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Maternal health services utilization and influencing factors: A study in Lucknow district

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Abstract

Introduction: The maternal health care service utilization by reproductive women remains dismal despite various health programs and policies in the country. The study was initiated to find out the answer to the utilization level of maternal health services and the factors which influence the utilization. The present study was conducted to assess the utilization of maternal health care services (ANC and PNC) and the influence of factors on maternal health care utilization in Lucknow district.

Materials and Methods: Study design- Observational Cross Sectional. Study Area-Below poverty line people residing in Urban areas. Study Unit-Women delivered in last one year. Study Period-March, 2014 to January, 2015. Sampling Technique-Simple random sampling. Sample Size-484 subjects. Study Technique- Interviews using a pre-tested, pre-structured questionnaire.

Results: The study observed that utilization of maternal health care services was not up to the expected level, few indicators being abysmally low (PNC visits etc). The association of certain factors like literacy level of women, religion and parity was found to be significantly associated with Maternal health care service utilization.

Discussion: The current study re-emphasized that maternal health care utilization is governed by multiple factors like maternal literacy level, religion and parity of women. Literacy level increases awareness about health, availability and accessibility of services and helps in developing the confidence while religious faith motivates the utilization of services.

Conclusion: The better utilization of the maternal health services can be achieved by socio-economic development.

Recommendations: Policies and programs focusing on education of community and incorporation of opinions of religious bodies could be an appropriate strategy.

Keywords: Maternal healthcare services, utilization of services, below poverty line

Introduction

Prevention of maternal and child deaths is an outcome of the utilization of Maternal and child healthcare services by the eligible beneficiaries ^[1]. Many health programs specific for women and child health care are being implemented in the country many of them like NRHM has improved the maternal health ^[2] but Maternal mortality and morbidity continue to be high which could be due to sub optimal levels of utilization of services ^[3,4] especially amongst the poor people residing in urban areas ^[5]. Studies have revealed that the need for maternal health services is high among the poor population ^[6-16].

Uttar Pradesh has rates of utilization of maternal health services far below the national average and is home to 43% of urban poor. This underlines the need of research which may help in understanding the factors affecting the use of maternal health services. However, scarce research is available in the context of Uttar Pradesh, India.

Hence the current study was conducted with an aim to assess the utilization of maternal health care services and the association of factors in Lucknow district. This study may be helpful in providing the findings which may help in improving the policy efforts in the program.

Materials and Methods- This is a cross sectional study conducted in urban poor people (below poverty line) of Lucknow district and the study subjects were the women who have delivered in last one year. The study was conducted from March, 2014 to January, 2015. The areas were selected randomly & the study units were identified with the help of local stake holders, door to door survey etc. Every consenting eligible subject was enrolled in the study. The sample size calculated was 484. The interview was recorded on a pre-tested, pre-structured questionnaire. The Data Analysis was done using SPSS-20.0 version.

The appropriate statistical tests (Pearsons Chi – Square Test) were used for analysis of data. Necessary Approvals from Institutional and ethical committee were taken.

Results

Table 1: Socio-demography of Study Subjects

Socio-demography characteristics(N=484)		
Age of Subject(women)	No.	Percent
15-24 yrs	207	43
25-34 yrs	247	51
35 & above	30	7
Religion		
Hindu	225	47
Muslim	259	53
Literacy Level		
Illiterate	346	72
upto primary	78	16
upto intermediate	50	10
graduate or higher	10	2
Occupation		
Unskilled	93	19
Business	10	2
House Wife	381	79
Education of Husband		
Illiterate	237	49
upto primary	229	47
upto intermediate	16	3
graduate or higher	2	1
Occupation of Husband		
Skilled	120	25
Unskilled	224	46
Business	88	18
Pvt Job	40	8
Unemployed	12	3
Parity		
less than equal to 2	237	49
3 to 5	207	43
more than 5	40	8
Type of Family		
Nuclear	218	45.0
Joint family	266	55.0

ANC registration among study subjects was 77%. (Table 2), majority of whom being registered at a govt. maternity center (78.6%). Study subjects who availed all three ANC visits was low to the extent of 15% only and only 33% of these subjects undertook first ANC visit in first trimester. Two-third of study units did not receive IFA tablets while 96.6% of subjects had either one or two doses of TT vaccination. PNC visit was not undertaken by 95% of study units.

Table 2: Distribution of ANC services

Registered during ANC(N=484)	No.	Percent
Yes	372	77
No	112	23
PNC visit undertaken		
Yes	27	6
No	457	94
ANC services availed among those registered (N=372)		
Place of Registration		
Govt. Maternity Centre	292	78.6
Private Hospital	66	17.6
Other	14	3.8
No. of ANC Visits undertaken		
One	22	6
Two	158	42
Three	136	36
More than Three	56	16
First ANC Checkup undertaken during		
First Trimester	131	35
Second Trimester	180	48
Last Trimester	61	17
IFA Tablets Received		
Less than 100	65	18
More than 100	67	17
not received	240	65
Consumed (n=132)		
Less than 100	67	18
More than 100	39	10
not consumed	27	7
T.T. Vaccine		
One Dose	62	16
Two Dose	298	80
No Dose	12	4

Table 3: Association of socio-demographic factors with ANC & PNC Visit

	ANC visit			PNC visit		
	Yes	No		Yes	No	
Religion(N=484)			X ² - 22.0, d.f.=1, p=0.000			X ² - 3.17, d.f.=1, p=0.049
Hindu	190	35		16	208	
Muslim	182	77		11	249	
Literacy level of Subject(N=484)			X ² - 62.5, d.f.=3, p=0.000			X ² - 23.6, d.f.=3, p=0.000
Illiterate	241	104		14	332	
Up to primary	74	4		4	73	
Up to intermediate	47	4		8	43	
Graduate or higher	10	0	1	9		
Literacy level of Subject's Husband (N=484)			X ² - 0.2423, d.f.=3, p=0.97			X ² - 2.07, d.f.=3, p=0.538
Illiterate	182	55		14	223	
Upto Primary	177	52		13	216	
Upto Intermediate	12	4		0	16	
Graduate or Higher	1	1	0	2		
Parity of the Subject(N=484)			X ² - 7.03, d.f.=2, p=0.027			X ² - 0.43, d.f.=2, p=0.969
less than equal to 2	192	45		14	223	
three to five	153	54		11	196	
more than five	27	13	2	38		
Type of Family(N=484)			X ² - 0.08, d.f.=1, p=0.89			X ² - 0.72, d.f.=1, p=0.92
Nuclear	168	50		12	206	
Joint	204	62	15	251		

Religion & Literacy level was associated with the ANC and PNC visit and the association was statistically significant (Table 3). Parity of study subjects was found to be statistically significant with ANC service utilization (Table 3).

Discussion

Studies have shown that Utilization of health care services is affected by numerous factors and studies have also tried to identify the factors that contribute to differentiation in the utilization of maternal health care services [17, 18]. Globally evidence available suggests that these factors can be identified as cultural beliefs & values, socio-economic-demographic status, female autonomy, physical and financial accessibility [19].

The strength of our study was the primary data collected from the study subjects. The current study found the literacy level of mother, parity and her religion to be associated with the utilization of maternal health care services (statistically significant $p < 0.05$). Many studies supported our findings which also found various socio-demographic factors like maternal education etc. influence the utilization of maternal health services [12-16, 20].

The present study observed that the literacy level of mother was highly statistically significant to be associated with maternal health care utilization and the finding was consistent with the studies in India and across the world [1-3, 20-26]. A study done in Rohilkhand region by Srivastava, A *et al* in 2014 also identified certain demographic and socio-economic factors such as education, religion etc. to be the major causes of poor utilization of primary health care services [17]. Some studies have also found that women with low level of education are less likely to access antenatal services, even if they are provided [27-29].

Variety of reasons explained for association of women literacy level with maternal health care utilization include education increases the communication within the family especially with the husband on health related issues and helps the women to develop confidence to take decisions regarding her health [23]. Literate women seek out better service quality, and can utilize the health related inputs better. Studies have proven the more the women is educated, the more they are aware about their health, know more about availability of maternal health care services and use this awareness and information in accessing and availing the health care services [25, 26].

The association of religion is statistically significant to use of Ante-Natal and Post Natal care and similar findings were reported from other studies as well [2, 3, 21, 22]. A study conducted by Jat *et al* in 2011 found that religion had considerable influence on the use of ANC and safe delivery services whereas no noteworthy influence of these factors was found on post natal care and also observed that women from schedule tribes population and Hindu religion were least likely to be users of the three dimensions of maternal health services [31].

Studies have found factors like lifestyle and theological issues between different religions to the greater level of maternal health service utilization [35]. Some values and faith of religious groups may encourage negative attitudes healthcare service utilization [36]. Evidence from other continents suggests that incorporation of views of religious leaders in health policies are vital for changes in health [37]. Hence inclusion and involvement of religious bodies in the

health sector may have a positive impact on overall utilization of health services.

The present study observed that the utilization decreased with the parity of the study subject and was in sync with the findings of other studies [2, 3, 21, 17]. The reason could be mothers with low parity (esp. primi) are more concerned about pregnancy and thus likely to undertake proper healthcare visits [24, 38].

We also observed that the study subject residing in nuclear families were availing ANC services almost similar to the those residing in joint families. The association was not statistically significant and the findings were in contrast to the study done by Srivastava *et al* in 2014 at Rohilkhand [17]. The findings of our study regarding the utilization of maternal health care services like ANC registration, Registration at Govt. facility, Consumption of IFA (more than 100 tablets), at least one dose of tetanus Toxoid is found were better in comparison to Annual Health Survey (2nd update 2012-13) while the 1st ANC visit in early trimester was lower in comparison to AHS [39]. The reason may be that present study confined to small area may not represent the state level aspect. The present study observed that 78% ANC care was received from Govt. hospital similar to Delhi slum study [5]. The low level of PNC in our study was in concurrence with other available studies [1, 5]. The low utilization of PNC services can be the belief of the mother that it is not necessary to go for health check-ups post delivery without any complications.

Conclusion

Even though there is a high utilization rate of antenatal maternal health services among the poor people residing in urban areas of Lucknow, there is scope of improvement in the service utilization. The use of postnatal services is dismal and it risks the mother of undue mortality, therefore PNC should not be overlooked. The improved utilization of the health services can be achieved by socio-economic development including focus on women literacy, incorporation of religious norms and faiths in the health policies. Interventions should focus on factors like overall literacy levels of couple, parity and religion. It is also suggested that further research should be carried out to study issues with low use of PNC and the qualitative aspect of maternal health care services.

Recommendations

Improving education of community in general and women in particular and incorporation of opinions of religious bodies could be included to improve the utilization of maternal health care services.

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