SELF MEDICATION PRACTICES

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ABSTRACT… Introduction: Obtaining and consuming drugs without the advice of physician either for diagnosis, prescription or surveillance is called Self medication. Self medication has been a natural tendency of mankind at all times to relief their discomfort. **Objectives:** To assess the self medication practices and the factors influencing self medication practices among the people living in Ghulam Mohammad Abad, Faisalabad. **Study design:** A Descriptive Cross -Sectional Study. **Setting:** Population of Ghulam Mohammad Abad, largest colony of Faisalabad. **Material & methods:** By simple random technique a sample of 369 people living in Ghulam Mohammad Abad were selected. A pre -tested questionnaire was filled by interviewing each individual. **Results:** Prevalence of self medication found in study group was 61.20%. An increase pattern of self medication practices were found in the younger age group (15-35 years) which were 64.8 %. Self medication practice was found more in male (64.5%) as compared to female (58.5%). The unmarried persons as compared to married were involved 8% more in self medication. Similarly 11% increase pattern of self medication was observed amongst the respondents belonging to nuclear family (66.9%) as compared to extended type of family status (55.9%). There were 13.60% more practices of self medication in urban population (64.2%) as compared to rural (50.6%) and self medication was observed in illiterate (50.4%) and in matric level education (62.3%) and persons having education above matric (74.4%). The prevalence of self medication was more among skilled labor (75.9%) as compared to (54.9%) in unskilled labor. **Conclusions:** An increase pattern of self medication practices were found in the younger age group. As for as the gender is concerned it is more in the male as compared to female. Unmarried persons as compared to married persons were involved more in self medication. It is more in persons belonging to nuclear family status and also more in urban population as compared to rural population. Furthermore uneducated and respondents having education up to matric are more involve in self-medication practice. Advice of person selling medicine at medical store were having more affect on self medication. No reason for the use of drugs and un–affordability are also the determinants of increased self medication.

Key words: Self-medication, Surveillance, Determinants, Ghulam Mohammad Abad, Pattern, Factors.

INTRODUCTION

It is difficult to explain the concept of Health and Disease. The people of different socio-demography have different explanations for the health and disease. The health is considered as the absence of the illness or disease. World Health Organization defines health as, state of complete physical, mental, and social well-being and not merely the absence of diseases or infirmity[1].

In 1995 the World Health Organization Expert Committee on National Drug policies stated: "Self-medications is widely practiced in both developed and developing countries. Medications may be approved as being safe for self-medication by the national drug regulatory authority after considering the socio economical status of the community. Most of these medicines are normally used for the prevention or treatment of minor ailments or symptoms, which usually do not justify medical consultation. In some chronic or recurring illnesses, after initial diagnosis and prescription, self-medication is possible but the role of the doctor cannot be denied"[2].

The self medication has been a natural tendency of human beings at all times. Wherever an individual falls sick they try to take something for relief. There is a historical background of self medication that the people either apply or take something to feel better. People try everything present in their primitive environment whether of plant, animal or mineral origin. Sometimes, what they tried to eat was obviously not appropriate for food and developed side effect like vomiting, purgation or even sweating or diuresis. It is significant that primitive people who observed these effects everywhere in world would then undertake the rationale use of such substances which are beneficial and which one is injurious to them and considerable drug lore accumulated in every part of the world in every culture, from Arctic to Zanzibar. This lore with the passage of time became extensive and was gradually codified by the especially interested people. The earliest of this codification occurred in the Egypt from around 2000BC containing 900 prescriptions of various kinds[3].

Self-medication is one of the most modern ways of expression of the always present need of men and women for care of their health. World Health Organization emphasized the existence of a valid role of self-medication in caring the health of people by themselves[4]. Minor Illness episodes are treated by self-medication. Although it is popular preference by the individuals, little is known about the appropriateness of self-medication. Therefore, the appropriateness of self medication still need to be further evaluated[5].

Globally the Self medication practices encourage the individuals to look after their minor diseases with simple methods. In countries like England where 50% of the health care (on average) takes place within the realm of Self Medication it shows its broad prevalence. In spite of more advancement in the research little information's is available about its major determinants especially in the developing countries where its prevalence is more[10,6].

Many studies indicated that there is correlation between increased self-medication activity and demographic factors such as morbidity, income, education (schooling), gender, age and absence of periodic consultation. These have been found to be statistically significant factors in self-medication practices[7,8].

Self Medication is a common practice in most of the countries of the world especially in lower socio-economical. It is a common practice in our country. It is dangerous and harmful to the patients. It is very much undesirable ethically. It should be stopped with utmost efforts.

MATERIAL AND METHODS

Study Design
Cross sectional study.

Setting
In Ghulam Muhammad Abad Colony Faisalabad.

Duration of Study
One Month

Sample Size
369

Sample Technique
First of all, a sampling frame was prepared and then with simple random technique sample of 369 individual was selected.

Data Collection Instruments
A structured questionnaire .

Data Collection Procedure
The investigator himself collected the information from the sample under study. First of all, an informed consent was obtained from the respondent under study in which aim of getting information, secrecy of the information was ensured.

DATA ANALYSIS PROCEDURE
Data was entered and cleaned using Epi Data version 3. Data was analyzed using Epi info version 3.5.1 and SPSS, frequency and percentage calculated and presented in the table. P-value was calculated using chi square test of significance.

OPERATIONAL DEFINITION

Self Medication
The operational definition for this study is defined as "obtaining and consuming drugs without the advice of physician either for diagnosis, prescription surveillance of treatment".

RESULTS
Total respondents in this study were 369, out of this 226 did self medication and 143 were not doing self medication. The results of this study showed prevalence of self medication 61.20%. The minimum age of the participant was 17 years old, maximum age were 76 years old with the mean age of 32.60 +12.47. There were 11.4% more prevalence of self medication practices in the younger age group (15-35 years).and there were a gradual decreasing pattern of self medication practices with the increasing age. This study also showed a (6%) increase tendency of self medication in the male as compared to female and 7.5% more prevalence of self medication among the unmarried persons as compared married persons .There were 11% increase prevalence of self medication among the respondents belonging to

Variables		Self Medication			
		No	Yes	Total	P-value
Age groups in years	15-35	89 (35.2%)	164 (64.8%)	253 (100.0%)	0.037
	60-76	54 (46.6%)	62 (53.4%)	116 (100.0%)	
Gender	Female	83 (41.5%)	117 (58.5%)	200 (100.0%)	0.239
	Male	60 (35.5%)	109 (64.5%)	169 (100.0%)	
Marital Status	Un-married	53 (34.4%)	101 (65.6%)	154 (100.0%)	0.148
	Married	90 (41.9%)	125 (58.1%)	215 (100.0%)	
Family Status	Nuclear	60 (33.1%)	121 (66.9%)	181 (100.0%)	0.030
	Extended	83 (44.1%)	105 (55.9%)	188 (100.0%)	
Family Background	Rural	40 (49.4%)	41 (50.6%)	81 (100.0%)	0.261
	Urban	103 (35.8%)	185 (64.2%)	288 (100.0%)	
Education Status	Illiterate	62 (49.6%)	63 (50.4%)	125 (100.0%)	0.002
	Matric	58 (37.7%)	96 (62.3%)	154 (100.0%)	
	Graduate	23 (25.6%)	67 (74.4%)	90 (100.0%)	
Occupation	Un skilled labour	116 (45.1%)	141 (54.9%)	257 (100.0%)	0.0001
	Skilled labour	27 (24.1%)	85 (75.9%)	112 (100.0%)	
Economic status	< 10000 Rupees / month	125 (42.8%)	167 (57.2%)	292 (100.0%)	0.002
	> 10000 Rupees / month	18 (23.4%)	59 (76.6%)	77 (100.0%)	
Distance to Road	< 20 Minutes walking distance	140 (39.4%)	215 (60.6%)	355 (100.0%)	0.175
	> 20 Minutes walking distance	3 (21.4%)	11 (78.6%)	14 (100.0%)	
Distance to Medical Store	< 20 Minutes walking distance	134 (38.6%)	213 (61.4%)	347 (100.0%)	0.831
	> 20 Minutes walking distance	9 (40.9%)	13 (59.1%)	22 (100.0%)	
Distance to Health Care Center	< 20 Minutes walking distance	93 (36.3%)	163 (63.7%)	256 (100.0%)	0.150
	> 20 Minutes walking distance	50 (44.2%)	63 (55.8%)	113 (100.0%)	
Doctor Free	< 200 rupees	142 (39.8%)	215 (60.2%)	357 (100.0%)	0.008
	> 200 rupees	-	11 (100.0%)	11 (100.0%)	
Availability of Medicine at Home	No	108 (55.7%)	86 (44.3%)	194 (100.0%)	0.0001
	Yes	35 (20.0%)	140 (80.0%)	175 (100.0%)	
Family history of distance	No	60 (37.0%)	102 (63.0%)	162 (100.0%)	0.549
	Yes	83 (40.1%)	124 (59.9%)	207 (100.0%)	
History of self illness	No	67 (40.9%)	97 (59.1%)	164 (100.0%)	0.459
	Yes	76 (37.1%)	129 (62.9%)	205 (100.0%)	

nuclear family as compared to extended type of family status. This study also showed that the self medication practices were more common in the urban population as compared to rural population and as education level increased, the prevalence of self medication is also increased. Results also showed 21% more prevalence of self medication among skilled worker as compared to unskilled worker. 57.2% prevalence of self medication was observed in the respondents having monthly income up to 10000 rupees, and 76.6% in the respondents having income more than 10000 rupees. Results showed that those respondents having up to 20 minutes walking distance a health facility have 60.6% prevalence of self medication and having unto 20 minutes walking distance to the medical store have 61.4% prevalence of self medication. The prevalence of self medication amongst the respondents living in area where Dr. fee status is up to Rs. 200 was 60.2% while it was 100% in the person living in the area where the Dr. fee was more than Rs 200. As p value is 0.008 which is less than 0.05 and so statistically significant.. Results also showed more prevalence of self medication in those keeping medicine at home as compared to those not keeping medicine at their homes. It was also observed that 52.65% were doing self medication on the advice of person selling medicine at medical store As p value is 0.000 which is less than 0.05 and statistically significant. The prevalence of self medication was 59.9% in those having history of disease in the family as compared to 63 % prevalence of self medication in those not having such history. The prevalence of self medication was 62.9% in those having history of self illness /disease as compared to 59.1 % prevalence of self medication in those not having such history. Results of the study revealed that most common symptoms responsible for self medication were related to upper and lower respiratory tract (35.5%), gastrointestinal tract (20.9%) and psychosomatic problems (16.3%). Results showed that NSAIDs were the most common drugs used by the respondents for the purpose of self medication and the prevalence was 37.7% while 31.86 % showed unaffordability, 16.37% non compliance and 5.31% shortage of time, 4.42% unavailability of doctor and 3.10% previous experience.

DISCUSSION

The prevalence of self medication found in this study was 61.20% which was almost similar to the results found in another study conducted on self medication in Pokhara valley Nepal showed that 59 % of the respondents were doing self medication[9]. But high prevalence of self medication was observed in Khartoum state of Sudan which was 81.8%[10]. This high prevalence of self medication may be due to easy availability of medicine, high influence of peers, relatives and friends and socio economic condition of the country. The mean age of the participant were 32.60 with standard deviation of 12.47 compared to the mean age 12.6 in another study on self medication conducted in Sudan[10]. Major participants in this study were 15 to 35 years (68.6%) like another study having 54 % respondents between ages 20 to 39 years[9]. An increase pattern of self medication practices were found in the younger age group (15-35 years) and that were 64.8% as compared to 53.4% in the age group of more than 35 years old. This was also found in other study on self medication conducted in Pokhara valley Nepal having a higher proportion of respondents aged less than 40 years used medicine more frequently as compared to above or equal to 40 years[9]. The high prevalence of self-medication in the adolescent group was also observed in Kuwait from 87% in 14 years of age to 95% in 18 years of age. This may be due to fact that the children becoming more aware of their health needs[11]. Furthermore analysis showed a gradual decreasing pattern of self medication practices with the increasing age and found 53.4% in age group of more than 35 years old. This decreasing pattern of self medication with the increase in age is also observed in another study conducted in urban population of Portugal and it was observed 33% in the younger age group people this may be as the individual grow older he or she use to visit the doctor more frequently[12]. Analysis of the data showed that the prevalence of self medication were (64.5%) in male as compared to the (58.5%) in the female. There was slight (6%) increase pattern of self medication in male as compared to female in this study. It is also observed in a study conducted in Abu Dhabi in which 68.5% prevalence of self medication in the male and 31.5% in the females[21]. But there are few studies in which the prevalence of self medication was high in female as compared to male like in Sudan in which there were 49% prevalence of self medication in female and 51%

prevalence of self-medication in male and which showed slightly increase of self-medication pattern in female as compared to male as compared to the results of this study which showed a high prevalence in the male[10]. Similar results were also observed in a cross sectional study conducted on adult population in Spain, the results of which showed that women were doing more self medication as compared to males[13]. Males are free more to go outside, they are economically strong and have more access to medical stores. Reason for slight decrease of self medication among female may be due to less independence to women in our society, more dependency over males in every matter.

Female respondents are economically dependent on male. Social constraints also plays role in this regard. Marriage also affects the pattern of self medication. It is because of increased responsibilities. It was also observed that 65.6% unmarried respondents were involved in practicing self medication as compared to 58.3% married persons who were involved in self medication. The results were different with the results of another study conducted in ABABA showing more trend of self medication in married in which 49.8% prevalence was in unmarried actual drug users as compared to 46.2% married actual drug users[14].

Results of study showed the respondents having extended family were involved11% more in self medication which was the same as in another study conducted in Ababa showing more prevalence of self medication in nuclear family as compared to extended family status[14] and further supported by another study conducted in Spain showing a high prevalence of self medication nuclear family system as compared to extended. As for as the distribution of self medication amongst urban and rural population were concerned the analysis of study showed that the self medication practices were more common in the urban population as compared to rural population which showed almost 14% increase prevalence of self medication in the urban area as compared to rural. This result is also supported by another study showing 37% prevalence of self medication in urban area and 17% rural area[15]. This support is further augmented by another study conducted in rural areas of Portugal showing the effect of back ground on self medication in the form of increase tendency of self medication in urban area as compared to rural[23] But a study conducted in Pakistan showed that there was no difference in the prevalence of self medication practices in urban and rural population as it was observed that in urban population the prevalence was 74% and in rural 73%[16]. Self medication rises with the rise in education level. It was observed 14.1% in illiterate, 17.6% primary school, 27% public school, 35.4% high school and 38.4%in bachelor. It was also noted that same level of self medication found in high school level and university level education[12]. But in another study conducted in Spain showed that the prevalence of self medication were more in illiterate persons which were 65.7% as compared to 44.8% in the literate persons which was opposite to the results of this study showing high prevalence in the high education people[13] while a study conducted in India supported the results of this study and showed that the prevalence of self medication was high in educated persons as compared to uneducated which were 26% in educated and 23% in the uneducated participants[17]. The distribution of self medication practices amongst various occupations were also analyzed and found that there were more tendency of self medication among skilled workers which was 75.9% as compared to unskilled which were 54.9%. which showed 21%more prevalence of self medication in the skilled workers is also sported by another study conducted in Spain that the occupation also affects the practices of self medication and showed that in skilled person 71.3%, in unemployed 38%, house wife 31.5% and in student it was 53.9% prevalence of self-medication[13].

The results of this study showed that economic conditions also affect the pattern of self medication and it was observed that prevalence of self medication in the respondents having monthly income up to 10000 rupees was 57.2%, and it was 76.6% in the respondents having income more than 10000 rupees per month. Analysis showed that the respondents living in high socio economic conditions were doing self medication more as compared to people living in low socio economic conditions which was supported by high practices of self medication in high economic groups In studies by

Durgawale in urban slum and Seed et al on self medication practice and prevalence observed was 60.53% and 86% respectively[18,19]. But in another study conducted in Sudan it was observed that respondents with higher incomes appeared less inclined to self medication. This is expected as they can afford to consult qualified doctors[10].

Distances between the residence of respondents and health care facility also played a vital role in self medication practices pattern of respondents. Results showed that those respondents having up to 20 minutes walking distance to reach the main road have 60.6% prevalence of self medication and those respondents having unto 20 minutes walking distance to reach the medical store have 61.4% prevalence of self medication. While 56 respondents having up to 20 minutes walking distance to a health care facility have 63.7% prevalence of self medication. The effect of fee on self medication practice showed that prevalence of self medication in the respondents living in the area where doctor consultation fee charged more than 200 rupees was 59.8% as compared to those respondents living in the area where doctor charged less than 200 rupees and 31.8% was observed. Results of another study con ducted in Sudan showed that 46%respondents were having the perception that community pharmacies and herbal shops are of low cost as compare to health care facilities that charges doctor and investigation charges which showed that the prevalence of self medication increased with high fee[10]. Results showed more prevalence of self medication in those keeping medicine at home as compared to those not keeping medicine at their homes. This showed that there was increase tendency of self-medication among the persons keeping medicine at home as compared to those not keeping medicine at home. It was also observed in another study conducted in Greek Rural population showing only 9.1% of the participants who did not report self-medication with antibiotics, had stored drugs at home compared to 49.2% of the participants who reported self medication. Finally, 31.5% of the participants reported earlier discontinuation antibiotics when symptoms improved and restarted medicine without doctor's advice again with same sign and symptoms[20]. Results of this study showed that 52.65% were doing self medication on the advice of person selling medicine at medical store, while 16.81% on relative advice, 18.60% having previous experience, 9.7% on friends and 2.2% were doing medicine on no advice out of 369. As p value is 0.000 which is less than 0.05 and statistically significant. Results showed that majority of people were doing self medication on the advice of drug sellers, relatives or on the basis of previous self experience of self medication. Similarly in another study conducted in Kuwait on self medication used, it was observed that 36% respondents did self medication on the advice of parents. Among other source 57% did under the influence of non allopathic doctor. 6% followed self instinct while one percent seeks information from pharmacist[11]. It is also observed in another study conducted in Portagal that most of the people were doing self medications on the influence of their friends, relatives and family member's advice. 47.2% dispensed drugs for self medication from pharmacies while 8.6% on the relatives/ friends advice, 5.5% other health professional and 32.9% subject have their own previous experience. Media were responsible for only 5.9% of drugs acquired for self medication[12]. It is also observed in another study conducted in Oman[21]. But a study conducted in Chile showed that 46% frequency of self medication were associated with prior prescription, as compared to the advice of pharmacist and relatives[22].

Out of 226 respondents doing self medication, 36.28% were having no reason for the use of drugs without doctors advice while 31.86% were providing reasons of unaffordability,16.37% of non compliance, 5.31% shortage of time, 4.42% unavailability of doctor and 3.10 % previous experience which was also sported by the result of another study showing that 46% respondents were having the perception that community pharmacies and herbal shops were low cost as compare to health care facilities that charges doctor and investigation charges and 38% of the respondents' were having previous experience and having high morale with the similar types of illnesses[10]. It has been observed that among the major reasons for self- medication were mainly minor ailments accounts for (46.4%) saving time for, (37.7%) saving cost for (31.4%) being afraid of discovering the more serious disorder for (5.9%) and

having no trust on medical doctors for (3.8%)[21].As the results of the study showed that prevalence of self medication was 59.9% in those having history of disease in the family as compared to 63 % prevalence of self medication in those not having such history which showed that there was no effect of disease in the family member on the practice of doing self medication by the family members. The prevalence of self medication was 62.9% in those having history of self illness /disease as compared to 59.1% prevalence of self medication in those not having such history. As p value is 0.459 which is greater than 0.05 and statistically not significant but another study conducted in Oman Jordan showed that minor ailments in the family account for 46.4% and another study conducted in Spain showed 57% prevalence of self medication associated with chronic disorders. Results of the study revealed that most common symptoms responsible for self medication were related to upper and lower respiratory tract (35.5%), gastrointestinal tract (20.9%) and psychosomatic problems (16.3%). A study conducted in rural population of Greek on self medication also observed that fever, cough, common cold and sore throat were the major causes responsible for self medication[20]. In another study conducted in Ababa it was observed that most frequently reported illnesses forcing self medication were 25.1% gastro intestinal tract infection, 24.9% fever and headache and 21.4% respiratory infections[14]. Results showed that NSAIDs were the most common drugs used by the respondents for the purpose of self medication and the prevalence was 37.7%. Out of 226 total respondents involved in self medication, 175 did not know the name of drugs used for self medication, 30 used antibiotics and 8 used multivitamins. It was also observed in another study conducted in Sudan on prevalence of self medication showed that NSAIDs and Paracetamol were the most commonly used drugs and antibiotics used were 28.7%. It is also observed in another study conducted in Greek that analgesics and antipyretics were the most commonly used drugs. But it was observed in another study conducted in UAE that antibiotics were the drug most commonly used by the respondents.

CONCLUSIONS

Different researcher argue for and against self-medication based on their perspectives and backgrounds, which may sound good at one time but may not at other times. The contribution of self-medication to the health care delivery of any country is well noted if it is within its limit that is, limited by the type of diseases to be treated and the type of products to be self medicated. An increase pattern of self medication practices were found in the younger age group. Analysis of the data showed that males were practicing self medication more as compare to female. It was also observed that unmarried persons were involved more in self medication as compare to married persons. An increase pattern of self medication was observed in the respondents having nuclear type of family as compared to the respondents belonging to extended type of family status. Further more, an increase pattern of self medication was observed in the urban population as compare to rural population. It was also observed that a high prevalence self medication among educated person as compared to uneducated persons. Similarly, there were more tendency of self medication among skilled labor as compared unskilled and it was also noted that the people having high income showed more prevalence self medication as compared low income people. It also showed that as the doctor fee cost increased, self medication practice also increased. The association between low economic statuses with use of self medication is statistically significant. Monetary constraints were sighted as the major cause of practicing self medication. Results showed that self medication practices were more on the advice of person selling medicine at medical store and on relative advice. The most frequently self-diagnosed illnesses or symptoms of illnesses were: GI illness, headache and fever.

Some of the socio-demographic characteristics such as education, gender, occupation, do determine the extent of self medication in general. Socio-demographic characteristics and the source of information/advice affect the type of category of drug products requested for self-medication.

RECOMMENDATIONS

This study highlights the urgent need of public education about specific risk/ side effects of self medication and its importance, by mass media and local government

authorities.

- Particular attention and specific advice/ counseling should be provided during self-medication for all drug consumers, particularly, to drug consumers such as Pregnant and breast-feeding women, children, elderly and chronically ill drug consumers.
- For self-medication information should be provided describing how to use it, possible effects and side-effects, how to monitor the medicine's efficacy, possible interactions, precautions and warnings, treatment duration and point at which the patient should seek medical advice.
- Pharmacy professionals and prescribers should ask their clients whether they are taking other drugs during the time of dispensing and prescribing, respectively.
- The pharmacist's role is a key element to help customers make the best decision on self-care and self-medication, as well as to provide and interpret the available information about medicinal products..
- Promotion and marketing should not encourage irresponsible self-medication.
- Government should develop public education materials on risks associated with use of drugs.
- Health providers must educate the patients about dangers of sharing of drugs particularly potent drugs.
- Health care providers have to advice or counsel about the drugs dispensed irrespective of the level of knowledge of the client.
- In spite of all benefits one cannot forget the role of self medication in the development of antimicrobial resistance so proper legislation should be promulgated.
- Improving communication and introducing a referral system between pharmacists and physicians is an interesting avenue which should be explored. This integration of pharmacy services (community pharmacy) in primary health care system.
- Pharmacists should be made aware about the medico legal aspects, consumer protection act and human rights issues regarding self medication.

REFERENCES

1. Park K. **Parks textbook of preventive and social medicine.** 20th ed. India: Banarsidas Bhanot;2009..
2. World Health Organization (WHO). Contribution to updating the WHO Guideline for Developing National Drug Policies. Report of a WHO Expert committee meeting, 19-24 June 1995.
3. Leak CD. **History of self medication.** Am NY Acad Sci1965;120(3);815-22
4. Nancy V. and Markm N. **Changing Patterns of Pharmaceutical Practice in the United States.** Soc. Sci. Med. 1997; 44(9): 1285-1302.
5. Sclafer, J., Slamet, L.S. and de Vischer G. **Appropriateness of Self-medication: Method Development and Testing in Urban Indonesia.** J. Clin. Pharm. Ther. 1997; 22(4): 261- 272.
6. AfolabiAO. **Factors influencing the pattern of self medication in an adult Nigerian population.** Annals of African Medicine2008;120(7):120-7.
7. Caulin, C., and Cranz, H. **Self-medication: is Regulation Needed from Whom.** Therapie2000; 55(4): 547-553.
8. Somsen, GA., and Schut, N.H. **Acute Renal Failure due to Self-medication.** Neth. J. Med.1998; 53(1): 45-46.
9. Shankar PR,Partha P,ShenoyN. **Self medication and non doctor prescription practices in Pokhara valley,Western Nepal.** BMC Family Practice 2002;3:17.
10. Awad AI, Eltayab IB, Capps PA. **Self medication Practices in Khartoum state, Sudan.** Eur JClin Phamacol 2008;62:317-24.
11. Abahussain E, Matowe LK, Nicholls PJ. **Self reported medication use among adolescents in Kuwait.** Med Princ Pract 2005;14:161-64.
12. DeMelo MN, Madureira B, Ferreira APN, MendesZ, Miranda ADC and Martins AP. **Prevalence of self medication in the rural areas of Portugal.** Pharm World Sci 2006:28:19-25.
13. Figueiras A, **CaamanoF&OteroJJG Sociodemographic**

factors related to self medication in Spain. Europeon Journal of Epidemiology2000;16:19-26.

14. Tadege TA. **A prospective study on self medication practices and consumer drug knowledge in AddisAbbaba.**june2002.

15. Phalke V.D, Phalke D.B, Durgewale P.M. **Selfmedication practices in rural Mahashtra.** Indian journal of community medicine2006;3(1).

16. Hussain S, Malik F, Hameed A, Ahmad S, Riaz H. **Exploring health-seeking Behavior, medicine use and self medication in urban and rural Pakistan.** Southern Med Review (2010) 3; 2:32-34

17. Shveter S, Jagmohan S. **A study of selfmedication pattern in Punjab.** Indian journal of pharmacy practice 2011;4(3).

18. Saeed AA. **Self medication among primary care patients in Faradak clinic in Riyadh Soc Science** Medicine 1988;27:287-9.

19. Durgawale PM. **Practice of self medication among slum dwellers.** Indian Journal of Public Health 1998; 42: 5.

20. Skilros E, Merkouris P,Gikas A, etall. **Selfmedication with antibiotics in rural population in Greece.** BMC Family Practice 2010;11:58.

21. Yousaf AMM Al-Bakri AG Bustanji Y Wazaify M. **Self medication pattern in Amman, Jordan**. Pharm World Sci 2008;30:24-30.

22. Albarran KF,Zapata LV. **Analysis and quantification of self medication patterns of customers in pharmacies in southern Chile.** Pharm World Sci2008;30:863-8.

23. Abasaeed A, Vlck J, Abulkhair M, Kubina A. **Self medication with antibiotics by community of Abu Dhabi Emirates.** J Infect D Ctries 2009;3(7):491-97.

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