The Professional Medical Journal
www.theprofesional.com

DOI: 10.17957/TPMJ/16.3239

ORIGINAL PROF-3239

ANALYSIS OF SELF MEDICATION PRACTICES;
A DESCRIPTIVE CROSS SECTIONAL STUDY

Dr. Shumaila Humayun[1], Warda Imran[2], Iram Naheed[3], Nazish Javid[4], Misbah Hussain[5], Maheen Azhar[6]

1. Community Medicine Deptt, Foundation University Medical College, Islamabad.
2,3,4,5,6 Students of 4th year MBBS, Foundation University Medical College.

Correspondence Address:
Dr. Shumaila Humayun
Demonstrator
Community Medicine Deptt
H#21, St#12, Sector E,
DHA Phase 1, Islamabad
shumailahn@gmail.com

Article received on:
02/01/2016
Accepted for publication:
15/03/2016
Received after proof reading:
04/05/2016

ABSTRACT… Background: Worldwide practice of self-medication is increasing and due to lack of awareness emphasis is put on counseling of general public. **Aim:** To assess the practices of self-medication among general public. **Design:** Descriptive cross sectional study. **Place and duration of study:** Fauji Foundation Hospital, Rawalpindi from February 2015 to September 2015. **Methods:** Two hundred and fifty five attendants accompanying patients in general OPD of Fauji Foundation Hospital completed a self-administered questionnaire translated in urdu language for this study. **Results:** Out of 255 study participants, 168 (or 65.9%) practiced self-medication. The prevalence was found highest among 25 to 38 years old (70.2%) and was almost equally distributed in males 65 (65.65%) and females 103 (66.02%). The main reasons for self-medication were lack of time (43.45%), and high doctor fee (35.71%).Factors influencing this practice were age, employment, income and the education level. **Conclusions:** The study revealed that prevalence of self-medication was high among study population. Majority of respondents practiced self-medication for minor ailments and to get quick relief, or to avoid high doctor fee. Pharmacies are a big source of providing drugs for self-medication. There is need for healthcare professionals to educate the general public about the hazards of inappropriate medicine use, and there should be restrictions on over-the-counter sale of drugs without doctor's prescription.

Key words: Analysis, Self-Medication, Minor ailments, Over-the-counter, Cross sectional, Descriptive Study.

Article Citation: Humayun S, Imran W, Naheed I, Javid N, Hussain M, Azhar M. Analysis of self-medication practices; a descriptive cross sectional study. Professional Med J 2016;23(5):608-613. **DOI:** 10.17957/TPMJ/16.3239

Statement of Novelty

The phenomenon of self-medication has been studied in various segments of society but intensive and extensive literature survey indicates none of the studies conducted in Northern area of Pakistan especially in the Pothohaar Region. The study fills an identified gap in the body of knowledge and proves to be a contribution to the domain of public health.

INTRODUCTION

Self-medication is the use of medicines by individuals (or for family members of individual) to treat self-recognized or self-diagnosed conditions or symptoms. [1] It means obtaining and using drugs without the advice or recommendation of a physician either for diagnosis, prescription or surveillance of treatment or usage of non-prescription medicines by people totally on their own.[1] Self-medication is a common and an important health problem worldwide due to its universal acceptance especially in under developed countries or where proper drug regulation systems or laws are not present or not implicated. This encourages individuals to treat minor illnesses by using simple and effective remedies through self-medication without a doctor's visit, thus saving time and doctor's fee. These minor illnesses include pain, diarrhea, constipation, gastric acid hyper secretion, or allergic diseases.[2]

The list of responsible factors shown in different studies includes lifestyle, access to drugs, the potential to manage certain illnesses through self-care, and greater availability of medicinal products.[3] It is generally accepted that self-medication has an important part in health

care. By improving people's education, general knowledge and socio-economic status; self-medication can decrease the burden on hospital OPD. It has been successfully implicated into many health care systems throughout the world.[4] But there is also the risk for misuse and abuse of such drugs. Misuse here is defined as taking an over-the-counter drug for a genuine medical condition but in higher doses or for a longer period than prescribed, like taking excess amount of a painkiller than prescribed for treatment of headache. Abuse is using nonmedical over-the-counter drugs, e.g. to gain or lose weight.[5]

Several studies on the subject show that there are risks like misdiagnosis, drug resistance or increased pathogen resistance, and use of drugs in excessive amounts, use of expired drugs, long time use, drug interactions and poly-pharmacy[6] in self-medicating people. It is predicted that more than 50% of antibiotics globally are bought privately without prescription, from pharmacies or street vendors.[7,8] e.g. Chlorpheniramine is an over the counter drug easily accessible in Pakistan which is a substance of misuse and abuse among the truck drivers.[9] Taking medications on their own is common practice these days and the prevalence is high around the globe[10,11] up to 68% in European countries,92% in Kuwait,59% in Nepal and 31% in India, while a previous study in Pakistan shows 51% prevalence.

The purpose of this study was to analyze the self-medication practices in general population and to identify the determinants of self medication, as there is no current study available in this region.[12]

METHODS

Cross sectional study was conducted in General OPD of Fauji Foundation Hospital, Islamabad, affiliated with Foundation University Medical College, from February 2015 to September 2015 after pilot testing through closed ended structured questionnaire translated in Urdu. 255 consenting male and female attendants aged> 18 years, in FFH general OPD were included in the study and they were selected by convenient sampling. Only currently non diseased adults were subjects of our study hence less than 18 year old subjects were excluded, as well as patients, and hospital staff was excluded from study. The respondents were self-interviewed by the research group students of fourth year MBBS. After collection of data it was checked for omissions and mistakes and it was cleaned and only necessary data was entered in SPSS 17. Data analysis results for this study were mainly done in frequencies and percentages. In order to calculate the differences in self-medication practice by gender, chi-square test was applied and p-value of less than 0.05 was taken as significant.

RESULTS

The results showed that among 255 attendants accompanying the patients in general OPD, 99 (38.8%) were males and 156 (61.2%) were females. Majority belonged to the age group of 25-31yrs.Almost 50% were unemployed. There were 21.6% illiterate while 88% literate subjects. About 40% were from rural area while 60% belonged to urban and suburban residence. A great majority 65.9% self-medicated of which 73 (43.45%) self-medicated due to lack of time and 60 (35.71%) due to high doctor fee. Our results show that self-medication practice was more common in urban areas (71.24%). 29% used homeopathic, 4.7% used ayurveda, 12.2% used Hakeem and 54.1% used allopathic system of medicines. Self-medication was mainly done for symptoms of runny nose (50%).Moreover, 15.47% used the medicines for skin wounds, 16.07% used them for cough, 4.2% used them for joint pains, 9.52% used them for fever, 3.57% used them for headaches and 1.2% used them for acidity. About 47.02% said that their medicine selection was based on chemists' recommendation. Others based their medicine selection on opinion of family members (26.19%), opinion of friends (14.88%), self-experience (9.52%), internet (1.78%) and pervious doctor's prescription (0.59%). 60.8% did not change the medicine, 63.9% did not change dosage of drug, 47.62% switched to other medicines and 51.19% never completed the recommended course of medicine. 60.12% developed adverse reactions to drug. Around 51.4% think self-medication is a

good and successful practice. 54.5% check the expiry dates and 31.4% of them receive these medicines from hospitals. Rest of them obtains the medicines from community pharmacies (24.3%), leftover from previous prescription (29.8%), online shopping/E-pharmacy (10.2%) and other sources (4.3%). Only 51.8% read the instructions. Thus it revealed that the prevalence is high in Pakistan and the main factors influencing self-medication are age, employment, and income and education level.

Self-medicated	Frequency	%
Yes	168	65.9
No	87	34.1
Reason	**Frequency (n=168)**	**%**
High doctor fee	60	35.7
Lack of time	73	43.4
For quick relief	30	17.9
Confidence in myself	5	3
Selection of medicine	**Frequency**	**%**
Recommendation by chemist	79	47.02
Opinion of family members	44	26.2
Opinion of friends	25	14.88
My own experience	16	9.52
Internet	3	1.78
Previous doctor's prescription	1	0.59
Conditions For Which Self medicated	**Frequency**	**%**
Runny nose	84	50
Skin wounds	26	15.47
Cough	27	16.07
Joint pains	7	4.2
Fever	16	9.52
Headache	6	3.57
Acidity	2	1.2

Table-I. Frequencies of self-medication in consenting attendants greater than 18 years old in FFH general OPD (n=255)

INTERPRETATION OF CHI-SQUARE TEST

H0: There is no significant difference between the practice of self-medication among males and females.

H1: There is a significant difference between the practice of self-medication among males and females.

P Value: 0.952.

Level of Significance: 0.05.

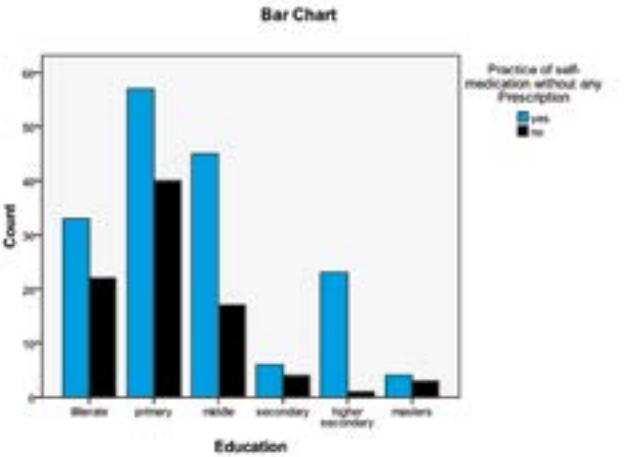

Figure-1. Cross tabulation of educational status with self-medication

The application of Chi-square Test indicates that P value has been 0.952 that is higher than the level of significance that is 0.05 hence accepting the null hypothesis and rejecting the alternate hypothesis. The results of the analysis indicate the peculiar socioeconomic structure of this society where accessibility to medical facilities gets restricted due to low income per capita and it equally affects male and female population.

DISCUSSION

This is a questionnaire based descriptive study on self-medication which was completely based on the information given by respondents in outpatient department of Fauji Foundation Hospital Rawalpindi. A total of 255 attendants participated in this study. Out of 255, 99 (38.8%) were male and 156 (61.2%) female. Majority (65.9%) people were observed to practice self-medication. Another research in Islamabad[13] which was conducted on 500 respondents showed that 61.2% people self-medicated. It is higher than Hong Kong China (32.5%) while lower than Slovenia (92.3%).

According to our study self-medication was mostly practiced by young people belonging to age group 25-31 years (47.1%).This result is in line with study named attitude and practice towards self-medication among resident of Ikeja 20- 29(47.5%).[14]

Gender * Practice of self-medication without any prescription Cross tabulation					
			Practice of self-medication without any prescription		Total
			yes	no	
Gender	male	Count	65	34	99
		Expected Count	65.2	33.8	99.0
	female	Count	103	53	156
		Expected Count	102.8	53.2	156.0
Total		Count	168	87	255
		Expected Count	168.0	87.0	255.0

CHI SQUARE TEST

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.004[a]	1	.952		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.004	1	.952		
Fisher's Exact Test				1.000	.529
Linear-by-Linear Association	.004	1	.952		
N of Valid Cases	255				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 33.78.

b. Computed only for a 2x2 table.

CHI-SQUARE TEST

Our results show that self-medication practice is more common in urban areas (71.24%).Similar response is seen in Islamabad[15] in a study which reveals high prevalence rate in urban subjects, 68.3%. There is a similar pattern in a study from India; however in Srilanka the prevalence in rural areas was higher than urban areas. It is not unexpected that due to the unsatisfactory medical care, people with busy urban lifestyle use self-medication as alternative especially in mild illnesses.

In our study mostly people practiced self-medication because of lack of time 73 (43.45%) and high doctor fee 60 (35.71%) it can be compared with study in Bangladesh [16] which shows the same reason for self-medication practice as high doctor fee (42%) and not having enough time (32%).In this study we found that (54.1%) of population use Allopathic system of medication, people (29%) showed trust on homeopathic on Ayurveda (4.7%) and on Hakeem (12.2%) These results can be compared with a study done in Karachi, Pakistan[17] in which 64.7% used allopathic system.

(54.1%) people favored the self-medication practice as it is convenient and provides quick relief. Our results are in line with study in Ethiopia[18] where (55%) respondents agree with self-medication practice.

Our study shows that majority of the respondents 31.4% took medicine from hospital and 29.8% used left over drugs. It can be further compared by another study at Saudi Arabia[19] where (80%) respondents identified that pharmacy was a major source for both drugs and information. This is probably due to weak enforcement of regulation regarding drug handling and dispensing. Consequently salesmen of pharmacies are commonly considered as major source of medicine without prescription.

CONCLUSION

The study revealed that prevalence of self-medication in this area is high among sample population. The main factors influencing self-

medication are age, income, and employment and education level. According to our study majority of respondents practiced self-medication for minor ailments and to get quick relief. People also self-medicated because of lack of time and high doctor fee. Pharmacies were a big source of providing drugs for self-medication. Pharmacists should be more attentive towards people who take medicines without prescription. This is an alarming sign as an indiscriminative use of drugs can lead to various drug interactions and side effects. There is need for healthcare professionals to familiarize the consumers with problems of inappropriate medicine use through public education. There is dire need for enforcement of regulations on over-the-counter availability of drugs, and constant surveillance of pharmacies.

REFERENCES

1. Mumtaz Y, Jahangeer SMA, Mujtaba T, Zafar S, Adnan S. **Self-Medication among University Students of Karachi.** Journal of Liaqat University of Medical and Health Sciences. 2011; 10: 102.

2. Amin S, Abid F, Javeed A, Ashraf M, Riaz A, Mushtaq MH, Ghafoor A, Anees M, Yaqoob M. **A Cross-sectional study on Self-medication with analgesics among pharmacy students of Lahore, Pakistan.** Sci. Int. (Lahore). 2014; 26(3): 1181.

3. Bushra Ali Sherazi et al. **Prevalence and Measure of Self Medicine: A Review.** Journal of Pharmaceutical Sciences and Research. 2012; 4(3): 1775.

4. **The benefits and risks of self-medication.** WHO Drug Information. 2000; 14: 1.

5. Cooper RJ. **Over-the-counter medicine abuse – a review of the literature.** Journal of Substance Use. 2013; 18: 82-107.

6. Hughes CM, McElnay JC, Fleming GF: **Benefits and risks of self-medication.** Drug Saf. 2001; 24: 1027–1037.

7. Cars O, Nordberg P. **Antibiotic resistance –The faceless threat.** The International Journal of Risk and Safety in Medicine. 2005; 17: 103-10.

8. Togoobaatar G, Ikeda N, Ali M, Sonomjamts M, Dashdemberel S, Mori R & Shibuya K. **Survey of non-prescribed use of antibiotics for children in an urban community in Mongolia.** Academic Journal. 2010; 88: 877-953.

9. Kunin CM. **Resistance to antimicrobial drugs-A Worldwide Calamity.** Ann Intern Med. 1993;118:557-561.

10. Zafar SN, Syed R, Waqar S, Zubairi AJ, Vaqar T. **Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes.** Journal of Pakistan Medical Association. 2008; 58(4): 214-7

11. Baig QA, Muzaffer D, Afaq A, Bilal S, Iqbal N. **Prevalence of self medication among dental patients.** Pak Oral Dent J 2012;32:292-5.

12. Hussain A, Khanum A. **Self-Medication among University students of Islamabad, Pakistan- A preliminary study.** Southern Med Review,2008;1(1):14-16.

13. Aqeel T, Shabbier A, Basharat H, Bukhari M, Mobin S, Shahid H, &Waqar SA. **Prevalence of Self-Medication among Urban and Rural Population of Islamabad, Pakistan.** Tropical Journal of Pharmaceutical Research.2014;13(4): 627-633.

14. Kuku K, Odusanya O. **Attitude and Practices towards Self Medication among residents of Ikeja.** 2011; 2.

15. Ira IJ. **Present condition of self-medication among general population of Comilla district, Bangladesh.** The Pharma Innovation Journal. 2015;4(1): 87-90.

16. Ali SM, Fatima M, Ali L. **Self-medication among downtown urban population of Karachi, Pakistan.** Indian Journal of Medical Research and Pharmaceutica Sciences. 2015;2(4):17-24.

17. Abay SM, Amelo W. **Assessment of Self-Medication Practices among Medical, Pharmacy, and Health Science Students in Gondar University, Ethiopia.** J Young Pharm. 2010;2(3):306-310.

18. Alghanim SA. **Self-medication practice among patients in a public health care system.** Eastern Mediterranean Health Journal. 2011;17(5):409-416.

"If you want to live a happy life,
tie it to a goal.
Not to people or things."

Albert Einstein

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Shumaila Humayun	Principal investigator topic selection & data analysis & interpretation	
2	Warda Imran	Co-investigaters & data collection	
3	Iram Naheed	Co-investigaters & data collection	
4	Nazish Javid	Co-investigaters & data collection	
5	Misbah Hussain	Co-investigaters & data collection	
6	Maheen Azhar	Co-investigaters & data collection	