



## Research Article

### PREVALENCE AND CONSEQUENCES ASSOCIATED WITH SELF MEDICATION IN OUR SOCIETY: A GLOBAL ISSUE

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#### ABSTRACT

Self-medication is defined as the usage of medicines without a prescription from an authorized practitioner, acquiring medicines on the bases of old prescriptions recommended under different symptoms and circumstances or using medicines already stored at home. In developing countries like Pakistan self-medication is a common practice as it provides a cheap and easy alternative. Especially, the youth is exposed to media and the increased advertising of pharmaceuticals poses a larger threat to the younger population. The aim was to determine the prevalence of self-medication among common segments of society and identify the sources and reasons for self-medication. For this purpose a survey was carried out in general areas of Karachi. Total 100 people were examined for subjected purpose by distributing forms to be filled with requisite information and particulars, out of them total 68% people were indulge in self-medication. Amongst them 40 were medical figures while 60 were non-medical people including 35 students, 5 family members, 6 friends and 14 from other segments of society. There were 25% males and 75% females. NSAIDs (50%), Anti-emetics (21%), antibiotics (10%), vitamin (5%), Allergy (4%) beta blockers (2%) and Anti-depressant (8%) were most commonly used drugs. After careful consideration about self-medication it's concluded that there is a requirement of a serious effort to educate the society as well as easy availability of prescription for a common man.

**Keywords:** self-medication, prevalence, Risk, global issue, factors.

#### INTRODUCTION

Self-medication is actually the use of drugs with therapeutic intent but without professional advice or prescription. It can also be defined as the use of non-prescribed medicines by people either on advice of friends or family members or using previous experience or on own initiative without consulting doctor which require awareness regarding threat associated with self medication<sup>1,2</sup>. Even now in routine life we are processing self-medication<sup>3</sup>. This paternalistic approach to medicine, supported by health care system or centers which are constructed to treat different diseases alternatively to prevent disease needs a serious check<sup>4</sup>.

We inherited this menace of self-medication is our society through traditions where diseases were cured by taking drugs, herbs or home remedies without consulting a practitioner<sup>5</sup>. Drugs prone to self-medication include analgesics, antimalarial, antibiotics and cough syrups etc.<sup>6</sup>. There is easier access to over-the-counter medicines without prescription then acquisition of prescribed ones<sup>7</sup>. Self-medication could cause bacteria resistance to such antibiotics and may precipitate the emergence of multiple-resistant organisms that would be difficult to treat and this has caused increased morbidity<sup>7-10</sup>.

Most common sources which play a vital role in rising of self-medication in a common inhabitant of our country are the advices of families, friends, classmate, cousin, the pharmacist, earlier prescribed drug. Today self-medication become very common and can be seen as that it is a need as well as capability of people and they are independent to choose medicine but the truth is that they are playing with their perception<sup>4,11,12</sup>.

A bit of the complications correlate with self-medication like as masked diagnoses, use of excessive drug dosage, prolonged period of use, drug synergy can developed in self-medicating particular person. After all, there is substantial variation in the prevalence rates of self-medication with flourishing and advance community due to intrinsic

alteration in civilization, imbalance in health care structure like payment strategy, approach to health maintainers, and drug dispensing policies<sup>13</sup>.

Major problems which are associated with self-medication are diffusion of funds or income, rising of struggle of pathogens along with source of severe health risk just as adverse reaction and continue difficulties. Bacterial resistance is present dilemmas in large scale especially in establish state where antibiotics are applicable without any instruction<sup>3,14</sup>. Thus, the ministry or government considers significant steps to supervise or control the subject of self-medication. It could be concluded by accomplishing safe and secure drugs with the useful information and guideline about its usage, benefits as a consequence whenever in need examine or call in a physician/ pharmacist<sup>3,15</sup>.

The objective of the study is to determine the prevalence of self-medication in our society in view of the fact to identify the sources and reasons for self-medication with serious consequences associated with it.

#### METHODOLOGY

The methodology adopted was the distribution of specially designed survey forms. Total of 100 survey forms were distributed by 6 students in almost all the segments of society which include students of university (75%), friends (6%), family members (5%), relatives (4%), neighbors (3%), shopkeepers (5%) and vendors, (2%). The survey took around 20 days. The task was distributed as 3 students were tasked to visit the university with 75% forms, 1 student in markets with 7% forms and 2 students were tasked to collect data from different friends and family members with 18% forms. A satisfactory response was received from society. Most of the people were quite cooperative despite few odd cases (11%). 21% were not found involved in self-medication and 68% confirmed their

involvement. The sole purpose of the survey was to accumulate following statistics, which are elaborated in subsequent paragraphs:

- Type and uses of medicine. (Figure 1)
- To draw a comparison of self-medication between different age groups. (Table 1)

- Factors which suggest self-medications. (Figure 2)
- Analyses of drug category. (Figure 3)
- Common side effects observed post self-medication. (Table 2)

**RESULT**

With a response rate of 100%, total 68% people were indulge in self-medication (Figure: 1).

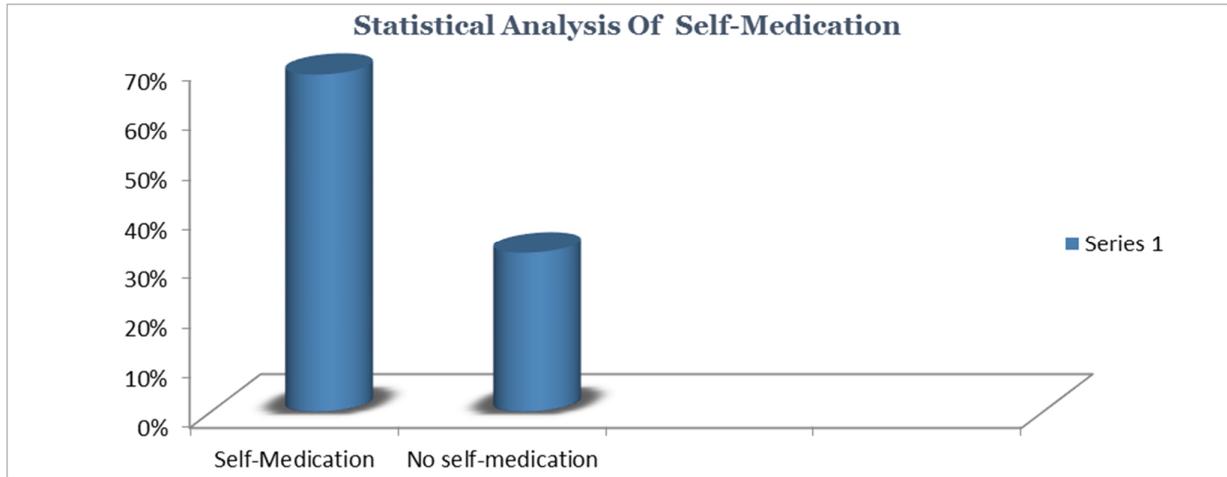


Figure 1: Statistical analysis of self-medication Indulged in Self-medication

Majority of Young people between the age of 10-30 years participated in this survey. Amongst them 40 were medical students while 60 were non-medical figures including 35 students, 5 family members, 6 friends and 14 from other segments of society. There were 25% males and 75% females. A serious inclination was noticed in young generation i.e. 41% aging between 20-30 years (Table.1).

Table 1: Different age group percentage

AGE	PERCENTAGE
10-20	33%
20-30	41%
30-40	9%
40-50	16%

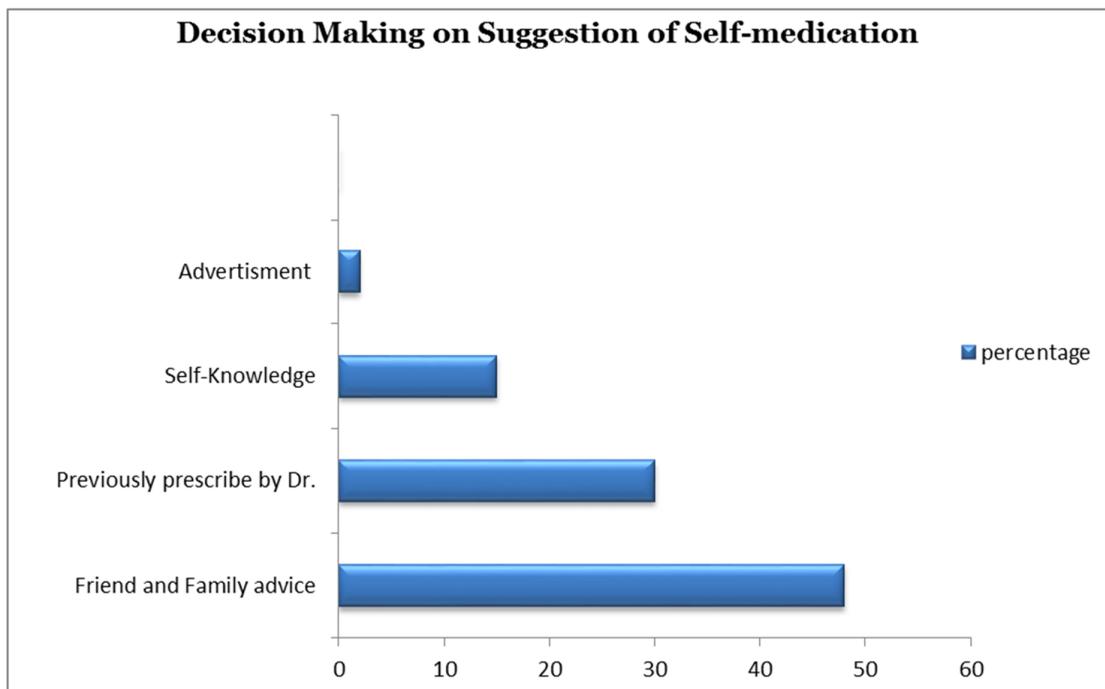


Figure 2: Statistical analysis of suggestion on self-medication

Main suggesting factor was family and friends. Mostly people without understanding difference of medical status of different bodies, keeping their previous experience in mind with similar symptoms recommend self-medication to their family and friends i.e. 48% people (Figure.2).

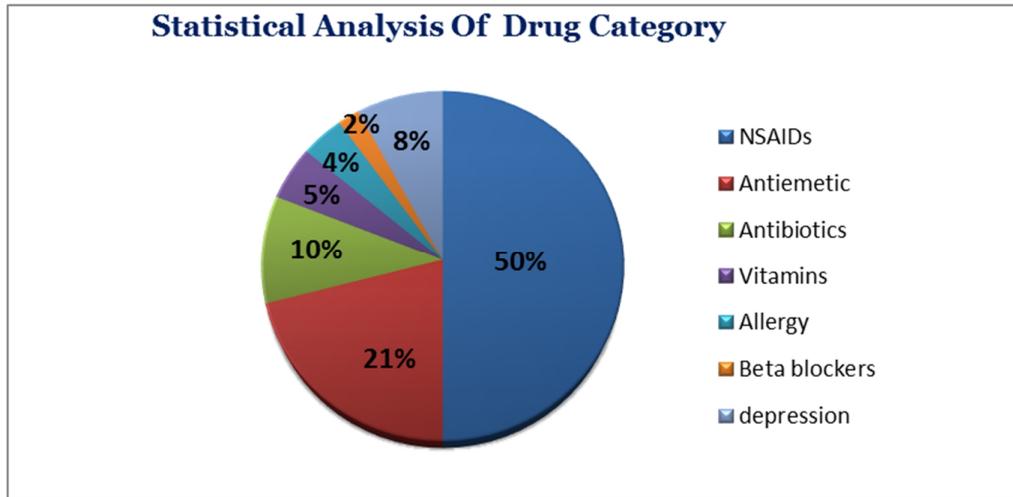


Figure 3: statistical analysis of drug category

The most common symptoms that led students to indulge in self-medication are headaches (42%), fever (18%) and flu like symptoms (20%) and miscellaneous symptoms (20%). Consequently NSAIDs (50%), Anti-emetics (21%), antibiotics (10%), vitamin (5%), Allergy (4%) beta blockers (2%) and Anti-depressant (8%) were most commonly used drugs (Figure.3).

Table 2: Side effects of Self-medication

DRUGS	SIDE EFFECTS
NSAIDs	Increase bleeding during menstruation, Vomiting, Dry mouth.
Antibiotic	Headache, vomiting, allergy, hives.
Anti-emetic	Difficulties in breathing, swelling of face lips Or throat.

The side effects observe in the survey were Increase bleeding time during Menstruation, vomiting, dry mouth, headache, allergies, hives, face swell and suffocation, which are elaborated as per drug in table No.2

The catalog of tables from 1-5 are as following:

- Statistical analysis of self-medication at Figure 1.
- Different age group percentage indulged in Self-medication at Table 1.
- Decision on suggestion of self-medication at Figure 2.
- Statistical analysis of drug category at Figure 3.
- Common side effects of drugs by self-medication at Table 2

## DISCUSSION

In this survey our study demonstrates that about 68% of people are indulge in self-medication and here is also a point to be pondered upon very seriously that our participants who filled the survey forms are well-educated people and they also know its side effects. The misuse of the OTC drugs is found mostly amongst students or teenagers, which is quite alarming. In Pakistan, sale of drugs without prescription is very common in pharmacy or medical stores of almost every city. Accordingly, antibiotics, anti-depressant and many other drugs are easily available to the people. Repeatedly undergoing self-medication at times leaves adverse effects on our health which includes mental illness, depression, drug resistance, drug interaction, antagonism, synergism change in psychological behavior etc and may also lead to the addiction. Several people consider that over-the-counter (OTC) medications are secure than the other medications which require a prescription. There is no such medicine which is 100% safe even the OTC medicine can be risky or harmful. In our survey we acquired that mostly people are engaged in self-medication through their previous experience and suggested medicine to their

family and friends. In this survey we assessed that the drug most commonly used in self-medication is NSAIDs, almost 50% of people use NSAIDs extensively. Several people take NSAIDs without prescription and don't face any side effects. The side effects of NSAIDs can be extremely serious or poisonous. NSAIDs are commonly used for analgesic to relieve from pain, Anti-inflammation and as an Anti-pyretic. consequences responsible for this one factor may also possible multiple NSAIDs prescribing practice by physician allow them irrational use to relieve pain<sup>16</sup>.

The main action of NSAIDs is on cyclooxygenase pathway which blocks the synthesis of prostaglandins. They cause the inhibition of Cyclooxygenase-1 (COX-1) and Cyclooxygenase-2 (COX-2) enzymes and are responsible for adverse reaction of GIT. Gastrointestinal side effects specially ulcer, indigestion, stomach upset and bleeding which is usually associated with the inhibition of COX-2 enzyme. COX-1 enzyme protects stomach lining from stomach acid. These types of NSAIDs cause blocking of COX-1 and COX-2 enzymes. Later leads to inflammation and pain, while former has very limited contribution in the same. The adverse effects associated with COX-1 enzyme are heart burn, stomach cramp, swelling, allergy etc. while COX-2 enzyme causes abdominal pain, diarrhea, heart attack, stroke etc.

Some side effects of NASIDs include increase in bleeding during menstruation, nausea, dry mouth, vomiting etc. Use of Aspirin being blood thinner and diluter of clotting process, causes prolonged bleeding during menstruation.

Antibiotics were generally found as most commonly used unprescribed drug i.e. 10% of surveyed people, which alarmingly endanger patient's health if they choose the wrong antibiotic or intake incorrect dosage. Antibiotics usually kill bacterial infections and are not effective against viral infections like cold, flu or against fungal infections, like ringworm or vaginal yeast infections. Mostly people are unaware of their side effects and use antibiotics for the same

symptoms. Repeated, incorrect and insufficient dosage of these antibiotics can drastically reduce the immunity level against bacterial attacks. Most commonly used antibiotic by people during the survey was Augmentin, which is basically a penicillin antibiotic and fights against bacteria in the body. Bacterial disease such as sinusitis, pneumonia, ear infections, bronchitis, urinary tract infections, and infections of the skin are treated by Augmentin.

In this survey, persons who were more prone to self-medicate with antimicrobial drugs were comparatively young people and more educated. Self-treatment with a drug that is ineffective against the causative organism or with an inappropriate dosage may increase the risk of selection of resistant organisms that are difficult to eradicate. These resistant organisms may then be transferred into the community. The side effects faces by the individual are headache, vomiting, allergy etc.

We also found that about 21% of the populace uses Anti-emetic drug against vomiting, nausea and for motion sickness, most common side effects of these medicines are swelling of face, lips or throat, difficulty in breathing and hives etc in rare cases. While other medicines are also used without prescription like Multi vitamins, beta-blockers, Anti-depressant etc.

## CONCLUSION

Being developing country, since decades allopathic treatment was not the routine way of medication against diseases rather most of the people used to treat even dangerous diseases with domestic tips / doses as heard from their ancestors with no authenticity. This habit is still engrossed in the society, enforcing them to take allopathy on same lines despite knowing the adverse effects of it. The prevalence of self-medication practices is alarmingly high in the educated youth of Pakistan, and is the same in both medical and non-medical people despite the majority knowing that it incorrect they still do. The self-medication practice is inevitable; drug authorities and health professionals need to educate students about the pros and cons of self-medication. Common populace needs to be sensitized on the side effects of self-medication otherwise long term loses shall adversely affect the life a common man involved in self-medication.

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