

ASSESSMENT OF SELF-MEDICATION AMONG MEDICAL AND NON-MEDICAL STUDENTS

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ABSTRACT

Background and Objectives: Self – medication is defined as taking medications to treat one’s own self diagnosed symptoms or disease, which might be chronic or intermittent in nature, without proper medical supervision. The objective of the study was to determine the knowledge, attitude and practice of self-medication among medical and non-medical students.

Methods: A cross – sectional study using non probability convenient sampling technique was conducted within a duration of four months. Data was collected from a total of 308 students of two renowned medical and non-medical universities of Lahore, using an interview based questionnaire. Knowledge, attitude and practice regarding self – medication was assessed. Frequencies and percentages were calculated using SPSS version 17.

Results: Out of total students, 79.9% medical and 66.2% non-medical students reported to practice self-medication. Leaflet for instructions was being read by 54.5% medical students as compared to 50% non-medical students. As regards the awareness of side effects, 78.6% medical and 71.4% non-medical students believed to have appropriate knowledge. Medical 63% and non-medical 59.7% students responded with self – medication “occasionally” being able to treat their symptoms correctly. Most of the medical students 53.2% agreed that self – medication is harmful whereas 49.4% of non-medical students neither agreed nor disagreed.

Conclusion: Self – medication is prevalent, both in medical and non-medical students despite being aware of its harmful effects. The findings of the current study conclude that the prevalence of self – medication is high and only a minimal difference in the knowledge, attitude and practices of both medical and non-medical students was observed. Community should be made aware of the hazards of self – medication and strict law enforcement should be done to limit the purchase of medicines without a prescription.

Key Words: Self – medication, Medical students, Non-medical students, Knowledge, Practice.

INTRODUCTION

Self-medication is a phenomenon that has emerged due to advances in medicine leading to the availability of new drugs. This phenomenon coupled with exposure by the media and laxity shown by the authorities has led a wide variety of drugs to be within the reach of the population who neither have adequate knowledge nor proper training.¹

Self – medication can be regarded as taking medicines to treat one’s own self diagnosed symptoms / disease which can range from being acute to chronic and intermittent, without proper medical supervision e.g.

- Absence of an appropriate prescription.
- Using old prescriptions.
- Encouraging others to use medicines e.g. family and friends.^{2,3}

Taking medicines without medical supervision may have its benefits in some cases e.g. it saves a trip to the doctor, money and time but ultimately the potential risks outweigh the minor benefits it carries. Considering that every person is unique, both biologically and psychologically, the reaction that a drug has on the body of a particular person is quite variable.⁴ It is to be noted that most of the people do not have appropriate knowledge to establish a relevant diagnosis and when medicines are taken for symptomatic relief they might not be able to treat the symptoms, thus some diseases become masked and enter chronic state and many heinous diseases remain hidden. This being the tip of the iceberg. Medication requires proper knowledge of dosing intervals, administration protocols and proper knowledge of the possible side effects. Failure of see-

king medical help thus deprives the patient from proper healthcare and even endangers them with antibiotic resistance as well as drug reactions, their interaction with food substances, all the things stressing that intricate knowledge of the drug mechanisms are required for proper dispensing of medicines. Using medicines with this handicap can lead to outcomes that may prove fatal and as a developing country, these results could be troublesome and far reaching.^{5,6}

Taking the entire globe into perspective these practices are quite common and exhibit a variation from 12% – 99%,⁷ with Pakistan coming in at 55.3%¹ as compared to some other countries like Egypt 80.9%⁸ and India 82.3%.⁹ Unfortunately even with these alarming figures the practice remains mostly unchecked. Virtually any medication can be purchased by the common man, pharmacists and even undergraduate students still under training, can prescribe medications and in some areas a general positive attitude has ensued.^{1,9}

Pakistan being one of the developing countries is more prone and vulnerable to this practice because of lack of proper medical infrastructure, rising socioeconomic pressures, political instability, illiteracy, population growth and poverty. This scenario when coupled with the loose stance that the government has taken on the drug laws is leading to an unchecked rise in this exercise across Pakistan.

The objective of this research is to assess self-medication in medical and non-medical students in Lahore as they represent a highly educated group and being future doctors self-medication may have an implication in their future practice. In addition to identify what steps can be taken to deter this practice and highlight the importance of creating awareness regarding self-medication practices.

METHODOLOGY

A cross sectional study was done on 308 medical and non-medical students of Fatima Memorial Medical and Dental College and University of Central Punjab, Lahore (50% from each institute). Sample size was calculated using World Health Organization formula keeping confidence level at 95%, population proportion 0.55 and alpha at 5%. Non Probability convenient sampling was used to select the students. Study was completed in a period of four months.

Data was collected from two identified colleges of Lahore, Fatima Memorial College of Medicine and Dentistry (Total number of students = 656) and University of Central Punjab (Total number of students 8,000). A total sample of 308 students, 50% from each institute was taken. Six investigators interviewed the students from Fatima Memorial College of Medicine and Dentistry, whereas eight investigators went to the University of Central Punjab for data collection. Data was collected using a structured questionnaire by

interview conducted by the investigators, after consent from the students and institutions ensuring confidentiality of data. Different levels of Likert scale were used for different questions in the questionnaire. SPSS version 17 was used to analyze the data. Frequencies and percentages were calculated. Data was presented with the help of frequency tables and bar charts.

RESULTS

In the current study participants were enrolled from two identified institutions of Lahore. The percentage of male and female participants was 47.7% and 52.3% respectively with a mean age of 21 ± 1.48 .

In the current study, out of a total of 308 students, 123 (79.9%) medical and 101 (66.2%) non-medical students reported to practice self-medication and there was a significant difference between medical versus non-medical students as far as understanding the term self-medication was concerned (p value 0.02) (Figure 1) Leaflet for instructions was being read by 84 (54.5%) medical students as compared to 77 (50%) non-medical students. As regards the awareness of

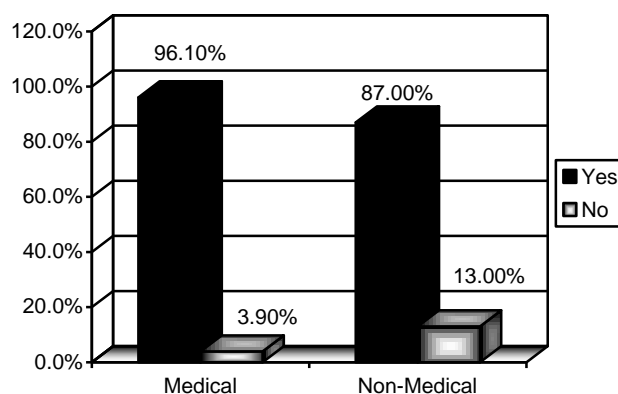


Fig. 1: Understanding the Term of Self-Medication (p value = 0.02).

Table 1: Self-medication an alternative to visiting a doctor.

Self-medication an Alternative to Visiting a Doctor	Medical		Non-medical	
	n	%	n	%
Strongly disagree	32	20.8	20	13
Disagree	58	37.7	38	24.7
Neither agree or disagree	15	9.7	39	25.3
Agree	43	27.9	47	30.5
Strongly agree	6	3.9	10	6.5
Total	154	100	154	100

p value < 0.001

side effects, 121 (79%) medical and 109 (71%) non-medical students believed that they had appropriate knowledge. Medical 97 (63%) and non-medical 92 (59.7%) students responded with self-medication “occasionally” being able to treat their symptoms correctly.

A significant difference with a p value < 0.001, was observed in the medical and non-medical students when asked whether they used self – medication as an alternative to visiting the doctor (Table 1). As far as

Table 2: Usage of medicines: only prescribed by a doctor.

Usage of medicines : only prescribed by a doctor	Medical		Non-medical	
	n	%	n	%
Never	9	5.8	5	3.2
Rarely	7	4.5	20	13
Sometimes	95	61.7	71	46.1
Always	43	27.9	58	37.7
Total	154	100	154	100

p value 0.004

always using medicines prescribed by a doctor majority agreed that sometimes they complied with the prescription which gave significant results with a p value of 0.004 (Table 2).

Self – medication is harmful, a significant difference (p < 0.001) was observed in the perception of medical versus non-medical students. When inquired about the level of acceptability of self – medication majority of both medical and non-medical students had a neutral opinion.

DISCUSSION

Self – medication by itself has both pros and cons that depend on who and what one chooses to self – medicate. Our study focused on the knowledge, attitude and practices of medical and non-medical students regarding self – medication.

The current study showed that 123 (79.9%) medical students and 101 (66%) non-medical students were practicing self – medication. Similar findings were observed in different studies, in Karachi 2008, it was observed that 80% of medical and non-medical students self-medicate,¹⁰ similarly 71.2% of non-medical students were identified to self – medicate in a study conducted in Bahawalpur.¹¹ In addition, highly variable frequency

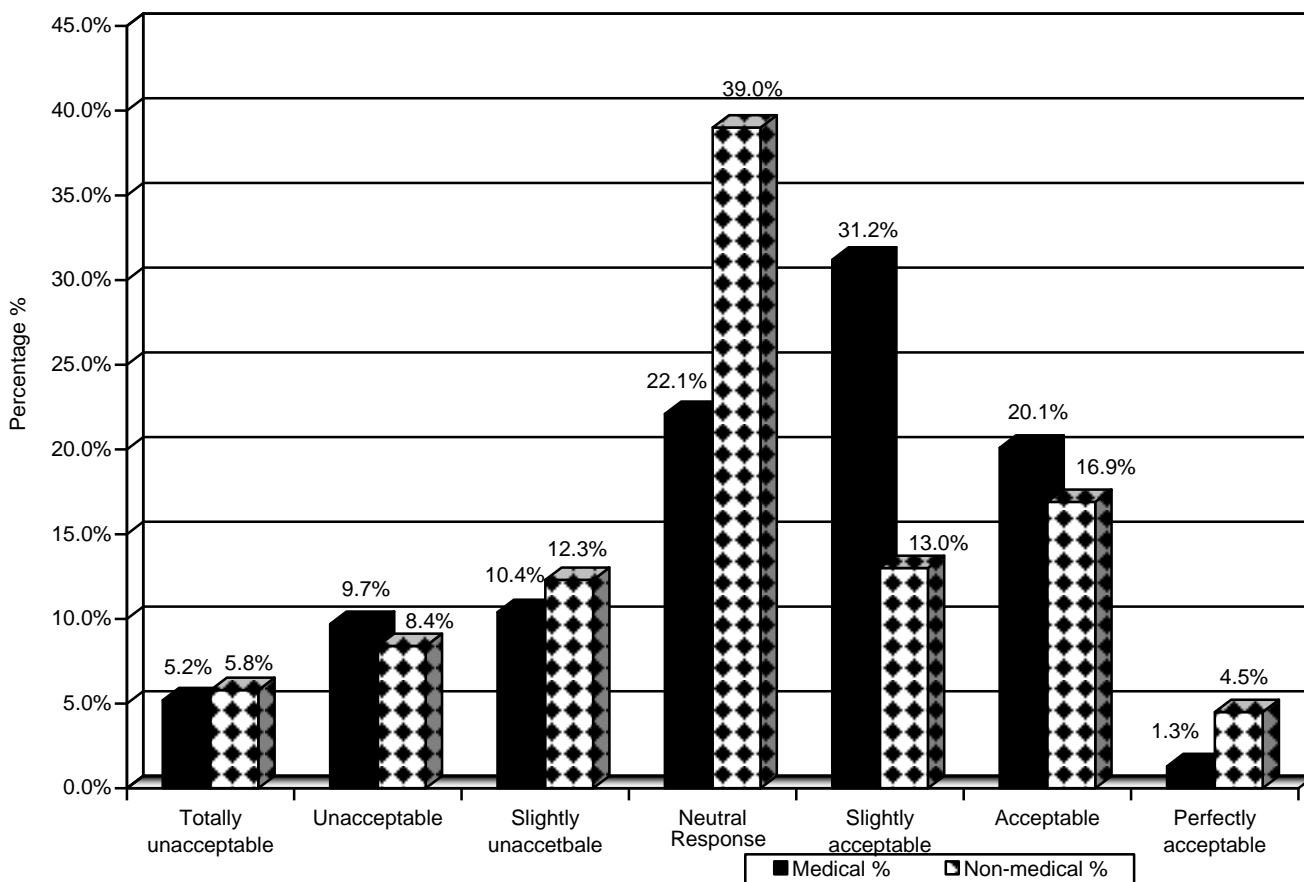


Fig. 2: Level of acceptability of self medication in Medical and Non-medical students (p value < 0.001).

of self – medication has been reported in different parts of the World; 47.8% in Southern China, 48% in Iran to 79.5% in Sudan.¹¹⁻¹³

It is universally agreed that only an experienced and trained doctor with abundant background knowledge of medical diseases and treatment is qualified to prescribe medicines.¹⁵ Upon questioning the participants, more than 77 (50%) of medical students thought it was acceptable to self – medicate, concurrent with the findings of a study carried out in Karachi which showed that more than 50% of medical students were practicing self – medication.¹⁶

The relationship between self – medication and prescribing medicine by medical students go hand in hand the reason being that medical students think it is acceptable for them to self – medicate although it requires further investigation and research.¹⁶

In the current study, 50 (32.4%) non-medical students agreed that self-medication is an alternative to visiting a doctor. These findings corroborate with the findings of previous studies done. “Past Successful Experience with the Drug”, “Saves Time” and “Trivial Problems” were quoted as reasons for not visiting the doctor in multiple studies.^{10,17,18}

Most common conditions for which students self-medicated were flu, fever, sore throat and pain as supported by other studies.^{10,14,1} Common medications being painkillers, antibiotics and anti-allergics. Studies have shown that extravagant use of painkillers have led to severe complications like acid peptic disease, liver and kidney failure.¹⁵ Greater usages of antibiotics have led to increasing resistance of bacteria towards simpler antibiotics.¹⁸ Although medical students 78.6% have superior knowledge of side effects of medicines, alarmingly they show the same usage of drugs as non-medical students, which is of concern and is highlighted in the current study.

Easy approach to medications and lack of proper healthcare facilities augments self – medication usage¹⁹ which can be controlled by strict legal regulations and prohibition of over-the-counter medications at local pharmacies throughout Pakistan.²⁰

Educational interventions regarding this issue should be taken into consideration, because self – medication among future healthcare professionals can represent a serious threat to professionalism in medicine

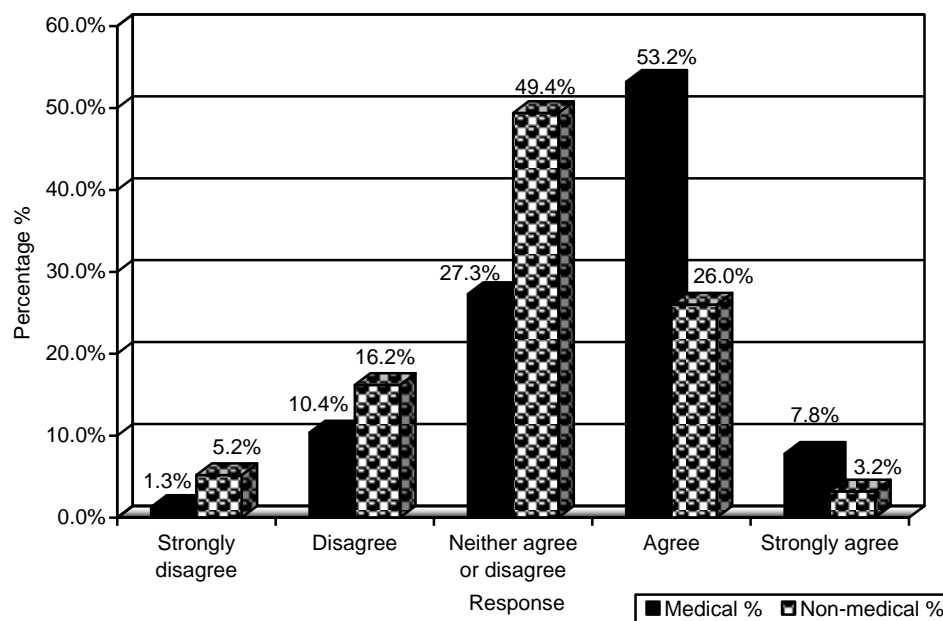


Fig. 3: Self medication is harmful: perception of Medical and non-medical students.

and intimidate people’s trust into the doctors.

It is **concluded** that the findings of the current study indicate that the prevalence of self – medication is high and only a minimal difference in the knowledge, attitude and practices of both medical and non-medical students was observed. This represents a high risk behavior that should be monitored and intervention efforts are required to check this practice.

Limitations

Convenient sampling technique and small sample size may be considered a limitation which was opted due to budgetary constraint.

Recommendations

The following recommendations are made based on this study:

- A holistic approach should be taken that involve educational interventions and awareness for the students regarding pros and cons of self – medication in all institutions.
- Legislation regarding active sale of over the counter drugs should be implemented and monitored.
- Self – medication of antibiotics needs to be addressed, because their misuse is leading to resistance against different strains of bacteria.
- This study has opened gateways for further research involving a larger sample and other institutions, as it highlights self – medication to be an important issue which needs serious attention.

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CONTRIBUTION OF AUTHORS

H. A. Questionnaire development, Results, Discussion. N. O. Concept, Questionnaire development, Discussion Refinement. A. A. Questionnaire development, Discussion. S. Y. Literature review, Refinement. R. M. Introduction, Results. A. A. Tables, Figures, References.

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