



## Research Article

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### KAP (KNOWLEDGE, ATTITUDES AND PRACTICES) STUDY ON MEDICINE AND HEALTH INFRASTRUCTURE USE IN PREGNANT WOMEN OF RURAL AREAS OF MAHARASHTRA, INDIA: A CROSS-SECTIONAL SURVEY

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#### ABSTRACT

Use of medicines and also health infrastructures are important for actual benefit of the patients. So, the KAP (Knowledge, Attitudes and Practices) study need to be done to formulate the policies which will ensure rational and scientific use of national resources. It is a cross-sectional survey, observational in nature, where six hundred and fifty six pregnant women (656) participated. KAP was evaluated by using pre-designed, pre-coded and pre-tested questionnaire. 40.70 % pregnant women of the study were over the counter (OTC) medicine user and at the same time 37.5 % had knowledge about expiry date, though 66.76 % pregnant women knew about the residence of the trained females (called dai) of their village, on the contrary only 17.68 % pregnant women actually used services of local qualified doctors. Present study KAP should be evaluated in beneficiaries before implementation of any intervention to improve the health.

**Keywords:** KAP study, Pregnant, Rural areas, India.

#### INTRODUCTION

The process of diagnosis and treatment is a complex one. After diagnosis, treatment through prescription by advising medicines is the next step. During prescription writing, age, sex, disease condition and also other factors like pregnancy, liver and kidney functions etc. should be considered. Prescribing medicines during pregnancy is of special medical importance.<sup>1</sup> Use of unsafe medicine like, chloramphenicol, salvarsan, sulfanilamide (which itself not fatal) containing solvent diethyl glycol, thalidomide etc.<sup>2,3</sup> can be disastrous anytime. For rational use of medicine knowledge, attitude and practice on use of medicine is important. This is more relevant in India, especially in rural areas where illiteracy and ignorance is widely prevailed. Majority of the Indian population lived in rural areas but most of the health care budget is spent in the urban areas. As a result the rural populations lack access to the most basic services, even to qualified medical practitioners. The doctor-patient ratio in rural areas is extremely low.<sup>4</sup> Only aware and compliant patients, using medicines and health infrastructures can ensure the rationality of treatment.<sup>5</sup> Though indicators proposed by WHO<sup>6,7</sup> can explain the medicine use status in any community, but other factors like patient's

knowledge, attitude and practice about medicine use is also important and could not be evaluated by these indicators. Drug consumption in pregnancy were analyzed by different researchers in western world<sup>8,9</sup> and also in India<sup>10,11</sup> but there are very few studies in India on KAP on use of medicine and use of health services available nearby. Therefore, it was rational to conduct a study on this topic.

#### MATERIALS AND METHODS

This was an observational study. Six hundred and fifty six (656) pregnant women gave consent in writing and participated in the study. Pregnant women attending the village clinics of Mahatma Gandhi Institute of Medical Sciences, Sewagram, Wardha, Pin Code – 442102, Maharashtra, India from 1<sup>st</sup> January 2012 to 31<sup>st</sup> August 2012 were interviewed with a questionnaire and prescriptions available with the mother were also copied. The questionnaire was standardized and pretested. Pregnant women with established high risk pregnancy or with history of medication for more than three months due to medical or pregnancy related problems were excluded from this study. The study was started only after clearance from Institutional Ethics Committee.

**Table 1: Study of knowledge of medicine and its use in pregnant women**

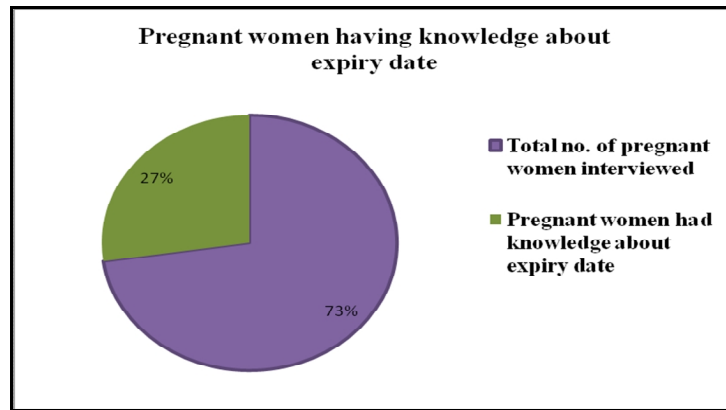
Knowledge and attitude of pregnant women	No. of pregnant women	Percentage (%)
Pregnant women expressed that regular checking of expiry date should be done before consumption of any medicine	633	96.5
Pregnant women expressed that use of local languages on the labeling of drugs should be done for their better understanding	577	88
Pregnant women expressed that they were OTC drug user	267	40.70
Pregnant women informed that they had previous experience (symptoms and signs) related to adverse drug reaction (ADR) after using medicine, but never informed this to the doctor	28	4.3

The data in the above table represents the knowledge and attitude in pregnant woman regarding medicine use related parameters, where total no. of pregnant women in study population (n) = 656

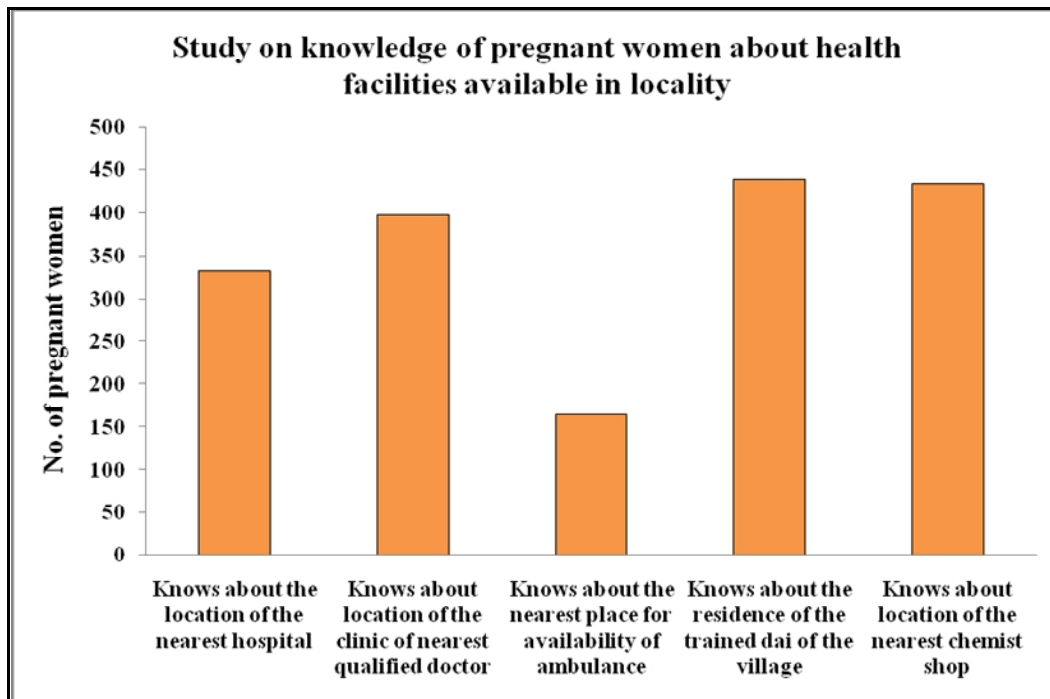
**Table 2: Study of the use of available health facilities by the pregnant women**

Actual use of health facilities available nearby	No. of pregnant women	Percentage (%)
Pregnant women actually used services from the local hospital at least once	289	44.05
Pregnant women actually used services from the local qualified doctors at least once	116	17.68
Pregnant women actually used services from the ambulance available in locality at least once	15	02.28
Pregnant women actually used services from the trained dai of that village at least once	390	59.45
Pregnant women actually used services from the chemist shop at least once	128	19.51

The data of the above table represents the study result of actual use of the health facilities available in locality by the pregnant women (n = 656)



**Figure 1: Knowledge of expiry date of medicine in pregnant women (n = 656)**



**Figure 2: Knowledge of pregnant women (n = 656) about available local health facilities**

## RESULTS

In the present study, out of the 656 pregnant women interviewed, 81.1 % pregnant women informed that they preserved old prescription regularly. 37.5 % had knowledge about expiry date (Figure 1), but after explanation by the investigator about the importance of expiry date, 633, i.e., 96.5 % pregnant women expressed their opinion that expiry date should be checked before consumption of any medicine. 88 % pregnant women were of the opinion that the instruction on label of commonly used medicines like iron, folic acid, paracetamol, ibuprofen etc. should be in the local languages. This would help them for better use of these medicines. They also expressed that information about the harmful effect of the medicines should also be in local language and in different colour also. 40.7 % women expressed that they use over the counter (OTC) medicines. 4.3 % also informed that they had previous signs and symptoms related to adverse drug reaction (ADR) after using medicine, but never informed this to the doctor (Table 1). Knowledge of pregnant women about health facilities available nearby was evaluated. The result showed that 50.6 % pregnant women knew about the nearest local hospital, 60.5 % had knowledge about the clinic of local doctor, 25 % knew about the availability of ambulance in the locality, 66.76 % (Figure 2) pregnant women had knowledge about the residence of trained dai of their village and 66 % had knowledge about the nearest chemist shop in the locality. Present study showed that 44.05 % pregnant women utilized the services of the local hospital at least for once, when enquired about the utilization of services of local qualified doctors, only 17.68 % used it at least for once and only 02.28 % actually used the services of ambulance available locally. 59.45 % pregnant women of this study informed that they used the service of trained dai of that village. Regarding utilization of services of local chemist shop, 19.51 % women of the study informed that they used it at least for once (Table 2), not only for purchasing medicines but also for taking tetanus toxoid injection, dressings and for getting information on use of medicines.

## DISCUSSION

As far as evaluation of the attitude, behavior and knowledge of drug use is concerned in pregnant women, it was found that 37.5 % of pregnant women had knowledge about expiry date of drugs. Though majority of study population were of opinion that expiry date should be checked before consumption of any drugs. 88 % pregnant mothers were of opinion that local languages should be used on the labels of the drugs and on the information booklet at least for the commonly used drugs like iron and folic acid, vitamins, paracetamol, ibuprofen etc. This awareness of pregnant mothers might be helpful in enhancing rational drug use ultimately. Very few studies were conducted in India on OTC drug use in pregnant women. Studies of Henry *et al.*, 2000 from South Australia<sup>12</sup> and Gharro *et al.*, 2000 from Nigeria<sup>13</sup> were in contradiction with the results of present study. Study of Dineshkumar *et al.*, 1995 from National Institute of Nutrition, Hyderabad, India<sup>14</sup> was in agreement with this study, but recent cross sectional study conducted at

Jammu city Sharma *et al.*, 2005<sup>15</sup> differed in results because of their urban study area. Study results showed that 4.3 % mothers suffered from some type of unwanted reactions due to drug use during pregnancy. Even after intensive interview, the exact cause of drugs or drug-drug interaction was not identified. This was due to the ignorance of pregnant women about ADR and poor reporting system. Present study was in agreement with observation of Dhasmana *et al.*, 2002<sup>16</sup> where they observed that voluntary reporting of ADR was very low even among the physicians of a teaching hospital. The knowledge of pregnant women about emergency health service facilities available in the locality was evaluated and it was observed that they were not only in the lack of knowledge and awareness on health service infrastructures available nearby, but also were very poor in utilization of these resources. No relevant data was available to compare present observations on these parameters.

## CONCLUSION

There were few lacunae in this study, which include the number and selection of study population, selection of villages, etc. This cross-sectional study methodology was based on interview and analysis of prescription. Knowledge, awareness and practices of rational use of medicines and health facility utilization by pregnant women or even by the general population are a neglected topic till today, though it is of immense importance. Any drug or medicine or any health infrastructure, whatever it may be, sophisticated or modern, is of no value, if not actually used by the beneficiaries. Present study showed that pregnant women were not aware about the health resources available nearby to their residence. Not only that, only a few percentages aware women among them actually used these infrastructures. From overall results of the study it may be concluded that though there was lack of knowledge about proper, rational and judicious medicine and health infrastructure use amongst pregnant women, it can be improved if they are informed properly. Efforts should be taken to disseminate the knowledge on medicine use and the use of health infrastructure available nearby, so that all health related initiatives become successful in terms of utilization.

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