

Prevalence of self medication practice among students of a medical college

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Abstract

Background: The unsolicited practice for self medication is commonly seen all over the world. In our country it is also commonly practiced even by health care professionals.

Objectives: This study is done to focus on the prevalence and other associated factors in various aspects of self medication among medical students.

Methods: This was a descriptive study conducted within 4th year students among 113 participants by using a researcher made questionnaire in Gazi Medical College, Khulna from January 2019 to June 2019. Data analysis was done by using Microsoft excel.

Results: The prevalence of self medication was reported at 88.49%. The most important reasons for self medication was previous experiences with the illness (48%), minor illness (30%), and time saving (25%). The greatest number of students used self medication to treat headache (30%), gastric acidity (28%), fever (22%), and runny nose (14%). The data reveals that the highest proportion (38%) of students learned medications from old prescription of doctor provided to cure their past illness. The respondents used different group of drugs where greatest number (32%) used analgesics followed by anti ulcerants (28%), antipyretics (25%), and antibiotics (22%).

Conclusion: Due to high prevalence of self medication, it is necessary to implement strict rules and regulations to prevent this practice and provide adequate facilities to access medical services properly.

Key words: self medication, practice, prevalence.

Introduction

World Health Organization defines "Self medication as the use of drugs to treat self diagnosed disorders or symptoms or the intermittent or continued use of prescribed drug(s) for chronic or recurrent disease or symptoms.¹ Inappropriate and inefficient use of medicines is a serious global problem clinically which has been reported in European countries by about 68% and in America about 42%.^{2,3} Self medication is a common practice in both developed and developing countries and its prevalence is reported to be higher in developing countries.⁴

Prevalence of self medication in developing countries widely varies between 12.7% to 95%. It is 59% in Nepal, 51% in Pakistan, and in Bangladesh 81.3% in young and 78.5% in elderly.¹ Previous studies also have reported that the prevalence of self medication among medical

student of Bangladesh was high as 65.2% as well as, 88.18% in Karnataka, India, 76% in Karachi.³ Main sources of self medication are relatives, friends, pharmacists who not only provide medicines but also the information about usage of drug.⁵

Media exposure and pharmaceuticals advertisement pose a larger threat in providing self medication practice.⁶ Several factors like costly consultation, lack of access to health care, time constraint, lack of trust on physician, inadequate implementation of drug laws have been shown to indulge this practices.^{5,7}

Benefits of self medication is precised as convenient, cost effective, product safety when used as recommended in the instructions and self reliant to the recipient in preventing or relieving

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minor symptoms or condition^{7,8} on the other hand several studies have indicated that inappropriate self medication results in adverse drug reactions, misdiagnosis of disease, drug interactions, antibiotic resistance, treatment failure, unintentional and intentional poisonings, drug abuse and misuse, increased morbidity, drug market disruption, financial loss and wastage of healthcare resources.^{3-5,7,9} Because of its favourable and unfavourable consequences, self medication has an substantial impact in healthcare sector.⁴

Though medical student does not have legal permission to prescribe medicines, but they are involved in self medication practice by themselves and also for others because of their gradually acquired knowledge through their professional course regarding different drugs. In order to prevent irrational drug use, it is necessary to assess the prevalence of self medication practice among individuals and understand the factors contributing to the same. The current study was carried out to know the practice of self medication among the undergraduate medical students and also to find out the existing knowledge, attitude and pattern of practice regarding the same.

Methods

After taking ethical permission from the Institutional Ethics Committee (IEC), this cross-sectional study was conducted by the department of pharmacology of Gazi Medical College, Khulna, Bangladesh from January 2019 to June 2019. It was designed in the form of a survey. A semi structured questionnaire was designed in English after reviewing literature. The eligible participants were all the paraclinical 4th year students. Students were enrolled who were willing to cooperate in the study, had no other diagnosed chronic diseases, or were not treated during the study period.

Additionally, students who did not give consent to participate were excluded from the study. After explaining the purpose of study, informed consent was taken from participants and then they completed questionnaires in about 30 minutes. Data were analyzed using Microsoft excel. The results were presented by percentages shown in figures and tables.

Results

Total number of students in Year 4th was 113. Among them 100 participants (88.49%) reported to have practiced self medication (Figure 1). All the self medicated participants were between the ages

of 19 to 24 years where females (52%) were predominant than male (48%).

Table I

Reasons for the self medication in perspective of students

Reasons / Factors	Distribution frequency %	
Previous experiences	48	48
Minor illness	30	30
Time saving	25	25
Seeking for a rapid relief	21	21
Personal convenience	18	18
High cost of medical consultation	15	15
Doctor business with many patients	10	10
Long distance from Doctor/clinic to home	7	7
Suggestion of a relative/friend/ family members	6	6
Lack of faith in health care system	3	3

N B: In many cases participant selected more than one options. So the sum of the percentage is more than 100%

Only 4% were married. Majority of the students came from urban area (72%) than from rural (28%). In the current study, the most common illnesses for which self medication had been done were headache (30%), gastric acidity (28%), fever (22%) and runny nose (14%) (Figure 2).

Table II

Sources of Information regarding Self Medication Practice

Sources of Information	Distribution frequency %	
Old prescription of doctor	38	38
Using medical textbooks	36	36
Self decision	33	33
Opinion of friends & family	26	26
Online through internet	22	22
Advertisement on media	05	05

The students reported the most prevalent reasons for self medication to be their previous experiences (48%) and minor illness (30%) followed by time saving (25%), seeking for quick relief (21%), personal convenience (18%) (Table I). The most prevalent drugs for self medication practice were

analgesics (32%) and anti ulcerants (28%) followed by antipyretics (25%), antibiotics (22%) (Figure 03).

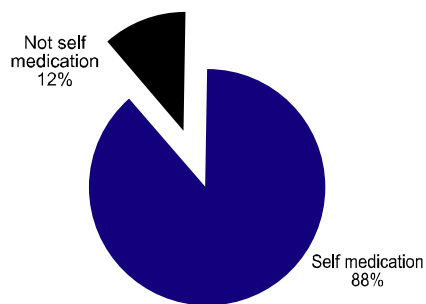


Figure 1. Prevalence for self medication of participants

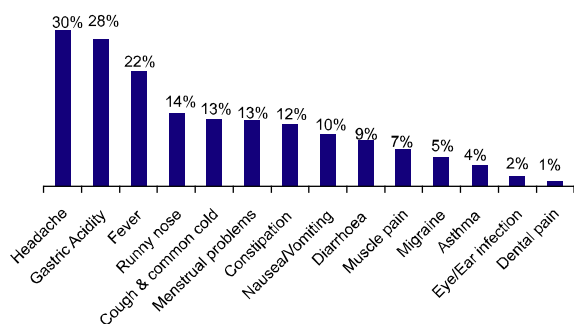


Figure 2. Symptoms/Diseases for self-medication practice

Old prescription of doctor (38%), textbook (36%) were the most prevalent sources of information about the drugs used for self medication (Table II).

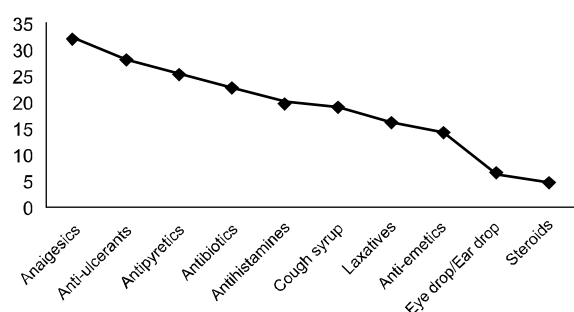


Figure 3. Drug groups used for self-medication

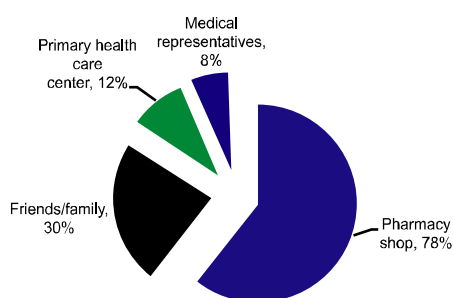


Figure 4. Sources of obtaining medicine for self medication practice

Students collected medicine for self medication mainly (78%) from pharmacy / shop and also from friends/family members (30%), primary health care center (12%) and from medical representatives (08%) (Figure 4).

Discussion

Prevalence of self medication has remained common in both developing and developed countries.⁶ The prevalence varies in different countries ranging from 38.5 to 92% due to differences in demographic characteristics of study population, research methodology, data collection tools.¹⁰ In the present study, the prevalence of self medication was about 88.49%. In studies conducted in developing countries, the prevalence of self medication was shown to be 94% in Oman, 90% in Iran, 65% in India, 62.9% in Egypt.^{3,4,6,9-11} Poor implementation of pharmaceutical rules due to various reasons like lack of adequate supervision by the concerned authorities may be the reason for high prevalence of self medication.

In Bangladesh, like many other countries, dangerous and risky medications must be sold with prescription. In this study, self medication among the male (48%) and female (52%) student was not so different. Self medication is not associated with gender and it is observed in both men and or women. Our findings is supported by some other studies where it was found that the practice of self medication was more prevalent among females than males.^{4,6,11-15} Female students used self medications for menstrual disorder. This may be cause of high prevalence than male. In addition, the findings showed self medication was higher among the students living in urban area (72%) than those living in rural (28%) area but the difference was not statistically significant.

In our study, headache (30%), gastric acidity (28%), fever (22%), runny nose (14%), cough common cold (13%), menstrual problems (13%) were most common illness of self treatment. These findings were consistent with results of other studies.^{1-3,7,10}

Analgesics (32%), anti-ulcerants (28%), antipyretics (25%), antibiotics (22%), antihistamines (19%) were the most common classes of drugs self prescribed for treatment by the students in our study. Some other studies also revealed almost similar observations conducted in India^{9,11}, Saudi Arabia⁷, Iran¹⁰, Tehran³, Turkey.¹⁴ Major reasons for practice of self medication, as found in this study were previous experiences (48%) followed by

minor illness (30%), time saving (25%), quick relief (21%). The findings were in congruence with other studies.^{3,6,7,9}

Majority (38%) of the respondents gathered information about self medication from the previously prescribed medicines of physicians followed by using medical textbooks (36%), self decision (33%), opinion from family/friends (26%), online through internet (22%) which was consistent with the other research work done by Jakaria. M et al. and Seam MOR et al. where students learned medications from doctor's prescription provided during their previous illness.^{8,16} Another study done in Egypt reported that advice from pharmacy clerk (69.9%), neighbors & family (62.2%), friends & classroom colleagues (40.6%) were the leading sources of information.⁶ Participants obtained drug for self medication from pharmacy shop mainly (78%) followed by family/ friends (30%) which was similar to a study done in Saudi Arabia.⁷

Self medicated use of antibiotics can lead to hazardous effects like development of antibiotic resistance, toxicities etc as a consequence of inappropriate or irrational treatment pattern. Therefore, this kind of practice should be discouraged.

The current study has some limitations. First of all, the study was conducted only on 4th year medical students in a single medical college, so the number of population is limited. Moreover, time and financial constraints also affected the study. Therefore results do not necessarily reflect the drug using pattern.

Conclusion

With the perceptions of this study further community based evaluation could be done to explore the prevalence and associated other unknown factors of self medication among the different sub group of the community.

References

1. Chari HS, Kadeangadi DM, Mallapur MD. Practice of self medication among urban households-a community based cross sectional study. *National Journal of Community Medicine*. 2015; 6: 1-4
2. Mosaddek ASM, Haque M, Islam Z, Rahman W, Sharmin R, Sharmin ZR, et al. Practice of Self Medication among Students of a Selected Medical College of Dhaka City Bangladesh. *International Medical Journal* 2017; 24: 225-229
3. Latifi A, Ramenkhan A, Rezaei Z, Ashtarian H, Salmani B, Yousefi M, et al. Prevalence and associated factors of self medication among the college students in Tehran. *Journal of Applied Pharmaceutical Science*. 2017; 7: 128-32
4. Flaiti MA, Badi KA, Hakami WO, Khan SA. Evaluation of self medication practices in acute diseases among university students in Oman. *Journal of Acute Disease*. 2014; 3: 249-52
5. Limaye D, Limaye V, Krause G, Fortwengel G. A Systematic Review of the Literature to Assess Self medication Practices. *Ann Med Health Sci Res*. 2017; 7: 1-15
6. Helal RM, ElWafa HAS. Self Medication in University Students from the City of Mansoura, Egypt. *Journal of Environmental and Public Health*. 2017; 2: 1-7
7. Albusalih FA, Naqvi AA, Ahmad R, Ahmad N. Prevalence of Self Medication among Students of Pharmacy and Medicine Colleges of a Public Sector University in Dammam City, Saudi Arabia. *Pharmacy*. 2017; 5: 1-13
8. Jakaria M, Hasant A, Tarek MI, Islam MZ, Zaman R, Parvez M, et al. Evaluation of Self Medication among Students from Di5erent Universities in Chittagong Bangladesh. *JM*. 2017; 18: 15-20
9. Pal J, Ahmad S, Pal P, Chatterjee D. Prevalence and pattern of self medication among undergraduate students in a medical college of Kolkata. *International Journal of Community Medicine and Public Health*. 2017; 4: 3619-24
10. Abdi A, Faraji A, Dehghan F, Khatony A. Prevalence of self medication practice among health sciences students in. *BMC Pharmacology and Toxicology*; 2018; 19: 1-7
11. Kumar N, Kanchan T, Unnikrishnan B, Rekha T, Mithra P et al. Perceptions and Practices of Self Medication among Medical Students in Coastal South India. 2013; 8: 2-6
12. Moise K, Bernard JJ, Henrys JH. Evaluation of antibiotic self medication among out patients of the state university hospital of Port-Au-Prince, Haiti: a cross sectional study. *Pan African Medical Journal*. 2017; 28: 1-4
13. Henrique P, Domingues F, Regina K, Andrade C De, Silva MT, Medicina, F De, et al. Prevalence and associated factors of self medication in adults living in the Federal District, Brazil:a cross sectional population based study. *Epidemiol.Serv. Saude. Brasilia*. 2017; 26: 135-146
14. Okyay RA, Erdogan A. Self medication practices and rational drug use habits among university students: a cross sectional study from Kahramanmaras, Turkey. *Peer J*. 2017; 5: e3990
15. Zhu X, Pan H, Yang Z, Cui B, Zhang D, Ba-thein W. Self-medication practices with antibiotics among Chinese university students. *Public Health*. 2015; 130: 78-83
16. Seam MOR, Bhatta R, Saha BL, Das A, Hossain MM, Uddin SMN, et al. Assessing the perceptions and practice of self medication among Bangladeshi undergraduate pharmacy students. *Pharmacy* 2018; 6: 1-1