Original Article

A STUDY ON UTILIZATION OF MATERNAL HEALTH CARE SERVICES IN RURAL AREA OF AURANGABAD DISTRICT, MAHARASHTRA

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ABSTRACT

Introduction: Poor access and utilization of antenatal and other health services continue to contribute to high maternal mortality rate along with other socioeconomic factors. Improving utilization of maternal health care services is a global challenge for the health system in low and middle income countries.

Material and Methods: It was a community based descriptive cross-sectional study which was undertaken from August 2010 to July 2011 in 4 villages of Paithan taluka, of Aurangabad district. Respondent women who had less than 1 year child and should be resident of particular area for previous 2 years or more at the time of interview were included in the study. Simple random sampling was used for selection of villages.

Results: In present study only 40.8% respondent women had their first antenatal visit in 1st trimester. Majority of the women 90.3% had institutional delivery. Out of 8(3.9%) deliveries assisted by untrained person in 4(1.9%) deliveries umbilical cord cut with unsterile instrument and of these 4(1.9%) deliveries in 2(1.0%) untrained person applied cow dung to umbilical stump.

Conclusions: Awareness regarding three or more antenatal visits and registration of pregnancy in first trimester should be emphasized through health education campaign. In present study though negligible percentage of hazardous practice of application cow dung to the umbilical stump was observed. It should be averted through health education and promotion of institutional deliveries.

Key words: maternal health**,** TT, IFA tablets, untrained person

INTRODUCTION

In the Indian epic Mahabharata, a women was always blessed as "sau putravati bhavh" (be mother of hundred sons), because in those days, the prime role of women was childbearing. The situation has not changed much since then as till date in many parts of India, mainly rural areas, the main role assigned to her is that of child bearer. Thus pregnancy is one of the most important events in the life of Indian women.[1] Routine antenatal visits may raise the awareness about the need for care at delivery or give women and their families, familiarity with health facilities that enable them to seek help more efficiently during crisis.

Since an estimated 90% of maternal deaths can be prevented with timely medical intervention, ensuring quick access to appropriate services when obstetric emergencies arise is one of the most important aspects of safe motherhood in developing countries.[2]

Maternal and child healthcare is one of the eight basic components of primary healthcare (PHC) in the Declaration of Alma-Ata.

The Child Survival and Safe Motherhood, now a component of Reproductive and Child Health Programme, is initiated to achieve a substantial improvement in the health status of women and children in India.[3] Understanding of the knowledge and practices of the community regarding maternity care during pregnancy, delivery and postnatal period is required for program implementation.[4]

Poor access and utilization of antenatal and other health services continue to contribute to high maternal mortality rate along with other socioeconomic factors.[5]

Improving utilization of maternal health care services is a global challenge for the health system in low and middle income countries. The goal set by United Nations, Millennium Developmental goals to reduce the

maternal mortality ratio by three quarters during the period 1990-2015.[6] So the present study was carried out to study utilization of maternal health care services in a rural population of a Aurangabad district.

MATERIAL AND METHODS

The present descriptive cross sectional study was planned to carry out in rural areas of a Aurangabad district to study utilization of various maternal health care services from August 2010 to July 2011. One of the important indicator for determination of maternal health care delivery utilization is, minimum three antenatal care visits to health care facility. According to NFHS-3 survey 65.5 % women in rural area had at least three antenatal care visits for their last birth, in Maharashtra.[7]

Sample size was determined by referring the book of WHO publication of 1991 titled Sample size determination in health studies written by Lwanga S. K. and Lemeshow S.[8] For this anticipated Population proportion (P) was 65.5, confidence level [100(1-α) %] set to 95% and Precision (ε) set to 10%. Formula was $n= (z)^2 p (1-p) / \varepsilon^2$ where z is (confidence coefficient) which was 1.96. Thus the sample size derived was 203 for P= 0.65 and ε =0.1 So it was decided to take sample size of more than 203 from rural area.

Respondent women mean women who had less than 1 year child at the time of interview.

Mother who had less than 1 year child at the time of interview and should be resident of particular area for previous 2 years or more and who were willing to participate in this study were included. Those mothers who had more than 1 year child and who were not willing to participate in this study were excluded.

Health education received: if respondent women told that she received advice regarding rest, nutrition, exercises, counseling, breast feeding, immunization during pregnancy from health worker then it was considered as a health education received.

JSY eligible woman: Respondent woman who fulfilled the criteria of beneficiary under JSY scheme was considered JSY eligible women.[9]

JSY benefit: Respondent woman who received monetary benefit of JSY scheme considered as JSY benefited women.[9]

Post natal visit: Respondent women who had paid at least one visit to health facility within seven days of delivery considered as post natal visit paid.

For data collection first one of the taluka selected randomly from the list of talukas in a Aurangabad district. Paithan was the taluka selected randomly. List of villages from Paithan taluka was arranged alphabetically and by simple random sampling villages were selected. Sample size of 203 required from rural areas. So initially one village was selected randomly naming Pimpalwadi from the list of villages. Investigator visited Pimpalwadi village, collected information from respondent women by visiting household. Efforts were made to cover whole village by investigator. Household which were found locked or where respondent women was not available for interview was revisited twice. Investigator could collect information from 56 respondent women of village Pimpalwadi. Once first village was covered investigator randomly selected next village naming Dhorkin. Here he could find 28 respondent women. Same procedure was repeated and investigator could collect information from 50 respondent women of village Chitegaon and from 72 respondent women of village Bidkin. Total 206 rural respondent women were enrolled for the study.

Before the actual commencement of the study in any village, a preparatory visit was made by the investigator to that village. A meeting with the Anganwadi Worker (AWW) was made after taking permission from the Child Development Project Officer. The purpose of study was explained to the AWW. She accompanied with the investigator during study in village. On seeing the familiar personnel, the respondent women were co operative.

A house to house survey was carried out in all the selected villages to identify the women who had less than one year child. For the data collection in particular villages firstly investigator searched for important land mark like temple, school, masjid, rikshow stand etc, then he searched for number of paths (lanes) leading to village from that important landmark. Investigator started data collection from one of the path, visited households one by one. After visiting the first household, next household, which has front door nearest to the front door of the first household (previous household), was visited. Then he went to the next houses in that direction till that particular path ends, after that investigator went on surveying other paths till whole village got covered.

At the household investigator first introduced himself and told purpose of his visit and explained about the study to the family head or adult present in the house. Enquiry was made about women who had less than one year child, if answer was yes then consent of the respondent women was taken. The utilization of maternal health care services was assessed with the help of predesigned pretested questionnaire. Questions were asked regarding her age, literacy status, occupation and income, religion, registration of pregnancy, number of ANC visits paid, time of first ANC visit, administration of TT injection, consumption of iron and folic acid tablets, place of delivery, assistance during delivery, postnatal visits paid etc.

The data was compiled, analyzed and tabulated with the help of Percentages.

RESULT

Table 1:- Distribution of rural respondent women according to sociodemographic variables

Variable	Frequency (%)
Age group (in Years) n=206	
≤ 20	48 (23.3)
21-24	86 (41.8)
25-28	54 (26.2)
≥ 29	18 (8.7)
Educational status n=206	
Illiterate	48 (23.3)
Primary School	34 (16.5)
Middle School	82 (39.8)
High School	34 (16.5)
Intermediate	4 (1.9)
Graduate	4 (1.9)
Occupational status n=206	
Housewives	164 (79.6)
Non agricultural worker	8 (3.9)
Agricultural worker	26 (12.6)
Owner & Cultivator	8 (3.9)
Socio-economic class* n=206	
Class I	2 (0.9)
Class II	32 (15.5)
Class III	76 (36.9)
Class IV	88 (42.7)
Class V	8 (3.9)

*Socioeconomic classification as suggested by B. G. Prasad was adopted and modified as per the All India Consumer Price Index (AICPI) of May 2011.

Table 2:- Distribution of rural respondent women according to antenatal care utilization

Variable	Frequency (%)
Number of Antenatal visits paid n=206	
None	12 (5.8)
1	8 (3.9)
2	76 (36.9)
3	102 (49.5)
≥4	8 (3.9)
Time of first antenatal visit n=206	
1st trimester	84 (40.8)
2nd trimester	110 (53.4)
3rd trimester	0 (0.0)
No	12 (5.8)
TT dose taken n=206	
Single dose	24 (11.7)
Two doses	158 (76.7)
Booster dose	10 (4.8)
None	14 (6.8)
IFA tablet consumed n=206	
≥100	36 (17.5)
< 100	142 (68.9)
Not taken	28 (13.6)

Majority 86(41.8%) were in the age group of 21 to 24 years and 48(23.3%) were equal to and below 20 years. The average age of the respondent women was 23.7 years. The youngest and oldest respondent women were 19 and 34 years old respectively. Most of the respondent women 82 (39.8%) were educated up to middle school followed by 48 (23.3%) were illiterate. 42 (20.4%) women were involved in some kind of work while 164 (79.6%) were Housewives. Majority 88 (42.7%) belonged to socioeconomic class IV while 34 (16.4%) belonged to upper socioeconomic strata.

In our study only 12 (5.8%) respondent women did not pay any antenatal visit. At least 3 antenatal visits should be paid by pregnant women; it is vital to start it in 1st trimester. In present study only 84(40.8%) had their first antenatal visit in 1st trimester. Majority of respondent women 142 (68.9) consumed less than 100 IFA tablets.

Table 3:- Distribution of rural respondent women according to assistance during delivery

Place and Assistance	Frequency (n=200) (%)
Government	
Medical officer	34 (16.5)
Obstetrician	30 (14.6)
Private	
General Practitioner	64 (31.1)
Obstetrician	58 (28.2)
Home	
Untrained person	8 (3.9)
General Practitioner	8 (3.9)
ANM	4 (1.9)

In present study 186(90.3%) respondent women delivered in hospital while 20(9.7%) women delivered in home. Out of 8(3.9%) deliveries assisted by untrained person in 4(1.9%) deliveries umbilical cord cut with unsterile instrument and of these 4(1.9%) deliveries in 2(1.0%) untrained person applied cow dung to umbilical stump.

Table 4:- Distribution of rural respondent women according to health education received, JSY benefit and postnatal visits paid

	Frequency (%)
Health education n=206	
Received	142 (68.9)
Not received	64 (31.1)
JSY eligibility n=206	
Eligible	144 (69.9)
Not eligible	62 (30.1)
JSY benefit n=144	
Received	38 (26.4)
Not received	106 (73.6)
Post Natal visit n=206	
Yes	18 (8.7)
No	188 (91.3)

Out of 206 rural respondent women maximum 142(68.9%) had received health education. Out of 144 (69.9%) eligible JSY women 38 (26.4%) received financial benefit. Most of 188(91.3%) did not pay any post natal visits to health facility respectively.

DISCUSSION

In present study most of the respondent women 110 (53.4%) had paid three or more than three antenatal visits and 12 (5.8%) did not pay any antenatal visit. Ranjan Das[10] in his study observed that 14 (23.7%) respondent women paid one antenatal visit, 8(13.6%) paid two, 15(25.4%) paid three and 22(37.3%) paid equal to and above four antenatal visits. Number of women who paid three antenatal visits was more compare to Ranjan Das[10] study. According to NFHS-3 survey (2005-06)[7] 65.5% of rural women paid at least three antenatal care visits in Maharashtra. In present study percentage of women who paid at least three antenatal care visits was less compare to NFHS-3 survey. This could be due to geographical, demographic, social, economical conditions. In present study 84(40.8%) had their first antenatal visit in 1st trimester and 12(5.8%) women never paid antenatal visit. Afrin Sagir[11] in rural study showed 71(38.4%) women had their first antenatal visit in first trimester, 106(57.3%) and 8(4.3%) women had their first antenatal visit in second and third trimester respectively. Findings were approximately similar with our study. Rural study carried out by Nazil Khatib et al[12] found 86(31.4%) women had their first antenatal visit in first trimester, 120(43.8 %) and 68(24.8%) women had their first antenatal visit in second and third trimester respectively. These findings were not similar with present study. This could be due to socioeconomic and cultural variations. Majority 158(76.7%) had received two doses of TT while 14(6.8%) did not receive TT dose in our study findings were similar with study carried out by Suman Singh[13] showed 54 (75 %) women received two doses of TT. Rural study carried out by Godi Rajendra Varma[3] found 177 (92.2%) received TT dose during pregnancy and 15(7.8%) did not receive TT dose findings were similar with our study. In present study majority 142(68.9%) had consumed less than 100 IFA tablets. Nazil Khatib et al[12] in rural study showed 155(56.6%%) mothers consumed less than 100 IFA tablets while 86(31.5%) mothers consumed more than 100 IFA tablets and rest 33(12.0%) did not consume IFA tablets. Findings of Nazil Khatib et al[12] were approximately similar with present study. Out of 206 rural respondent women 186 (90.3%) had hospital delivery and 20 (9.7%) women had their delivery occurred in home of which 8 (3.9%) women had their delivery assisted by untrained person. Out of 8(3.9%) deliveries assisted by untrained person in 4(1.9%) deliveries umbilical cord cut with unsterile instrument and of these 4(1.9%) deliveries in 2(1.0%) untrained person applied cow dung to umbilical stump. M. K. Sharma[14] showed out of 354 deliveries majority 202 (57%) deliveries conducted by untrained persons. Use of unsterilized instruments (i.e scissors / knife) for cutting umbilicus was found in 36 (10.8%) deliveries. Application of cow dung to umbilical stump in 9 (2.5%) deliveries and no application were used in 85 (24%) newborns. Percentage of deliveries attained by untrained persons is more compare to present study. This could be due time lag between conduction of these studies. Jha Ranjit K et al[15] in their rural study found 209 (99.05%) women had their delivery conducted by hospital staff, 1(0.47%) woman had their delivery conducted by trained and untrained dai each. Percentage of deliveries conducted by hospital staff is more than our study. Most of the rural respondent women 186(91.3%) did not pay any post natal visits to health facility while only 18 (8.7%) sought post natal care. Study carried out by Paras Agarwal[4] showed maximum women 69 (84.1%) were not sought post natal care and 13 (15.9%) sought post natal care. Present study findings were similar with Paras Agarwal[4] study.

CONCLUSIONS

Percentage of Institutional deliveries which were found in present study is encouraging and it should be promoted through IEC activities. Importance of post natal visit to health facility after delivery should be advocated in these populations as these visits gives opportunity to the health care providers to examine the mother and newborn. Immunization can be given to the newborn during this visit. In present study though negligible percentage of hazardous practice of application cow dung to the umbilical stump was observed. It should be averted through health education and promotion of institutional deliveries.

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