

## Utilization of over the counter medication among pregnant women; a cross-sectional study conducted at Isra University Hospital, Hyderabad

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### Abstract

**Objective:** To determine the frequency of use of over-the-counter medication among pregnant women, types of medicines, source of information and reason to opt for self-medication.

**Methods:** The descriptive cross-sectional study was conducted at Isra University Hospital, Hyderabad, Pakistan, from April 14 to October 14, 2014, and comprised pregnant women who were interviewed face to face. Data was collected on a proforma comprising demographic data, practice of using over-the-counter medications before and during pregnancy, type of medicines, illnesses, knowledge about the medicines, source of recommendation and reason for practicing it. Data was analysed on SPSS 16.

**Results:** The mean age of 351 patients in the study was 26.19±4.82 years (range: 18-45 years). The mean gestational age was 26.28±10.42. Overall, 223(63.5%) patients were using over-the-counter drugs before pregnancy; 128(36.5%) had used them in previous pregnancy; and 133(37.9%) were using them during the current pregnancy. Most common medication used was acetaminophen 58(43.6%), headache was the most common illness 80(60.2%). A total of 103(77.4%) had no knowledge about the medicines.

**Conclusion:** A significant number of pregnant women indulged in the practice of using over-the-counter medication.

**Keywords:** Pregnancy, Over the counter, Awareness. (JPMA 66: 68; 2016)

### Introduction

In recent years, an escalating inclination towards use of non-prescription or over-the-counter (OTC) medication has been seen owing to drugs accessible in pharmacies and retail outlets.<sup>1</sup> The World Health Organisation (WHO) describes self-medication as the utilisation of drugs by individuals in quest of treating symptoms or self-diagnosed health state.<sup>2</sup>

OTC medication is taken by over 90% of pregnant women.<sup>3</sup> Non-prescription drugs make up around 60% of medication intake in the United States, out of which OTCs were used by >80% of pregnant women.<sup>4,5</sup> The prevalence of self-medication was 59%, 54%, 34%, 26.2% in Nepal, Bambi, Mexico and Ethiopia, respectively<sup>6</sup> and 11.3% pregnant women used self-medication in Brazil.<sup>7</sup>

Although OTC drugs have proved to be efficient and safe and are intended for self-medication, but wrong use or abuse propose serious outcomes, especially in geriatrics, paediatrics, pregnant and lactating women.<sup>8,9</sup> Pregnancy is a special bodily processing state where medication intake is a major concern and presents a challenge as altered drug pharmacokinetics and drug crossing the placenta may cause harm to the foetus.<sup>10</sup> In pregnant

women, self-medication is reported to be common because of a variety of complaints related to pregnancy, like back pain, headache, nausea, vomiting, heartburn and haemorrhoids.<sup>11,12</sup>

During pregnancy, drug utilisation is complicated because of incomplete data as clinical trials often don't include pregnant women, with reference to benefits and potential undesirable effects on both the mother and the foetus.<sup>13</sup>

Evidence suggests that a lot of people opting for self-medication tend to obtain information of the practice from relatives, neighbours, medicine dealers, and, occasionally, media.<sup>14</sup> Recognising the type of illness that demands self-medication, frequently administered drugs or group of drug products, and identifying the source of information for self-medication are needed to design interventions.<sup>15</sup> Such injudicious use of medicines may cause preventable injurious consequences and may unknowingly harm both maternal and foetal health.

The current study was planned to access the frequency of the usage of OTC medicines, type of medicines used and motivation to go for self-medication among pregnant women.

### Subjects and Methods

The descriptive cross-sectional study was conducted in the Outpatient Department (OPD) of the Obstetrics and

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Gynaecology Unit at the Isra University Hospital, Hyderabad, Pakistan, from April 14 to October 14, 2014, and comprised interviews with pregnant women selected through cluster sampling. After obtaining permission from the institutional ethics committee, a questionnaire was used as the data-collection tool which included age, residence, socio-economic status, education, occupation, gravidity, gestational age in weeks, trimester of the pregnancy and history of abortion. History of using OTC before pregnancy, during previous pregnancy and current pregnancy, type of medicines, illnesses for which the medicines were used, source of recommendation and reason for practising self-medication were inquired after verbal consent had been obtained from all individuals.

Non-pregnant women and those who refused to participate were excluded.

Using SPSS 16, descriptive statistics were worked out and frequencies and percentages were calculated. Mean  $\pm$  standard deviation were calculated for age of the patient and gestational age. Comparison between patients with history of use of OTC in previous and present pregnancies and those who used OTC in previous pregnancies and had history of abortions were calculated using chi-square test.

## Result

The mean age of 351 patients in the study was  $26.19 \pm 4.82$  years (range: 18-45 years). There were primigravida 77(21.9%), multigravida 236(67.2%) and grand multigravida 38(10.8%). The mean gestational age was  $26.28 \pm 10.42$  weeks. Of the total, 334(95.2%) were housewives and 17(4.8%) were working women. Subjects in the 3rd trimester were 184(52.4%); 97(35.4) had history of abortion; and 177(64.6%) did not have history of abortion (Table-1).

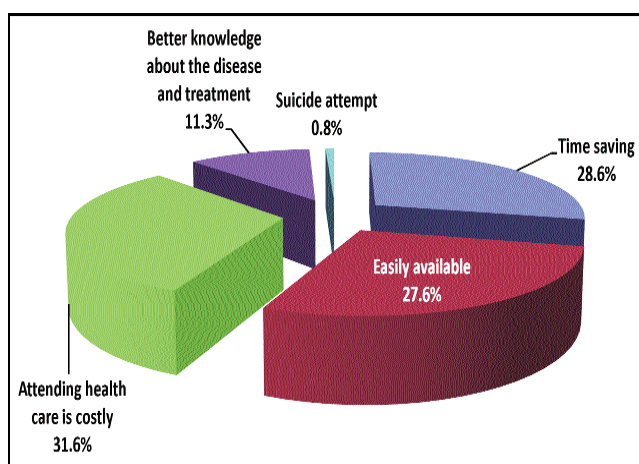


Figure: Reason for adopting the practice.

Table-1: Demographic data.

S.No	Variables	Number	Percentage
1	Age in groups		
	18-26	3	13.60%
	27-35	12	54.50%
	>35	7	31.80%
2	Gravidity		
	Primigravida	77	21.90%
	Multigravida	236	67.20%
	Grandmultigravida	79	10.80%
2	Residence		
	Urban	121	34.50%
	Rural	151	43%
	Semi-urban	79	22.50%
3	Socioeconomic status		
	Low	201	57.30%
	Middle	146	41.60%
	Upper	4	1.10%
4	Education		
	Illiterate	152	43.30%
	Primary	127	36.20%
	Secondary/ Higher	72	20.50%
5	Occupation		
	Housewife	334	95.20%
	Working	17	4.80%
6	Trimester of pregnancy		
	1st trimester	67	19.10%
	2nd trimester	100	28.50%
	3rd trimester	184	52.40%
7	History of abortion(n=274)		
	Yes	97	35.40%
	No	177	64.60%

Overall, 223(63.5%) subjects were using OTC before pregnancy and 128(36.5%) said they had never used these medication on their own. As many as 100(36.5%) subjects had history of using OTC in their previous pregnancy/pregnancies and 49(49%) of them had history of abortion. Also, 133(37.9%) were using OTC in the current pregnancy. Out of the 223 women who were using medication before pregnancy, 111(49.77%) were still using these medications during pregnancy, while 112(50.22%) had quit the practice; 22(17.1%) were new users during pregnancy (Table-2).

The most common medication used was acetaminophen 58(43.6%), followed by acetaminophen + aspirin 24(18%), multiple drugs 20(15%), acetaminophen + ibuprofen 16(12%).

Among the 133 using OTC drugs the current pregnancy, 103(77.4%) had no knowledge about such medication. The more common source of recommendation for the use

**Table-2:** Details about use of over the counter (OTC) drugs.

S.No	Variable	Numbers	Percentages
1	Use of OTC before pregnancy		
	Yes	223	63.50%
	No	128	36.50%
2	Use of OTC in current pregnancy		
	Yes	133	37.90%
	No	218	62.10%
3	Use of OTC in previous pregnancy/pregnancies		
	Yes	100	36.50%
	No	174	63.50%
4	Type of medicine		
	Acetaminophen	58	43.60%
	Acetaminophen + Aspirin	24	18%
	Acetaminophen + ibuprofen	16	12%
	Multiple drugs	20	15%
	Ibuprofen	5	3.80%
	Multivitamins/Iron	3	2.30%
	Acetaminophen + Antacids	2	1.50%
	Aspirin	2	1.50%
	Antibiotics	1	0.80%
	Castor oil	1	0.80%
Unknown drugs	1	0.80%	
5	Illness OTC used for		
	Headache	80	60.20%
	Multiple complains	26	19.50%
	Headache + Backache	14	10.50%
	Fever	3	2.30%
	Headache + heartburn	3	2.30%
	Weakness	3	2.30%
	Constipation	1	0.80%
	Cough	1	0.80%
	Common cold	1	0.80%
	Suicide attempt	1	0.80%
6	Source of recommendation		
	Yourself	98	73.70%
	Yourself and husband	18	13.50%
	Pharmacist/drug store	15	11.30%
	Neighbours/Family members	2	1.50%
7	Knowledge about the medication		
	No knowledge	103	77.40%
	Dose	27	20.30%
	Indication + dose	2	1.50%
	Indication, dose and side effect	1	0.80%

of OTC was themselves in 98(73.7%) cases, followed by their husbands 18(13.5%) and pharmacist/drug stores 15(11.3%).

Most common reason for OTC drug intake was the cost of attending proper healthcare 42(31.6%), time-saving 38(28.6%), easy availability 37(27.8%), better understanding of the disease and the treatment 15(11.3%) and one (0.8%) subject used OTC medications in a suicide attempt (Figure).

## Discussion

Pregnancy is a special state where intake of medication is a challenge and a major concern as it may harm the foetus as these drugs may cross the placenta<sup>9</sup> but practice of self-medication is common among these women due to pregnancy related problems.<sup>10,11</sup>

To our knowledge, it is the first study on this subject in Pakistan. According to our findings, 133(37.9%) were using OTC in the current pregnancy which shows that many women indulged in this practice. Similar frequencies of usage were seen in India<sup>16</sup> 42.8% and Iran<sup>17</sup> >35%. Much higher frequencies of usage was reported in Ethiopia<sup>18</sup> 47.8%, Nigeria<sup>19</sup> 72.4% and in a multinational web-based study which included European countries, North and South Americas and Australia<sup>20</sup> 66.9%. On the contrary, fewer incidences were seen in The Netherlands<sup>21</sup> 12.5%, United States of America<sup>22</sup> 23% and in another study conducted in Ethiopia 20.1%.<sup>23</sup>

In the present study, most common medicines used were acetaminophen 58(43.6%), acetaminophen + aspirin 24(18%), multiple drugs 20(15%) and acetaminophen + ibuprofen 16(12%) which are similar medications used by patients shown in different studies.<sup>18,20-22</sup> Besides, 157(41.9%) pregnant women in Nigeria used fever/pain relievers; herbs and other medicines 47(9.1%), 15 (4.0%) and 13(3.5%) sedatives and alcohol, respectively.<sup>19</sup> Most common illnesses for which these medications were used in our study were headache 80(60.2%), multiple complaints 26(19.5%), headache + backache 14(10.5%) and, to our surprise, 1(0.8%) woman reported to have used these medicines in order to attempt suicide. One study<sup>22</sup> showed common illness being headache and typhoid 29(47.5%) and 9(14.8%) respectively for practice of self-medication. In India, nausea (26%) was the chief complaint along with pain in abdomen and fever (7%) for which pregnant women self-medicated.<sup>16</sup> In a study conducted in Nigeria, causes for use of these substance included increasing blood, reduced sleep, vomiting, fever and vomiting, and infections.<sup>19</sup>

Majority of our pregnant women had no knowledge about the medications that they were using 103(77.4%) and few were aware about indication and dose 27(20.3%) which shows that the clinicians need to make them aware of the potential hazards of these medication. Similar lack of knowledge was also reported by other studies.<sup>17,22</sup>

Most common source of recommendation for the use of OTC was patients themselves 98(73.7%), their husbands 18(13.5%) and pharmacist/drug store 15(11.3%) which indicated lack of communication between the doctors

and patients and a negative role being played by drug stores which are recommending medication by themselves to the patients without any evidence of prescription. This issue was also reported earlier<sup>22</sup> highlighting that in 44(72.1%) cases private drug retail outlets were common source.

Most common reason for adopting this practice was attending healthcare is costly 42(31.6%), time-saving 38(28.6%), easy availability 37(27.8%), better understanding of the disease and the treatment 15(11.3%) and even 1 (0.8%) case of attempted suicide. A study in Iran showed reason for practising self-medication was not having awareness concerning the disease, less time for doctor visits, and many were satisfied by the results of self-medication.<sup>17</sup> Easily accessible 45.9%, time-saving 32.8% and few study subjects had better information about the disease and the treatment were the reason reported in a study conducted in Ethiopia.<sup>20</sup>

Though there is not much evidence about the hazards of using these medication and pregnancy outcomes, potential hazards should be considered to discourage intake of these medicines without doctor's prescription.

## Conclusion

Many subjects were found to be indulging in the practice of using OTC medication which reflects communication gap between doctors and patients and sheds light on the importance of generating awareness regarding potential hazards of such medications in pregnancy. Proper education of the gravid women during different medical settings and public awareness along with close check on practices of drug stores should be considered in order to resolve this issue.

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