Original Research Article

Utilization of antenatal services in urban slums of Jorhat municipality, Assam, India and the socio - demographic factors affecting it

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ABSTRACT

Background: Antenatal service is an important strategy for improvement of maternal and child health, reduction of maternal mortality and neonatal death. But mere presence of this service is not enough. Utilization of the antenatal service is the most important aspect and there are many socio demographic factors that influence the women for its utilization. The objective of the study is to assess the utilization of antenatal services in the urban slums of Jorhat municipality, Assam and the socio - demographic factors affecting it.

Methods: A community based cross-sectional study was done among women of the slum areas who had at least a child less than one year by using a pre structured and predesigned questionnaire.

Results: Adequate utilization of antenatal service was 19% while inadequate utilization was 66%. 74.2% of women had at least one dose of TT and 87.2 % consumed Iron and Folic Acid tablets for four months or more. Women who were high school and above had either adequate (13.2%) or inadequate utilization (81.1%) and only 5.7% of them did not have any antenatal service at all as compared to 37.5% among illiterates. Religion, caste, age of the women, parity did not have much role in its utilization. Among women from the joint families who did not have any antenatal service was only 4.8% as compared to 19.2% of women from nuclear families.

Conclusions: Majority of women had inadequate utilization of antenatal service in the slum areas and education played a very important role. Key words: Utilization, antenatal services, slum area.

Keywords: Antenatal services, Slum area, Utilization

INTRODUCTION

Antenatal care (ANC) is a key strategy to improve maternal and infant health.¹ Antenatal care is defined as the services provided to the pregnant woman for the well being of the woman and her unborn child. The goal of antenatal care is to prevent health problems in both infant and mother and to see that each newborn child has a good start.² Effective models of antenatal care have a focus on the individual woman's needs and preferences, collaboration and continuity of care.

It is accepted that all women should seek antenatal care early in pregnancy. Many do, but there are frequently women who do not present for care until very late in the pregnancy or even in labour itself⁽⁴⁾ Recently the WHO Technical Working Group has recommended a minimum level of care to be four visits throughout the pregnancy.⁵

Although efforts have been made to achieve the Millennium Development Goal (MDG) - 5 "Improvement of Maternal Health" of reducing the maternal mortality ratio (MMR) by three- quarters by 2015, this goal has not

been achieved yet. Many deaths occur during labor, delivery, and the immediate postpartum period.⁶ This is mainly because of the low utilization of maternal health services especially by women living in households that fall within the poorest population quintile.⁷

According to Government sources, the slum population of India have exceeds the population of Britain. It is estimated that by 2017, India's total slum population will be 104 million.⁸ Assam, being the gateway to North-East India, has attracted a lot of people and therefore we tend to find slum formation in many over - crowded areas where basic amenities like water, drainage etc. are lacking and our study area Jorhat town is also not an exception.⁹

The slums are frequently been conceptualized as social clusters that produce a distinct set of health problems. The poor environmental condition, high population density makes them a major reservoir for a wide spectrum of adverse health. An overview of women's and children's health status presents even a somber picture. Women were found to seek treatment only when their health problem caused great physical discomfort or when it affected their work performance.¹⁰ Pregnancy being a natural phenomenon in a women's life, it can be assumed that the utilization of antenatal care will be bare minimum during this period among the slum women. Hence it is important to determine the utilization of antenatal services by the women of the slum areas.

Objective of the study

To study the utilization of antenatal services in urban slums of Jorhat municipality, Assam and the socio - demographic factors affecting it.

METHODS

The study was a cross sectional study conducted in the urban slum areas of Jorhat municipality, Assam, during a period of three months from August to October, 2015.

Sample size : According to a study conducted in East Delhi , 92% of the women received ANC during pregnancy.⁽¹¹⁾ Considering this prevalence rate, the approximate sample size was determined as 120 with an absolute precision of 10% and confidence interval of 95%.

Sample technique and data collection : According to the town profile of Jorhat municipality Board 2011, Jorhat has six slum areas namely Raja Maidam , New Colony, Fancy Ali, Pujadubi , Horizon Colony, Tarajan Smashan , Bishnupur Banchbari with about 5000 households. Stratified random sampling was used to get a representative sample. All women in each slum who had at least a child less than one year were enrolled. Then 20 women were selected at random from each slum to get a total of 120 samples. The study population was asked a

pre-formulated set of questions as regards to their utilization of antenatal services and socio-demographic profile.

Operational definitions

Adequate: Utilization of ANC service was considered adequate if the first visit took place within the first 12 weeks and the numbers of visits were at least four during pregnancy period. **Inadequate:** Utilization was considered inadequate if the first visit was not within the first 12 weeks and the number of visits was less than four.

Non utilization: Non utilization of ANC service was considered when a single visit was not undertaken.

Statistical analysis: The collected data were tabulated and analyzed in MS Excel and SPSS -version 23. Appropriate statistical test were used to determine the p-value for test of significance under 95% confidence interval.

RESULTS

In our study, it was observed that out of 120 women 19% women had adequate utilization of ANC services. 66% had inadequate utilization while 15% did not have any ANC services during their pregnancy (Figure 1).

Figure 1: Utilization of antenatal services.

It was observed that 74.2% received one dose of TT while 25.8% received both doses of TT by women during their pregnancy. Regarding Iron & Folic Acid tablets, 87.2% consumed it for at least 3 months while 12.7% did not consumed the IFA tablets or consumed for less than three months (Table 1).

Table 1: TT and IFA tablet supplementation.

ANC services	Yes	No	P value
TT Injections:			
TT (1 st dose)	89 (74.2%)	31 (25.8%)	<0.001*
TT(Both doses)	64 (53.3%)	56 (46.7%)	
Iron and folic acid tablets consumed	89 (87.2%)	13 (12.7%)	0.772

*Statistically significant.

In the present study, it was seen that adequate utilization was highest (23.4%) in the age group 21-25 years. In the other age groups ANC utilization was inadequate. It was found that even among the women who had their first child, only 15.3% had adequate ANC, while 12.2% never had any ANC. Among women who had two living children 66.7% had adequate ANC while 30% of women who had 3 or more children never had any ANC services. Irrespective of religion, maximum women had inadequate utilization of ANC services. 20.9% the women of Hindu religion and 14.8% of the Muslim women had adequate utilization of ANC services. Most women of different caste had inadequate utilization of ANC services. The study reveals that 16.9% of the women of General caste, 25% of SC, 25% of ST, 33.3% of OBC, 37.5% of other

tribes had adequate utilization of ANC services respectively, while 7.7% of women belonging to General caste, 8% belonging to Scheduled caste, 5.5% belonging to OBC and 12.5% belonging to other caste did not have any ANC services. As regards to type of family, 23.1% from the nuclear family and 11.9% from joint family had adequate utilization of antenatal services. Non utilization of antenatal services was found to 19.2% among women from nuclear family and 4.8% in women from the joint family. As regards to the education status, 37.5% women who were illiterate did not have any ANC services but among women with education qualification of high school and above only 5.7% did not have any ANC services (Table 2).

Table 2: Socio-demographic factors affecting the utilization of antenatal services.

A)Socio- demographic factor	Adequate utilisation	Inadequate utilisation	Non utilisation	Total individual	p- value
	Number (%)	Number (%)	Number (%)	(120)	
Age of mother					
< 21 years	4 (15.3%)	19(73.1%)	3(11.5%)	26	0.278
21-25 years	15 (23.4%)	34(53.1%)	15(23.4%)	64	
25-30 years	2 (12.5%)	13(81.2%)	1(6.2%)	16	
>30 years	3 (21.4%)	10(71.4%)	1(7.1%)	14	
No. of living children					
1	15(15.3%)	71(72.4%)	12(12.2%)	98	<0.001*
2	8(66.7%)	3(25%)	1(8.3%)	12	
3 or more	0	7(70%)	3(30%)	10	
Religion					
Hinduism	9(20.9%)	26(60.4%)	8(18.7%)	43	0.924
Muslim	12(14.8%)	48(67.9%)	10(17.3%)	70	
Other	1(14.3%)	5(71.4%)	1(14.3%)	7	
Caste					
General	11(16.9%)	49(75.4%)	5(7.7%)	65	0.829
Scheduled caste	6(25%)	17(68%)	2(8%)	25	
Scheduled tribe	1(25%)	3(75%)	0	4	
OBC	6(33.3%)	11(61.1%)	1(5.6%)	18	
Others	3(37.5%)	4(50%)	1(12.5%)	8	
Type of family					
Nuclear	18(23.1%)	45(57.7%)	15(19.2%)	78	0.014*
Joint	5(11.9%)	35(83.3%)	2(4.8%)	42	
Educational status					
Illiterate	1(12.5%)	4(50%)	3(37.5%)	8	0.019*
Below primary level	3(27.3%)	8(72.7%)	0	11	
Primary level	4(20%)	16(80%)	0	20	
Middle school	4(14.3%)	23(82.1%)	1(3.5%)	28	
High school and above	7(13.2%)	43(81.1%)	3(5.7%)	53	

*Statistically significant.

The main reason cited by the women who did not use antenatal services during their pregnancy or used ANC inadequately was lack of time (65.4%) available to go to the health centre as it hampers their household chores. Other reasons were financial (11.5%), transportation

(3.9%) and unavailability of accompanying persons (7.7%) though the ASHA (accredited social health activist) worker was there to accompany them. 11.5% said that they were not interested in seeking antenatal checkups (Figure 2).

Figure 2: Reasons for incomplete or non-utilization of ANC services.

DISCUSSION

In our study it was found that 19% had adequate utilization of ANC services as the first antenatal checkup was during the first twelve weeks of pregnancy and had total four ANC services. Inadequate utilization was 66% while non utilization was 15%. These results differed from the results found by Sachin S Mumbare et al. They found 64.76% pregnant women utilized minimum four ANC services and only 5.71% pregnant women did not utilized a single ANC services.¹² But Agarwal P et al in their study in an urban slum found 24% did not seek antenatal care which was more than our results.¹³

In regards to TT utilization at least 74.2% of the pregnant women had received one dose of TT while 53.3% of the pregnant women received both the TT doses. This showed a higher non recipients of TT (25.8%) as compared to the results found in the study “Maternal health-care utilization among women in an urban slum in Delhi” by Agarwal P where 17% of the pregnant women were unprotected against tetanus.¹³ This might be that the pregnant women in our study were less aware of the importance of TT in spite of repeated health education.

Regarding Iron & Folic Acid tablets 87.2% consumed the tablets for minimum four months while 12.7% did not consumed. Major reason cited for not taking IFA tablets was their fear that these tablets would make the baby big in size resulting in difficult delivery. A similar result (12.3%) was found by Satija M et al in their study among the pregnant women in an urban area of Punjab.¹⁴

Adequate utilization was highest (23.4%) in women between 21-25 years. Most women below 21 years (73.1%) had inadequate utilization of ANC services. Women in the age group 25-30 years and above had much knowledge on the utilization of ANC services and also had the support of their spouse which was very rewarding for the improvement of the health of the women. The results were similar to the study by Sachin S Mumbare et al where they found women above 30 years had utilized ANC services maximum.¹²

It was seen that women during their second pregnancy had maximum adequate utilization (66.7%) of ANC services. This was because they realized the importance of ANC services to prevent the hazards that had arisen during their first pregnancy.

The present study revealed that caste and religion did not play any significant difference in regards to utilization of ANC services and maximum women of different caste and religion had inadequate utilization.

Women from the joint family had better utilization of ANC services than women from nuclear family which was statistically significant. Only 4.8% of women from joint family did not have any ANC services as compared to 19.2% of women from nuclear family. This was because of the support they received from other members of the joint family in looking after their children and doing the household chores. But in another study done by Sachin S Mumbare in the tribal areas of North Maharashtra, there was no relation between the type of family and ANC utilization.¹²

Education played a very important role in the utilization of antenatal services. It was seen that with increase education, utilization of antenatal services also increased which was statistically significant. Among the illiterate women 37.5% did not have any ANC services while among the women of high school and above it was only 5.7%. Similar results was also observed by Rajiv Kumar Gupta, et al where they found that with increasing level of education utilization of ANC services was better.¹⁵

The main reason cited by the women who did not use antenatal services or used inadequately was lack of time available to go to the health centre as it hampered their work. Other reasons were financial, transportation and unavailable of accompanying persons while some were not interested in seeking antenatal checkups as they did not have any health problem. Similar reasons were also cited by Rajiv Kumar Gupta et al in their study in rural areas of North India regarding inadequate utilization of ANC services.¹⁵

CONCLUSION

The study showed that maximum women (66%) had inadequate utilization of antenatal services. Age, religion, caste did not play much role in utilization of antenatal care services. On the other hand, education and type of family played a major role. Majority of the women had taken only one dose of TT. Many women did not complete the course of IFA tablets because they thought that it would make the baby big resulting in difficult delivery. The most common reason for inadequate utilization or non utilization of ANC services was lack of time. Thus increasing the literacy status of the women and making all the members of the family aware of the importance of antenatal services can improve the health of both mother and child in the community.

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