Research Article

Utilization pattern of antenatal health care services among married women of reproductive age group in the rural area of Surendranagar district, Gujarat, India: a community based cross sectional study

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ABSTRACT

Background: Maternal mortality continues to be a major public health problem. Inspite of the existence of national programmes for improving maternal and child health in India, maternal mortality and morbidity continue to be high. High quality antenatal care is the most important way to reduce the maternal morbidity and mortality. Utilization of Ante natal care (ANC) services is poor in the rural areas, causing significant impact on the health of the mother and ultimately leads to increased maternal morbidity and mortality.

Methods: It was a Community based Cross-sectional study. The study was carried out through oral questionnaire method using pre-designed and pretested performa. All the information was collected, compiled and analysed by applying suitable tests. The data was analysed by Statistical Package for Social Sciences (SPSS) and Microsoft word and Excel have been used to generate graphs, tables etc.

Results: A total of 403 women were included in the study. Pregnancy registration was done by 88.77% of the women at either government facility or private doctor. Out of total registered women, majority i.e. 54.25% had registered their pregnancy during 2nd trimester. In response to frequency of antenatal visits, study showed that, 59.18% (216) women had availed three or more than three antenatal visits. It was found that 81.92% (299) had taken complete (2 doses) tetanus immunization. About 47% of women had completed full course of iron and folic acid tablets. It was observed that only 46.03% women had availed complete ANC package.

Conclusions: Although Antenatal services in India have been created, strengthened and expanded over the years, their output in terms of utilization particularly in rural area is still limited. The present study has brought out many significant socio cultural barriers like caste, women's literacy, husband's literacy, occupation of women, socio-economic class and parity of women affecting the utilization of services.

Keywords: Antenatal health care services, Utilization pattern, Rural area

INTRODUCTION

Pregnancy and childbirth are special events in women's lives as well as in their families and that can be the time of great hope and joyful anticipation.[1] However, in many families, these events may become a symbol of sorrow and grief where mothers depart from their babies and families because of inadequate and poor or nil maternal health services provided to these innocent mothers. These maternal deaths could be prevented by applying simple preventive measures.[2] Preventable maternal deaths indicate gross violation of the basic human right of survival and highlight gross failure of health services on almost all fronts particularly in terms of choice of strategic

interventions and their extent of coverage in population.[3] Routine antenatal visits may raise the awareness about the need for care at delivery or give women and their families, familiarity with health facilities that enable them to seek help more efficiently during crisis.[4]

Antenatal care (ANC) refers to pregnancy-related health care, which is usually provided by a doctor, an ANM, or another health professional. Ideally, antenatal care should monitor a pregnancy for signs of complications, detect and treat pre-existing and concurrent problems of pregnancy, and provide advice and counseling on preventive care, diet during pregnancy, delivery care, postnatal care, and related issues. Antenatal care among pregnant women is one of the important factors in reducing maternal mortality and morbidity.[5] In India, the Reproductive and Child Health Programme aims at providing antenatal check-ups which should include a weight and blood pressure check, abdominal examination, immunization against tetanus, iron and folic acid prophylaxis, as well as anemia management.[6]

Antenatal Care has a tremendous impact on the health of the mother and child. However, good quality antenatal care is not uniformly distributed in society.[7] Advancements in technology have made sophisticated tertiary care available to those who can pay. At the same time, the gap between the rich communities and the poor, marginalized, and underserved communities is increasing.[8,9] There is a sharp distinction between states and between rural and urban areas. This could be related to several factors, an important one being non-utilization or under-utilization of maternal health-care services, especially amongst the rural poor and urban slum population due to inaccessibility, illiteracy , cultural factors which have significant relationship as a determinant of maternal & child health in population.[10,11]

For effective implementation of the programs, understanding of the factors affecting the utilization of antenatal care services during pregnancy is very essential. If these factors are correctly identified, then the program efforts can be concentrated to increase the acceptance/utilization rates. Therefore, the present study was carried out in the rural area of Surendranagar district with the following objectives; (1) To find out the utilization pattern of antenatal healthcare services. (2) To identify social correlates associated with utilization of antenatal healthcare services. (3) To assess the reasons for non-utilization of antenatal healthcare services.

METHODS

The study was conducted in Sayla of Surendranagar district, Gujarat, India a field practice area of C. U. Shah Medical College. It was a Community based Cross-sectional study. Institutional ethical clearance was obtained prior to initiation of the study. The total population of Sayla is 16,169. There are 7799 females and 8370 males.[12] As per SRS-2012 percentage distribution of married females of reproductive age group in Gujarat (Rural area) is 51.7% which amounted to 4032 females.[15] It was decided

to include 10% of the total married females of reproductive age group which amounted to 403 females as the sample size.

Sayla is divided into 17 main areas named Muli Darvaja, Karshanpara, Sabhani Pa, Sarvaliya Pa, Pipaliya Sheri, Vihat Chock, Sudamana Darvaja, Ambedkar Nagar, Dalvadi Sheri, Holi Dhar, Limda Sheri, Kamdar Sheri, Rampara Darvaja, Navagadh, Khatki Vas, Ramdev Nagar, Bhatt Sheri. Out of these, five areas were selected randomly named Muli Darvaja, Rampara Darvaja, Ambedkar Nagar, Sudamana Darvaja and Sabhani pa. The houses in the area were listed and a randomly selected house was taken as the first house to be surveyed. Houses were selected only from one direction of the lane to avoid cross selection and duplication, and continued till the blind end reached. In the next lane the same procedure was followed till the entire sample size was achieved. Married women of reproductive age group (15-44) were included in the study whereas Unmarried women, women not giving consent, non-co-operative women and post-menopausal women were excluded from the study. The collection tool used was a pre designed questionnaire, which was pre-tested. Data collected as such was compiled, coded and analyzed using SPSS and expressed in percentage. Chi-square test was used for evaluating association between antenatal care (ANC) and categorical variables. 'P' value less than 0.05 was considered statistically significant.

RESULTS

A total of 403 women were surveyed during the study period. Majority of them i.e. 161 (39.95%) were between 20-24 years followed by 129 (32.01%) between 25-29 years, 53 (13.15%) between 30-34 years, 33 (8.19%) were in the age group of 35 years or more. There were only 27 (6.70%) in the age group of 15-19 years (Table 1).

Out of 403 respondents covered under the study, majority i.e. 338 (83.87%) were Hindus and 57% were living in joint families (Figure 1 and Table 2).

On analyzing the educational status, it was seen that most of the women i.e. 177 (43.92%) were illiterate. 37 (9.18%) were just literate (who can read and write but not completed primary education), 98 (24.32%) had education up to primary, 41 (10.17%) had education up to secondary (SC), 29 (7.20%) had education up to higher secondary (HSC) and only 21 (5.21%) were graduated and had education above that. Data relating to their husband's education showed that 32.51% (131) were educated up to primary, 24.07% (97) were illiterate, 13.65% were educated up to secondary (SC), 10.67% (43) had education up to higher secondary and 7.19% (29) were graduated or had education above that (Table 3).

Out of total 403 married women, 46.40% (187) women were housewives, 24.32% (98) were labourers, 15.38% (62) were agricultural workers and 9.68% (39) of women were doing service or job (Figure 2).

Table 1: Age distribution of women under study (n=403).

| Age group (years)	Numbers	Percentage (%)
15-19	27	6.70%
20-24	161	39.95%
25-29	129	32.01%
30-34	53	13.15%
$\geq$ 35	33	8.19%
Total	403	100%
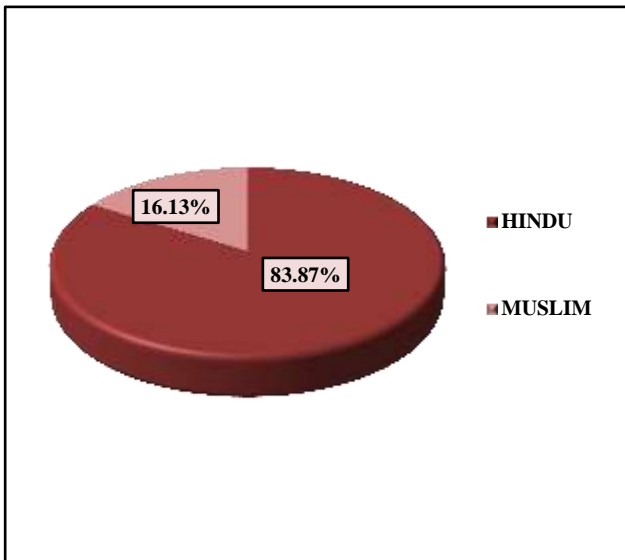
Figure 1: Distribution of women according to their religion (N=403).

Table 2: Distribution of women according to their type of family (N=403).

Type of family	Numbers	Percentage (%)
Nuclear	173	42.93%
Joint	230	57.07%
Total	403	100%

Table 3: Literacy status of women and their husband (N=403).

| Educational status	Women Number (%)	Husband Number (%)
Illiterate	177 (43.92%)	97 (24.07%)
Just literate	37 (9.18%)	48 (11.91%)
Primary	98 (24.32%)	131 (32.51%)
Secondary	41 (10.17%)	55 (13.65%)
Higher Secondary	29 (7.20%)	43 (10.67%)
Graduate and above	21 (5.21%)	29 (7.19%)
Total	403 (100%)	403 (100%)
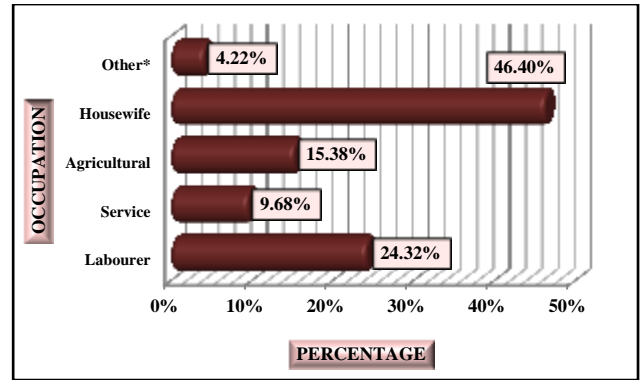
Figure 2: Occupational status of women under study (N=403).

According to Uday Pareek classification of socio-economic class, 39.21% (158) women were in the upper lower (IV) socioeconomic class followed by 29.03% (117) in the lower (V) socioeconomic class, 15.63% (63) in the upper middle (II) socioeconomic class, 10.92% (44) in the lower middle (III) socioeconomic class and only 5.21% (21) women were in the upper (I) socioeconomic class (Table 4).

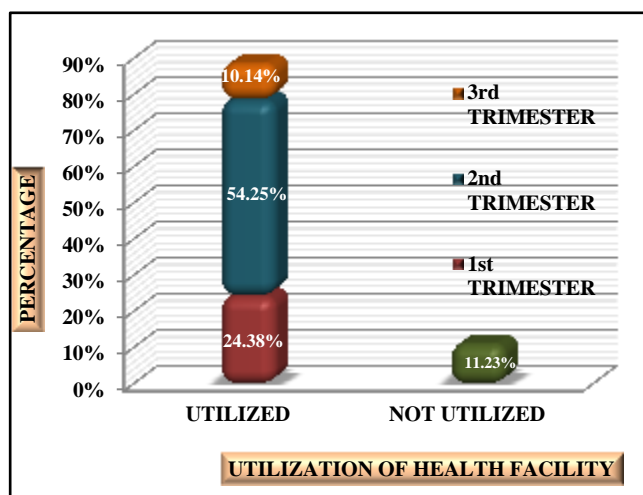**Table 4: Distribution of women according to socio-economic class (N=403).**

Socio-economic class	Numbers	Percentage (%)
Upper I	21	5.21%
Upper middle II	63	15.63%
Lower middle III	44	10.92%
Upper lower IV	158	39.21%
Lower V	117	29.03%
Total	403	100%

Majority of the women under study i.e. 27.79% and 26.30% had two children and one child respectively. There were 16.13% women who had 3 children, 14.4% who had 4 children and 4.7% who had 5 or more children (Figure 3).
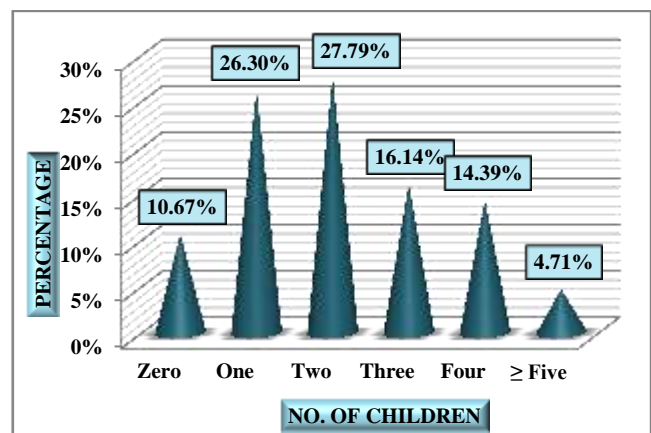
Figure 3: Distribution of women according to their number of children (N=403).

Pregnancy registration was done by 88.77% of the women at either government or private health facility. Out of total registered women, majority i.e. 54.25% had registered their pregnancy during 2nd trimester and 24.38% women had registered themselves during 1st trimester. However, about 10.14% women had registered themselves at the health facility only during their 3rd trimester (Figure 4).

Figure 4: Distribution of women according to utilization of health facility for antenatal registration (N=365).

Out of total women who had registered, 63.27% were registered at the government health facility and 36.73% at the private health facility. In response to frequency of antenatal visits, study showed that 59.18% (216) women had availed three or more than three antenatal visits and 27.94% (102) had availed less than three antenatal visits. About 12.88% (47) women had not availed a single antenatal visit. It was found that 81.92% (299) had taken complete (2 doses) tetanus immunization and 5.20% (19) women had taken incomplete (at least one dose) immunization. About 47% of women had completed full course of iron and folic acid tablets (100 tablets) where as 37.53% had not completed iron and folic acid supplementation. It was unfortunate to note that 15.35% women had not consumed a single tablet of iron and folic acid (Table 5 and 6).

Table 5: Type of health facility utilized for antenatal registration (N=324*).

Place of registration	Numbers	Percentage
Government health facility	205	63.27%
Private health facility	119	36.73%

(*11.23% women were not registered)

It was observed that only 46.03% women had availed complete ANC package i.e. ≥3 ANC Visit + At least one TT/Booster + ≥100 IFA Tablets, whereas majority (53.97%) of the women had not availed complete ANC package. The present study revealed that out of total women who had availed complete ANC package, 26.85% availed services from the government health facility,

15.34% from the private health facility and 3.84% women from both the health facility (Table 7, Figure 5 and 6).

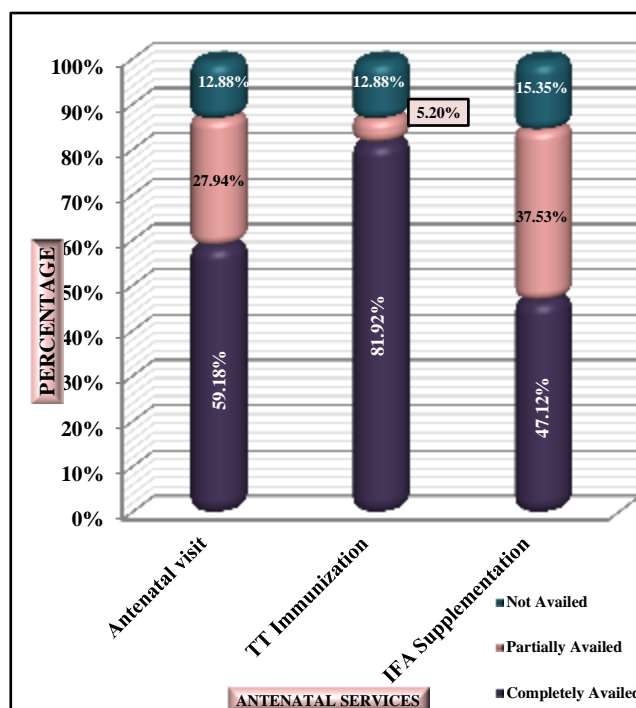**Table 6: Antenatal services utilization by women (N=365*).**

Antenatal services	Numbers	Percentage(%)
Antenatal visits		
<3	102	27.94%
≥3	216	59.18%
Not a single visit	47	12.88%
Tetanus toxoid immunization		
Incomplete immunization	19	5.20%
Complete Immunization	299	81.92%
Not Immunized	47	12.88%
Iron and folic acid tablets		
≥100 tablets	172	47.12%
<100 tablets	137	37.53%
Not taken	56	15.35%

(*38 women had never conceived and 5 women were primigravida).

Table 7: Distribution of women according to utilization of full antenatal care package* (N=365).

Full ANC package*	Numbers	Percentage
Availed	168	46.03%
Not availed	197	53.97%
Total	365	100%

(* ≥3 ANC Visit + At least one TT/Booster + ≥100 IFA tablets)

Figure 5: Distribution of women according to antenatal services availed (N=365).
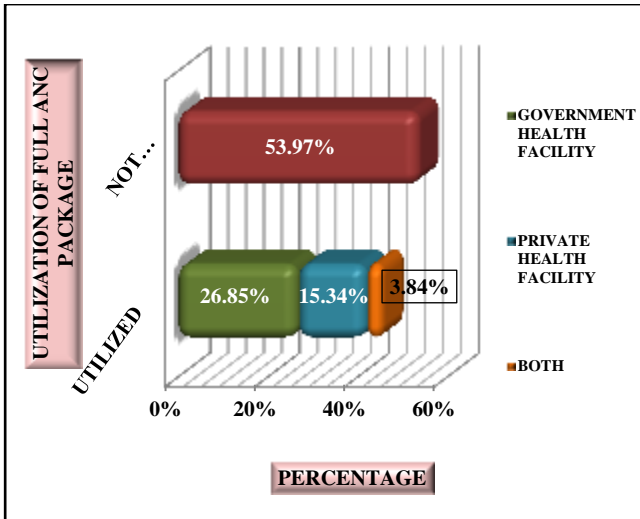
Figure 6: Health facility utilization for availing full ANC package (N=365).

No significant difference was found regarding utilization of full ANC services among different religions. About 53% women belonged to General category of Caste had utilized full ANC package as compared to 37.50% and 41.18% women belonged to Schedule Cast/Schedule Tribe and Other Backward Caste respectively. This difference was found to be statistically significant. The analysis showed that 44.94% and 46.86% women living in nuclear and joint family respectively had utilized full ANC package.

It was seen that literacy status of women had a direct association with utilization of ANC services. Among total women, full ANC services was utilized by 75% and 73.08% of the graduates and higher secondary educated respectively, nearly 57% of secondary educated and 43.3% of primary educated and only 39.24% and 35.29% of illiterates and just literates respectively. The association was statistically significant.

The data revealed that education of husband had also an impact on utilization of ANC services, which decreased as education of husbands decreased. This difference had a significant statistical association.

Among the women 55.23% housewives had availed full ANC services as compared to 37.82% of working women. This difference in receiving full ANC services among housewives and working women was found to be significant statistically. No such association was found between the employment status of husband and utilization of ANC services.

Study indicated a significant association between women's socio-economic class and availing the ANC services. It was observed that as the socio-economic status decreased, the level of utilization of ANC services was also decreased and this association was statistically significant.

Study found that there is an inverse association between parity of females and utilization of full ANC services. As the parity of females increased, the level of utilization of ANC services was decreased (Table 8, Figure 7 and 8).
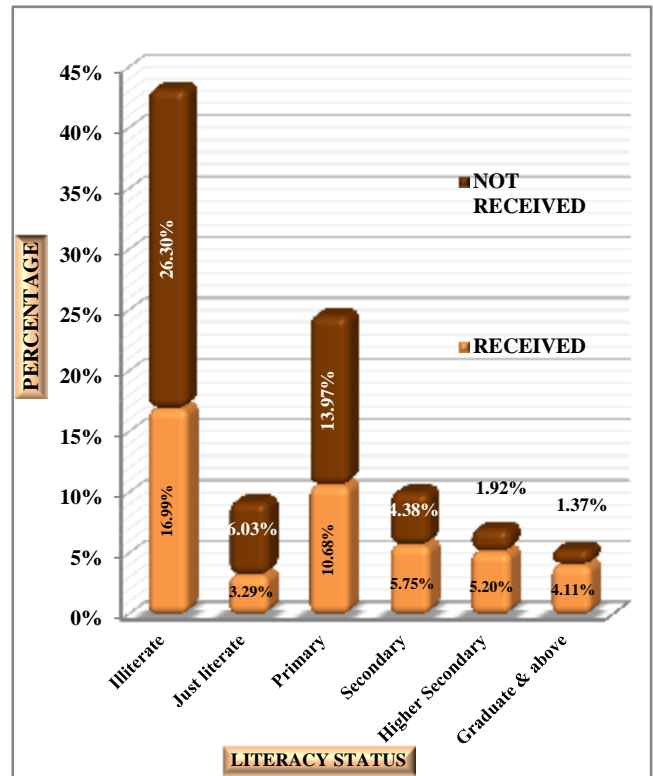
Figure 7: Literacy status and its association with utilization of full ANC package (N=365).
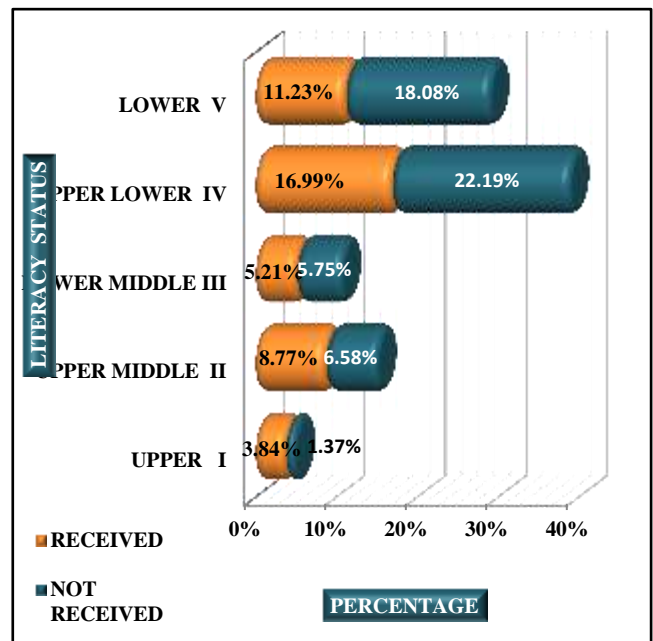
Figure 8: Socio-economic class and its association with utilization of full ANC package (N=365).

Table 8: Socio-demographic variable and utilization of full antenatal care package (N=365).

Socio-demographic variable	Full ANC package		Statistical Values
	Utilized	Not utilized	
	Number (%)	Number (%)	
Religion			
Hindu	147 (47.26%)	164 (52.73%)	$x^2 = 1.3$
Muslim	21 (38.89%)	33 (61.11%)	$p > 0.05$
Total	168 (46.03%)	197 (53.97%)	
CASTE			
Open	101 (52.33%)	92 (47.67%)	$x^2 = 6.776$
SC/ST	39 (37.50%)	65 (62.50%)	$p < 0.05$
OBC	28 (41.18%)	40 (58.82%)	OR = 1.72
Total	168 (46.03%)	197 (53.97%)	$(1.13 - 2.61)$#
Type of family			
Nuclear	71 (44.94%)	87 (55.06%)	$x^2 = 0.133$
Joint	97 (46.86%)	110 (53.14%)	$p > 0.05$
Total	168 (46.03%)	197 (53.97%)	
Literacy status of women			
Illiterate	62 (39.24%)	96 (60.76%)	$x^2 = 20.9$
Just literate	12 (35.29%)	22 (64.71%)	$p < 0.05$
Primary	39 (43.34%)	51 (56.66%)	OR = 1.90
Secondary	21 (56.75%)	16 (43.25%)	$(1.25 - 2.88)$#
Higher Secondary	19 (73.08%)	7 (26.92%)	
Graduate and above	15 (75.00%)	5 (25.00%)	
Total	168 (46.03%)	197 (53.97%)	
Literacy status of husband			
Illiterate	26 (28.26%)	66 (71.74%)	$x^2 = 21.583$
Just literate	17 (40.48%)	25 (59.52%)	$p < 0.05$
Primary	58 (48.74%)	61 (51.26%)	OR = 2.49
Secondary	27 (57.45%)	20 (42.55%)	$(1.60 - 3.90)$#
Higher Secondary	23 (58.97%)	16 (41.03%)	
Graduate & above	17 (65.38%)	09 (34.62%)	
Total	168 (46.03%)	197 (53.97%)	
Employment status of women			
Housewife	95 (55.23%)	77 (44.77%)	$x^2 = 11.095$
Working	73 (37.82%)	120 (62.18%)	$p < 0.05$
Total	168 (46.03%)	197 (53.97%)	OR = 2.03
			$(1.33 - 3.08)$#
Employment status of husband			
Employed	91 (46.67%)	104 (53.33%)	$x^2 = 0.069$
Unemployed	77 (45.29%)	93 (54.71%)	$p > 0.05$
Total	168 (46.03%)	197 (53.97%)	
Socio-economic class			
I	14 (73.68%)	05 (26.32%)	$x^2 = 11.641$
II	32 (57.14%)	24 (42.86%)	$p < 0.05$
III	19 (47.50%)	21 (52.50%)	OR = 2.18
IV	62 (43.36%)	81 (56.64%)	$(1.30 - 3.67)$#
V	41 (38.32%)	66 (61.68%)	
Total	168 (46.03%)	197 (53.97%)	
Parity of females*			
One	61 (57.55%)	45 (42.46%)	$x^2 = 7.849$
Two	49 (43.75%)	63 (56.25%)	$p < 0.05$
Three or Above	57 (40.14%)	85 (59.86%)	
Total	167 (46.39%)	193 (53.61%)	

(# 95% Confidence Limits,*5 Women Were Primigravida).

In vast majority of the respondents, the reason for non-utilization of ANC package was lack of knowledge about full ANC services (58.88%) followed by family member's refusal/financial problem in 10.66% women and fear of

side effects of injections and tablets in 8.12% of women. However 6.61% of women believed that there is no need of these services during antenatal period. In 5.58% of women the reason was far distance of health facility and 4.06% of women had problem of non-availability of TT Vaccine/IFA tablets at the health facility (Table 9).

Table 9: Reasons for non-utilization of full ANC package (N=197).

Reasons for non-utilization	Numbers (%)
Unaware of full ANC services	116 (58.88%)
Health facility distant from home	11 (5.58%)
Fear of side effects of injections & tablets	16 (8.12%)
No need of service	13 (6.61%)
Non availability of TT / IFA tablets	08 (4.06%)
Family member's refusal/Financial problem	21 (10.66%)
Any other/Multiple reason	12 (6.09%)

Among the 87 women who had complication during antenatal period, 64.37% had not availed full ANC services during their antenatal period. It was unfortunate to know that in spite of availing full ANC package 35.63% women had suffered from antenatal complication. In depth inquiry of these 30 women having complication during their antenatal period revealed that majority of them had not followed the advice given at the health centre regarding nutrition, rest, regularity in consuming iron and folic acid tablets etc. Over work and stress also was a limiting factor in not being able to take care of them which was responsible for the findings (Table 10).

Table 10: Antenatal care package utilization and antenatal complication (N=365).

Antenatal care package	Antenatal complication		Statistical Values
	Present	Absent	$x^2 = 11.641$
	Number (%)	Number (%)	$p < 0.05$
Utilized	31 (35.63%)	137 (49.28%)	OR = 2.18
Not Utilized	56 (64.37%)	141 (50.72%)	(1.29 -
Total	87 (23.84%)	278 (76.16%)	3.67)[#]

(# 95% Confidence Limits).

DISCUSSION

The analysis of the data disclosed that there is no significant difference between the religions as far as utilization of full ANC services/package was concerned. Study conducted by Revathi S et al and Bajpai R.C. et al also found similar result.[14,15]

Among 403 respondents covered by the study, about 57% were living in joint families; around 47% and 43% of women belonging to joint and nuclear family respectively had availed full ANC services. The difference was not statistically significant. Similar finding was also observed in a study conducted by Mumbare SS et al on antenatal care services utilization.[16]

Significant difference was found as far as the literacy status of women respondents was concerned. The data revealed that education of both the partners had an impact on utilization of ANC services. The proportion of women who had received full ANC package was increased as the education level of women increased. A majority (60.76%) of the illiterate women had not received full ANC package as compared to 25% of women who were graduates or more than that. Similar result was found by other studies carried out by Mondal SK, Gupta A, Revathi S et al and Sahani B et al.[14,17-19]

Present study revealed that nearly half of the women respondents were housewives and were not engaged to any occupation outside the home. About one-fourth of the total respondents were labourers by occupation. About 15% were engaged in agricultural work and only about 9% were in service. Working women had utilized less ANC health services as compared to women who were housewives and this difference was found to be significant statistically. The reason for poor utilization among working women was may be due to the fact that they could not afford to lose one day's wages. In contrast to this Dabade KJ et al in their study found no significant association.[20]

The analysis shows that social class background of respondents made significant difference in the utilization of full ANC package. Majority of women (40%) belonged to class IV, 29% were from class V, 15% (63) were in class II, around 10% were from class III and only 5.21% women were from class I. It was observed that as the socio-economic status decreased, the level of utilization of full ANC package was also decreased and this difference was found to be significant statistically. Mumbare SS et al and Dasgupta U et al also showed a positive association between the Socio-economic class and Utilization of ANC services.[16,21]

Out of 365 women, around 88% had registered at either government or private health facility, whereas about 12% women had not registered at any of the health facility. According to studies conducted by Mumbare SS et al and Revathi S et al around 86% and 98% had registered their pregnancy at the health facility.[16,14]

In the present study more than half (61%) had registered their pregnancy during 2nd trimester, 27.47% had registered during 1st trimester and about 12% during 3rd trimester. Study carried out by Mumbare SS et al found that 63.81% had registered their pregnancy in 1st trimester.[16]

Out of total women who had registered, 205 were registered at the Government health facility where as 119 were registered at the Private health facility. Sheth JK et al in their study also found that 59.4% of women had registered at government health facility and 21.2% at

private health facility which was similar to the present study.[22]

In response to frequency of antenatal visits, the result showed that, around 59% women had availed three or more than three antenatal visits, 27.94% women had less than three antenatal visits whereas about 13% women had not received a single antenatal visit. Study conducted by Gupta SK et al also found that 59% women had three minimum recommended visits.[23] According to NFHS 3 the proportion of women who had at least 3 antenatal care visits for their last birth for rural area was 42.8%.[24] As per DLHS 3 report of India, women who had three or more ANC in rural area were 44.1%.[25]

Study indicated about 82% women had received complete tetanus immunization, around 6% had received incomplete immunization and nearly 13% were not immunized at all. As per the fact sheet of DLHS 3, 73.4% of women had received at least one tetanus toxoid injection.[25] Dubey DK in their study in Uttar Pradesh found that 75% of women were fully immunized with 2 doses of TT which was less as compared to our study.[26]

Around 48% women had received full course of iron and folic acid tablets (100 tablets) where as 37.53% women had not completed iron and folic acid supplementation. It was unfortunate to note that 15.35% women had not consumed a single tablet of iron and folic acid. AS per DLHS 3, 46.6% women had received 100 IFA tablets.[25] According to NFHS 3, only 22.3% mothers had consumed IFA tablets for 90 days or more than that.[23] A Study conducted by Bhanderi DJ et al in Anand district of Gujarat found that 48.3% women had consumed full course of IFA tablets which was very similar to present study.[27]

Full ANC package include ≥3 ANC Visit + At least one TT/Booster + ≥100 IFA tablets. Out of 365 women only 46.03% women had utilized complete ANC package. Revathi S et al in their study found that 80.8% women had utilized full antenatal care during their pregnancy.[14] As per DLHS 3, around 32.2% had availed full ANC package.[25]

It was disappointing that in present study around 54% of women did not avail full ANC package due to one or more reasons and association was observed between utilization of full ANC services and antenatal complication. Women who did not avail full ANC services had faced more ante natal complications which was similar to the study carried out by Sarode VM.[28]

The most potential reason for not availing the full ANC package was found to be lack of awareness about full ANC package (about 60%). The other reasons were fear of side effects of injections and tablets in nearly 8% of women, belief of no need of these ANC services in 7%. In 5.58% of women the reason was far distance of health facility and 4.06% of women had problem of non-availability of IFA tablets at the health facility. Bajpai RC et al and Mumbare

SS et al in their study also found same reasons for non-utilization of ANC services.[15,16]

Although antenatal services in India have been created, strengthened and expanded over the years, their output in terms of utilization particularly in rural area is still limited. The present study has brought out many significant socio cultural barriers like caste, women's literacy, husband's literacy, occupation of women, socio-economic class and parity of women affecting the utilization of antenatal services.

Utilization of ANC services according to religion did not show a specific pattern of distribution. Caste was found to be associated with the utilization of full ANC services as more than half (52.33%) women from general caste availed full ANC services as compared to only about 38% from other caste. Women living in joint families were found to avail more ANC services as compared to women living in nuclear family. Parity of women had also an impact on utilization of ANC services as more than half (about 58%) women having one child had utilized full ANC package as compared to women having more than one children.

The utilization of ANC services was found better among educated women compared to illiterate women as nearly 55% literate women had utilized full ANC services as compared to only 32% of illiterate women.

Working women had utilized less antenatal health services as compared to women who were housewives. ANC package utilization was found to be directly proportional to the socio economic class as around 62% women from upper socio-economic class had utilized full ANC package as compared to only around 42% women from lower socio-economic class.

The main reason for non-utilization of ANC services was found to be unawareness. Utilization of ANC services had also an impact on the development of complication during antenatal period. Women who did not avail full ANC package had faced more complications as compared to women who had utilized full ANC services.

The main problem of under-utilization is embodied in the socio-economic and cultural background of the care-seekers. There is a need to target certain population and to find a way through which the utilization of antenatal health care services can be accelerated. Information, education and communication (IEC) activities with emphasis on government programmes focusing on maternal and child health need to be strengthened, keeping the socio-cultural context in mind in order to generate a favourable opinion among the rural people towards services provided by the Government.

CONCLUSION

Although Antenatal services in India have been created, strengthened and expanded over the years, their output in

terms of utilization particularly in rural area is still limited. The present study has brought out many significant socio cultural barriers like caste, women's literacy, husband's literacy, occupation of women, socio-economic class and parity of women affecting the utilization of services.

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