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Research Article

**A CROSS-SECTIONAL RESEARCH ON OVER THE COUNTER (OTC) USE OF SELF-MEDICATION IN THE INCIDENCE OF HEADACHE, VOMITING, NAUSEA AND RELATED DISEASES BEFORE, DURING AND AFTER PREGNANCY IN ASSOCIATION WITH POTENTIAL ADVERSE OUTCOMES**<sup>1</sup>Dr. Rana Muhammad Aatif, <sup>2</sup>Dr. Amina Inayat Ullah, <sup>3</sup>Dr. Asrar Ahmad<sup>1</sup> T.H.Q Hospital Sharqpur Sharif, Sheikhpura<sup>2</sup>WMO, BHU Aroop (24/7), Gujranwala<sup>3</sup>Waziabad Institute of Cardiology**Abstract:**

**Objective:** We aimed at the determination of the over-the-counter medication use frequency in the pregnant ladies, medicines type, information source and reason of choice for the self-medication trend.

**Methods:** Our research was cross-sectional and descriptive in nature held at Services Hospital, Lahore. We selected sample women through face to face interviews and gathered all the data on a pre-designed form, our data comprised of demographic information, over the counter medications, illness, medicine type, medicine awareness, recommendation source and practicing reason. Data analysis was carried out through SPSS-21.

**Results:** In the total 351 participants mean age was selected in the age limit of 18 – 45 years as (26.28 ± 10.42) years. Overall, over the counter drug users were observed as 223 patients (63.5%) before their pregnancy; 128 cases (36.5%) were reported the use of drugs in their previous pregnancy and current pregnancy cases were 133 (37.9%). Our research observed that repeated medicine was acetaminophen noticed in 58 patients (43.6%), common most illness was headache observed in 80 patients (60.2%). No awareness about the medicine was observed in 103 cases (77.4%).

**Conclusion:** Research found that number of ladies were in the practice of over the counter medication without any awareness and prescription.

**Keywords:** Pregnancy, Awareness and Over the counter.

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**INTRODUCTION:**

Recently, non-prescription and over the counter use of the medicine has increased because of the available medical stores [1]. According to the WHO definition an intentional use of medicine on the basis of symptoms by individuals is graded as self-medication without specialist advice [2].

Ninety percent of the pregnant women are in the habit of self-prescribed medication [3]. The same incidence is observed as sixty percent in USA and pregnant ladies are involved in this incidence above eighty percent [4, 5]. Self-medication prevalence in Ethiopia and Nepal is observed respectively 26.2% and 59% [11].

Serious outcomes can be associated to self-medication in the abuse and non-restricted use specifically in the pediatrics, geriatrics, lactating and pregnant women [8, 9]. Medical intake is a special concern during pregnancy as it can directly harm the fetus [10]. Women feel issues such as back pain, nausea, headache and vomiting during pregnancy that leads to the use of these drugs [11, 12]. There are potential hazards to maternal and fetus health as a result of the utilization these drugs [13].

Relative, medicine dealers and neighbors guide in the act of self-medication sometimes media is also a tool that guides in the malpractice of drugs [14]. Illness diagnosis, prescription of medicine and drug administration are the sensitive areas demanding due consideration [15]. Injuries may be the result of these injudicious utilizations of self-administered medicines causing harm to fetus and mothers. We planned this research for the OTC usage assessment in terms of medicine type and motivation behind the use of that medicine specifically in the pregnant women.

**SUBJECTS AND METHODS:**

We held this cross-sectional descriptive research in the OPD of Gynecology and Obstetrics Dept of Services Hospital, Lahore. Research was completed from June to December, 2015. We included pregnant

women in the research through interviews and cluster sampling technique. Data was collected through permission of the department and informed consent of the participants and we administered a questionnaire for the data collection. Collected data included residence, age, socio-economic status, occupation, education, gravidity, gestational age, pregnancy trimester and abortion history. Previous OTC use before pregnancy, in the course of last pregnancy and at present, medicine type, specific illnesses, recommending source and self-medication practice reason was asked from the participants. All women neither willing nor pregnant were not included in the research.

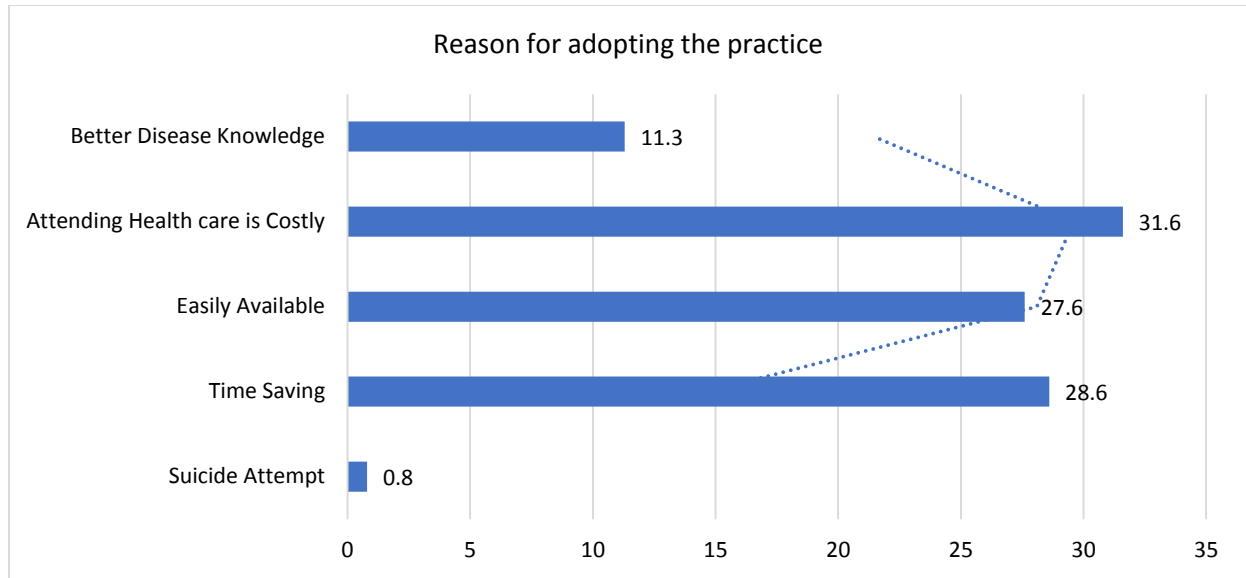
Data analysis was made through SPSS – 16 and we calculated all frequencies and percentages. Gestational age and age were calculated in Mean and SD. Patients were compared for their history and previous use of OTC, abortion history was also measures through Chi-Square test.

**RESULTS:**

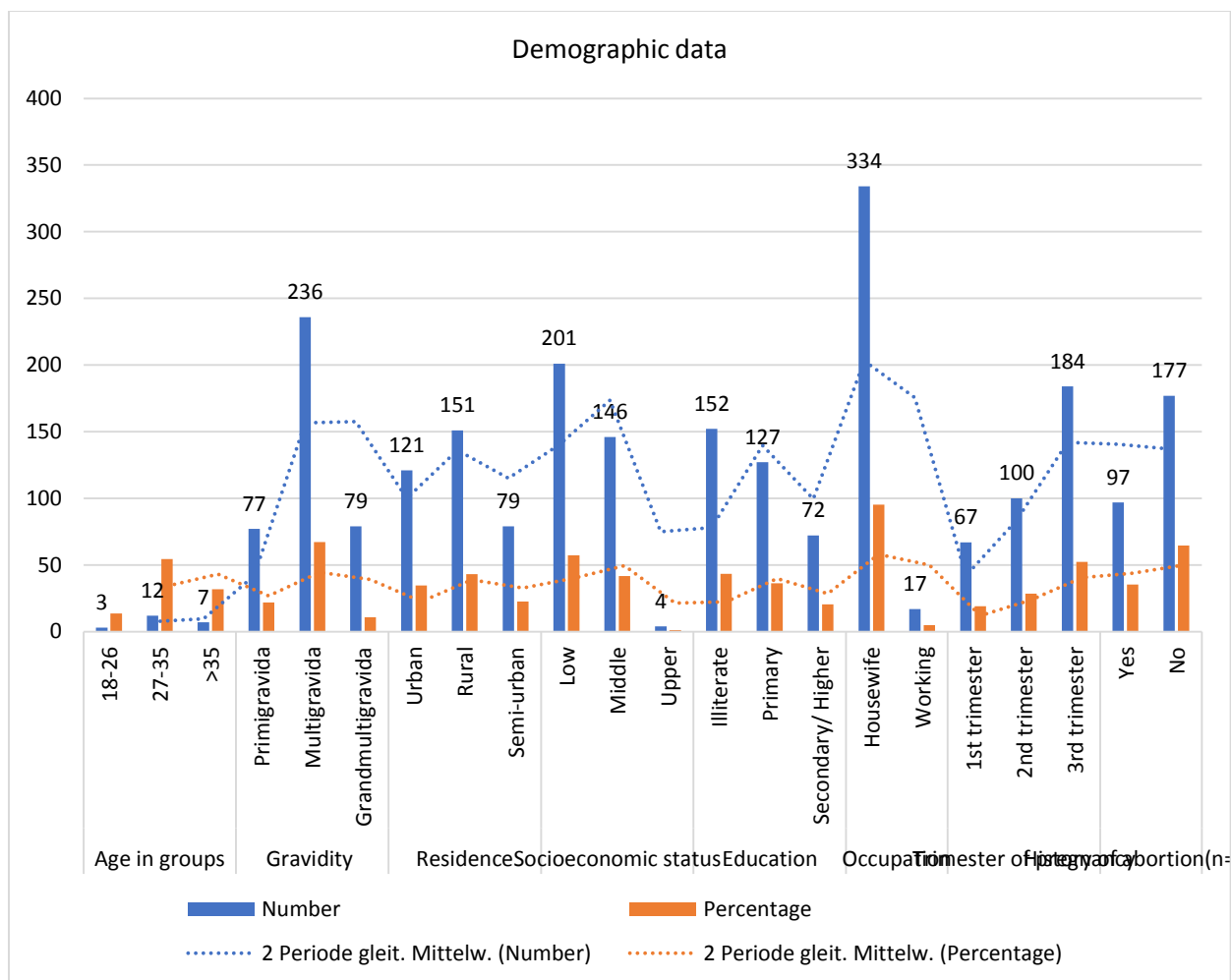
In the total 351 participants mean age was selected in the age limit of 18 – 45 years as (26.28 ± 10.42) years. Overall, over the counter drug users were observed as 223 patients (63.5%) before their pregnancy; 128 cases (36.5%) were reported the use of drugs in their previous pregnancy and current pregnancy cases were 133 (37.9%). Our research observed that repeated medicine was acetaminophen noticed in 58 patients (43.6%), common most illness was headache observed in 80 patients (60.2%). No awareness about the medicine was observed in 103 cases (77.4%). The proportion of primigravida, multigravidas and grand multigravidas were respectively 77 cases (21.9%), 236 cases (67.2%) and grand multigravida 38 cases (10.8%). We also observed a mean gestational age as (26.28 ± 10.42) weeks. We noticed 334 housewives (95.2%), and 17 working (4.8%) women. There were 184 third trimester cases (52.4%); 97 abortion history (35.4) and 177 no abortion history (64.6%) cases as shown in Table – I.

**Table – I: Reason for adopting the practice**

Practice Adopting Reason	Percentage
Suicide Attempt	0.8
Time Saving	28.6
Easily Available	27.6
Attending Health care is Costly	31.6
Better Disease Knowledge	11.3

**Table – II: Demographic data**

Variables		Number	Percentage
Age in groups	18 - 26	3	13.6
	27 - 35	12	54.5
	> 35	7	31.8
Gravidity	Primigravida	77	21.9
	Multigravida	236	67.2
	Grand multigravida	79	10.8
Residence	Urban	121	34.5
	Rural	151	43
	Semi - urban	79	22.5
Socioeconomic status	Low	201	57.3
	Middle	146	41.6
	Upper	4	1.1
Education	Illiterate	152	43.3
	Primary	127	36.2
	Secondary / Higher	72	20.5
Occupation	Housewife	334	95.2
	Working	17	4.8
Trimester of pregnancy	1 <sup>st</sup> trimester	67	19.1
	2 <sup>nd</sup> trimester	100	28.5
	3 <sup>rd</sup> trimester	184	52.4
History of abortion (n = 274)	Yes	97	35.4
	No	177	64.6



Overall, 223 before pregnancy OTC (63.5%) cases and 128 non-users (36.5%) were in the outcomes of the research. The history of OTC was observed in 100 cases (36.5%) and 49 abortion history cases (49%) were there in the research outcomes. Also, current pregnancy cases were 133 patients (37.9%) in the practice OTC. Medication before pregnancy was observed in 223 women and among these women 111 cases were still using the medicines (49.77%); whereas, 112 stopped the practice (50.22%); during pregnancy 22 cases (17.1%) were observed as shown in Table – II. Acetaminophen was commonly used by 58 patients (43.6%) with another as second common medicine as (acetaminophen + aspirin) in 24 patients (18%), 20 multiple drug users (15%) and users of acetaminophen + ibuprofen were 16 patients (12%).

**Table – III:** Details about use of over the counter (OTC) drugs

Variable	Numbers	Percentage	
Use of OTC before pregnancy	Yes	223	63.5
	No	128	36.5
Use of OTC in current pregnancy	Yes	133	37.9
	No	218	62.1
Use of OTC in previous pregnancy/pregnancies	Yes	100	36.5
	No	174	63.5
Type of medicine Acetaminophen	Acetaminophen + Aspirin	58	43.6
	Acetaminophen + ibuprofen	24	18
	Multiple drugs	16	12
	Ibuprofen	20	15
	Multivitamins/Iron	5	3.8
	Acetaminophen + Antacids	3	2.3
	Aspirin	2	1.5
	Antibiotics	2	1.5
	Castor oil	1	0.8
	Unknown drugs	1	0.8
Illness OTC used for	Headache	80	60.2
	Multiple complains	26	19.5
	Headache + Backache	14	10.5
	Fever	3	2.3
	Headache + heartburn	3	2.3
	Weakness	3	2.3
	Constipation	1	0.8
	Cough	1	0.8
	Common cold	1	0.8
	Suicide attempt	1	0.8
Source of recommendation	Yourself	98	73.7
	Yourself and husband	18	13.5
	Pharmacist / drug store	15	11.3
	Neighbors / Family members	2	1.5
Knowledge about the medication	No knowledge	103	77.4
	Dose	27	20.3
	Indication + dose	2	1.5
	Indication, dose and side effect	1	0.8

In the total research sample, regular current pregnancy users were 133, no awareness was observed in 103 patients (77.4%). OTC was commonly recommended by oneself 98 patients (73.7%), husbands in 18 cases (13.5%) and 15 cases were recommended by pharmacist 15 cases (11.3%). As the proper healthcare is costly so people opted for self-medication as observed in 42 cases (31.6%), 38 time-saving (28.6%), 37 easy availability (27.8%), better treatment and understanding was observed in 15 cases (11.3%) and only cases was observed for suicide attempt as

(0.8%)

### DISCUSSION:

During critical stage like pregnancy becomes sensitive for medicines and careless use of medicine may lead to harmful state for the fetus and it may also cross placenta, still this malpractice is common among ladies [10, 11].

The research is unique in its subject and setting as there is no evidence of such research as per our information. As we observed 133 cases (37.9%) used OTC at present pregnancy state, Iran also observed the same practice statistics but higher frequency was observed in Ethiopia respectively > 35% and 47.8% [17, 18].

We observed that common use was observed for acetaminophen 58 cases (43.6%), acetaminophen + aspirin in the 24 cases (18%), 20 cases (15%) for multiple drugs and 16 cases (12%) for acetaminophen + Ibuprofen as depicted by various research studies [18, 20 – 22]. Besides, 157 pregnant cases (41.9%) were reported in Nigeria in the habit of using pain relievers, related medicines and herbs in 47 cases (9.1%), sedatives 4.0% and 13 alcohol cases 3.5% [18, 19]. Headache was repeated cause observed in 80 cases (60.2%), various other complaints were also reported in 26 cases (19.5%), backache and headache in 14 cases (10.5%) and surprisingly suicide case was one 0.8%. In another research the common illness was typhoid and headache observed respectively in 9 cases (14.8%) and 29 cases (47.5%) in order to self-medicate.

In a Nigerian research reduced sleeping hours, increased BP, vomiting, infections and fever were also observed as common causes of self-medication [19]. In our research, medication awareness was present in the women 103 cases (77.4%) and indications were also known to 27 cases (20.3) in terms of dose and side-effects, few of the other research studies also report the same [17, 22].

Recommendation source observed very common was own self observed in 98 cases (73.7%) about OTC, 18 cases (13.5%) husbands and 15 cases (11.3%) of pharmacist and drug stores. Absence of any specialist prescription was linked with the lack of communication. An earlier indication was given about the same issue in 44 private cases (72.1%) [22].

Costly healthcare is the evident reason behind self-medication in 42 cases (31.6%), to save the time of doctor's visit was observed in 38 cases (28.6%), 37 cases (27.8%) were observed about the easy

availability, a good disease understanding was observed in 15 cases (11.3%) including one suicide case (0.8%). An Iranian author states that lack of awareness is the major cause for self-medication specially in the setting of any disease when healthcare is costly and patient saves time; these reasons end in self-medication [17]. In an Ethiopian research 45.9% cases were reported for accessibility and 32.8% cases for timesaving [20]. No evidence has been observed in terms of self-medication adverse outcomes; whereas, in the light of any potential hazard we need to discourage the intake of medicines without specialist's prescription.

### CONCLUSION:

Research found that number of ladies were in the practice of over the counter medication without any awareness and prescription. OTC practice was observed common which shows the scarcity of communication between patients and doctors. Appropriate training and awareness is required specially gravida women for the self-medication hazards and adverse effects on fetus and maternal health.

### REFERENCES:

1. Matt DW, Borzelleca JF. Toxic effects on the female reproductive system during pregnancy, parturition, and lactation. In: Witorsch RJ, ed. Reproductive toxicology. 2nd ed. New York: Raven, 1995:175-93.
2. Loyola Filho AI, Uchoa E, Guerra HL, Firmo JO, Lima-Costa MF. Prevalence and factors associated with self-medication: the Bambuí health survey. Rev Saude Publica 2002; 36: 55-62.
3. Rocha RS, Bezerra SC, Lima JW, Costa FS. Consumption of medications, alcohol and smoking in pregnancy and assessment of teratogenic risks. Rev Gaucha Enferm 2013; 34: 37-45
4. Murray MD, Callahan CM. Improving Medication Use for Older Adults: An Integrated Research Agenda. Ann Int Med 2003; 139:2425-59.
5. Choonara I, Gill A, Nunn A. Drug Toxicity and Surveillance in children. Br J Clin Pharm 1996; 42: 407-10.
6. Banhidly F, Lowry RB, Czeizel AE. Risk and benefit of drug use during pregnancy. Int J Med Sci 2005; 2: 100-6.
7. Gibson PS, Powrie R, Star J. Herbal and alternative medicine used during pregnancy: a cross-sectional survey. Obstet Gynecol 2001; 97:

- S44-5.
8. Bond C. POM to P - Implications for Practice Pharmacists. *Prim Care Pharm* 2001; 2: 5-7.
  9. World Health Organization: Role of pharmacists in self-care and self-medication. [online] [Cited 2015 may 16]. Available from: URL: <http://apps.who.int/medicinedocs/pdf/whozip32e/whozip32e.pdf>.
  10. Mitchell AA, Gilboa SM, Werler MM, Kelley KE, Louik C, Hernández-Díaz S; National Birth Defects Prevention Study. Medication use during pregnancy, with particular focus on prescription drugs: 1976-2008. *Am J Obstet Gynecol* 2011; 205: 51.e1-8
  11. Jacobs LR. Prescription to over-the-counter drug re-classification. *Am Fam Physician* 1998; 57: 2209-14.
  12. Pangle BL. Drugs in pregnancy and lactation. In: Herfindal ET, Gourley DR, editor. *Textbook of therapeutics, drug and disease management*. 8th ed. Philadelphia: Lippincott William Wilkins; 2006.
  13. Stephansson O, Granath F, Svensson T, Haglund B, Ekblom A, Kieler H. Drug use during pregnancy in Sweden - assessed by the Prescribed Drug Register and the Medical Birth Register. *Clin Epidemiol* 2011; 3: 43-50.
  14. Shah AP, Parmar SA, Kumkishan A, Mehta AA. Knowledge, Attitude and Practice (KAP) Survey Regarding the safe use of medicines in rural area of Gujarat. *Adv Trop Med Pub Health* 2011; 1: 66-70
  15. Worku S, G/Mariam A. Practice of self-medication in Jimma town. *Ethiop J Health Dev* 2003; 17: 111-6.
  16. Rathnakar UP, Singh N. Drug utilization patterns during antenatal period. *J Pharm Res* 2011; 4: 3559-61
  17. Verstappen GMPJ, Smolders EJ, Munster JM, Aarnoude JG, Hak E. Prevalence and predictors of over-the-counter medication use among pregnant women: a cross-sectional study in the Netherlands. *BMC Public Health* 2013 13:185.
  18. Bercaw J, Maheshwari B, Sangi H, Haghpeykar H. The use during pregnancy of prescription, over-the-counter, and alternative medications among Hispanic women. *Birth* 2010; 37: 211-8.
  19. Befekadu A, Dekama NH, Adem M. Self-medication and Contributing Factors among Pregnant Women Attending Antenatal Care in Ethiopia: The Case of Jimma University Specialized Hospital. *Med Sci* 2014; 3: 969-81.
  20. Baghianimoghadam MH, Mojahed S, Baghianimoghadam M, Yousefi N, Zolghadr R. Attitude and Practice of Pregnant Women Regarding Self-medication in Yazd, Iran. *Arch Iran Med* 2013; 16:580-3.
  21. Mohammed MA, Ahmed JH, Bushra AW, Aljadhey HS. Medication use among pregnant women in Ethiopia: A cross sectional study. *J App Pharm Sci* 2013; 3: 116-23.
  22. Abasiubong F, Bassey EA, Udobang JA, Akinbami OS, Udoh SB, Idung AU. Self-medication: potential risks and hazards among pregnant women in Uyo, Nigeria. *Pan Afr Med J* 2012; 13: 15.
  23. Lupattelli A, Spigset O, Twigg MJ, Zagorodnikova K, Mardby AC, Morelto ME, et al. Medication use in pregnancy: a cross-sectional, multinational web-based study. *BMJ Open* 2014; 4: e004365.