Indian J.Sci.Res. 8(1) : 143-147, 2017

ISSN : 0976-2876 (Print)
ISSN : 2250-0138 (Online)

EXPLORING PATTERNS OF UTILIZATION OF AVAILABLE MATERNAL HEALTH SERVICES: A CROSS SECTIONAL STUDY

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ABSTRACT

Literacy status and socio economic development are positive determinants of full utilization of available services. General upliftment of women by ensuring equity in educational and economic opportunities is needed to improve rates of utilization India fell short of achieving the MDG5 target. It has become imperative now to explore the reasons why some women fail to utilize health services which may be within reach. To determine the pattern of utilization of available antenatal and delivery care services. And to assess the socio-demographic factors associated with utilization. Utilization was classified as full, partial and nil. Analysis was done using SPSS 13.0. Percentage and odds ratio were calculated. There was 23.7% no utilization, 63.1% partial and 13.2% full utilization of available services. The sociodemographic factors significantly associated with utilization were woman's literacy status OR=6.6 (3.1-13.8), husband's literacy status OR= 8.8(3.2-24.1), husband's occupation OR=4.3(2.1-9.3), standard of living OR=22.8(9.7-53.4), type of family OR=3.8(1.9-7.6) and birth order OR=6.8(2.9-15.8).

KEYWORDS : Maternal care, Safe delivery, Health care Utilization

India still accounts for an unacceptably high maternal mortality and morbidity. The decline of MMR from 327 per 1 lakh live births in 1999-2001 to 167 per 100,000 live births in 2011-13 has been impressive yet insufficient to meet the national and international commitments like that of the National Population Policy and the Millennium Development Goal 5. For Uttar Pradesh, which is one of the Empowered Action Group states, the condition is even worse- MMR = 285/ 1 lakh live births.

Reasons for poor maternal health in India are both medical and social. Alongwith bottlenecks at supply side like poor availability and high cost of maternal health services, demand side issues like perceived need and acceptability of these services over a background of various socio-demographic factors together affect the actual utilization of the available services. The purpose of this study was to to determine the pattern of utilization of available antenatal and delivery care services and to assess the socio-demographic factors associated with utilization

MATERIALS AND METHODS

This is a community based, cross sectional, descriptive study conducted in the rural and urban field practice areas of Department of Community Medicine, J.N. Medical College, Aligarh Muslim University, Aligarh, covering a population of 26,888 living in 4135 households. Data collection was done for a period of one year, from December 2008 to December 2009.The study unit was Recently Delivered Woman i.e. A woman who had given birth within one year prior to survey.

Sampling: The sample size was calculated using the formula $4PQ/L^2$; where P was taken as 76% (coverage of antenatal care as reported in NFHS-3 (NFHS-3, 2005-06) and L as 6% absolute error. Adding 10% maximum non response rate, the calculated sample of 223 was drawn equally from rural and urban strata making the total sample size as 446. A list of all recently delivered women, residents of the study area and registered with the respective rural and urban health centres, was prepared first and the study subjects were chosen randomly from each village/ urban area using probability proportional to size sampling. Women who did not give consent or who were not found during 2 home visits were excluded from the study. Thus, after an actual non response of 4.7%, 425 RDWs were interviewed, 215 from rural areas and 210 from urban areas. The interviews were conducted at homes, after taking informed verbal consent. A preformed and pre tested semi-structured interview schedule was used for the study. Standard definitions of Full ANC, Safe Delivery and Standard of Living as used in DLHS3 were used. Data analysis was done using SPSS 13.0. Simple proportions and Odds ratio were used for statistical analysis.

RESULTS

Majority of the studied women were young females under the age of 30 years with maximum in the 21-25 y age group (Table 1).

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Table 1: Distribution of Study Population

Age group	Place of Residence		Total (%)
	Rural	Urban	
≤20	36	38	74 (17.4)
21-25	100	88	188 (44.2)
26-30	57	51	108 (25.4)
31-35	21	26	47 (11.1)
36-40	1	7	8 (1.9)
Total	215	210	425 (100)

PATTERN OF UTILIZATION OF SERVICES (Table 2)

Antenatal Care

36.2% of the women studied did not receive any antenatal care during their index pregnancy. 45.7% women had some exposure to health services for pregnancy care but dropped out without receiving the full package of services (partial utilization) and only 18.1 % of the women received the Full ANC Package.

Delivery Car

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Maternal Care Utilization

Combining both antenatal and delivery care periods a composite measure of maternal care utilization was construed wherein women who had no contact with health services during the entire course of index pregnancy and delivery, were classified as "No Utilization". Women who had utilized either ANC or delivery care, fully or partially, were classified as "Partial Utilization" and women who had availed the full ANC package along with having safe delivery were classified as "Full Utilization" of maternal care.

In our study, Majority of women (63.1%) utilized maternal care only partially. A substantial 23.7% of women had no exposure to medical care during pregnancy and delivery and only 13.2 % of the recently delivered women had availed the full maternal care during their index pregnancy.

Coverage of postnatal care has been excluded in this study as rates of utilization were very poor.

Table 2: Pattern of Utilization of Maternal Care Services

	N	%
Antenatal Care		
No ANC	154	36.2
Partial ANC	194	45.7
Full ANC package	77	18.1
Total	**425**	**100.0**
Delivery Care		
Unsafe Delivery	194	45.6
Safe Delivery	231	54.4
Total	**425**	**100.0**
Maternal Care Utilization (both Antenatal and Delivery Care)		
No Utilization	101	23.7
Partial Utilization	268	63.1
Full Utilization	56	13.2
Total	**425**	**100.00**

SOCIO-DEMOGRAPHIC FACTORS ASSOCIATED WITH FULL UTILIZATION OF MATERNAL CARE SERVICES

To highlight the important socio-demographic factors affecting full utilization of maternal care services, the group having had no maternal care (n=101) was compared with the one having full package of services (n=56) and odds ratios with 95% confidence intervals were calculated. The results are tabulated in table 3.

Woman's Literacy Status

Literate women were 6.6 times more likely to be recipients of full package of maternal services, as compared to their illiterate counterparts (OR= 6.6; 95% CI 3.1 13.8).

Husband's Literacy And Occupational Status

Wives of literate men were more likely to have utilized full maternal care as compared to those of illiterate husbands (OR 8.8; 95% CI 3.2 24.1). Similarly, occupation of the husband being equal to or better than skilled work made the woman 4.3 times (95% CI 2.1 9.3) more likely to have had full antenatal and delivery care as compared to wives of unskilled labourers or unemployed men.

Type of Family

Women belonging to joint families were more likely to have availed full maternity care services (OR= 3.8; 95% CI 1.9 7.6)

Standard of Living

Women having a high standard of living (SLI > 19) were 22.8 times (95% CI 9.7 53.4) more likely to have availed the full package of antenatal and delivery care as compared to those having low or medium standard of living (SLI =/< 19).

Birth Order

The likelihood of utilizing full package of maternity services was 6.8 times (95% CI 2.9 15.8) more if the woman was pregnant for the first time and decreased with advancing birth order. The factors not found to be significantly affecting a woman's chances of availing full maternal care services were woman's age at the time of pregnancy, her working status, place of residence and religion.

Table 3: Socio-Cultural Factors associated with Maternal Care Utilization

	No Maternal Care Utilization (n=101)	Full Maternal Care Utilization (n= 56)	OR	95% CI
Woman's Age				
<25	46	23	1.2	0.6 - 2.3
25+	55	33		
Woman's literacy status				
Illiterate	84	24	6.6	3.1 - 13.8
Literate	17	32		
Husband's literacy status				
Illiterate	47	5	8.8	3.2 - 24.1
Literate	54	51		
Husband's occupation				
Unemployed/ unskilled labor	52	11	4.3	2.1 - 9.3
Skilled worker / professional	49	45		
Religion				
Hindu	40	20	1.2	0.6 - 2.3
Muslim	61	36		
Working status of woman				
Not working	90	49	1.2	0.4 - 3.2
working	11	7		
Place of residence				
Rural	45	24	1.1	0.5 - 2.1
Urban	56	32		
Type of family				
Nuclear	65	18	3.8	1.9 - 7.6
Joint	36	38		
Standard of living				
Low/medium	87	12	22.8	9.7 - 53.4
Hingh	14	44		
Parity/birth order				
Birth order 2 or more	91	32	6.8	2.9-15.8
First pregnancy	10	24		

DISCUSSION

A proactive, watchful primary health care given during the perinatal period foresees complications and ensures a healthy mother and child at the end of the pregnancy. Needless to say, universal provision and utilization of such a care is essential for bringing down maternal and childhood mortality and morbidity. The present study shows unacceptably low coverage of full antenatal care at 18.1% and safe delivery services at 54.4%. An even lesser number of women had utilized both these services comprehensively ie only 13.2%. Our findings conform to the findings of DLHS 2 (DLHS 2, 2002-04) where only 16% of the women in India received full antenatal care. However DLHS 3 (DLHS 3, 2007-08) reported even lower rates of full ANC utilization at 2.8%.

Among the correlates affecting full utilization, the significant ones were found to be the literacy of the woman and her husband, the husband's occupation, type of family, the Standard Of Living and the birth order.

The effect of maternal and paternal education on improved utilization practices found in this study echo well with the findings of other such studies conducted in developing countries(Singh et al., 2012, Mustafizur Rahman and Prosannajid Sarkar, 2009, Agarwal 2007, Salam 2006). Educated women and their husbands have greater felt need and decision making ability to enroll for, and fully utilize the health services during pregnancy and childbirth.

Similarly, better occupational profile of the husband translates as an enabling factor of better and complete health care service utilization, by improving affordability and accessibility. This finding is also consistent with other study (Idris SH).

In our study women belonging to joint families were found to be more likely to avail and fully utilize the health care services as compared to women having nuclear families. Similar observations were made in an earlier study conducted in Davangere (Ventakesh RR 2005). Joint families provide a support system to the expectant mother. With division of labour, the woman usually has someone to take care of her other children and to accompany her to a health facility if and when she wants to avail health care.

Primiparous women are more likely to utilize full package of services, as shown by other studies (Thind A 2008, Dhakal S 2007). With advancing pregnancies the felt need for medical assistance falls, probably because of cumulative experience and confidence.

As a proxy measure of economic status, the effect of SLI on the probability of full utilization of maternal health services was evaluated in the present study. As predicted by multiple other studies (DLHS 2, 2002-04) , women belonging to high SLI group were much more likely to have utilized pregnancy and delivery care, fully, compared to those belonging to medium or low SLI group. It is quite obvious that for women belonging to a more socioeconomically advantaged background, health services in general and maternal health services in particular are more economically accessible.

Working status of woman, although a predictor of economic independence for the woman, has been consistently observed to be negatively associated with utilization of maternal health services by various researchers (Matsumura M and Gubhaju B 2001) . In our study significant differences were not observed between utilization rates of working and non working women. Lower utilization rates in working women in all these studies can probably be attributed, in part, to poor quality of services and long waiting lines in government facilities coupled with conflicting concern for losing daily earnings in the process of seeking health care.

CONCLUSIONS

This study brings to light the fact that the coverage of full utilization of maternal care is still very poor in some parts of India. In spite of innovative government schemes of direct monetary benefit to women utilizing these services, reasons of low level of utilization have to be explored. Demand side bottlenecks in universal utilization of safe motherhood services can be tackled, in one way, by improving background socio demographic profile of women, thus enabling them to make informed choices regarding their reproductive health. Further research is needed to evaluate the availability and quality of these services to zero-in on the supply side barriers in order to reach out to all pregnant women. The study does not include postnatal care in evaluating maternal care coverage due to very poor rates. Postnatal period remains the most vital period for ensuring health of both mother and child.

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