

Original Research Article

Socio demographic profile & MCH services utilization status of breast feeding mothers of Rural Health Training Centre of a Medical Institute of Central India

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Abstract

Introduction: *Better care of mother is always reflects as birth of a healthy baby & healthy community. Since the evolution of medical science there are lots of efforts are done towards improvement in maternal health care by incepting good MCH services so that maternal as well as infant mortality can be decreased.*

Objectives: *To assess the socio demographic profile of breast feeding mothers. & to find out the MCH services utilization status of mothers.*

Methodology: *The present study was a cross sectional (observational) community based study conducted in rural field practices area of medical college Gwalior for 1 year period .Study subject were randomly selected 400 lactating mothers having infants aged 0-6 months.*

Results: *Maximum number of mothers were belong to Hindu religion (75.5%) & of Gen. Caste (34.5%) & were illiterate (33%) and only 2.75% were post graduate. 28.5% mothers were belong to class IV, maximum mothers were have the history of all 3 necessary ANC visits (43.75%) but 9.5% mothers were not have any ANC visits, The distribution of mothers according to place of delivery is found significant ($p < 0.05$) max. mother 27.75 % delivered at PHC.*

Conclusions: *MCH services utilization increased among mothers which directly improve maternal health and it leads to good practices of breast feeding and other cares of babies which cumulatively better impact on maternal and child health , along with MCH service utilization, good socio demographic variables can also improve maternal & child health.*

Keywords: *Maternal & Child Health, ANC, institutional delivery, NFHS.*

Introduction

Better care of mother is always reflects as birth of a healthy baby & healthy community. Since the evolution of medical science there are lots of efforts are done towards improvement in maternal health care so that maternal as well as infant mortality can be decreased. The health of women and children has always been an important social goal of all societies. Over the years, maternal and child health has evolved through various stages of conceptual approach, technological advances and social prioritization. The realization that, improved maternal and child health is the key to the ultimate objective of lifelong health in any society, has led to renewed interest and global focus towards this¹.

Worldwide, nearly 600000 women between the ages of 15 and 49 die every year as a result of complications arising from pregnancy and childbirth. Most of these deaths could be avoided if preventive measures were taken and adequate care was available². According to current estimates, South East Asia Region accounts for 170,000 maternal deaths annually. Maternal mortality rates vary from 830 per 100,000 lives births in African countries to 24 per 100,000 births in European countries³. For the better health status of mothers and children a set of good practices of care for the mother as well as for the babies is mandatory for any class of society. The key cares for both of the groups are ANC visits and institutional deliveries along with promotion of breast feeding is always related to the good output. Every child has the right to be adequately feed with mother's milk. Breast feeding is an ideal food for neonate, a mother who gives the birth of baby also gives the breast feeding as the best gift to her baby.⁴ Breast feeding is the feeding of an infant or young child with breast milk directly from female human breasts (i.e., via lactation) rather than from a baby bottle or other container⁵. Breast milk is the nature's most precious gift to the newborn, and equivalent of which is yet to be innovated by our scientific community despite tremendous advances in science and technology.

Breastfeeding is therefore a key aspect of self-reliance and primary health care⁶.

According NFHS – 3 in all over India only 46.4% of women exclusive breast fed their children and only 23.4% women initiates Breast feeding within 1 hour. ,but in case of M.P. state as per NFHS ,only 21.6% women exclusive breast fed their children and only 14.9% women initiates Breast feeding within 1 hour.⁷ But as per recently published NFHS-4 survey findings these all data has been found improved as 52.1 % Indian mothers exclusively breast feed their children and 42.8 % mothers initiated breast feed within one hour of birth and in case of M.P. these figures remains as 54.2 % and 31.6 % respectively⁸, although it found as improvement in practices of breast feeding but it needs to be increased universally to reduce IMR .

Although 76 percent of women who had a live birth in the five years preceding the survey of NHFS-4 received antenatal care, only 44 percent started antenatal care during the first trimester of pregnancy, as recommended. Another 22 percent had their first visit during the fourth or fifth month of pregnancy. Just over half of mothers (52 %) had three or more antenatal care visits. Urban women were much more likely to have three or more antenatal visits than rural women. The percentage of women who had three or more ANC visits ranges from 17 percent in Bihar and 27 percent in Uttar Pradesh to at least 90 percent in Kerala, Goa, and Tamil Nadu. And it is 40.2 % in case of MP. It found as 50.7 % in all over India and 37 % women found as 4 antenatal checkups as per NFHS-3 but as per latest NFHS-4 it was found as 51.2 % women having total 4 antenatal checkups. If we go for urban and rural distribution of such findings it was found as 58.4% and 34.6 % in M.P. state but as per NFHS-4 in M.P. again these data found increased as 35.7 % as total 4 ANC checkups which was just 22.3 in NFHS-3. Thirty-nine percent of births in the five years preceding the survey took place in health facilities; more than half took place in the woman's own home; and 9 percent took place in

parents' homes. But in M.P. the data found as 29.7 % total institutional delivery , 59.9 % in urban and 20.2% in rural areas. But as per recent NFHS-4 it was found as 78.9 % in all over India and in MP it was observed as 80.2 % which is higher than national data. The more ANC visits that a woman had during pregnancy, the greater the likelihood that her delivery took place in a health facility. First births are more likely to be delivered in an institution than births at higher birth orders^{7,8}.

Several studies have shown that better maternal health care which leads to exclusive breastfeeding for six months is nutritionally adequate and provides protection against many acute and chronic illnesses in children of the developing as well as the developed world. Breast feeding for 6 months as a potential to reduce under 5 mortality by 13% it is the most effective intervention to reduce neonatal and under 5 deaths, if every baby were exclusively breastfed from birth for 6 months, an estimated 1.5 million lives would be saved each year^{9,10}.

Objectives

- 1) To assess the socio demographic profile of breast feeding mothers.
- 2) To find out the MCH services utilization status of mothers.

Methodology

Background Information- The present study was conducted in Block Barai, Distt. Gwalior. The whole population (as per census 2011) of this Block was 1,81,025, in which male population was 97,114 and female population was 83,911.

Study Design: The present study was a cross sectional (observational) study

Study Area- The study areas were randomly selected 24 villages from whole Block Barai. From whole Block Barai all major five health facilities (CHC/PHCs) were selected and after this 24 villages were randomly selected from each CHC/PHCs area

Study Duration: 1st July 2010 to 30th June 2011.

Study Subjects: Study subject were lactating mothers having infants aged 0-6 months.

Sampling Method: The overall method used was random sampling. For the selection of the villages the Multistage Random Sampling method was used in this method. Total 24 villages were selected randomly from the whole block Barai for purpose of study area for present study. 23 Mothers were selected randomly from each villages.

Sample size: The study population was 400 mothers of Block Barai having infants of age 0 to 6 months with no any feeding problems and were apparently healthy.

Sample size calculation-

Formula $N=4PQ/L^2$, Where Sample size=N, Prevalance =p,=22 %,Q=(100-P) =78 and Allowable error=L=20% of Prevalance Hence, $N=4 \times 22 \times 78 / 19.36 = 354.4$ and drop out was kept 10 % hence total sample size was kept 400.

Study Tool: A predesigned & pretested questionnaire (Close ended and Open ended) based, semi structured proforma was used to collect the information about all variables

Inclusion Criteria: Mothers who were healthy, were in lactating period, having baby of 0 to 6 six months of age in apparently healthy condition and with no any congenital feeding problems and giving consent were included in the study & vice versa were excluded .

Informed Consent: Verbal consent obtained from the subjects after explaining the purpose, nature and procedure of the study.

Data Collection: Study respondents were contacted for in-depth interviews of mother having 0-6 months age of baby with the help of female health worker by using a pretested, semi structured proforma which consists of various close and open ended kinds of questionnaires.

Data Processing and Analysing: It was done by using various required statistical methods like percentage and proportions, using graphs and tables by manually or by using suitable statistical software i.e. Epica-info 2000. All necessary

writing or computer errors were sorted out accordingly.

Results

When it was observed the distribution of mothers according of their age group then it was found that maximum respondents (27.75%) were in age group of 20 to 25 yrs and minimum (9%) were in age group of less than 20 yrs. The mothers more than 35 yrs were also in small numbers (15%). (Table -1)

Table No. 1 Distribution of Mothers According to Age

S. No.	Age Group	No. of Mothers	Percentage(%)
1.	<20 yrs.	36	9.0
2.	20-25 yrs.	111	27.75
3.	26-30yrs.	107	26.75
4.	31-35 yrs.	86	21.5
6.	>35 yrs.	60	15.0
Total		400	100%

In case of socio demographic distribution maximum number of mothers were belong to Hindu religion (75.5%) and minimum were belong to others religion like Christian religion (5%).in caste wise distribution maximum mothers were belong to Gen. Caste (34.5%) and minimum were in ST category (15.25%), in case of education wise distribution maximum mothers were illiterate (33%) and only few of them (2.75%) were post graduate. in socio economic distribution it was observed that max. mothers (28.5%) were belong to class IV and minimum were belong to Class I (3%) (Table-2)

Table No. 2 Distribution of Mothers according to Socio-Demographic Profile

S.No.	Social demographic Criteria	No. of Mothers	Percentage(%)
1.	Religion		
	Hindu	302	75.5
	Muslim	78	19.5
	Others	20	5.0
Total		400	100
2.	Caste		
	General	138	34.5
	SC	96	24.0
	ST	61	15.25
	OBC	105	26.25
Total		400	100

3.	Education		
	Illiterate	132	33.0
	Up to primary	112	28.0
	Up to middle	84	21.0
	Up to High	41	10.25
	School	20	5.0
	Up to Higher	11	2.75
	Secondary		
Graduate & Post Grad.			
Total		400	100
4.	Socio-Economic		
	Status	12	3.0
	Class I	25	6.25
	Class II	86	21.5
	Class III	114	28.5
	Class IV	113	28.25
	Class V	50	12.5
Class VI(BPL)			
Total		400	100

When it was observed for the ANC visit by breast feeding mothers then it was found as maximum mothers were have the history of all 3 necessary ANC visits (43.75%) but 9.5% mothers were not have any ANC visits and in case of 12.75% mothers they were have only 2 ANC Visits. (Table-3.)

Table No.3 Distribution of Mothers according to ANC visits

S.No.	ANC Visits	No. of Mothers	Percentages (%)
1.	I	51	12.75
2.	II	136	34.0
3.	III	175	43.75
4.	None	38	9.5
Total		400	100

In case of palace of delivery it was found max. number of mothers delivered at PHC (27.75%) and minimum of them delivered at private hospital (3.75%), remaining of them 22.5% were delivered at home,17% delivered at Govt Apex hospital i. e. kamala raja hospital associated with medical college gealior,23.75% delivered at CHC and remaining 5.5% mothers were delivered at distt. Hospital (Table No 4). The distribution according to place of delivery is also found significant (p=<0.05).

Table No. 4 Distribution of Mothers According to Place of Delivery

S.No.	Place of delivery	No. of Mothers	Percentage(%)	Chi-square & p value
1.	Home	89	22.25	Chi-square: 142.04, p-value= 0.000001
2.	PHC	111	27.75	
3.	CHC	95	23.75	
4.	Distt. Hospital	22	5.50	
5.	Govt Apex Hospital (K.R.H.,G.R.Medical College)	68	17.0	
6.	Private hospital	15	3.75	
Total		400	100	

In maximum cases of delivery (32%), delivery was conducted by ANM and similarly in 30% cases delivery was conducted by LHV and in minimum number of cases (8.25%) delivery was conducted by house mates/relatives. 15.755 deliveries were conducted by doctors. (Table No 5) The distribution according personnel responsible for conduction of delivery was also found significant ($p < 0.05$)

Table No.5 Distribution of Mothers According to Personnel responsible for Delivery Conduction

S.No.	Delivery conducted by	No. of Mothers	Percentages (%)	Chi-square & p value
1.	House mate/relatives	33	8.25	chi-square: 109.03, p-value: 0.000001
2.	Local trained dai	56	14.0	
3.	LHV	120	30.0	
4.	ANM	128	32.0	
5.	Doctor	63	15.75	
Total		400	100	

Discussion

In the present study When it was observed the distribution of mothers according of their age group then it was found that Maximum respondents (27.75%) were in age group of 20 to 25 yrs and minimum(9%) were in age group of less than 20 yrs. The mothers more than 35 yrs were also in small numbers (15%). The distribution according to age is highly significant. ($p \text{ vale} = < 0.001$) In case of socio demographic distribution maximum number of mothers were belong to Hindu religion (75.5%) and minimum were belong to others religion like Christian religion(5%).in caste wise distribution maximum mothers were belong to Gen. Caste (34.5%) and

minimum were in ST category (15.25%), in case of education wise distribution maximum mothers were literate and only 33% mothers were illiterate and only few of them (2.75%) were post graduate. in socio economic distribution it was observed that max. mothers (28.5%) were belong to class IV and minimum were belong to Class I (3%) Socio economic stata according to modified B.G. Prasad and Proposed by Dr. Anil K. Agrawal classification. Similarly K Madhu et al (2009)¹¹ found at PHC area of Karnataka the majority of the mothers were between the ages of 21 and 25 years old (60%) and 15 and 20 years old (30%). About 52% of the mothers were illiterate and belonged to a low to medium socio-economic class (55%). Again similar age wise distribution and family wise distribution was also found by Sunil Kumar Raina (2011)¹² et al in Jammu and Kashmir among of 300 women were practicing breast feeding practices.

Regarding ANC visit status of mothers it was also seen that maximum mothers were have the history of all 3 necessary ANC visits (43.75%) but 9.5% mothers were not have any ANC visits and in case of 12.75% mothers they were have only 2 ANC Visits remaining 9.5 % mothers were having none of ANC visit, these all may be due to the study area is directly attached to medical college hence awareness about the ANC visits may played a good role to attend antenatal clinic at hospital. Similarly as per NFHS -3 & 4 survey it found as 50.7 % & 51.2 % respectively as per all over India.^{7,8}

Regarding palace of delivery in the present study it was found max. number of mothers delivered at PHC (27.75%) and minimum of them delivered at

private hospital (3.75%), remaining of them 22.5% were delivered at home, 17% delivered at Govt Apex hospital i. e. Kamala Raja Hospital associated with Medical College Gwalior, 23.75% delivered at CHC and remaining 5.5% mothers were delivered at distt. Hospital. This kind of distribution of place of deliveries may be due to different educational status and socio economic status of mothers, those who are not at all aware about benefit of institutional delivery or those who are not having availing conditions to institutional delivery used home delivery itself. The distribution according to place of delivery is also found significant ($p < 0.05$). Similarly study conducted by NFHS- 3 & 4 also found variation in institutional deliveries and home deliveries. Although this extent of increasing institutional delivery may be due to inception of JSY under NRHM as per Sanjeev Kumar Gupta¹³ et al. Similarly study conducted by Addis Alem Fikre¹⁴ et al in Ethiopia also found Only 18.2% of the mothers gave birth to their last baby in health facilities. Urban residence, educational level of mothers, pregnancy related health problems, previous history of prolonged labour, and decision made by husbands or relatives showed significant positive association with utilization of institutional delivery services. Amy J Kesterton¹⁵ et al also found in a descriptive analysis of NFHS -1 & NFHS-II that the very strong regional differences in place of delivery that exist even after adjustment for access, economic status, birth order and education suggest that there are further unexplained factors affecting perceived desirability or preference for institutional delivery in India. As per William Joe Jessica¹⁶ et al also found as per the detailed analysis finds that utilization of institutional delivery care in India increased from 43% in 2004 to 83% in 2014. The bulk of the increase was in public sector use (21% in 2004 to 53% in 2014) with a modest increase in private sector use (22% in 2004 to 30% in 2014). The shift from a pro-rich to pro-poor distribution of public sector use is confirmed.

In the present study In maximum cases of delivery (32%), delivery was conducted by ANM and similarly in 30% cases delivery was conducted by LHV and in minimum number of cases (8.25%) delivery was conducted by house mates/ relatives. 15.75% deliveries were conducted by doctors. Similar findings were also published in NFHS-3& 4 data. Still number of doctors is fewer hence proportion of deliveries conducted by doctors is very less in comparative of deliveries conducted by any other auxiliary health staffs i.e. ANM and LHV. A study conducted by Bharati Sharma¹⁷ et al also found that shift from home births attended by Traditional Birth Attendants (TBAs) to hospital births. Is increased among even rural tribal population after implementation of NRHM in India.

Conclusion

MCH service utilization has great role on the improvement of the maternal and child health specially in the rural set up of India, although service utilization status has been increased since the services have been launched. as MCH services utilization increased among mothers it directly improve maternal health and it leads to good practices of breast feeding and other cares of babies which cumulatively better impact on maternal and child health. Still the rate of increase in service utilization need to be increased in greater magnitude so that maternal and child health can be well maintained.

References

1. Kushwaha AS. Text book of Public Health and Community Medicine. AFMC Pune: 809-814.
2. World Health Organization. Coverage of Maternity care. A Listing of Available Information. Fourth Edition. Geneva, Switzerland. Maternal and Newborn Health/ safe Motherhood (Document WHO/RHT/ MSM/96.28), 1997.

3. Park K. Textbook of Preventive and Social Medicine. 19th Edition Pg 444, 368, 364,370.
4. Ghai O.P, essentials of Pediatrics, CBS Publishers ,7th edition page 122-125.
5. <http://www.who.int/topics/breastfeeding/en/>
6. Subbiah, Nanthini, A study to assess the knowledge, attitude, practice and problems of postnatal mothers regarding breastfeeding, Nursing Journal of India / aug 2003
7. www.nfhsindia.org/nfhs3.shtm
8. rchiips.org/NFHS/factsheet_NFHS-4.shtml
9. Park K ,Text Book of PSM/community medicine, 21st edition, Bhanot publication, page no 488.
10. Ghai O.P, essentials of Pediatrics,CBS Publishers ,7th edition page 122-125.
11. K Madhu, Sriram Chowdary, and Ramesh Masthi,Breast feeding practices and new born care in rural areas:A descriptive Crossectional StudyIndian J Community Med . v.34(3); Jul 2009 Issue : 3 | Page : 243-246
12. Sunil Kumar Raina, Vijay Mengi, Gurdeep Singh, Determinants in initiation of breastfeeding among lactating women in block R. S. Pura of district Jammu (India), annals of tropical medicine and public health Year : 2011 Volume : 4 Issue : 2 Page : 71-73
13. Sanjeev K. Gupta, Dinesh Pal, Impact of Janani Suraksha Yojana on Institutional Delivery Rate and Maternal Morbidity and Mortality: An Observational Study in India. J Health Popul Nutr. 2012 Dec; 30(4): 464–471.
14. Addis Alem Fikre and Meaza Demissie Prevalence of institutional delivery and associated factors in Dodota Woreda (district), Oromia regional state, Ethiopia, Reprod Health. 2012; 9: 33.
15. Amy J Kesterton, John Cleland, Andy Sloggett -Institutional delivery in rural India: the relative importance of accessibility and economic status, BMC Pregnancy Childbirth. 2010; 10: 30.
16. William Joe Jessica M Perkins Saroj Kumar Institutional delivery in India, 2004–14: unravelling the equity-enhancing contributions of the public sector, Health Policy and Planning, Volume 33, Issue 5, 1 June 2018, Pages 645–653
17. Bharati Sharma, Gayatri Giri, Kyllike Christensson ,The transition of childbirth practices among tribal women in Gujarat, India - a grounded theory approach, BMC Int Health Hum Rights. 2013; 13: 41.