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Research Article

**A CROSS-SECTIONAL RESEARCH STUDY ON OVER THE  
COUNTER (OTC) SELF-MEDICATION USAGE IN THE CASE  
OF PREGNANCY BEFORE, DURING OR AFTER WITH  
POSSIBLE ADVERSATIVE RESULTS**

<sup>1</sup>Dr.Zain Mehmood, <sup>2</sup>Dr. Tooba Waseem, <sup>3</sup>Ayaz Mahmood<sup>1</sup>Ex Medical Officer THQ Samanabad.<sup>2</sup>DHQ Teaching Hospital, Sahiwal<sup>3</sup>RHC Ladhe Wala Warraich, Gujranwala**Abstract:**

**Objective:** The purpose of this study was to determine the reasons of choice for the self-medication trend, medicines type, information source and over-the-counter medication usage by pregnant women.

**Study Design:** Cross-Sectional Study (CSS).

**Place and Duration of Study:** Completed the current descriptive study in 06 months period starting from October, 2017 and ending in March, 2018 in Jinnah Hospital, Lahore.

**Material and Methods:** Selected total number of 351 women for the present study who were going to be or undergoing pregnancy. Carried out one on one interviews of all the participants of study and collected all the required data on a formulated form specially designed for the current research. Collected data was consisting of practicing reason, recommendation source, medicine awareness, medicine usage type, illness, over the counter medications and demographic information. Used the SPSS software version 20 to carry out data analysis.

**Results:** The age limit of all patients was from 18 years to 45 years with the mean age as  $26.28 \pm 10.42$  years. As per observations of this study there were 37.9% (133) patients used OTC medications during the pregnancy, 63.5% (223) patients adopted OTC medication before their pregnancy and 36.5% (128) patients carried out OTC medication in their previous pregnancy. According to the findings of present study observed no awareness about the medicine in 77.4% (103) cases, Paracetamol was most commonly used medicine observed in 43.6% (58) patients and Headache was the common most sickness noticed in 60.2% (80) patients.

**Conclusion:** The results of the study very clearly show that the tendency of over the counter medicine use without any prescription and lack of awareness is too much common in especially women of Pakistan.

**Keywords:** Over the counter (OTC), Pregnancy, Awareness, Medication, Headache.

**Corresponding author:****Dr.Zain Mehmood,**

Ex Medical Officer THQ,  
Samanabad.

QR code



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**INTRODUCTION:**

Now a days without prescription and OTC usage of drugs has risen due to easily available medicines. without specialist doctor advice an international use of medicine on the basis of symptoms by persons themselves is known as self-medication according to the definition by WHO. Found the trend of self-medication in 90% of pregnant ladies. Observed in a study that Self-medication prevalence in Ethiopia was 26.2% and in Nepal it was 59%. According to another study in USA 60% people were involved in same tendency among which the ratio of pregnant women was more than 80%.

Misuse and Non-restricted self-medication results particularly in the lactating, pediatrics, geriatrics and pregnant women are very formidable. During pregnancy use of drugs is too much considerable because it will affect the embryo. Generally, females face problems like vomiting during pregnancy, headache, back pain and nausea which provoke them to use self-medication. Health of mother and pregnant women is greatly on risk as a result of self-medication. Drug administration, disease recognition and prescription of medicine are the sensitive areas demanding due consideration. Sometimes neighbors, drug dealer and also electronic media is involved in guiding towards misuse of medicine. This research study aims to reveal the hidden causes of OTC drug usage in the shape of medicine type and inspiration, specially in pregnant females and generally in public.

**SUBJECTS AND METHODS:**

carried out present descriptive research study in OPD of Gynecology and Obstetrics Department of Jinnah Hospital, Lahore. Completed the research in period of 24 weeks starting from October, 2017 and ended in March, 2018. Selected total number of 351 women for the present study who were going to be or undergoing pregnancy symptoms. Carried out face to face meetings with all the participants of study and collected all the required data with the permission of the department and informed consent of the

participants, on a formulated form specially designed for the current research and through cluster sampling technique. Collected data was consisting of practicing reason, recommendation source, medicine awareness, medicine usage type, illness, residence, age, socio-economic status, occupation, education, gravidity, gestational age, pregnancy trimester, abortion history, over the counter medications and demographic information. Also asked the patients about previous OTC use before pregnancy, recommending source and self-medication practice reasons, medicine type, specific illnesses, in the course of last pregnancy and at present. Excluded all unwilling pregnant women and also those who were not pregnant. Carried out data analysis through SPSS software version 20 to calculate all percentages and frequencies. also measured previous use of OTC, abortion history through Chi-Square test.

**RESULTS:**

The age limit of all patients, with the mean age as  $26.28 \pm 10.42$  years, was in between of 18 years and 45 years. According to observations of this study patients of no awareness about the medicine were 77.4% (103). There were 37.9% (133) patients used OTC medications during the pregnancy, 63.5% (223) patients adopted OTC medication before their pregnancy and 36.5% (128) patients carried out OTC medication in their previous pregnancy. According to the findings of present study observed no awareness about the medicine in 77.4% (103) cases, Paracetamol was most commonly used medicine observed in 43.6% (58) patients and Headache was the common most sickness noticed in 60.2% (80) patients. There were 64.6% (177) patients of no abortion history, 35.4% (97) patients with abortion history and 52.4% (184) patients were third trimester cases. Observed that amongst the pregnant women there were 4.8% (17) working women and 95.2% (334) were housewives. The proportion of grand multigravida 10.8% (38) cases, primigravida 21.9% (77) cases and multigravidas 67.2% (236) cases. The results are in tabular and graphical shape below.

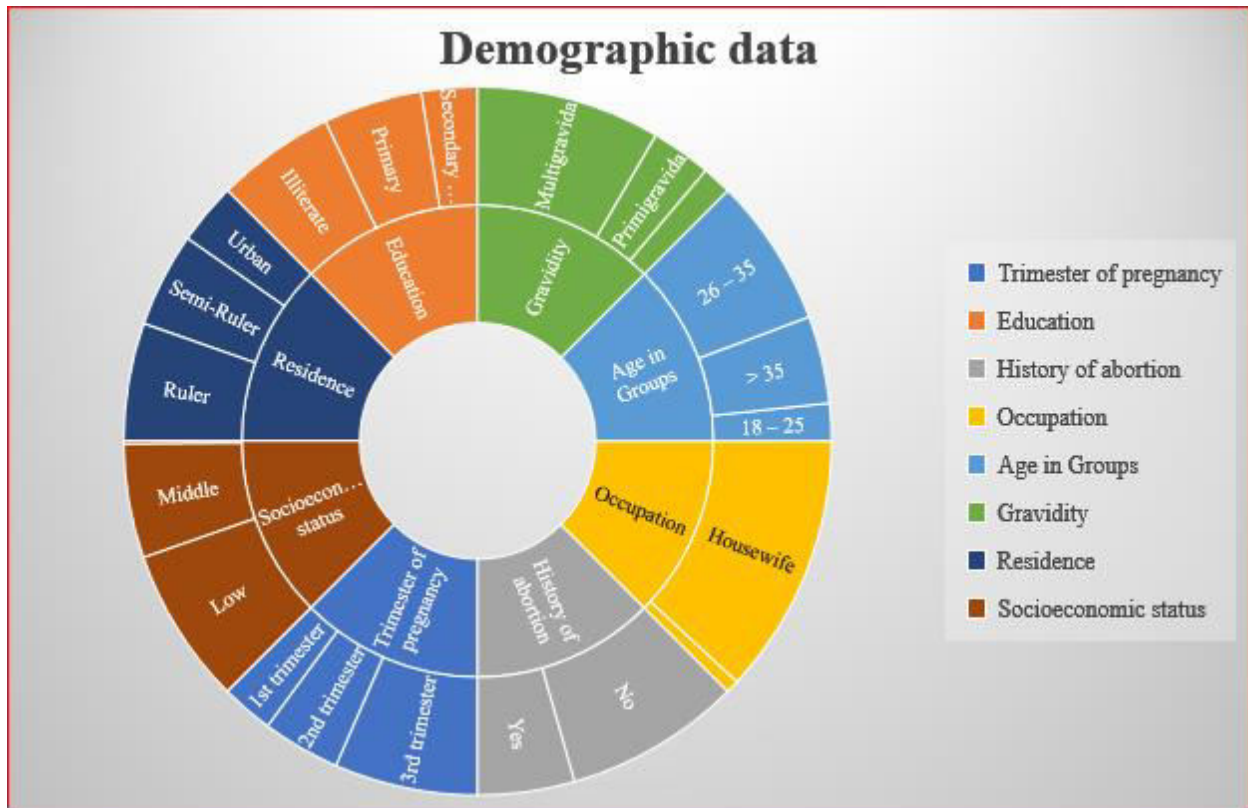
**Table No 1: Reason for adopting the practice**

Practice Adopting Reason	Percentage
Easily Available	27.6 %
Attending Health care is Costly	31.6 %
Better Disease Knowledge	11.3 %
Suicide Attempt	0.80 %
Time Saving	28.6 %



**Table No 2: Demographic data**

Variables	Percentage	Numbers	
Trimester of pregnancy	1 <sup>st</sup> trimester	19.1 %	67
	2 <sup>nd</sup> trimester	28.5 %	100
	3 <sup>rd</sup> trimester	52.4 %	184
Education	Illiterate	43.3 %	152
	Primary	36.2 %	127
	Secondary / Higher	20.5 %	72
History of abortion	Yes	35.4 %	97
	No	64.6 %	177
Occupation	Housewife	95.2 %	334
	Working Women	04.8 %	17
Age in Groups	18 – 25	13.7 %	48
	26 – 35	54.4 %	191
	> 35	31.9 %	112
Gravidity	Primigravida	22.0 %	77
	Multigravida	67.2 %	236
	Grand multigravida	10.8 %	38
Residence	Semi-Ruler	34.5 %	79
	Ruler	43.0 %	151
	Urban	22.5 %	121
Socioeconomic status	Low	57.3 %	201
	Middle	41.6 %	146
	Upper	01.1 %	4



Observed medications before pregnancy in 63.53% (223) women and among these women 49.77% (111) cases were still using the medicines, whereas, 31.9% (112) stopped the practice, during pregnancy observed 17.1% (22) patients in practice. Noticed common use of Acetaminophen in 43.6% (58) patients with another as second common medicine acetaminophen + aspirin in 18% (24) patients, 15% (20) multiple drug users and acetaminophen + ibuprofen users were 12% (16) patients. Overall, 63.5% (223) before pregnancy OTC cases and 36.5% (128) non-users were in the findings of the research. Observed the history of OTC in 36.5% (100) cases and 14% (49) abortion history cases were there in the research findings. Also, current pregnancy cases were 37.9% (133) patients in the practice OTC. The results are in tabular and graphical shape below.

Table No 3 (Part-I): Details about use of over the counter (OTC) drugs

Variables		Percentage	Numbers
Knowledge about the medication	No knowledge	77.4%	103
	Dose	20.3 %	27
	Indication + dose	01.8 %	02
	Indication, dose and side effect	0.80 %	01
Source of recommendation	By self	73.7 %	98
	Husband and by self	13.5 %	18
	Pharmacist / drug store	11.3 %	15
	Neighbors / Family members	01.5 %	02

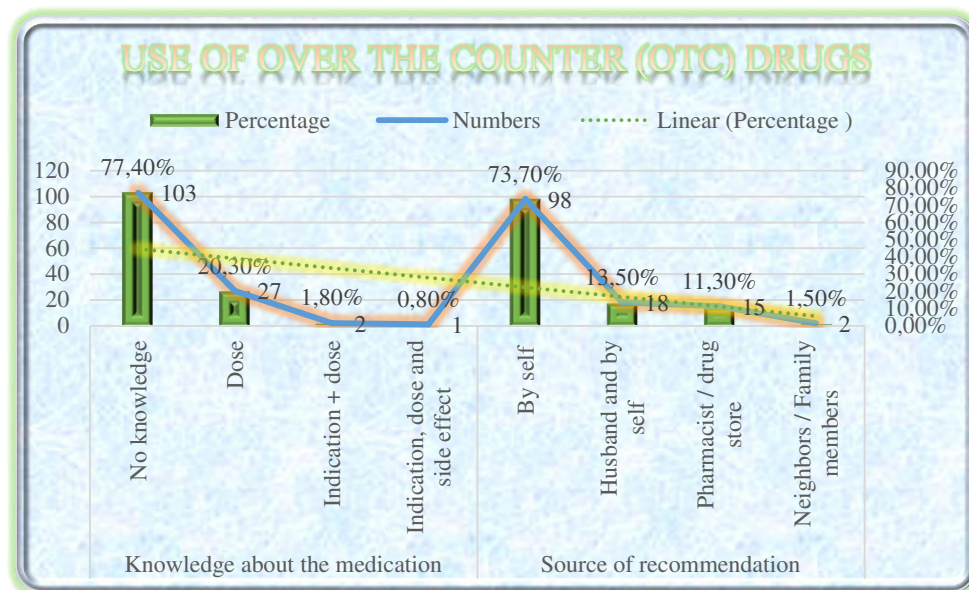
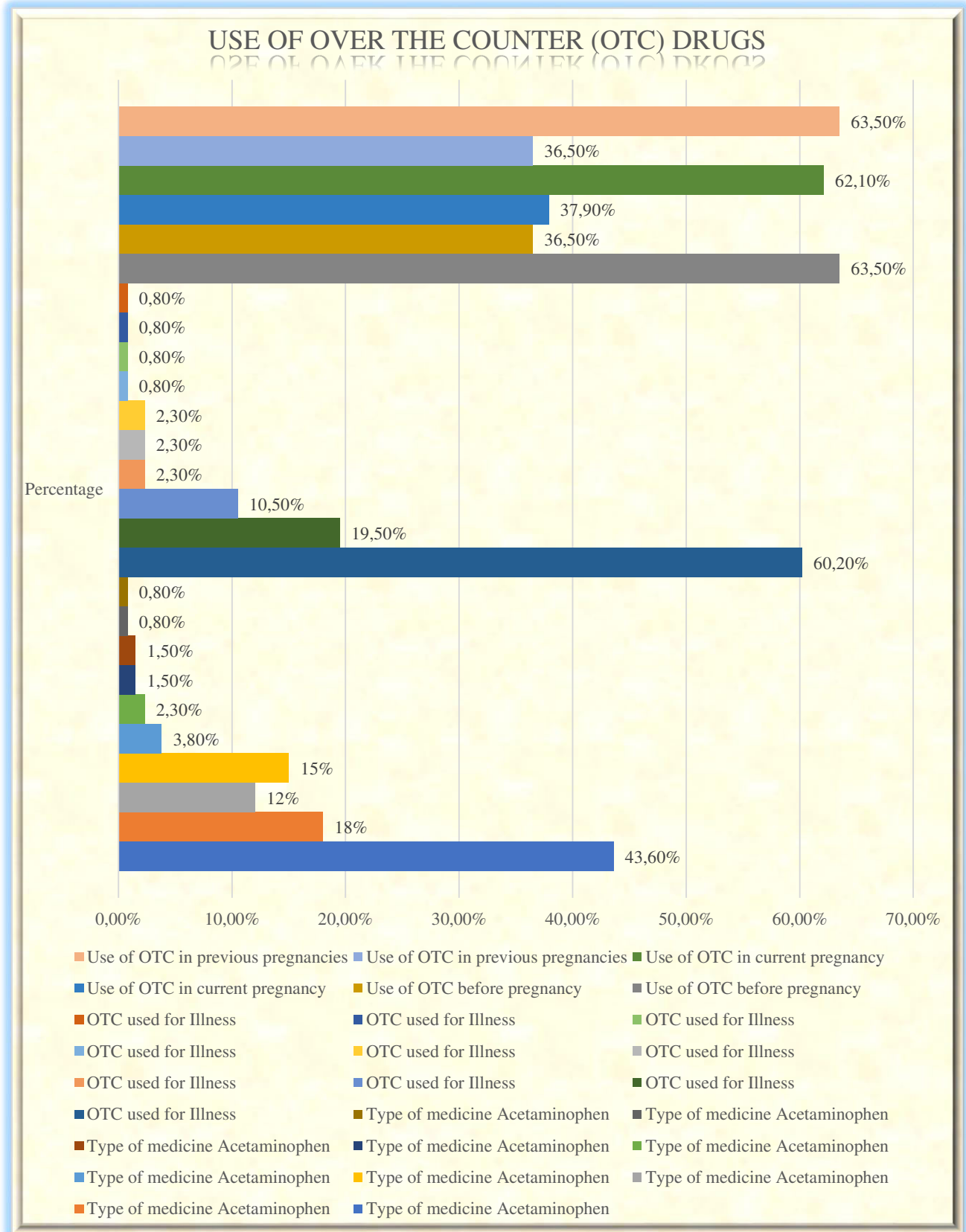
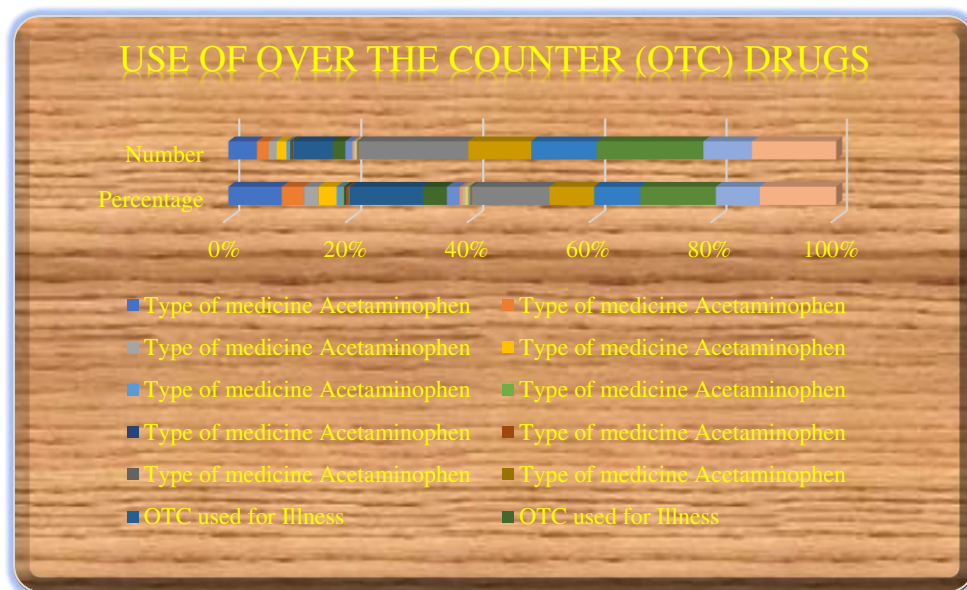


Table No 3 (Part-II): Details About Use of Over the Counter (OTC) Drugs

Variable		Percentage	Number
Type of medicine Acetaminophen	Acetaminophen + Aspirin	43.6 %	58
	Acetaminophen + ibuprofen	18 %	24
	Multiple drugs	12 %	16
	Ibuprofen	15 %	20
	Multivitamins/Iron	3.8 %	5
	Acetaminophen + Antacids	2.3 %	3
	Aspirin	1.5 %	2
	Antibiotics	1.5 %	2
	Castor oil	0.8 %	1
	Unknown drugs	0.8%	1
OTC used for Illness	Headache	60.2 %	80
	Multiple complains	19.5 %	26
	Headache + Backache	10.5 %	14
	Fever	2.3 %	3
	Headache + heartburn	2.3 %	3
	Weakness	2.3 %	3
	Constipation	0.8 %	1
	Cough	0.8 %	1
	Common cold	0.8 %	1
Suicide attempt	0.8 %	1	
Use of OTC before pregnancy	Yes	63.5 %	223
	No	36.5 %	128
Use of OTC in current pregnancy	Yes	37.9 %	133
	No	62.1 %	218
Use of OTC in previous pregnancies	Yes	36.5 %	100
	No	63.5 %	174





### DISCUSSION:

There is no evidence of such research study as per our knowledge so we can say that this study is exclusive in its settings and subject. Pregnancy is very sensitive time period of a women life and there is a need of extra care in use of medicines during this time period. Uncaring use of drugs may lead to damaging situation for the fetus and it may also cross placenta but still this misuse of drugs is very common in women.

We observed that common use for acetaminophen + Ibuprofen was in 12% (16) cases, 43.6% (58) cases of acetaminophen, acetaminophen + aspirin in the 18% (24) cases and 20 cases (15%) for multiple drugs as represented by various research studies. As we observed 133 cases (37.9%) used OTC at present pregnancy state, Iran also observed the same practice statistics but observed higher frequency in Ethiopia > 35% and 47.8% respectively. Furthermore, in Nigeria reported cases were 157(41.9%) of pregnant women who were in the habit of using pain relievers, related medicines, 3.5% (13) alcohol cases, herbs in 9.1% (47) cases and sedatives 4.0%. Backache and headache in 10.5% (14) cases, surprisingly suicide case was one 0.8%, Headache was repeated cause observed in 60.2% (80) cases and also observed various other complaints in 19.5% (26) cases. In another research, as a result of self-medication, the common illness was typhoid observed in 14.8% (9) patients and found headache problem in 47.5% (29) cases.

In current research, medication awareness was

present in 77.4% (103) women and found knowledge about indications in 20.3% (27) cases in terms of side-effects and dose, few of the other research studies also report the same. In a Nigerian study also observed other common results of self-medication which are increased BP, fever, infections, reduced sleeping hours and vomiting. Absence of any specialist prescription was due to the lack of communication. Very common source of recommendation was own self noticed in 73.7% (98) patients, 11.3% (15) cases of pharmacist and drug stores and 13.5% (18) cases of husbands. Observed 27.8% (37) cases about the easy availability, costly healthcare is the apparent reason behind self-medication in 31.6% (42) cases, observed a good disease understanding in 11.3% (15) cases and there was 28.6% (38) cases of saving the time of doctor's visit.

An Iranian author described that lack of awareness is the main reason for self-medication especially in the setting of any disease when medical treatment is expensive and patient saves time, these reasons end in self-medication. Hence, in the light of any possible risk we need to dissuade the ingestion of medicines without specialist's prescription.

### CONCLUSION:

The consequences of the study undoubtedly show that the propensity of over the counter (OTC) medicine use without any prescription of doctor and lake of awareness is too much common in especially women of Pakistan. Appropriate training and awareness can reduce these problems specially in

gravida women for the self-medication hazards and adverse effects on maternal health and fetus.

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