Scholars Journal of Applied Medical Sciences (SJAMS) **ISSN 2320-6691 (Online)**
Sch. J. App. Med. Sci., 2017; 5(8C):3179-3184 **ISSN 2347-954X (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI: 10.36347/sjams.2017.v05i08.041

Original Research Article

Utilization of Antenatal Care Services in Rural Areas of Jorhat

Dr Hiyeswar Borah[1*], Dr Parash Jyoti Bora[1]
[1]Department of Community Medicine, Jorhat Medical College, Jorhat, Assam, India

***Corresponding author**
Dr Hiyeswar Borah
Email: hborahcom@gmail.com

Abstract: Antenatal care services are critically important component for reducing morbidity and mortality among the mothers. In developing country like India antenatal care is not uniformly distributed particularly in rural areas. Various socio-demographic factor influences the utilization of antenatal care. The aim of this study is to assess the utilization of antenatal care services in rural areas of Jorhat and to find out the influence of various factors on the utilization of antenatal care services. It is a community based cross sectional study among women who have recently delivered and having children less than one year of age. Using multistage random sampling a total of 290 eligible subjects was selected for our study and they were interviewed using a pre-tested pre-designed schedule. In the present study about the utilization of antenatal care service in rural areas of Jorhat shows 100% of the study subjects registered during antenatal period but only 28.6% study subjects had early registration and 74.1% subjects had 4 or more antenatal visits, 82.8% women consumed more than 100 iron folic acid tablets and 93.1% women received 2 doses of tetanus toxoid. Age, socioeconomic class and education were significant contributing factors (P value<0.05) for antenatal care utilization. Antenatal care allows for the management of pregnancy, detection and treatment of complications and promotion of good health. The utilization of antenatal care services among the rural dwellers was found to be satisfactory though few of them were lacking behind due to ignorance and illiteracy.
Keywords: Antenatal care, Utilization, Rural, Jorhat

INTRODUCTION

Utilization of Antenatal Care (ANC) services and maternal and child health programmes were critically important in a country like India which is experiencing high infant and child mortality rate and maternal mortality rate. According to National Family Health Survey (NFHS) reports, infant mortality rate in India was 79 per 1000 live births during 1988 to 1992 and under five mortality rate was 109 [1]. Improved nutritional status along with better antenatal care can help reduce the incidence of low birth weight babies and thus reduce Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR). Antenatal services not only offer medical care but also include advice on correct diet and provision of iron and folic acid tablets and immunization with 2 doses of Tetanus Toxoid (TT) to pregnant women [2].

Pregnancy and Childbirth is a celebrated event, in almost all the communities. However the events turn into grief and sorrow where the mothers depart from their babies and families because of inadequate health care services. Such death during childbirth is rare in developed countries but the scenario is worst in developing countries like India where, MMR is 167 and IMR is 40 [3]. Maternal Mortality Rate is low in Kerala and Punjab but, states like Assam, Bihar, Gujarat, Haryana, Karnataka, Madhya Pradesh, Rajasthan, Orissa, Uttar Pradesh and West Bengal were still having high.

The current MMR of Assam is 300 [3]. Poor utilization of antenatal and health care continue to contribute to the high MMR along with other socioeconomic factors. However it is noted that most maternal deaths and pregnancy complications can be prevented if pregnant women have access to good quality antenatal care and if certain harmful birth practices are avoided [4].

Antenatal care services were considered to be key element in the primary health care delivery system of a country which aims for a healthy society. Over the past sixty years maternal health situation in the country has been staggering despite several changes in a rapidly evolving socio-economic environment. In the last decade, as per the national data, health indicators including utilization of antenatal care services were as poor as 60% in rural India [5].

Considering the above the following study was conducted in Titabor Development Block of Jorhat, with the following objectives to assess the utilization of antenatal care services in rural area of Jorhat and to find out the influence of various factors on the utilization of antenatal care services.in rural area of Jorhat.

MATERIALS AND METHODS

The present study is a community based cross sectional study in rural areas of Jorhat under Titabor Sub-division from October 2016 to November 2016. As per DLHS-III data 74.8%, women received at least one ANC in Assam [6]. So, considering 74.8% prevalence of ANC utilization with 5% absolute error, the sample size was calculated to be 290. To get the required sample 10 village was selected randomly. The selection of the houses in the village was done by picking up a random starting number and then every house was visited until the required sample was obtained as such 29 eligible mothers from each village. The eligible samples from those houses were interviewed. In case of non-availability of the respondent or any house was found locked, next house was visited. If required samples not found in the village then adjacent village was visited.

Data was collected in a pre-designed proforma by interviewing the mother having less than one year children after taking verbal consent from the mothers. Demographic profile, reproductive history, ANC check-up and immunization status was assessed by questionnaire method.

Women who have recently delivered and women having children less than one year of age were included in the study and mothers not willing to co-operate, mothers not available during the time of data collection and women having children >1 year of age were excluded in our study

The data collected on various aspect of the study were completed, tabulated and subjected to statistical analysis. Data analytical procedures involved frequency distribution, chi square test and fisher's exact test where applicable. The statistical analysis was done using SPSS 16.1 software.

RESULTS AND OBSERVATION

Out of the 290 study subjects, majority (68.3%) were of age group of 25 years or below and 31.7% above 25 years. 64.5% subjects belongs to nuclear family, 50.7% study subjects were OBC by caste with 53.4% belongs to lower class and 77.9% followed Hinduism. Among the study subjects most of them (79.3%) were literate but only 28.6% were found employed (Table 1).

In our study 71.4 % registered after 12 weeks of gestation and only 28.6 % registered within 12 weeks and it also reveals that majority (75.8%) registered after 12 weeks belongs to 25 and below age group. There is a significant association (P Value<0.05) between time of registration and age of mother. Moreover majority of study subjects (84.5%) registered after 12 weeks belong to lower socio-economic class as compared to middle class (56.3%) and majority (75.3%) of literate respondent registered after 12 weeks .There is a strong significant association (P Value<0.05) found between time of registration with regards to socio-economic status and educational status. Our study also shows majority (74.1%) had more than 4 ANC of which 68.2% belongs to age group of 25 years or below and 87% belongs to age group of more than 25 years which also shows statistically significant result(P Value<0.05) between age group and number of ANC visits (Table 2). Inspite of unemployment 71.4%, majority (69.6%) registered after 12 weeks (Fig-1).

In our study 93.1% subjects received 2 doses of TT which include 96.5% from literate mother and 80% from illiterate mother received 2 dose of TT. On the other hand 93.9% of the literate mothers consumed > 100 IFA whereas 40% among the illiterate mothers consumed >100 IFA. There is strong statistical significance (P Value<0.05) among the literacy status with regards to TT immunization and consumption of IFA (Table 3).

Table−1: Table showing socio demographic characteristics of the study subject (N=290)

Variable	Number	Percentage
Age group		
<=25 Years	198	68.3%
>25 Years	92	31.7%
Type of Family		
Nuclear	187	64.5%
Joint	103	35.5%
Religion		
Hindu	226	77.9%
Muslim	64	22.1%
Caste		
General	83	28.6%
OBC	147	50.7%
SC	40	13.8%
ST	20	6.9%
Socio-economic status		
Middle Class	135	46.6%
Lower Class	155	53.4%
Education Status		
Literate	230	79.3%
Illiterate	60	20.7%
Occupation		
Employed	83	28.6%
Unemployed	207	71.4%

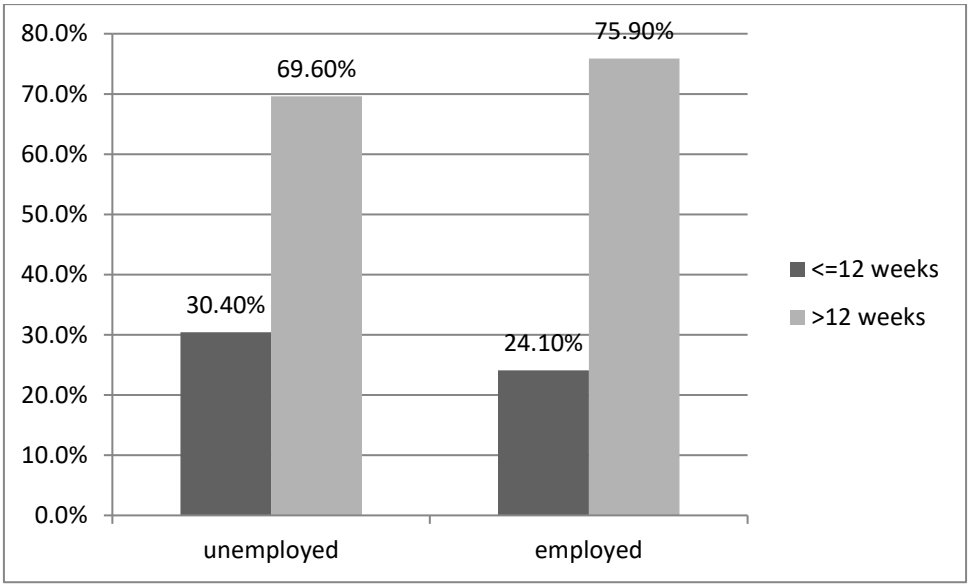
Table−2: Table showing the relation between antenatal care services & various factors

Variable	<=25 years		> 25 years		Total		p-value	χ^2
Time of registration	No	%	No	%	No	%		
12 weeks	48	24.21	35	38	83	28.6	0.016	5.86
>=12 weeks	50	75.8	57	62	207	71.4		
Total	198	100	92	100	290	100		
Number of ANC	No	%	No	%	No	%		
<4 visit	63	31.8	12	13	75	25.9	0.001	11.5
>=4visit	135	68.2	80	87	215	74.1		
Total	198	100	92	100	290	100		
Variable	Middle Class		Lower Class		Total		p-value	
Time of registration	No	%	No	%	No	%		
12 weeks	59	43.7	24	15.5	83	28.6	0.000	32.8
>=12 weeks	76	56.3	131	84.5	207	71.4		
Total	135	100	155	100	290	100		
Number of ANC	No	%	No	%	No	%		
<4 visit	32	23.7	43	27.7	75	25.9		
>=4visit	103	76.3	112	72.3	215	74.1	0.366	0.818
Total	135	100	155	100	290	100		

Variable	Literate		Illiterate		Total		p-value	
Time of registration	No	%	No	%	No	%	0.0076	7.134
12 weeks	57	24.7	26	43.3	20	6.9		
>=12 weeks	173	75.3	34	56.7	270	93.1		
Total	230	100	60	100	290	100		
Number of ANC	No	%	No	%	No	%	0.0082	6.984
<4 visit	51	22.2	24	40	50	17.2		
>=4visit	179	77.8	36	60	240	82.8		
Total	230	100	60	100	290	100		

Table−3: Relationship of education with TT and IFA consumption

Variable	Literate		illiterate		Total		p-value	χ^2
TT Immunization	No	%	No	%	No	%		
1 dose	8	3.5	12	20	83	28.6	0.000	20.2
2 doses	222	96.5	48	80	207	71.4		
Total	230	100	60	100	290	100		
Consumption of IFA								
<100	14	6.1	36	60	75	25.9	0.000	96.9
>=100	216	93.9	24	40	215	74.1		
Total	230	100	60	100	290	100		



Fig−1: Relationship between employment & time of ANC registration

DISCUSSION

The present study was undertaken to assess the utilization of antenatal care (ANC) services in the rural area of Jorhat and also to find out the influence of socio-demographic factors on utilization of ANC services among the rural dwellers.

The present study shows 100% study subjects registered during antenatal period but only 28.6% study subjects had early registration i.e. within first 12 weeks. This was well supported by similar study done by Shindhaye *et al.* [7] shows 79.5% registered for antenatal care, of which 27.6% women had early registration, whereas study done by Prasad D [8]. Shows 94.2% participant registered for ANC visit but 67.7% participant had early registration. The importance of early registration is imperative for timely diagnosis of high risk pregnancy and related treatment for preventing maternal morbidities. Statistically significant association (P value<0.05) between time of registration with regards to socio-economic and educational status directly shows that lower social economic status and inappropriate education is the foremost reason for lower early registration and appropriate public education needs to be augmented.

To achieve at the end of pregnancy healthy mother and child, Government of India recommends a minimum of 4 antenatal visits during the entire period of 9 month. The study done by Edward *et al.* [9] shows 79% women availed full range of ANC (3 or more visit) whereas study done by Prasad D [8] shows 87.9% of registered women visited health institution 3 or more times and the study done by Edward S *et al.* [9] also shows 67.2% mothers with low standard of living utilized full antenatal care services. Similar results were imparted also in our study, which shows 74.1% subjects had 4 or more antenatal visits.

Coverage of all pregnant women with two doses of tetanus toxoid is one of the interventions for neonatal tetanus prevention. According to study done by Shindhaye PR *et al*. [7] about 68.9% registered women received at least one Tetanus Toxoid injection where in study done by Prasad D [8] shows 66.5% mothers consumed > 100 doses of iron folic acid tablet whereas 69.8% took the 2 doses of TT injection and in a similar study conducted by S. Sumithra *et al.* [10] shows 99% women received TT injection. A better result value was found in our present study where 93.1% women received 2 doses of TT.

Women in developing country like India are always in a state of negative iron balance during the reproductive period and as such anemia is highly prevalent among the pregnant women. National protocol of India suggests prophylactic dose of Tablet IFA to pregnant women once daily for 100 days to prevent maternal anemia. In our present study 82.8% women consumed more than 100 iron folic acid tablets during antenatal period, which is well supported by study done by Shindhaye *et al* [7] shows 86.2% women registered for ANC received Iron and folic acid tablet and study conducted by S. Sumithra *et al* [10] where 98% women received iron folic acid tablet.

CONCLUSION

Coming to the conclusions, the majority of the rural dwellers belong to lower socio-economic class and most of the study subjects were unemployed. The utilization of ANC services among the rural dwellers was found to be satisfactory though few of them were lack behind due to ignorance and illiteracy. Antenatal care allows for the management of pregnancy, detection and treatment of complications and promotion of good health. However, women rarely perceive childbearing as problematic and therefore do not seek care. This affects the utilization of maternal health services in regions of the country where poverty and illiteracy were widespread. But the possibility of complications occurring was there and routine checks were highly desirable. The level of utilization of antenatal care services was not the same across states. This was likely to be due to differences in availability and accessibility of care among the states.

REFERENCES

1. International Institute for Population Sciences. National Family Health Survey: MCH and Family Planning. International Institute for Population Sciences; 1995.
2. Nair PM, Chandran A, Sabu A. The effect of maternal health programmes on infant and child survival in India. Journal of Family Welfare. 2000 Apr 1;46(1):61-9.
3. Pradeep TS, Kulkarni P, Murthy MN. Adolescent mothers: determinants and dimensions. International Journal Of Community Medicine And Public Health. 2017 Mar 28;4(4):1104-9.
4. Indicators of MCH care, MMR World Scenario, Preventive Medicine in Obsteritics, Pediartics and Geriartics. Park Text Book, 22nd Edition, 517.
5. Roy MP, Mohan U, Singh SK, Singh VK, Srivastava AK. Determinants of utilization of antenatal care services in rural Lucknow, India. Journal of family medicine and primary care. 2013 Jan;2(1):55.
6. Household DL. Facility Survey (DLHS-3), 2007–08. IIPS/mohfw. 2010;4.
7. Shidhaye PR, Shidhaye RR, Nagaonkar SN. Study of Utilization of Maternal Health Care

Services by Rural Women in Tertiary Care Teaching Hospital.
8. Paudel DP, Nilgar B, Bhandankar M. Antenatal care service utilization and contributing factors: a community based study in rural Belgaum, Karnataka, India. IOSR J Dent Med Sci (IOSR-JDMS). 2013;9(3):25-31.
9. Babu AK. Quality of work life in singareni collieries company limited. International Journal of Trade & Global Business Perspectives. 2013 Apr 1;2(2):334.
10. Sumithra S, Aswathy S, Sandeep S, Shobha P, Johnson AJ, Valsala LS, Lohidas V. Maternal and child health services utilization in married women of age 15-45 years. JOURNAL OF COMMUNICABLE DISEASES. 2006 Mar 21;38(1):102.