



A Cross Section Study to Probe Self-prescribing Trends among the Population of Faisalabad-Pakistan

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Authors' contributions

This work was carried out in collaboration between all authors. Author US wrote the first draft of the manuscript. Authors MM and MF collected the data. Author BA did the final proof. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/BJPR/2017/32240

Editor(s):

- (1) Vasudevan Mani, Universiti Teknologi MARA (UiTM), Selangor, Malaysia.
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 - (3) Dany Geraldo Kramer, Federal University of Rio Grande do Norte, Brazil.
- Complete Peer review History: <http://www.sciencedomain.org/review-history/18848>

Clinical Practice Article

Received 16th February 2017
Accepted 10th April 2017
Published 29th April 2017

ABSTRACT

Self medication is a one of the causes of drug intoxication. The present study was planned to investigate the prevalence rate and circumstances that favor the consumer for self medication. A questionnaire was designed that comprised of 22 questions that probe into research question. Data were collected in three months. Study objects were University students, having the average age 20.8 ± 2.54 , ranged from 18 to 24 years and non University person having middle and primary qualification, with the average age of 51.4 ± 13.92 ranging from 30 to 80 years of Faisalabad Pakistan. Sample size was calculated with Raosoft calculator. Results showed that females (53.3%) were more inclined to self medication as compared to males (44.6%). Muscle relaxants, antibiotics, antidepressants, antacids and analgesics were categories of medicines that were

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commonly used by university students and non university persons for cold/flu/cough, body aches and weakness. Antibiotics and muscle relaxants were taken by non university persons 52% and 12% as compared to university students (50% and 1.3%). Use of analgesics and antidepressants is 34% and 4.6% respectively in university students as compared to second group that is 31.3% and 2.6% respectively. It is concluded that self prescribing trend for antibiotics and muscle relaxants is more common in non university persons whereas analgesics and antidepressants were more used by university persons in university students. Antacids were almost equally consumed by both groups.

Keywords: University students; non university persons; self medication.

1. INTRODUCTION

According to William Osler urge to take medicine is a great feature that differentiate human from animals [1]. Self medication is defined as procuring or consuming medicines without the doctor's advice either for prescription, diagnosis, or surveillance. Patients consume pharmaceutical products and medicines either as prescription only medicines (POM) or without prescription (OTC, over the counter drugs) [2]. So, self medication is getting medicines without having a prescription, sharing medicines with friends and relatives, purchasing medicines by resubmitting the old prescription or by using leftover medicines which are stored at home [3]. The prevalence of self medication rate is high in European countries up to 68%, while in the developing countries it is much higher [4]. Among the adolescents of Kuwait it is 92% [5]. In neighboring countries including India and Nepal, prevalence rate of self medication are 31% and 59% respectively [4,6]. In Pakistan very few studies have been carried out, which confirmed high prevalence rate up to 51% [7]. It is alarming that despite continuous efforts to decrease this problem prevalence frequencies are on the rise [8]. Various previous studies have reported that self medication is more common in females, those having psychiatric disease condition, students, young age, low socioeconomic status people, and those who live alone [9,10]. Although self medication has never been appreciated but its practice is very much common from ancient times till today's modern and scientific age [11]. In Pakistan prime factors that push majority of public/patients for self medication are: practitioner fees, economic status of population, poor quality of medicines in public/government sector, hospitals, number of pharmacies and medical stores, health facilities, long waiting time [5]. Self medication is allowed in minor ailments like sore throat, flu, sunburn, cold etc

[12]. Improper use of OTC medicines may cause serious problems especially in pregnancy, lactation, geriatrics and pediatrics [13]. Non prescription drugs misuse among the students has also becomes a problem. The youth are exposed to increased pharmaceutical's advertising and media [14]. This poses a serious threat to youth and raises the concern of wrong diagnosis. To assess the self medication practices, various studies have been conducted in Pakistan in different times. Almost every Pharmacy in Pakistan sells the drugs without prescription, antibiotics and other drugs are easily accessible to lay man [15]. To ensure the safe self medication practice, all consumers should have at least basic knowledge about the drugs so that the chances of adverse effects can be minimized [16]. The current study was designed to investigate the causes of self medication in literate and sub-literate population of Faisalabad city of Pakistan.

2. METHODOLOGY

2.1 Study Design

A cross sectional study of three months was carried out to evaluate the practice of self medication in University students having the average age 20.8 ± 2.54 , ranged from 18 to 24 years and non University person having middle and primary qualification, with the average age of 51.4 ± 13.92 ranging from 30 to 80 years. Sample size was calculated with Raosoft calculator.

2.2 Study Population

Three hundred drug consumers were included in the study in which 150 belongs to University and remaining 150 were primary/middle pass persons. Study subjects were selected randomly.

2.3 Ethical Committee Approval

Study was conducted after getting approval from Institutional Ethical Committee of Government College University, Faisalabad-Pakistan, reference No. IRB/0786/16.

2.4 Data Collection Procedure

The questionnaire was filled by interviewing the study subjects who provided information on the basis of their past experiences regarding self medication. Informed consent was taken from all participants before the answering of questionnaire.

2.5 Data Collection Tool

A questionnaire was data collection tool for this study. This contained questions regarding probable causes of self medication and common signs and symptoms for which they self medicate themselves.

3. RESULTS

The study group of university students showed 53.3% females were indulged in self

medication practice that is greater than male (44.6%). University students having master's degree were 66.6% of the study population. In second group, 65.3% males were self consumers of medicines whereas female consumers were only 34.6% and selected consumers in this group had 52% primary education and 48% middle qualification (Table 1).

3.1 Causes of Self Medication

The major causes of self medication in university students were found as 1) Satisfaction with previous self medication (120%), minor ailment (137%), expediency (140%). Whereas in non university persons, common causes were minor ailment (131%), expediency (136%), Long Distance from physician (121%). Rest of causes along with percentages is given in Table 2.

3.2 Common Sign and Symptoms of Self Medication

Flu/cough/cold was reported as a symptom which encouraged the self medication trend in 37.3% (n=56) participants. Pain was found the

Table 1. Classification of study groups

Study groups	Qualification	N (%)	Total number
University students	Bachelor	59 (39.3%)	150
	Master	91 (60.6%)	
	Male	67 (44.6%)	
	Female	83 (53.3%)	
Non University persons	Primary	78 (52%)	150
	Middle	72 (48%)	
	Male	98 (65.3%)	
	Female	52 (34.6%)	

Table 2. Causes of self medication

Causes of self medication	University students	Non University (Primary/Middle persons)
Satisfaction with previous self medication	120 (80.0%)	29 (19.3%)
Minor ailment	137 (91.3%)	131 (87.3%)
Save the time	56 (37.3%)	53 (35.3%)
Sharing information from friends/ relatives	5 (3.3%)	14 (9.3%)
Expediency	140 (93.0%)	136 (90.6%)
Shortage of time	56 (37.3%)	108 (72.0%)
Cost of treatment	17 (11.3%)	89 (59.3%)
Long Distance from physician	113 (75.3%)	121 (80.6%)
Unsatisfactory behavior of specialist	119 (79.3%)	70 (46.6%)
High consultancy fee	31 (20.6%)	80 (53.3%)
Long medical therapy	56 (37.3%)	69 (46.0%)
Experience any side effects	120 (80.0%)	38 (25.3%)
Education influence the self medication trend	101 (67.3%)	60 (40.0%)

most common indication for self medication in 56.6% (n=85) of population. Infections 9.33% (n=14) and weakness 8% (n=12) were the other symptoms which indulged the university students in self medication. The prominent symptoms that predisposed participants for self-medication practices were pain (56.6%) and flu/cough/cold (37.3%). Fig. 1 showed that most common symptoms that led to indulge in self medication were flu/cough/cold in 37.3% (n=56) of people. The other symptoms that predisposed participants for self-medication practices were pain in any body part and infections in 38.6% (n=58) and 12.6% (n=19)

population respectively. Weakness was the symptom which was reported in 1.3% (n=2) respondents.

3.3 Categories of Medicines Commonly Used in Self Medication

Antibiotics and muscle relaxants were taken by non university persons 52% and 12% as compared to university students (50% and 1.3%). Use of analgesics and antidepressants is 34% and 4.6% respectively in university students as compared to second group that is 31.3% and 2.6% respectively (Fig. 2).

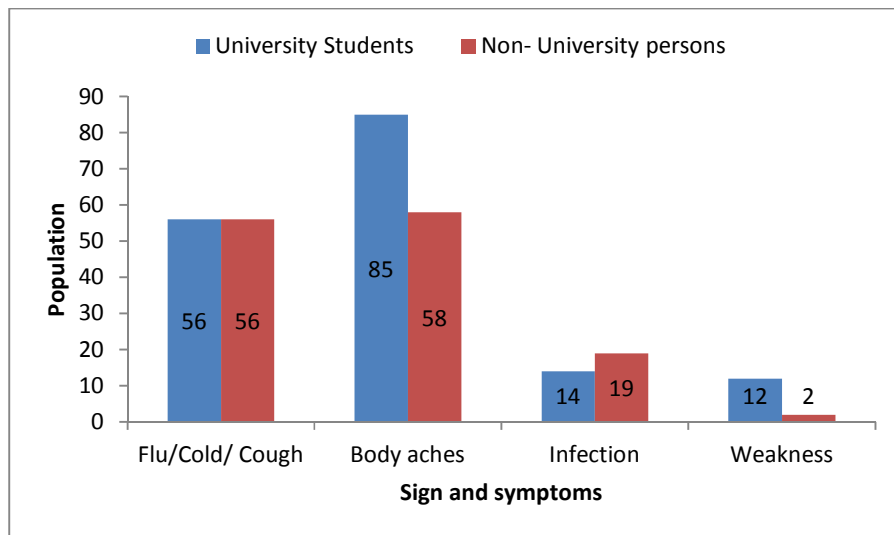


Fig. 1. Common sign and symptoms for self medication

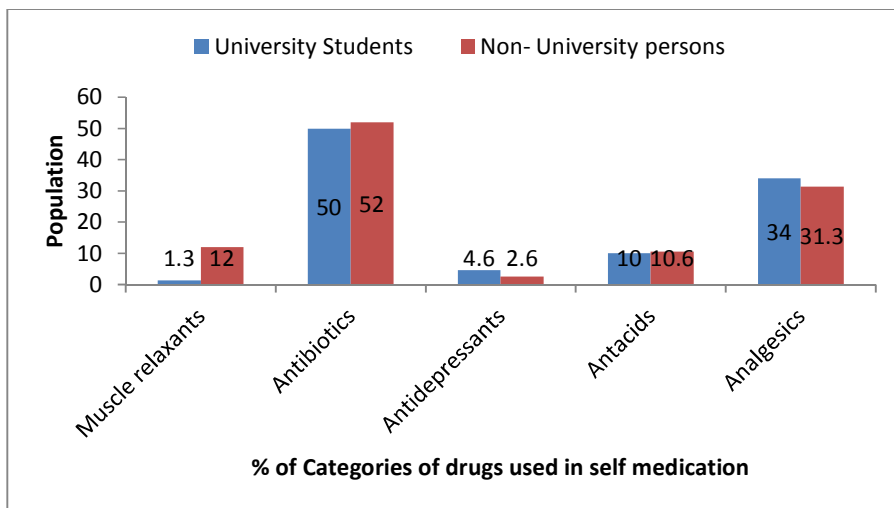


Fig. 2. Categories of medicines used in self medication

4. DISCUSSION

People of developing countries consider self medication as a self care element. For many years self medication has been a healthcare feature, and people always take more personal responsibility for their health. Self medication trend is common in Pakistan because of easy access to medicines at retail pharmacies. The use of OTC drugs as self medication is free from health risks. But the use of antibiotics without prescription is the cause of emergence of resistant bacterial strains [17,18]. The incidence of self medication is less in developed countries as compared to developing one [19,20]. A study at Hong Kong showed 94% university students do self medication whereas in Croatia 88% university students were indulged in self medication but this ratio is 45% in Turkey [21-23]. A study conducted at Karachi University showing 76% students did self medication but in our study 93% university students used to use drugs without prescription because of easy access of drugs on retail pharmacies [24]. Convincing by colleagues, advertisement of medicine via magazines or media, difficult approach to basic health units are few of the contributing factors that force the individuals to use medicines without prescription.

5. CONCLUSION AND RECOMMENDATION

The study demonstrated that prevalence of self-medication practices in the population of Faisalabad-Pakistan is alarmingly very high. It is almost equal in literate and sub-literate population. To prevent this practice, a realistic approach should be taken involving (a) strategies which inhibits the supply of medicines without the prescription by pharmacies (b) education and awareness regarding self medication (c) strict rules and regulations regarding advertising the pharmaceuticals (d) strategies to make less difficult to achieve the health care.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard, written approval of Ethics committee

has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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