



Utilization of MCH services in tribal area of Akole: A client perspective

Raju K.C. ^{*1}, Anup L Kharde ²

ABSTRACT

Background

Utilization of health services is a complex behavioral phenomenon. The Maternal complication and poor peri-natal outcome are highly associated with non- utilization of antenatal & delivery care services & poor socioeconomic condition of the patients. Maternal, Infant and child mortality rates are higher among the tribes.

Objectives

- 1) To determine the utilization of different MCH services in tribal area
- 2) To ascertain the various barriers in access and utilization of MCH services in tribal area.

Materials and Methods

The descriptive cross-sectional study was carried out to find determines of utilization of MCH services in Bhandardara tribal area, Akole Taluka, Maharashtra, India, conducted from March 2016 to April 2017. The study carried out in two Shendi and Ladgaon PHC's catchment areas were chosen purposively. A list of participants will be prepared by the help of Anganwadi and ASHA workers, and then participants were recruited by simple random sampling technique (Lottery method) to achieve the total sample size 360.

Results

Out of total participants 360, the utilization of MCH services were found that 96.1 % ANC, (28 % ≥ 4 visit), Followed by 46.7 % PNC (56.5% 1st PNC visit, within 24 hrs), 99.4% Immunization and 41.1 % Government institutional delivery. The reason of poor utilization was feel shy, don't examine proper, Doctor/ Staff not available and not belief for quality services.

Conclusions

Utilization was the poor in tribal areas, was affected by many barriers such as physically, economically, technically and psychological & socio-cultural.

Keywords: MCH, ANC Visit, PNC Visit, Immunization, Institutional Delivery, Accessibility, Utilization, Availability

INTRODUCTION

Utilization of health services is a complex behavioral phenomenon.¹ 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.⁴ The Maternal complication and poor perinatal outcome are highly associated

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¹Centre for Social Medicine, PIMS-DU, Loni, Ahmednagar District, Maharashtra, India

²Assistant Professor, Department of Community Medicine, Rural Medical College, PIMS-DU, Loni, Ahmednagar District, Maharashtra, India

*Corresponding Author

Raju K.C.
Centre for Social Medicine, Pravara Institute of Medical Sciences, Deemed University (PIMS-DU), Ahmednagar District, Maharashtra, India
raj.sr97785@gmail.com
Telephone No. +917756931465

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with non- utilization of antenatal & delivery care services & poor socioeconomic condition of the patients.⁶ In low and middle-income countries, less than half of all pregnant women have a minimum of four antenatal care visits.³ In India, the Reproductive and Child Health Programme aims at providing at least three antenatal checkups which include a weight and blood pressure check, abdominal examination, immunization against tetanus, and iron & folic acid prophylaxis, as well as anemia management.³ The World Health Organization (WHO) recommends that a woman should have at least four ANC visits as a protocol (1st at 8-12 weeks, 2nd at 24-26 weeks, 3rd at 32 weeks and 4th at 36-38 weeks of pregnancy) and undergo an Institutional Delivery (ID) followed by a 1st Post Natal Care (PNC) visit (within 24 hrs)⁷ Maternal and Child Health group in the population which is especially vulnerable to disease, disability or death. Poor access and utilization of antenatal and other health services continue to contribute to high maternal mortality rate along with other socioeconomic factors. Maternal, Infant and child mortality rates are higher among the tribes⁵. Every year globally 2, 89, 000 women die due to complications in pregnancy and childbirth and 6.6 million children below 5 years of age die of complications in the newborn period and of common childhood diseases.⁸

In India according estimates only 37% pregnancy gets 4 ANC, 47% pregnancy delivered in the institution and only 77% children are completely immunized against childhood infections.⁷ In Maharashtra, ANC 1st visit (1st trimester) and 4th visit are 67.6% and 72.2% respectively, followed by PNC visit (within 48 hrs) is 78.5% and Institutional births is 90.3% as well as immunization coverage is 56.3% (NFHS-4 2015-16). In India, MCH services comprise registration of women for Antenatal and Post natal care, distribution of iron and folic acid tablets to pregnant women, advice on diet, immunization of infants and children with BCG, Polio, Tetanus toxoid, diphtheria, and anti-typhoid vaccines, distribution of Vit. A and treatment of minor ailments. Despite the efforts, utilization of RHC services by the rural community has not reached the desired level.²

Now, improving utilization of maternal and child health care services is a global challenges in low and middle income countries.⁹ In rural areas, there are multiple reasons for poor utilization of this situation such as early marriage, malnutrition, illiterately, ignorance, lack of health services and unavailability of transportation facilitation.¹⁰ As well as poor attitude of staffs is also main reasons for not utilizing health care facilities.¹¹ In the Indian context the available data suggest that the marginalized sections such as Scheduled Castes/Scheduled Tribes and the other backward Castes who are the poor and suffer from a 'Social gap' in terms of health status and health services.¹²

MATERIAL AND METHODS

The descriptive cross-sectional study was carried out to find determines of utilization of MCH services, conducted in Bhandardara tribal area, Akole Taluka, Ahemadnagar district, Maharashtra, India. Which was been conducted from March 2016 to April 2017.

This is the located about 90 km from Loni and about 185 km from Mumbai. Its nearest city is Nasik. 14 villages were selected of accessibility, nearest and surrounding of two PHC areas which were selected purposively in Bhandardara tribal area to collect the research data. The study population for this study were, (A) All the women who were delivered within last 1 years (Priority) & (B) Women who had under 5years child (Second priority). For sample size calculation $n = Z_{(1-\alpha/2)}^2 P(1-P)/d^2$ was used, where considering prevalence of 4th ANC visit was (p) 37%⁷, level of confidence of 95% Z value was 1.96 and precision $d=5\%(0.05\%)$. Thus, 360 participants were included in this study as per sample size.

For data collection, a list of participants were be prepared by the help of Anganwadi and ASHA. Then participants were recruited by simple random sampling technique (Lottery method) to achieve the total sample size.

Data were collected with the help of Anganwadi and ASHA worker in 14 villages which were accessibility and the nearest surrounding villages of both PHCs.

Total study population were enlisted 694 from 14 villages, Among of them 301 and 393 population were Shendi & Ladgaon. For lottery technique of simple random sampling method, total 301 piece of paper were prepared and there were numbered, for Shendi areas and same as 393 for Ladgaon area. Mixed them well, in boxes, then asked to a third person for drawn out 180 piece of paper from 301 and 180 piece from 393. As well as, I had added 10% extra pieces in both (18 pieces of paper for each) for covering, who non response during interview. Then prepared enlist of 198 for Shendi and 198 for Ladgaon areas.

The head of the family was asked about relevant socioeconomic details and a study woman was been asked about utilization and other relative question.

For collection the information of each respondent, questionnaire tool was used.

Questionnaire included the General information & Socio-demographic variables, differences services of MCH, and Barriers in access and utilization of MCH services. Face to face interview technique was used. Collected data was entered in excel then analyzed them by the help of SPSS 21 software. Basically, simple bar graph, proportional bar graph, pie charts, etc. were used for descriptive analysis for graph.

RESULTS

Socio-demographic determinants such as age of respondents, caste, age at marriage, religion, type of family, socioeconomic class, education, occupation etc. These all distributions are shown on table no. 1.

Table 1 Socio-Demographic Characteristics

Socio-Demographic	Frequency	Percentage
Age Group		
15-19	16	4.4
20-24	180	50.0
25-29	119	33.1
30-34	30	8.3
>35	15	4.2
Caste		
Scheduled Tribes (ST)	326	90.6
Scheduled Caste (SC)	14	3.9
Other Backward Class (OBC)	16	4.4
Nomadic Tribes	3	0.8
Others	1	0.3
Socioeconomic Status		
Class II	6	1.7
Class III	20	5.6
Class IV	79	21.9
Class V	255	70.8
Education		
Illiterate	75	20.8
Pre Primary	60	16.7
Primary	113	31.4
Secondary	88	24.4
High School	23	6.4
Undergraduate	1	0.3

Out of total participants 360, 96.1% were visited the SC/PHC/RH for the ANC checkup. Most of

them 65.9% was encouraged by Health facilitator; however 16.2% only were used to go

by themselves. They were 100% inj TT vaccine were injected and Tab Folic acid/Iron were administrated. And it was found that 100% baby

was survived in last delivery. Other utilization of MCH services of participant's were shown in table no 2.

Table 2 Utilization of MCH Services

MCH Utilization	Frequency	Percentage
Visited of PHC/SC/RH		
Yes	346	96.1
No	14	3.9
Total	360	100.0
Time of ANC Visited (If Yes, =346)		
1 time	36	10.4
2 time	84	24.3
3 time	129	37.3
≥4 time	97	28.0
Total	346	100.0
Encouraged person		
Self	56	16.2
Family member	61	17.6
Health facilitator	228	65.9
Others	1	0.3
Total	346	100.0
Referred Pregnant women		
Yes	278	80.35
No	68	19.65
Total	346	100
Type of Delivery		
Normal	317	88.1
Cesarean Section (SC)	43	11.9
Total	360	100.0
Place of Delivery		
Government institutions	148	41.1
Private institutions	105	29.2
Home(TBA/SBA/ANM)	100	27.8
Home (Non SBA/ANM)	6	1.7
Others (Vehicle)	1	0.3
Total	360	100.0
PNC visited		
Yes	168	46.7
No	192	53.3
Total	360	100.0
Time of PNC visiting* (If Yes, = 168)		
1 time	95	56.5
2 time	46	27.4
≥3 time	27	16.1
Total	168	100.0
Janani Surakcha Yojana Benefits (Eligibility = Gov. Inst. Delivery =148)		

Yes	106	71.62
No	42	28.38
Total	148	100.0
Children Immunized status		
Yes	358	99.4
No	2	0.6
Total	360	100.0
Completed the vaccinated till measles (If yes immunized, n = 358(99.4%)		
complete*	251	70.11
Incomplete	107	29.89
Total	358	100.0
Growth measure and height monitoring		
Yes	333	92.5
No	5	1.4
Not applicable	22	6.1
Total	360	100.0
Information status about child health nutrition and development		
Yes	343	95.3
No	17	4.7
Total	360	100.0
Treatment status of infected children		
Treated illness	60	57.14
Non-treated illness	45	42.86
Total	105	100.0
Vit-A prophylaxis (Applicable children ,n=289)		
Received Vit A	283	97.92
Non-received Vit A	6	2.08
Total	289	100.0

In accessibility of MCH services, 21.9% physical, 2% economical, 3.6% socio-cultural barriers were found, and In Utilization, 25.1% physical, 1.3% Economical,

17.2% technical and 17.5% psychological & socio-cultural barriers were found, which are shown in table no 3.

Table 3 The Barriers in Accessibility and Utilizing of MCH Services

Barriers	In Accessibility		In Utilization	
	Frequency	Percent	Barriers	Frequency Percent
Physical			Physical	
Long Distance to Service Centres	43	11.9	Not Maintain Privacy	1 0.3
Transportation not available	19	5.3	Not Good Behave there	2 0.6
Not Feel Necessary	14	3.9	Feel Shy	23 6.4
Others	3	0.8	Others	64 17.8
Total	79	21.9	Total	90 25.1
Economic			Economic	
Travel Costly	5	1.4	Costly in Lab Reporting	1 0.3
May be Taking Money	2	0.6	Costly Fee	2 0.6
Total	7	2	Others	1 0.3

Socio-Cultural			Total	4	1.3
			Technical		
Unfavorable Staffs Attitude	2	0.6	Doctors/Staffs not Available	21	5.8
	8	2.2	Proper Medicine/Services not Available	9	2.5
Others	3	0.8	Poor or Lack of PHC's Construction	30	8.3
			Others	2	0.6
Total	13	3.6	Total	62	17.2
			Psychological and Socio-Cultural		
			Not Believe to Provide Quality Medicine & Services	43	11.9
			Don't Examine the Patients Properly	1	0.3
			Others	18	5.0
			Total	62	17.5

Univariate Analysis of MCH Services Utilization

Socio-demographic Variables with ANC visit, PNC Visit, Immunization, Place of delivery

The univariate analysis of number of ANC visits with socio-demographic variable. On chi-square analysis, variables like age, socio-economic status and educations are found to be significantly associated ($P < 0.05$) with number of ANC visit and other variables like Caste is not be found significantly associated ($P > 0.05$).

The univariate analysis of number of PNC visits with socio-demographic variable. On chi-square analysis, variables like age, caste, socio-economic status and educations are not found to be significantly associated ($P > 0.05$) with number of PNC.

The univariate analysis of number of complete/incomplete Immunization with socio-demographic variable. On chi-square analysis, variables like Age group is found to be significantly associated ($P < 0.05$) with complete/ incomplete Immunization and other variables like Caste, Socio-economic status, and Education are not been significantly associated ($P > 0.05$).

The univariate analysis of number of Places of Delivery with socio-demographic variable. On chi-square analysis, variables like Socio-economic status and Education are found to be significantly associated ($P < 0.05$) with number of places of delivery

and other variables like Age group and Caste are not been significantly associated ($P > 0.05$).

DISCUSSION

The Utilization of MCH Services

In this study, the participants 96.1% of total were visited the SC/PHC/RH for their ANC checkup but 3.9% were not gone. 90% of tribal women received at least one antenatal check-up in Godi Rajendra Varma et. al. (2011)⁵ study. Out of total received participant ($n=346$), 10.4% participants were visited 1st visited, followed by 24.3% 2nd visited, 37.3% 3rd visited and 28% ≥ 4 visited for their ANC checkup. This study showed, 4th visit less compared to 3rd visit. There were various causes that did not complete at least 4 visit during pregnancy. 61.7% used antenatal services at least once in Tej Ram Jat et. al (2011)¹⁶ et. al. study. Same as 16% of tribal women received only one or two antenatal visits, whereas 83.3% of tribal women received three and/or more antenatal check-up visits in Godi Rajendra Varma et. al. (2011)⁵ study. Thus, in case of comparison, Utilization of ANC visit is poor in the present study compared to the previous studies. Out of total participants 346, 41.1% Government delivery was done followed by 27.8% by Home(TBA/SBA/ANM), 29.2% by Private institutes, 1.7% by Home(Non TBA/SBA/ANM) and 0.3% by other (in Vehicles). The present study shows less than 50% governmental institution delivery in tribal area and 1.7% delivery had been conducting home without presence of TBA/SBA/ANM still. In Sharmistha

Bhattacharjee et al. (2013)¹⁵ study, 73.5% women institutional had found. Same as in P.K. Mwaniki et al. (2002)¹⁸ study, 40.55% delivered at home while 7.5% delivered on the way to a health facility. Only 51% of deliveries were conducted by a health worker. In Jagdish C. Bhatia et al. (1995)¹⁹ study 38 percent delivered in a hospital. In his study, 77 per cent of home deliveries were conducted by untrained *dais*, 16 percent of all home deliveries (77%) were found delivered by trained assistance. ADNAN A ABBAS et al. (1986)²⁰ study, the women (48%) were delivered in hospital. The coverage of PNC visit was 46.7%, however, more than half i.e. 53.3% participants were not been followed for their PNC checkup. In Sharmistha Bhattacharjee et al. (2013)¹⁵ study, 72.6% postnatal visit was found which is the higher than 46.7%. In Ho usne Ara Begum et al. (2010),¹⁷ study 55.4% PNC was covered by ANM. This result 55.4% was also higher than 46.7%. Out of total participant (eligibility) 148 (41.1%), 71.62% participants were got the benefits of Janani surakhchha yojana (JSY) but 28.38% did not get the benefits. Because there were various causes, such as absent of Bank account, loss of ANC registration card, Delivery conducted in private hospital, Home delivery, ignorance, not belief in Government health facilities, moving in the mother's home for the delivery proposed, etc. But in Kuldeep J Dabade et al. (2013)⁴ study, Out of 144 (69.9%) eligible JSY women 38 (26.4%) received financial benefit. The coverage of immunization was found 99.4% and only 0.6% was not coverage. This coverage compared to other that found 95.9%, the childhood immunized in B.S.C. Uzochukwu et al. (2014)¹⁴ study. Out of coverage participants of immunization 358, 70.11% were completed the immunization till measles but did not complete 29.89%. But in Parika pahwa et al. (2013)¹¹ study, complete dose of immunization was till Measles 67%. This utilized percentage similarity with this study 70.11% of tribal children.

The Barriers in Accessibility and Utilizing of MCH Services

In Accessibility of MCH services

Out of total participants, it was found that 21.9% were physical barrier to access, followed by 2% economic barriers, and 3.6% socio-cultural barriers to access the MCH services. Compared to this with

Onasoga A. Olayinka et al (2014)¹³ study, 77.6% accessibility barriers to maternal health care services. The present study 27.5 % (in total) accessibility barriers are low compared to above previous study.

In Utilization barriers of MCH Services

Out of total participants, 25.1% were physical barriers to utilize; followed by 1.2% economical, 17.2% technical and 17.5% psychological & socio-cultural barriers to utilization the MCH services. The most of barrier for utilization were both technical and physical barriers. Compared to this study with Onasoga A. Olayinka et al (2014)¹³ study , 96.4% availability barrier in facilities/equipment (technical barrier), 91.1% complication during pregnancy labor or post-delivery (physical barrier), 85.4% affordability of maternal health care services (economic barrier), 84.4% attitude of the health care provider & 34.4% cultural acceptance (psychological & socio-cultural barrier). In Parika pahwa et al. (2013)¹¹ study, conducted that in urban slum areas of district Mohali, Punjab, 53% said that, 'they do not feel it's necessary (psychological & socio-cultural barrier), 42% revealed that, 'non cooperative hospital staff (psychological & socio-cultural barrier).

Univariate Analysis of MCH Services Utilization

The univariate analysis of number of ANC visit with socio-demographic variables, on chi-square analysis like Age, Socio-economic status and Education are found to be significantly associated ($P < 0.05$) with number of ANC but not found significant associated ($P > 0.05$) with Caste. In Parika pahwa et al. (2013)¹¹ study, on performing bivariate analysis, significant association in very high association was observed when associated with number of ANC visits ($\chi^2 = 0.001$, $p < 0.05$), and in ADNAN A ABBAS et al. (1986)²⁰ study, the use of antenatal services was significantly associated with the level of the women's education. Duration of marriage ($p < 0.001$) and increasing maternal age ($0.002 < p < 0.005$) were associated with use of antenatal care.

The univariate analysis of number of PNC with socio-demographic variable, on chi-square analysis, there are not found the significant associated ($P > 0.05$) with number of PNCs. But in ADNAN A ABBAS et al. (1986)²⁰ study, the use of PNC services was

significantly associated ($P < 0.05$) with the level of the women's education.

The univariate analysis of number of Immunization with socio-demographic variables, On chi-square analysis like Age group is found to be significantly associated ($P < 0.05$) with number of Immunization but not found significant associated ($P > 0.05$) with Caste, Socio-economic, and education.

The univariate analysis of number of type of delivery with socio-demographic variables, on chi-square analysis like Socioeconomic status and Education are found to be significantly associated ($P < 0.05$) with number of type of delivery but not found significant associated ($P > 0.05$) with age, caste.

In Sachin S Mumbare (2011)¹⁰ study, in a tribal area of North Maharashtra in Nashik district, was observed that the socioeconomic status, education of the mother were significantly associated with the delivery practices ($p < 0.05$). This study's result also was significant like the present study.

CONCLUSION

In conclusion, the utilization of MCH services was found poor in tribal area of study. 96.1% only visited for ANC checkup. Among of them 28% participants only were ≥ 4 visited ANC whereas 37% were visited in India and 72.2% in Maharashtra (NFHS-4 2015/16). And PNC checkup was also poor because 46.7% was PNC coverage whereas 78.5% were in Maharashtra (NFHS-4 2015/16) and ANC followed by 1st PNC visit was 56.5%. As well as practice of govt. institutional delivery was also poor. It was found only 41.1% which were already reported 47% in India and 90.3% in Maharashtra (NFHS-4 2015/16).

There were found barriers in accessibility and utilization of MCH services, In case of accessibility of MCH services- more physical barrier was found i.e. 21.9% (long distance to service centre, transportation not available), socio-cultural barrier also i.e. 3.6% (unfavorable staff's attitude, not supported by family) and economical barrier i.e. 2% (travel costly). Same as Utilization barrier were found. 25.1% physical barrier (not maintains privacy, feel shy, not good behave by staffs and complication of pregnancy

and delivery). 17.5% psychological & socio cultural (not belief to provide quality medicine & services), 17.2% technical (Doctor/staff not available, proper medicine/ services not available) and 1.2% economical (costly in lab reporting, costly fee, and others.)

In univariate analysis of socio-demographic with MCH components, On chi square test, age group, socioeconomic status and education were found to be significant ($p < 0.005$) with ANC visit, Age group significant ($p < 0.005$) with Immunization, Socioeconomic status & education significant ($p < 0.005$) with Places of delivery but not found socio-demographic significant with PNC.

As per above results, it should be needed the improvement in accessibility the services by government and should be remove the utilization barriers to improve the 100% MCH services utilization.

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