

PRACTICES OF SELF MEDICATION AMONG UNIVERSITY STUDENTS OF MULTAN, PAKISTAN

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ABSTRACT

The objective of present study is to determine the practices of self-medication among university students of Multan, Pakistan. A cross sectional study was carried out at Bahauddin Zakariya University Multan and Nishtar Medical University Multan, Pakistan. The data was collected from 300 medical and 300 non medical students with the help of convenient sampling. Close ended questionnaire were developed for the data collection. Of the 600 respondents 300 were medical while 300 were non medical students. There were 169(28.2%) male and 431(71.8%) were females. Majority of the respondents were Muslims 591(98.5%) while 9(1.5%) were non Muslims. The most frequent signs and symptoms that led students to involve in self medication were headache 279(46.5%), flu 102(17.0%), fever 101(16.8%), pain elsewhere 39(6.5%), anti allergies 28(4.7%), diarrhea 25(4.2%), 26(4.3%) for other reasons. Majority of the medical and non medical university students used commonly drugs, pain killer 411(68.5%), antibiotics 67(11.2%), Vitamins 51(8.5%), anti allergies 30(5.0%), sleeping pills 17(2.8%) herbal/ tonics 7(1.2%), and any other 5(.8%). Majority of the respondents reported that they practices self medication is due to the easy availability of common drugs 370(61.7%) while 104(17.3%) discussed that due to habit they used self medication, 85(14.2%) thought that there is no side effect. In our study there was no significant difference in practicing self medication amongst the medical and non medical students. A holistic approach should be implemented to prevent this important problem especially education and awareness towards the implication of self medication.

Keywords: Practices, Self-medication, University, Student

INTRODUCTION

Self-medication refers to an obtaining of drugs without the consultation of qualified doctor either for prescription, diagnosis or surveillance of treatment. It is much professional and public concern regarding the ridiculous use of drugs (Filho, Antonio, Costa, Uchoa, 2004; Bretagne, Molyoivd, Honnorat, Caekaert, Barthelemy, 2006). Worldwide the practice of self medication is very common and the irrational use of drugs is a cause of concern. All over the world the prevalence rate of self-medication is high; up to 68% in European countries while 92% in adolescents of Kuwait (Shankar, Partha, Shenoy, 2002; Abahussain, Matowe, Nicholls, 2005). In India the prevalence of self medication rate is 31% and 59% in Nepal (Deshpande, Tiwari, 1997). Studies reported that there are various factors that increase the self medication. These included lifestyle, easy access to drugs, socioeconomic factors, etc (Bruden, 1988). In Pakistan limited studies has been conducted which also confirmed high prevalence rate of self medication around 51% (Haider, Thaver, 1995).

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A study was conducted in Nigeria which observed that self medication is very common among health workers including midwifery, dental and nursing students (Ehigiator, Azodo, Ehizele, Ezeja, Ehigiator, Madukwe, 2013). Another study was conducted all India Institute of Medical Sciences, New Delhi which observed that the prevalence rate self medication was considerably high among undergraduate medical and paramedical students and it increased with medical knowledge (Azodo, 2013). Previous studies results shown that practices of self medication are much common in women and in those who are belonging to poor socioeconomic status, who live alone, have psychiatric condition, have more chronic ailments, younger age and in students (Hsiao, Alee, Huang, Chen, Cheny, 2006). Self medication prevalence rate is higher in middle and low income countries. Research showed that literate people practiced self medication higher as compare to illiterates (Ketis, 2010; James, 2006). In our local settings there is a paucity of literature about self medication. A study from Nigeria reported that practices of self medication is very common in health workers groups that included nursing students, midwifery, dental and medical students (Ehigiator et al, 2013). Every Pharmacy in Pakistan sells drugs without prescription, a phenomenon observe in most of the developing countries (Chang, Trivedi, 2003). In Pakistan pharmaceutical industries contributes to the widespread availability of medicines which promotes self medication. The most common available drugs are pain killer, cold and cough remedies, vitamins, energy tonics, anti allergy etc and these medicines are considered for the treatment of common health problems and risk free. Their excessive use can lead to unfavorable reactions and serious side effects. Due to poor primary health care system in Pakistan no strategy has been taken to overcome the issue. Very few studies have been conducted in Pakistan addressing the issue of self mediation. The present study presents the results of practices of self-medication amongst university students of Multan, Pakistan.

METHODS

A cross sectional study was conducted in the two Universities of Multan (One medical University and other non-medical ones) during 1st January 2017 to 30th June 2017. About 600 participants were approached (300 medical and 300 non medical students) through convenient sampling. Registered students of non-medical and medical universities were included and others non Pakistanis students were excluded. After explaining the purpose of the study and inform consent, a self administered questionnaire was distributed among the respondents. The questionnaire was constructed form the various similar studies previously conducted (Shankar, 2002; Hsiao 2006; Buke, 2005; Lau, 1995). The questionnaire was separated into the two parts, one based on the demographic information of the participants age, gender, housing arrangements, medical, non medical students, whether they self medicated or not and second part consist of the questions on the practices of self medication, what are the common symptoms that leads students to indulge to self medication, common drugs used to self medication, where did they usually obtain antibiotics from for self medication, How many times drugs used for self medication, impact of self medication on student's general health, What is the source of advice on self medication. Before data administration ethical approved was given from the respective head of departments of Universities. The questionnaires were assessed for their completeness and only the completed questionnaires were considered for the final analysis. For the descriptive data analysis frequency and percentage was used and for inferential statistics chi square test was used to check the association. After the data collection the collected data was analyzed by using statistical package for social sciences (SPSS) version 21 and obtained results were expressed in proportions.

RESULTS

Of the 600 respondents 300 were medical while 300 were non medical students. There were 169(28.2%) male and 431(71.8%) were females. Majority of the respondents were Muslims 591(98.5%) while 9(1.5%) were non Muslims.

Table 1 indicated the most frequent signs and symptoms that led students to involve in self medication were headache 279(46.5%), flu 102(17.0%), fever 101(16.8%), pain elsewhere 39(6.5%), anti allergies 28(4.7%), diarrhea 25(4.2%), 26(4.3%) for other reasons. There was no significant difference found between the medical and non medical university students regarding common symptoms that leads to indulge to self medication ($X^2=30.154^a$), ($P=.000$).

Table 1. Common symptom that lead students to indulge to self medication(n=600)

variables	program		Total	Chi-Square	P=Value
	Medical	Non-medical			
Fever	38(12.7%)	63(21.0%)	101 (16.8%)		
Flu	59(19.7%)	43(14.3%)	102(17.0%)		
Headache	137(45.7%)	142(47.3%)	279(46.5%)		
Anti allergies	19(6.3%)	9(3.0%)	28(4.7%)	$X^2=30.154^a$	($P=.000$)
Diarrhea	20(6.7%)	5(1.7%)	25(4.2%)		
Pain elsewhere	11(3.7%)	28(9.3%)	39(6.5%)		
Any other	16(5.3%)	10(3.3%)	26(4.3%)		

Table 2 depicted the kinds of common drugs used by the students for self medication. Majority of the medical and non medical university students used commonly drugs, pain killer 411(68.5%), antibiotics 67(11.2%), Vitamins 51(8.5%), anti allergies 30(5.0%), sleeping pills 17(2.8%) herbal/ tonics 7(1.2%), and any other 5(.8%). No statistically significant difference results were found between medical and non medical students regarding the use of common drugs ($X^2=29.595^a$), ($P=.000$).

Table 2. Kinds of common drugs used to self medication (n=600)

Variables	Program		Total	Chi-Square	P=Value
	Medical	Non-medical			
Vitamins	34(11.3%)	17(5.7%)	51(8.5%)		
Pain killer	197(65.7%)	214(71.3%)	411(68.5%)		
Anti allergies	17(5.7%)	13(4.3%)	30(5.0%)		
Sleeping pills	1(.3%)	16(5.3%)	17(2.8%)		
Anti biotics	42(14.0%)	25(8.3%)	67(11.2%)	X ² =29.595 ^a	(P=.000)
Herbal/ homeopathic	6(2.0%)	6(2.0%)	12(2.0%)		
Tonics	3(1.0%)	4(1.3%)	7(1.2%)		
Any other	0(0.0%)	5(1.7%)	5(.8%)		

Table 3 indicated the source of advice on self medication. Majority of the students reported that their source of advice of self medication is family 258(43.0%), own decision 199(33.2%), old prescription 95(15.8%), pharmacist 13(2.2%), media (magazine and internet 5(.8%), Books 2(.3%) and class 2 (.3%). There was a no significant difference found in the source of advice of self medication among medical and non medical university students (X²=43.735^a), (P=.000).

Table 3. Source of advice on self medication

Variables	Program		Total	Chi-Square	P=Value
	Medical	Non-medical			
Family	100(33.3%)	158(52.7%)	258(43.0%)		
Old prescription	49(16.3%)	46(15.3%)	95(15.8%)		
Own decision	120(40.0%)	79(26.3%)	199(33.2%)		
Pharmacist/ clerk	5(1.7%)	8(2.7%)	13(2.2%)		
Media (Magazine and internet)	0(0.0%)	5(1.7%)	5(.8%)	X ² =43.735 ^a	(P=.000)
Books	2(.7%)	0(0.0%)	2(.3%)		
Class	2(.7%)	0(0.0%)	2(.3%)		
Any other	22(7.3%)	4(1.3%)	26(4.3%)		

Table 4 indicated the reasons behind the selection of self medication among the students. Majority of the respondents reported that they practices self medication is due to the easy availability of common drugs 370(61.7%) while 104(17.3%) discussed that due to habit they used self medication, 85(14.2%) thought that there is no side effect. There was no significant difference found in the practices of self medication practices among medical and non medical students for their reasons behind the selection of self medication (X²=28.201^a), (P=.000).

Table 4. Reasons behind the selection of self medication among the students (n=600)

Variables	Program		Total	Chi-Square	P=Value
	Medical	Non-medical			
Easy to available	173(57.7%)	197(65.7%)	370(61.7%)	X ² =28.201 ^a	(P=.000)
No side effect	33(11.0%)	52(17.3%)	85(14.2%)		
Habit	59(19.7%)	45(15.0%)	104(17.3%)		
Any other	35(11.7%)	6(2.0%)	41(6.8%)		

DISCUSSION

In our study 54.2% of the university students practicing self medication. Similarly a study reported that 51% of mothers giving medicines to their children without the prescription of doctors in District Karachi. Another study conducted by (Zafar et al, 2008) which results showed that the prevalence rate of self medication was 76%. Similarly, practicing of self medication in our neighboring country India is around 31% (Deshpande, Tiwari, 1997), 45% in Turkey (Buke et al, 2005), 88% in Croatia (Vucic, Trkulja, Lackovic, 1977) 94% in Hong King(Lau, Lee, Luk,1995). In our study respondents belonging to educated group of people and if the occurrence rate of self medication is high in educated and aware group of people, then the rest of may be practicing self medication at high rate. It is true that self medication can help to treat the minor ailments in unprivileged countries that do not required specialist consultants that leads to reduce the load on medical services with limited health care resources (Deshpande, Tiwari, 1997). Moreover, practices of self medication has adverse effects that can lead to increase the problems including multi drug resistant pathogens, addiction and drug dependence hazard of misdiagnoses (Buke et al, 2005; Vucic et al 2001; Lau, 1995). In our study there was no significant difference in practicing self medication amongst the medical and non medical students. Similar study was reported the high ratio of self medication among medical professionals (Deshpande et al, 1997). In our study 68.5% of students had taken pain killer medicines without proper consultation of medical professionals. These results are similar to the study conducted in Southern Spain (Vucic et al, 2001). In this study Headache, Fever, Flu was a common symptom that leads to students to indulge to self medication. Other common symptoms were anti allergies, diarrhea, and pain elsewhere. These findings correlate with other study (Zafar et al, 2008). Consistent with the other findings (James, 2006) majority students commonly used pain killers, vitamins and antibiotics medicines. In our study majority (71.8%) students usually obtained antibiotics from community pharmacy, these results higher than the other studies from India. Gender is considered as a significant factor in self medication practices among students. In our study the prevalence rate of self medication was high in females students (71.8%), similar observation was found in the study from (Kumar et al, 2013) where the (81.2%) female students practicing self medication. Majority of the students in our study followed allopathic medicines which is compare to the observation made in other studies from India (Sarahroodi, Maleki-Jamshid, Sawalha, Mikaili, Safaeian, 2012). In our study previous prescription for the same illness was most reported source of self medication which was similar to observation made in the study of Uttar Pardesh (Verma, Mohan, Pandey, 2010).

CONCLUSION

The practice of self medication is high in educated youth and is the same amongst the medical and non medical university students despite majority of the students knowing that it is harmful for their health. A holistic approach should be implemented to prevent this important problem especially education and awareness towards the implication of self medication. It is important to build the strategy for the supply of medicines without the prescription of medicines by the medical professionals. The government should provide the better facilities in hospitals so that people can easily get the medical checkup and treatment.

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