EVALUATION OF THE SELF-MEDICATION PATTERNS AMONG UNIVERSITY STUDENTS OF KARACHI

[1]MUHAMMED JUNAID LAKHANI, [2]TAUQIR-UL-ISLAM, [3]SYED MUHAMMED UMER HASAN, [4]ANJUM TARIQ, [5]MARIUM IQBAL, [6]HAFSA ABDUL GHAFOOR, [7]MAYEDA KHALID, [8]HAJRA ANWAR, [9]HAJRA BAWANY, [10]SHOAIB NOOR

ABSTRACT

A cross-sectional study was conducted at the Jinnah Medical and Dental College, Karachi to find out the patterns of self-medication amongst the medical and non-medical university students of Karachi. A self-administered 21 item questionnaire was used to collect the data from four medical and four non-medical universities. A total of 200 students participated in the study. Results of this showed that 96.9% of medical university student and 92.2% of non-medical university students reported that they self-medicate. The most frequent reason of self-medication among medical students was headache (37.5%) followed by fever (19.8%); whereas in non-medical students it was fever (38.2%) followed by headache (34.3%). A vast majority of both the medical (86.5%) and non-medical (74.5%) students did agree to the fact that self-medication is harmful. Approximately Ninety one percent of the medical and 71.6% of the non-medical students believed that they should be careful with the intake of non-prescribed drugs. The study reveals that self-medication among university students of Karachi is very common. And it is higher in medical students since they believe they have enough knowledge to treat themselves without consulting a doctor, despite of the fact that most of them know that it is not correct.

Key words: Self-medication, University students

INTRODUCTION

Self-medication is defined as the use of any drug without the advice of a doctor.[1] It includes purchasing medicines without medical practitioner's prescription, using leftover or stored medicines and seeking advice from friends and family suffering from same disease.[2,3] Studies revealed that self-medication is more prevalent in poor communities and has a high incidence in youth.[4] Medical stores are generally the first point of contact of the public with the healthcare system.[5-7]

The World Health Organization consultative group on the role of the pharmacist in 1998 emphasized that self-medication should be controlled.[8] Studies from the literature reveal that inapt self-medication results in adverse side effects, drug resistance, prolonged duration of disease and drug dependence.[9-12]

Research on self-medication among university students have taken place in many countries like Nepal, Slovenia, India, Kuwait and Palestine. Studies conducted in Pakistan on self-medication includes study conducted at the Aga Khan University, and Hamdard Institute of Pharmaceutical Sciences, Islamabad.[1,2] Both researches show that self-medication is very common among both medical and non-medical university students.

This aim of this research is to find out is it more common among students of medical university or non-medical university. The reasons to choose university students for this study were; they are highly in touch with the social media which in many ways encourages self-medication. Moreover, medical university students will be future doctors and their attitude towards self-medication will have long term effects.[13]

MATERIAL AND METHODS

This study was conducted at Jinnah Medical and Dental College, Karachi from January to March 2017. Data was collected from eight universities of Karachi including four medical and four non-medical. A cross sectional, anonymous, questionnaire based survey

[1] Prof M Junaid Lakhani, BDS, FCPS, MHPE, Professor, Department of Oral Maxillofacial Surgery, Jinnah Medical and Dental College, Karachi, Email: drmjunaid@hotmail.com, Contact: 03008222287, 03228222287

[2] Dr Tauqir-ul-Islam, BDS, FCPS, Associate Professor, Liaquat National Hospital, Karachi

[3] Dr Syed Muhammad Umer Hasan, BDS MCPS, Associate Professor, Department of Oral Maxillofacial Surgery, Dow International Dental College, DUHS, Karachi

[4] Dr Anjum Tariq, BDS, MCPS. Associate Professor, Department of Dental Materials, Jinnah Medical and Dental College, Karachi

[5] Prof Marium Iqbal, BDS, FCPS, MHPE, Professor, Department of Operative Dentistry, Jinnah Medical and Dental College, Karachi

[6-10] Hafsa Abdul Ghafoor, Mayeda Khalid, Hajra Anwar, Hajra Bawany, Shoaib Noor. Demonstrator, Department of Oral Maxillofacial Surgery, Jinnah Medical and Dental College, Karachi

was done to collect the data from university students. Prior permission was taken from the above mentioned universities to collect the data. A self-administered 21 item questionnaire was used to collect the data from the participants. A briefing was given about the nature of the study, and the procedure of completing the questionnaire. The questionnaire was developed by incorporating similar study questions from the other studies done in the past. The questionnaire was pilot tested on a sample of 15 participants. A convenience sample of 200 participants was taken from the students of these universities. Results obtained from different individuals were stored in Microsoft Excel and analyzed using SPSS version 20.

RESULTS

The questionnaire was answered by 200 respondents and the following statistics were revealed.

In our study 96.9% of medical university student and 92.2% of non-medical university students reported that they self-medicate. When asked regarding the frequency of self-medication, it was not surprising to note that 43.8% of the medical students self-medicate at least two to three times a year as compared to 30.4% of non-medical students.

A major reason for self-medication among both medical and non-medical students was minor illness as shown in Fig 1.

The most common presenting complaint among medical students was headache (37.5%) followed by fever (19.8%). Whereas in non-medical students the most common complaint was fever (38.2%) followed by headache (34.3%).

When asked about the type of medicines being used, analgesics were reported to be the most commonly used drug on both sides of the study population. (Medical-62.5% and Non-medical-65.7%).

Majority of the non-medical students sometimes read the instructions on the leaflet (51%) as compared to 46.9% of the medical students. Most of the medical students acquired knowledge about the drugs and their dosages either by consulting a doctor (30.2%) or by reading the instruction leaflets (28.1%). On the other hand, majority of the non-medical students acquired this information from friends and family (56%). Forty three percent of the medical students "sometimes" change the dosage of drug during self-medication while the non-medical students "never" (46.1%) changed the drug dosage. It was interesting to note that medical students changed the drug dosage upon improvement of the condition (29.2%) while the non-medical students (21.6%) changed the dosage when the condition worsened.

Age	Gender	Study Group
Mean age – 22	Male – 32.2%	Medical students – 48.2%
	Females – 67.8%	Non-medical students – 51.3%
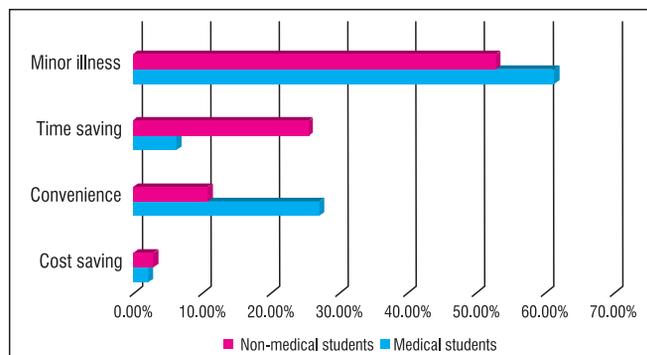
Fig 1: Reasons for self- medication
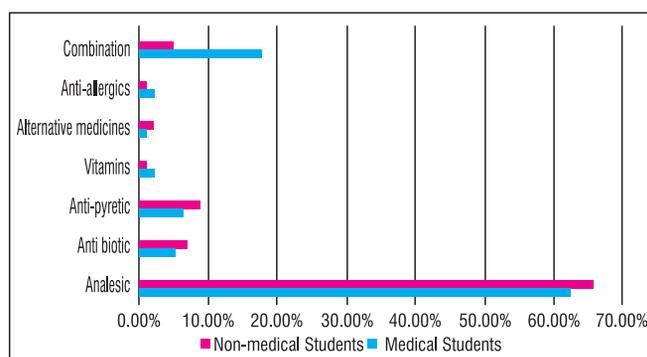
Fig 2: Type of medicine used
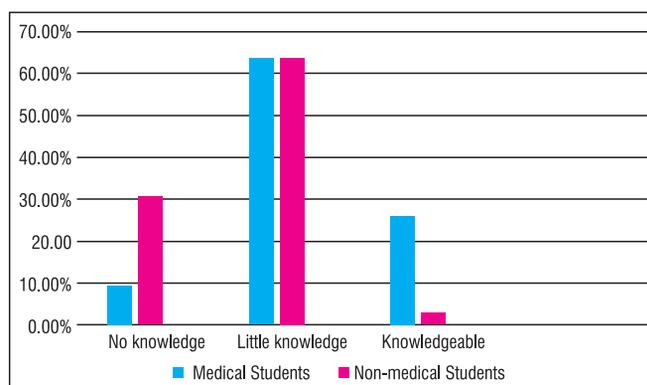
Fig 3: Hazards due to alteration in drug dosage

A significant majority of both sides of the study population did not experience any adverse drug reaction. In case of any adverse event, 11.5% of the medical students and 15.7% of the non-medical students consulted a doctor.

Eighty one percent of the medical students agreed that the course of medication should be completed even after symptoms subside whereas 50% of the non-medical

students were unsure about it.

When inquired about the knowledge regarding hazards due to the alterations in drug dosages and the side effects of drugs, similar percentages were observed in both groups of the study population as demonstrated by the graphs below. This shows that the participants have little knowledge about the side effects of drugs.

A vast majority of both the medical (86.5%) and non-medical (74.5%) students did agree to the fact that self-medication is dangerous if taken without appropriate knowledge. Approximately Ninety one percent of the medical and 71.6% of the non-medical students believed that they should be careful with the intake of non-prescribed drugs.

DISCUSSION

This study demonstrates that >90% of the university students self-medicate. A much lesser figure around 31% has been reported in the Indian population.[14] Studies conducted in Turkey had 45% of university students that self-medicate, 94% in Hong Kong and 88% in Croatia university students self-medicate.[15-17] The prevalence found in this study is quite high and is of a major concern since the study population is amongst the well-educated strata of the society. It should also be noted that the study population might be well aware of the hazards of self-medication and therefore the incidence in the general population should be of serious concern.

In our study the incidence of self-medication amongst medical university students and non-medical university students was insignificant being 96.9% and 92.2% respectively. The most popular reason for both groups was minor illness. Another study from Bahrain also stated that time-saving, cost-effectiveness and minor illness were the widely accepted reasons.[4] This infers that both groups of the study population found self-medication as economical, quick and easily available resort for minor illness.

Analgesics were found to be the most commonly used drugs amongst both the medical and non-medical students. This associates with headache being the most common "presenting complain for self-medication" among both groups of the study population. A similar study from Bahrain also reported increased usage of analgesics.[4] This might account for the fact that analgesics such as NSAIDs and paracetamol are easily available and are being used popularly as "pain-killers" since a long time.

It was interesting to note that in the preset study, usage of antibiotics was very low on both sides of the population (5.2% and 6.9%). However, an alarming percentage of 35.2% was reported in a study conducted at AKUH Karachi of students taking antibiotics without a prescription.[3] Similar results were found in studies conducted in Spain (41%)[18] and Croatia (38%)[16] where antibiotics were being taken by students without proper clinical evaluation.

This should be immediately brought to notice as it can lead to increased antibiotic resistance all over the world.[19,20] Our study only briefly looks into this issue but it should be further explored upon to determine the relationship between self-medication and antibiotic resistance.

In the current study, both group of students agreed that self-medication is injurious if taken without proper advice, but on the other hand, 44.8% of the medical students stated that medical problems can be cured with self-medication whereas 46.1% of the non-medical students disagreed. This disagreement might account for the lack of knowledge and caution perceived by non-medical students as compared to the medical side as they have more knowledge and thus are more confident towards self-medication.

A study from Slovenia reported that majority of the non-health care students perceived self-medication to be safe.[3] This might result in unsafe practices and the students must be provided proper and adequate education regarding self-medication. Although majority of the non-medical students agreed (74.5%) that self-medication is harmful, it was alarming to note that 32.4% of the non-medical students had experienced adverse drug reaction. This can be correlated with the fact that a major portion (56.9%) of this part of study population had little knowledge about the side effects. This means that thorough knowledge should be conferred to both medical and non-medical students as ignorance and inappropriate confidence can put their lives at risk associated with the inappropriate use of medications.

CONCLUSION

The study reveals that the incidence of self-medication among university students of Karachi is very high. And it is higher in medical students since they believe they have enough knowledge to treat themselves without consulting a doctor. Self-medication can lead to severe consequences for both the student who consume medication and those whom they suggest medications. Awareness amongst masses regarding the potential problems of self-medication can minimize the use of self-medication.

RECOMMENDATIONS

It is recommend that fundamental knowledge regarding health and safety should be incorporated in all university programs.

REFERENCES

1 Hussain A, Khanum A. Self -medication among university students of Islamabad, Pakistan- a preliminary study. Southern Med Review 2008; 1:14-16

2 Zafar SN, Syed R, Waqar S, Zubairi AJ, Vaqar T, Shaikh M, Yousaf W, Shahid S, Saleem S. Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes. Journal of the Pakistan Medical Association. 2008;58(4):214-7.

3 Klemenc-Ketis Z, Hladnik Z, Kersnik J. Self-medication among healthcare and non-healthcare students at University of Ljubljana, Slovenia. Medical Principles and practice. 2010;19(5):395-401.

4 James H, Handu SS, Al Khaja KA, Otoom S, Sequeira RP. Evaluation of the knowledge, attitude and practice of self-medication among first-year medical students. Medical principles and practice. 2006;15(4):270-5.

5 Shankar PR, Partha P, Shenoy N. Self -medication and non -doctor prescription practices in Pokhara valley, BMC Fam Pract 2002;3:17.

6 May C, Roth K, Panda P. Non-degree allopathic practitioners as first contact points for acute illness episodes: insights from a qualitative study in rural northern India. BMC Health Services Research. 2014;14(1):182.

7 Nalini GK. Self-medication among allopathic medical doctors in Karnataka, India. BJMP. 2010;3(2):325.

8 World Health Organization: The role of the pharmacist in self-care and self-medication. Report of the 4th WHO consultative group on the role of the pharmacist. The Hague, 1998. Available from http://www.who.int/medicines/library/dap/whodap-98-13/who-dap-98-13.pdf.

9 Ullah H, Khan SA, Ali S, Karim S, Baseer A, et al. (2013) Evaluation of self-medication amongst university students in Abbottabad, Pakistan; prevalence, attitude and causes. Acta Pol Pharm 70:919–22.

10 Bennadi D. Self-medication: A current challenge. Journal of basic and clinical pharmacy. 2013;5(1):19-23.

11 Awad AI, Eltayeb IB, Capps PA. Self-medication practices in Khartoum state, Sudan. European journal of clinical pharmacology. 2006;62(4):317-24.

12 Badiger S, Kundapur R, Jain A, Kumar A, Pattanshetty S, Thakolkaran N, Bhat N, Ullal N. Self-medication patterns among medical students in South India. The Australasian medical journal. 2012;5(4):217-20.

13 Ansam FS (2008) A descriptive study of self-medication practices among Palestinian medical and nonmedical university students. Res in Social Adm Pharm. 2008;4:164–72.

14 Deshpande SG, Tiwari R. Self medication--a growing concern. Indian J Med Sci 1997; 51: 93-6.

15 Buke C, Limoncu M, Ermevtcan S, Ciceklioglu M, Tuncel M, Kose T, et al. Irrational use of antibiotics among university students. J Infect 2005; 51: 135-9

16 Vucic VA, Trkulja V, Lackovic Z. Content of home pharmacies and self medication practices in households of pharmacy and medical students in Zagreb, Croatia: findings in 2001 with a reference to 1977. Croat Med J 2005;46:74-80

17 Lau GS, Lee KK, Luk CT. Self-medication among university students in Hong Kong. Asia Pac J Public Health 1995; 8: 153-7.

18 Vaananen MH, Pietila K, Airaksinen M. Self-medication with antibiotics—does it really happen in Europe? Health Policy 2006; 77: 166-71.

19 Stewart PS, Costerton JW. Antibiotic resistance of bacteria in biofilms. The lancet. 2001 Jul 14;358(9276):135-8.

20 Davies J, Davies D. Origins and evolution of antibiotic resistance. Microbiol. Mol. Biol. Rev. 2010 Sep 1;74(3):417-33.

CONTRIBUTIONS BY AUTHORS

1 **Muhammed Junaid Lakhani:**   Principal Researcher, Article writing.
2 **Tauqir-Ul-Islam:**   Proof Reading.
3 **Syed Muhammed Umer Hasan:**   Compilation of Results.
4 **Anjum Tariq:**   Article Disucssion and cross referencing.
5 **Marium Iqbal:**   Data Analysis and Interpretation.
6 **Hafsa Abdul Ghafoor:**   Data Collection.
7 **Mayeda Khalid:**   Data Collection.
8 **Hajra Anwar:**   Data Collection.
9 **Hajra Bawany:**   Data Collection.
10 **Shoaib Noor:**   Data Collection.