Assessment of Self and prescribed medication practices in rural community of Peshawar, Pakistan

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ABSTRACT

This Descriptive cross sectional study was to evaluate self and prescribed medication practices among rural community of Peshawar. The study was conducted by Pakistan Health Research Council(PHRC), Research Centre, Khyber Medical (KMC) Peshawar from 5th June to 30th November 2017in a defined rural community of District Peshawar. A digital questionnaire based on self and prescribed medications was prepared and uploaded into Open Data Kit (ODK) Collect Software in android tablets. Questionnaire was based on different question regarding socio-demographic, self and prescribed medication practices.

Among 310 respondents it was found that 44.2% were practicing both self and prescribed medication while 30.6% used to practice self-medication only. Minor illnesses like fever (89.9%) and pains (83.6%) were treated by self-medication. In case of chronic patients, they practiced prescribed medication rather than self-medication. Majority of the non-prescribed medicines were pain killers (92.8%) and fever relieving medicines (81.3%). According to 24.6% of the participants, chemists were the source of information for self-medication. Similarly, 51.6% respondents purchased medicines from nearest pharmacy/ chemist shop for self-medication. As regard the dosage of antibiotics and medicine 95% of those who practiced self-medication acquired information from family members and friends. More than half (53.2%) of the study subjects were in the favor of practicing self-medication.

The results show that majority of the participants were practicing self-medication. Low cost, quick relief, lack of access to health facility and most importantly ignorance from the side effects of self-medication might be the possible reasons in rural setting.

Keywords: Rural community, Self-medication, Digital questionnaire, Side effects, Chronic diseases, Medicines

How to Cite This:

Arif A, Ullah O, Ahmad I, Khan A, Khan AM. Assessment of Self and prescribed medication practices in rural community of Peshawar, Pakistan. Isra Med J. 2019; 11(5): 402-406.

INTRODUCTION

In developing countries self-medication practices are very common[1,2]. It is defined as taking and consuming drugs for treatment of disease without the advice of doctor or physician[3]. Patients diagnose their own diseases and purchase the medicines for the treatment from nearest pharmacy or medical stores. Patients use to take medicines for treatment without knowing the proper recommended dosage, its side effects or drugs interaction. Less information is available on the pattern and trends of self-medication despite its common and usual practice in day today life[2].

Self-medication practices are on the rise in rural communities due to high cost of consultation, medication, low socioeconomic status[1 2]. There are many factors for practicing self-medication among people as depicted in elsewhere[3] like drug advertisements, access to drug/medicines, education status, type of family and society. Other common reasons for self-medication practices are a lack of availability of doctors or healthcare personnel, economic status, mild illness and patient's previous experience for the treatment of same illness/ disease[4].

A study done in India reveals that study population received the expert opinion for self-medication from friends and even from strangers for the treatment of different morbidities like fever, wound infection, cough diarrhea, digestive problems etc[5]. Another study done in rural community demonstrated that fever and pains including headache were the major morbidities for self-medication[6].

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Received for Publication: January 07, 2019
1st Revision of Manuscript: July 04, 2019
2nd Revision of Manuscript: October02, 2019
3rd Revision of Manuscript: October 29, 2019
Accepted for Publication: December 11, 2019

Study done in Pakistan regarding self-medication reported that 45.5% people use the medicines for mild illness, 73% people obtained these medicines from local community pharmacy[5]. Numerous study results also showed that common medicines used without prescription are different antibiotics and analgesics[4-6.]

In many developing countries including Pakistan, almost every medical store /pharmacy sells the medicines without doctors or health care personal advice[7]. Similarly, potentially addictive drugs and antibiotics are very easily accessible to common people. Socio-economic status, previous experience of treating a same disease, mild illness lack of awareness about drugs/ medicines side effects, common man can face the lethal health issue. High cost of consultation of health care personals and also lack or far off of primary health care facilities from people of rural community leads to access other doors rather than to doctor's for health issues[6, 8].

In Pakistan, self-medication practices are quite common because the majority people have access to all types of medications easily. However limited literature is present on self-medication practices in rural communities of Khyber Pakhtunkhwa. Present study was designed with objective to find out the trend towards self and prescribed medication practices in rural community of Peshawar.

METHODOLOGY

This descriptive cross-sectional study was conducted by Pakistan Health Research council(PHRC), Research Centre, Khyber Medical (KMC) Peshawar in rural community of Budhni village Peshawar for a period of 6 months from 5th June to 30th November 2017. The calculated sample size accounting for non-response was 310households.

Convenient sampling technique was adopted for collection of data. Head of the family was inclusion criteria of the study. In case, head of the family was not available then questions were asked from second responsible member of the house. Respondents not willing to participate in study were excluded. Ethical clearance was taken from Institutional Review Ethical Board of PGMI Hayatabad Peshawar. Informed consent was obtained from head of households before administering questionnaire.

Digital questionnaire was prepared and uploaded into ODK Collect Software in android tablets according to procedure given on website of open data kit[9]. Briefly cloud server was established on appspot. The sever was prepared for ODK aggregate so that it can serve as a platform for uploading of questionnaire in ODK aggregate and collection of data from multiple android based tablets simultaneously. Questionnaire was recorded into XML using MS excel and XML form offline. The questionnaire was developed and uploaded onto cloud sever. Using Google play store ODK collect was downloaded and sever address was entered. After synchronization ODK collect with ODK aggregate sever, questionnaire was downloaded in ODK collect and data was collected till final sample size is reached. Once sampling is completed all the data was sent to sever for managing all data into one sheet. The data was then downloaded from server directly. The data was then analyses using SPSS. The digital questionnaire was filled by Researchers and trained Lady Health visitors from 310 households using android tablets. Village Budhni was divided into 10 blocks. Thirty-one households were included from each block with an equal interval to cover the whole block. Questionnaire comprised on a different close ended question regarding socio-demographic, preference of medication method either self or prescribed, drugs names, clinical condition for which medication was employed. Reasons for self-medication, Source of information for self-medication like, chemist, neighbor, and advertisement on TV/ Newspaper and factors associated with self-medication were also asked from head of household. Community meetings and awareness camps after completion of project were arranged in Budhni village to educate and deliver the knowledge regarding side effects/health hazards of self- medication.

Data Analysis: Data was analyzed using SPSS version 20 for windows (SPSS Inc, Chicago, IL, USA). Descriptive results were expressed as frequency and percentage. To check the association between self and prescribed medication practices with other independent variables, R by C chi square contingency table was applied using OpenEpi (AG Dean, KM Sullivan, MM Soe, www.openepi.com)

RESULTS

A total of 310 head of households were interviewed out of which majority were in age group of 31-40 years 90(29%). In selected households from the model village Budhni, 137(44.2%) respondents preferred both self and prescribed medication.

Table-I: Medication practices for various illnesses (N=310)

Short illness	self-medication n(%)	Prescribed medication n(%)	P value
Fever	194(89.9)	29(10.1%)	<0.000001
Aches and Pains (all categories)	184(83.6)	36(16.4%)	
Respiratory Tract Infection	102(47.5)	113 (52.5%)	
Skin and oral infections and ashes	44(26.8)	120(73.2%)	
Gastroenteritis	51 (31.5)	111(68.5%)	
Any other	37 (11.8)	64 (88.2%)	
Suffering from chronic illness			
Hypertension	9(17.6)	42(82.4%)	<0.000001
Diabetes Mellitus	3(7.9)	34(92.1%)	
Cardiovascular Diseases	-	21(100%)	
Accidents and injuries	2(28.6)	5(71.4%)	
Anemia	5(50)	5(50%)	
Tuberculosis	-	1(100%)	

Fever, pains and aches were most prevalent mild illness from selected households. Household members preferred to treat

mild illness like fever 194 (89.9%) and pains 184 (83.6%) through self-medication. In case of chronic diseases like hypertension and diabetes mellitus, responders preferred to take a prescribed medication i.e. 42(82.4%) and34 (92.1%) respectively (Table-I).

Table-II: Mild Illnesses versus self and prescribed medications (N=310)

Drugs used for treatment of mild diseases/ illness	Self-medication %	Prescribed medication %	P value
Pain killer	244 (92.8%)	39 (7.2%)	<0.000001
Fever Relieving Medicines	230(81.3%)	53 (18.7%)	
Cough Syrups	175 (70%)	75 (30%)	
Anti allergics	46 (36%)	82 (64%)	
Vitamins	91 (50.8%)	88(49.2%)	
Antibiotics	36 (22.2%)	142(79.8%)	
Pills for Indigestion	22 (24.2%)	69 (75.8%)	
Sleeping pills	3 (14.3%)	18(85.7%)	
Herbal/Homeopathic	-	6(100%)	
Tonics	-	(2100%)	
Birth Control Pills	1(10%)	9(90%)	
Any other	10(18.9%)	43(81.1%)	
How did you know about the dosage of antibiotics or other medicines			
By checking the Package insert	5(55.6%)	4(44.4%)	<0.000001
By consulting the Doctor	9(4.4)%	194(95.6%)	
By consulting a Pharmacist	132(65.4%)	17(34.6%)	
By consulting Family Members/Friends	117(95.1%)	6 (4.9%)	
From newspapers/ magazines / books/TV	27 (100%)	--	
From internet	--	--	
from my previous experience	112(88.9%)	14(11.1%)	
By guessing the dosage myself	17(100%)	--	

Responders from rural community preferred self-medication regarding pain killers 244(92.8%) and fever relieving medicines 230 (81.3%). Antibiotics 142(79.8%) and pills for indigestion 69 (75.8%) were taken according to the doctor's prescription. As regard the knowledge about the dosage of antibiotics and other medicines among those who used prescribed medication, 95.6% were taking the medicines according to doctor's advice while among self-medication responders95.1% respondents came to know about dosage from family members and friends respectively as showed in Table-II.

Figure-1 indicates that source of information for self-medicated drugs, majority were chemist 76 (24.6%) and 111(35.8%) responders were getting the information from various sources. According to51.6% responders, they usually purchased the medicines from nearest community medical stores/ pharmacist (Figure-1). Figure-2 showed that according to 165 (53.2%) interviewee, self-medication was good practice.

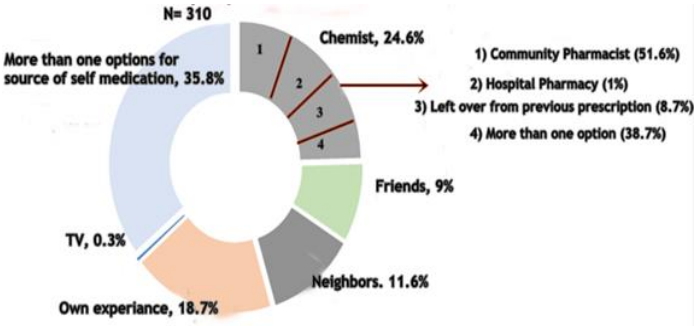
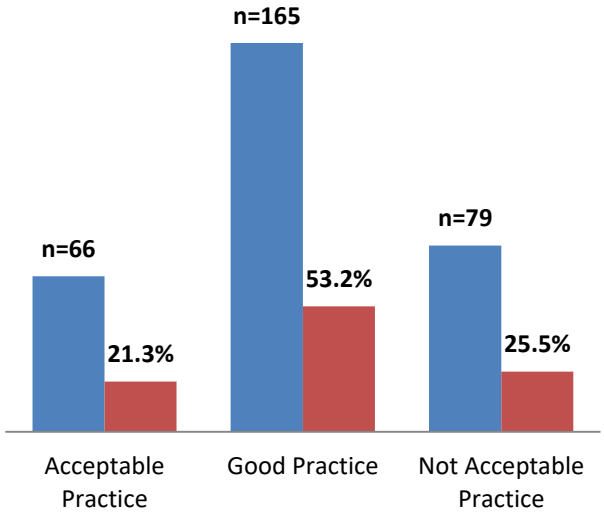


Figure-1: Frequency distribution of information sources of self-medication (N=310)



what do you think about self medication for self health care

Figure-2: Attitude toward self-medication. (N=310)

DISCUSSION

The current study highlights that about 44.2 % responders practice both type of medication**.** Only 30.6% residents preferred self-medication. Studies done among students in Karachi showed 76%[6]and 80%[10]prevalence of self-medication. The high prevalence of self-medication may be due to high literacy among students as compare to the present study where the subjects belonged to rural community with low literacy level. Another study done in rural dwellers of Karachi confirmed that 85 % population was self-medicated[8]. Karachi rural areas are less developed which is one of the reasons of practicing self-medication among rural community of Karachi. The results of our study are in agreement with another study done in Palestine[11] where 70% of the subjects reported self-medication for mild illnesses. Self-medication results could lead to different health consequences like drug-drug interaction, severe allergic reactions, antibiotic resistance and different other serious effects[11].

Our study reveals that low number of respondents suffering from hypertension and diabetes were taking medicines according to doctor's prescription in this study. A study done in

Kuwait reveals that 57% of respondents seek advice for medications from a doctor for acute illness[12]. There are two main reasons behind the less number of responders to take medicines with doctor's prescription in present study i.e. illiteracy and less or lack of awareness regarding medication. It also suggests that people with acute illness opt for doctor prescription while in chronic illnesses they rely mostly on self-medication after taking initial advice from clinician.

Most of the study subjects were using antibiotics according to doctor's prescription. While study done in rural community of Karachi showing that 52% participants were using antibiotics without doctor's prescription[8]. Research done in Ethiopia, around 60 % interviewees reported self-medicated use of antibiotics[13]. Ethiopia is less developed country and according to Central Intelligence Agency more than 80% population lived in rural area shaving 49% literacy rate, which might be a contributing factor towards the use of antibiotics without prescription[14].

Pain killers and fever reliving medicines were most commonly used drugs without prescriptions in the rural community. As reported in a local study, majority of the respondents were taking medicines without doctor's prescription for treating pains and fever[8].

Regarding information about the dosage of medicine, our study results are in agreement with the findings of a survey done in Karachi showed that 35% of study participants found the dosage from pharmacist and 22% from their previous experience[8]. Using medicines based on the previous experience induces a higher risk of exposure to expired medicines, especially in case of use of medicines already present at home brought for someone else or drugs that have been advised for different health issues; as a result this practice could lead to fatal side effects[15].

Our study results revealed that a considerable number of participants reported that chemists were the main source of information for self-medication. Likewise, multiple sources (e.g. own previous experience, neighbor, friends etc.) for self-medication were used by a number of study subjects. Research carried out in Ethiopia is comparable with our results[13]. Local community pharmacy (51.6%) was leading source for the purchase of medicines for non-prescribe medication which agrees with other study done in rural area of Pakistan[8].

Study participants were in favor of self-medication as it is cheap, convenient, giving quick relief in case of minor illness. Owing to lack of health literacy, they are ignorant of the side effects, drugs interaction, antibiotic resistance, misdiagnosis of illness, allergic reactions to drugs etc. of self-medication.

CONCLUSION

Majority of the participants were practicing self-medication. Low cost, quick relief, lack of access to health facility and most importantly ignorance from the side effects of self-medication might be the possible reasons in rural setting.

Recommendations: To prevent the self-medication practices on national level, awareness and education programs are required along with the implementation of the current strategies to stop selling medicines without doctor's prescription, restricting pharmaceutical advertising and increasing access to health care in rural areas.

Acknowledgment: The authors are indebted to the Pakistan Health Research Council for funding of this project. Authors are very thankful to Budhni village for their cooperation and as well as to Mrs. Masooma Bukhari, Mrs. Bina Ambreen and Mrs. Naheed Gul for helping in data collection.

AUTHOR'S CONTRIBUTION

Arif A: Conceived idea
Ullah O: Manuscript writing
Ahmad I: Designed methodology
Khan A: Data collection, Data analysis
Khan AM: Data collection, Manuscript writing

Disclaimer: None.
Conflict of Interest: None.
Source of Funding: This research was funded by Pakistan Health Research Council.

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