participants was found up to 83% that is 249/300. High prevalence rates of self medication were seen in conditions of common cold(87%), headache(82%) and other pains(83%), hence most commonly used medications were paracetamol (83%), other NSAIDS (67%), Antibiotics(50%) and vitamins(60%).High consultation cost (75%), minor illness cases(93%), having previous experience (70%), time shortage (59%), friend's advice to take medicine (77%) are the main factors & 48% participants indulge in this practice due to easily availability of all drugs from drug stores w/o prescription , 59% found it convenient to use this practice and 75% (N=225) participants had no awareness about complications of medicines that are consumed w/o professional consultation. we found that there was no prominent difference of self medication practice in males and females and in different age groups and among different departments.

**Conclusion:** Prevalence rate of self medication is alarming in university students. Thus further work should be done on larger scale and strict policies should be intimated to address this problem and give awareness to individuals about medication use.

**Keywords:** Self medication, OTC, irrational drugs use

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**INTRODUCTION:**

The word medication means use of medicines for treatment of ailments. Medicines should be used after consulting a doctor, according to symptoms of illness. Self medication is a kind of self care [1]. However the major difference in Self-medication & self care is that it uses medications that may cure ailments or produces harm [2]. In our society, it is a common practice to treat most illnesses by self medication. Self medication is very common in medical students (pharmacists, doctors, nurses) [3, 4, 5]. Self medication is a term used to describe a situation in which a person takes medicine without any prescription to treat his undiagnosed disorder [6]. Self-medication is defined as purchasing and using medication without professional prescription [7]. Self medication even for minor illnesses could lead to any kind of serious complication. A list of drugs which are most commonly irrationally used in our society as pain relievers, anti-allergies, cough remedies, laxatives, antibiotics, antacids and vitamins are sold OTC (over-the-counter)

[8]. Complications which may arise due to self medications are allergy, antibiotic resistance, kidney impairment, dependency etc. As excessive use of vitamins could lead to vitamin poisoning and a lot of risks are associated with use of analgesics in Self medication practice [9]. As far as its prevalence is concerned, it has high rate all over the world. It has high prevalence rate that is ranging from 32.5- 81.5% [10].self medication prevalence rate in developing countries is alarming that is 92% [11] , prevalence rate in European countries is 68 % [12] and in our neighboring countries like in India and Nepal are 31 % [13] & 59 % [11] respectively. In terms of self medication prevalence in Pakistan, sufficient data is not available but information that has been collected from relevant studies indicate 51% prevalence rate in Pakistan [14].

Self medication can be attributed by the following factors i.e. socio-economic factors, socio-demographic, easy accessibility of drugs in developing countries, pharmaceutical advertisement; previous medical history, left over medicine at home [15]. Moreover an emerging source is internet in most educated individuals.

On the other hand self medication can also have a positive impact on healthcare if it follows guidelines issued by WHO as it reduce workload on medical services, help to treat self limiting minor illnesses and cost saving [6].

In Pakistan most of the medicines including antibiotics and a lot of controlled drugs are available without prescription from medical store to layman [16]. This can lead to number of serious complications & harms, as layman is unaware of drug's lethal effects. Only few studies have been conducted on self medication in Pakistan and no program has been initiated by our health care system to give awareness about harms related to self medication. No data is available on the present status of self-medication practices among students of Sargodha University, Pakistan which our study aimed to generate. The aim of our study is to measure prevalence rate, determine the contributing factors, awareness and practice of self medication among the students of Sargodha University, Pakistan.

## **METHODOLOGY:**

### **Study area and period:**

This study was conducted in main campus of Sargodha University, Pakistan. The University of Sargodha was established since 2002 and is amongst the higher rank universities of Pakistan. It encompasses faculties of pharmacy, art, social sciences, biological sciences, health sciences, information technology, Management and Administrative Sciences and engineering and many other departments. The study was conducted in the period from the beginning of January 2013 to April 2013.

### **Study design:**

We conducted descriptive cross sectional study

### **Study Population and sampling:**

By convenience sampling method, 320 students having Sargodha university registration were selected from common rooms and cafeterias of different faculties of main campus. All those students who were not registered were not included in this study.

### **Study tools:**

A pretested study questionnaire was taken from studies previously conducted in same field [11, 17]. It was in English language and composed of three basic parts. First part dealt with demographic details of participants, 2nd part dealt with prevalence and practice of self-medication and third part dealt with participant's attitude towards self medication.

#### Consents:

The participants were informed about study objectives before data collection, and then sought their consents and questionnaires were filled only by those who were willing to fill it.

#### Data entry, analysis and interpretation:

Descriptive analysis was conducted by calculating means and proportions for data chi square test were used for inferential analysis to identify relation amongst variables. Analysis was done by SPSS software package. To determine the association between variables 0.05 significance level was used. The results were shown in absolute figures as depicted in Figures and Charts.

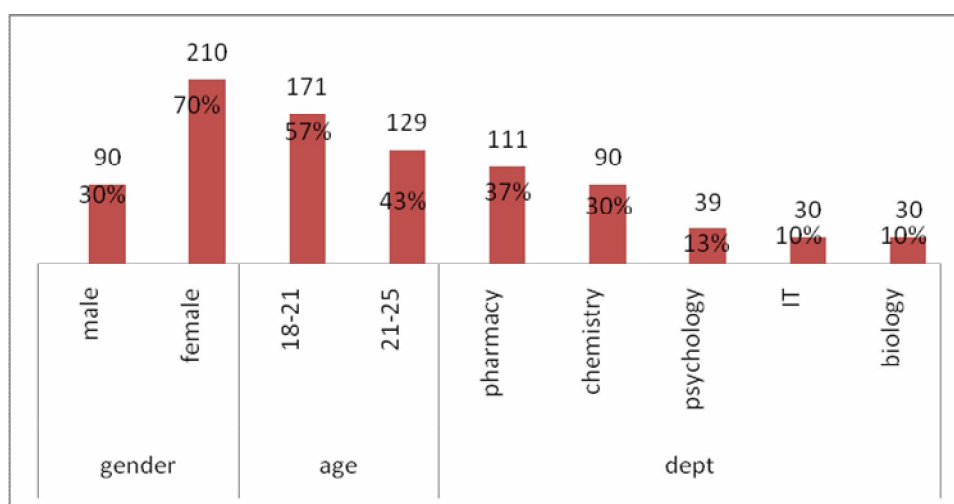
#### RESULTS:

93.7% response rate was obtained based on the fact that out of 320 students, 300 students completely and accurately filled and returned questionnaire.

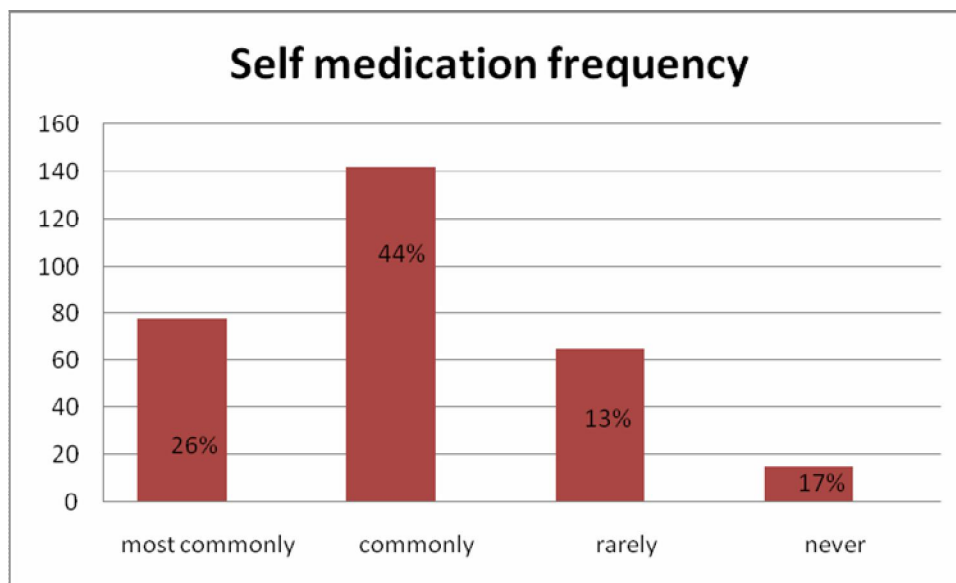
#### Socio-demographic data:

Gender, age and department of participants is shown in figure 1.that depicts us that 90(30%) were males and 210(70%) were females. The age of 171 (57%) participants was in range of 18 – 21 years and the remaining were in range of 21 – 25 years .In terms of department 37% participants from pharmacy department and 30%,13%,10% and 10% from chemistry, psychology, IT and biological sciences department respectively.

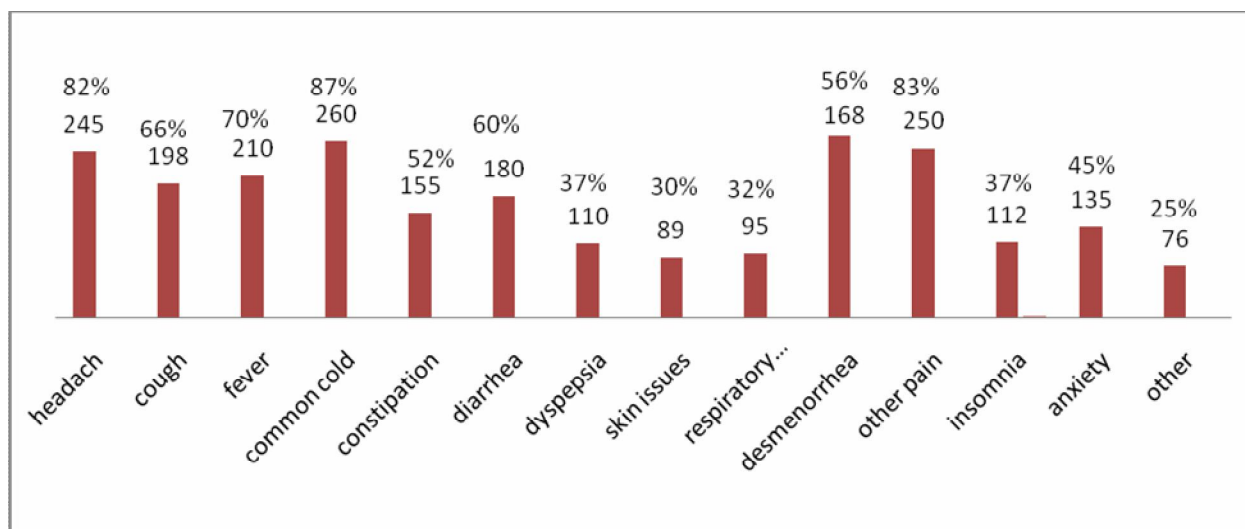
**Figure 1: Sociodemographic characteristics of study participants**



The prevalence rate of self medication in study participants was found up to 83% that is 249/300 as shown in FIG 2. 17% (51) participants never self medicate themselves. Whereas 13 % ( 39) participants rarely consume medications w/o prescription.

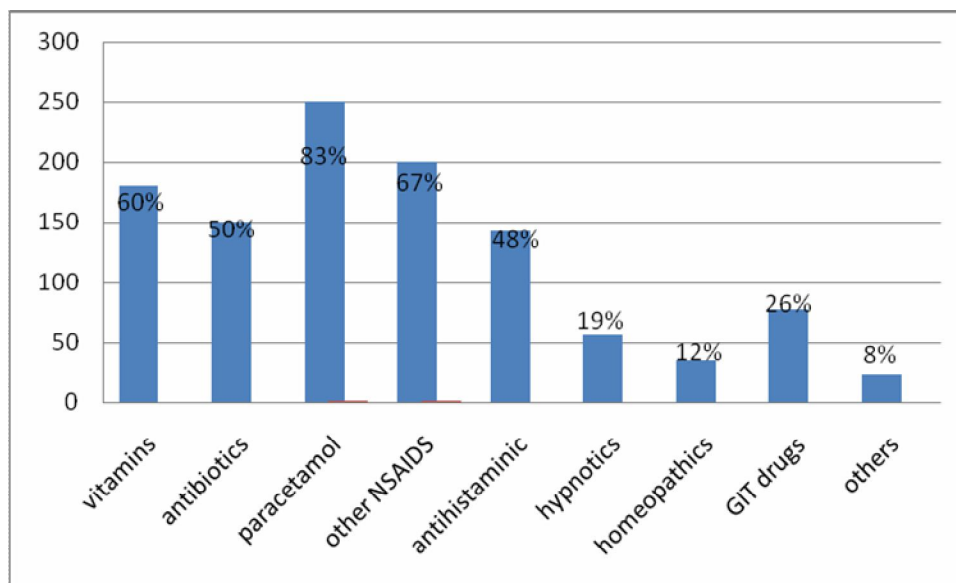
**Figure 2: Frequency of self-medication among participants**

Most common illnesses that led to practice self medication in participants were headache, cough, fever, common cold, constipation, diarrhea, dyspepsia, skin problems, dysmenorrhea, other pains, insomnia, anxiety and for many other situations with a prevalence rate of 82%, 66%, 70%, 87%, 52%, 60%, 37%, 30%, 32%, 56%, 83%, 37%, 45% and 25% respectively (FIG 3). Hence High prevalence rates of self medication were seen in conditions of common cold, headache and other pains.

**Figure 3: conditions which led to practice self medication**

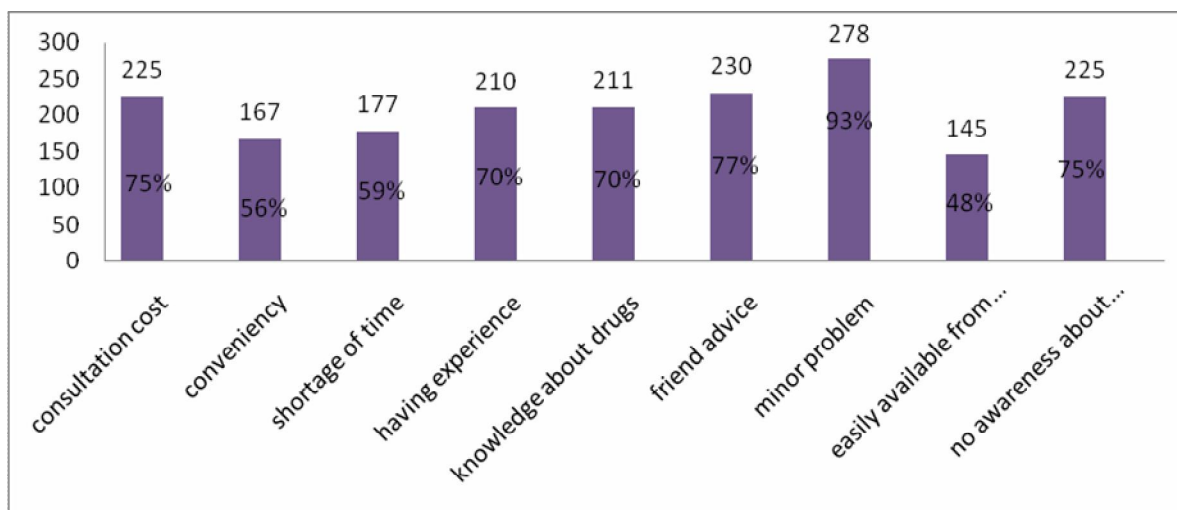
- Due to multiple responses, total value doesn't add to 100%

In self medication practice, the most commonly used drugs were paracetamol (about 83% of participants used this drug), 67% participants used other NSAIDS, 60% participants used vitamins, antibiotics (50%), antihistaminic (48%), & hypnotics (19%), homeopathic (12%), GIT drugs (26%) and others (8%) were used less frequently by participants (FIG 4)

**Figuer 4: Most common drugs used in self medication practice:**

- Due to multiple responses, total value doesn't add to 100%

Figure 5 depicted the basic reasons which led towards self medication practice were high consultation cost (75%), minor illness cases(93%), having experience with same medicine previously (70%), time shortage (59%), friend's advice to take medicine (77%) and also 48% participants indulge in this practice due to easily availability of all drugs from drug stores w/ prescription , 59% found it convenient to use this practice and 75% (225) participants had no awareness about complications of medicines that are consumed w/o professional consultation.

**FIG 5: Factors which led towards self medication practice**

- Due to multiple responses, total value doesn't add to 100%

**DISCUSSION:**

This study demonstrates that prevalence rate of self medication practice is up to 83% amongst Sargodha university students. In many developing countries including Pakistan, every pharmacy sells drugs without a prescription [16]. Since there has not been conducted any study on national level to assess overall prevalence of self-medication practice in Pakistan. So comparison is not possible. However the information that has been collected from relevant studies indicate 51% prevalence rate in Pakistan [14]. According to a letter Self-medication was reported in 7.1% of cases as compared to urban areas at 2.6% [18] & a study conducted in Spain demonstrated that self-medication prevalence was higher among those with higher educational levels[19] A study in university students of Karachi has found self medication prevalence rate up to 76% [8] and a study on Self-Medication of Anti-Biotic Amongst University Students of Islamabad assessed prevalence rate up to 77% [20] and another study on Self medication among university students of Islamabad depicted 41% prevalence [18]. From the data of our study, we found that there was no prominent difference of self medication practice in males and females and in different age groups and among different departments. These results differ from a previously conducted study among medical students, it showed higher prevalence among female students than male students [2] & self-medication prevalence was found to be higher among those with high educational levels[19]

According to a study excessive use of symptomatic headache medications can induce medication overuse headache, it is the third common diagnosis of headache in primary care settings [21] and in our study about 83% participants self medicate them with paracetamol and other analgesics. As development of antibiotic resistance due to irrational use of medicines is very serious issue in health care system. It is required to seize the antibiotics sale without any prescription [22]. In one study conducted in Sudan, about 73.9% of the study population had used antibiotics without prescription [23] while in our study about 50% participants used antibiotics irrationally that is alarming as well.

The basic reasons which led towards self medication practice were high consultation cost (75%), similar results were found by previously conducted study that majority of participants self medicate themselves due to high cost of treatment at private hospitals[24], minor illness cases(93%), having experience with same medicine previously (70%) [25], time shortage (59%), friend's advice to take medicine (77%) and also 48% participants indulge in this practice due to easily availability of all drugs from drug stores without prescription , 59% found it convenient to use this practice and 75% (N=225) participants had no awareness about complications of medicines that are consumed w/o professional consultation.

We should develop such system in our country which strictly deals with these drugs & ensures that these drugs should only be available on producing prescription. Another step which we can take is to reduce the consultation fee, so that every individual can have access to doctors. Awareness programs should be initiated which discourages the irrational use of medicines in terms of self medication.

There are certain limitations of our study that are the convenience sampling, limited population selected, Inclusion of educated youth only, study based on self reported data(depends upon participants will),and limited sample size. It is worthily noted that the participants of our study were educated enough to know the harms that are related to self medication practice, so it's obvious that the prevalence rate may be much higher in illiterate community.



## CONCLUSION

This study depicts the importance of need of further work done in this field on larger scale in our country and highlights the issues associated with self medication. This topic should not be ignored. Prevalence rate of self medication is alarming in university students. Thus further work should be done on larger scale and strict policies should be intimated to address this problem and give awareness to individuals about medication use.

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