

Research Article

Study of factors of utilisation of antenatal services and awareness among pregnant women in third trimester attending government maternity hospital Warangal, Telangana State, India

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ABSTRACT

Background: Understanding the factors affecting the utilization of maternity care during pregnancy and delivery is required. The present study was carried out to find out the awareness and factors associated with utilization of maternal care services.

Methods: A community based observational study was conducted during September to November 2015 on randomly selected antenatal mothers attending Government Maternity hospital, Kakatiya Medical College, Warangal, India. A total of 200 third trimester pregnant women were interviewed using a pre-tested questionnaire regarding utilization and awareness of antenatal services. Statistical analysis: Percentages, Proportions and chi-square test.

Results: A total of 200 antenatal mothers participated in the study. Majority (37.5%) belonged to the age group of 20-24 years in which most of the antenatal mothers belong to Hindu religion (86.3%), of which 50.7% lived in a nuclear family. In this study, the percentage of antenatal mother belonging to Upper Lower class was predominant with 26.5%. Association was also found regarding utilization of antenatal services between age of the mother and literacy of the mother. 83.5% of the antenatal mothers had taken the recommended two doses of T.T with a complete booster dose, 87.1% are aware of family planning services, 97.8% of antenatal mothers are aware of immunization and approximately 95% of the antenatal mothers are aware of mother craft classes.

Conclusions: The study shows early and wide spread use of antenatal care, but it also reveals that the antenatal visits occur late in the pregnancy. The literacy and age of women has significant bearing on utilization of antenatal care by the pregnant women.

Keywords: Antenatal services, Socio-demographic variables, Pregnant mother, Utilization

INTRODUCTION

Every minute a woman dies as a result of pregnancy or childbirth. Loss per annum of 500,000 women is mind boggling. Thus, maternal mortality continues to be a major public health problem.¹ About 99% of all maternal deaths occur in developing countries. The focus on maternal mortality was sharpened when reduction in maternal mortality became one of the eight goals for development in the Millennium Declaration (Goal 5).²

The target for MDG 5 is to reduce the maternal mortality ratio (MMR) by three quarters from 1990 to 2015.³

Maternal mortality is higher in women living in rural areas and among poorer communities. Young adolescents face a higher risk of complications and death as a result of pregnancy than other women. Skilled care provided before, during and after childbirth can save the lives of women and newborn babies. Between 1990 and 2015, maternal mortality worldwide dropped by about 44%.

Between 2016 and 2030, as a part of the sustainable development agenda, the target is to reduce the global maternal mortality ratio to less than 70 per 100,000 live births.⁴

Current maternal mortality in India is 167 per 100,000 live births.⁵ For effective implementation of the programs, understanding of the factors affecting the utilization of maternity care during pregnancy and delivery is required.

If these factors are correctly identified, the program efforts can be concentrated to increase the acceptance/utilization rates. Therefore, the present study was carried out to find out the factors associated with utilization of maternal care services.

Objectives

- To relate the various socio-demographic variables with utilization of antenatal services.
- To assess the health seeking behavior patterns existing among pregnant women.

METHODS

A cross-sectional study was carried out among 200 pregnant women who came for regular antenatal checkups during third trimester at Government maternity hospital, Kakatiya medical college, Warangal by a convenient sampling method over a period of 3 months from September 2015 to November 2015.

Kakatiya Medical College (KMC) is located in Warangal, Telanagana state under the gamut of Kaloji Narayana Rao University of Health Sciences. It is one of the premiere teaching and training public institutions of Telangana state that provides specialist tertiary-care services to patients largely belonging to lower/middle socio-economic strata of the society with rural and urban backgrounds.

A pre-designed, pre-tested, self-administered questionnaire in English was devised to collect data. The demographic details like age, occupation, education, marital status, BMI, past history, associated diseases, other chronic illness, hereditary factors, habits and lifestyle, health seeking behavior of the respondents were recorded.

Some questions were objective in nature with 'yes' or 'no' answers whereas a few questions were multiple-choice. The pregnant women studied on a voluntary basis and those who were too sick were not included in the study.

All study participants were given a briefing about the objective of the study and were assured about complete confidentiality regarding collection and storage of personal data.

Statistical analysis

Data were entered into Microsoft Excel and analyzed using the Statistical Package of Social Sciences (SPSS) version-22.0. Statistical significance was set at $P \leq 0.05$.

RESULTS

According to Table 1, the mean age of the antenatal mother is 23 years, and the number of third trimester mothers belonging to the age group of 20-24 years is 75(37.5%), amongst which most of the antenatal mothers belong to Hindu religion (86.3%) and 50.7 % lived in nuclear families. In this study, a predominant number of third trimester mothers belonged to upper lower class (26.5%).

Table 1: Socio-demographic profile of the study population.

Socio-demographic profile	Number (%)
Mean age	23 years
Mothers age	
<19 Years	38 (19%)
20-24 Years	75 (37.5%)
25-29 Years	51 (25.5%)
>30 Years	36 (18%)
Religion	
Hindu	173 (86.3%)
Muslim	15 (7.9%)
Christian	12 (5.8%)
Family Type	
Nuclear	101 (50.7%)
Joint	96 (47.9%)
Extended	03 (1.4%)
Socio Economic Status	
Upper Class	40 (20%)
Upper Middle	41 (20.5%)
Lower middle	42 (21%)
Upper lower	53 (26.5%)
Lower	24 (12%)
Antenatal mother Education	
Illiterate	27 (13.5%)
Primary	35 (17.5%)
Secondary	54 (27%)
Intermediate	48 (24%)
Graduate	33 (16.5%)
Post graduate	3 (1.5%)
Husband's education	
Illiterate	17 (8.6%)
Primary	27 (13.7%)
Secondary	85 (42.4%)
Intermediate	17 (8.6%)
Graduate	44 (22.3%)
Post graduate	9 (4.3%)

As depicted in Table 2, 87.8% of antenatal mothers are ANC registered and 67.6% have registered in the 1st trimester while 12.2% of antenatal mother's registered in 3rd trimester, 89.2% had antenatal card with 75.5%

antenatal mother's received IFA tablets are predominant. In this study, 74.8% of the antenatal mother's approach government hospital during health problems.

Table 2: Utilization of antenatal services amongst study population.

Utilization of antenatal services	YES (%)	NO (%)
Antenatal Care		
ANC Registration	176 (87.8%)	24 (12.2%)
Time of registration (1 st Trimester)	135 (67.6%)	65 (32.4%)
Antenatal card	178 (89.2%)	22 (10.8%)
Received antenatal care at Government sector	163 (81.4%)	37 (18.6%)
At least 4 antenatal visits	131 (65.7%)	68 (34.3%)
IFA Tablets	151 (75.5%)	49 (24.5%)
Abortions		
Spontaneous	125 (62.5%)	75 (37.5%)
Uneventful	38 (18.8%)	162 (81.2%)
MTP	38 (18.8%)	162 (81.2%)
Approach to treatment during health problems		
Self medication	13 (6.5%)	187 (93.5%)
Government hospital	150 (74.8%)	50 (25.2%)
Private Hospital	37 (18.7%)	163 (81.3%)

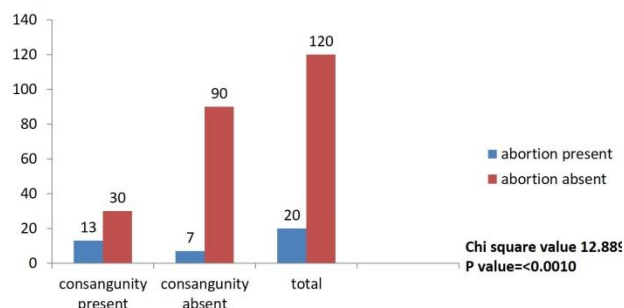


Figure 1: Response regarding consanguinity and abortion.

Figure 1 show there is significant relation between consanguinity and abortion ($p < 0.0010$), this indicates as consanguinity present there is increase chance of abortion. As Table 3 shows that there is a statistically significant relation between age of the mother with awareness of utilization of antenatal services (p -value=0.001). In this study, there is no statistically significant relation between gravida and awareness of utilization of antenatal services (p -value=0.682). In this study, there is a statistically significant relationship between literacy of mother with awareness of utilization of antenatal services (p -value=0.000). In this study, there is no statistically significant relation between socio economic status of mother with awareness of utilization antenatal services (p -value=0.984).

Table 3: Age of the mother, gravida, education and socio-economic status of mother with relation to awareness of utilization of antenatal services.

Characteritics	Antenatal care services utilization		P-value
	Yes	No	
Age of mother			
<19	32	6	P= 0.001
20-24	71	4	
25-29	36	15	
>30	34	2	
Gravida			
1	86	12	P=0.682
>1	87	15	
Literacy of mother			
Illiterate	22	5	P=0.000
Primary	28	7	
Secondary	53	1	
Intermediate	40	8	
Graduate/diploma	30	6	
Socio economic status			
Class 1	34	6	P=0.984
Class 2	35	6	
Class 3	36	6	
Class 4	47	6	
Class 5	21	3	

Table 4: Regarding response on T.T Doses.

T.T. Doses	Percentage
Nil	2.2%
1 dose	6.50%
2 dose	7.90%
Booster dose	83.50%

As Table 4 shows that, 83.5% of the antenatal mother's had taken complete 2 doses of T.T. with a complete booster dose. As Table 5 shows that 78.4% antenatal mothers are aware of complications in antenatal period, 87.10% of antenatal mothers are aware of breast feeding, 87.1% are aware of family planning services and most of the antenatal mothers are aware of warning signs of antenatal period.

Table 5: Regarding awareness in antenatal period.

Awareness	Yes (%)	No (%)
Awareness in antenatal period		
Complications	78.4%	21.60%
Breast feeding	87.10%	12.90%
Care of the baby	87.10%	12.90%
Need for cleanliness at time of delivery	88.50%	11.50%
Family planning	87.10%	12.90%
Warning signs		
Swelling of Feet	77.7%	20.1%
Fits	80.6%	19.4%
Headache	78.4%	21.6%
Blurring of Vision	78.4%	21.6%
Bleeding/Discharge per vagina	80.6%	19.4%

Table 6: Mother craft education.

Craft education	Yes (%)	No (%)
Nutrition	93.5%	6.5%
Advice on Child hygiene	93.5%	6.5%
Cooking demonstrations	18.7%	81.3%
Family Planning	87.1%	12.9%
Family Budgeting	16.5%	83.5%
Immunization of new born	97.8%	2.2%
Use of Contraceptives	32.4%	57.6%

As Table 6 shows that 97.8% of antenatal mothers are aware of immunization and approximately 95% of the antenatal mothers are aware of mother craft classes. In this study 32.4% of antenatal mothers are aware of use of contraceptives.

DISCUSSION

The present study was carried out among pregnant women in the third trimester residing at government maternity hospital K.M.C, Warangal. A total of 200 pregnant women were interviewed and analyzed for ANC services utilization in 3rd trimester.

Adequate ANC service utilization rate in the study: 78% ANC cases are registered and 65.7% pregnant women are have least 4 visits, Similarly according to NFHS-4 state fact of Telanagana state, women with at least 4 antenatal

visits are 75%, Whereas in NFHS-3, pregnant women having at least 3 or more antenatal visits in India are 52%.^{5,6} Another study done by Banerjee B also estimated that 93% women have 3 antenatal checkups.

In other study done by Singh and Arora also noted that 34.9% cases had 3 or more antenatal visits.^{7,8}

In this study, association of utilization of ANC services by women was not found statistically significant with socio economic status but education and age of mother were found influencing factors on ANC utilization. Similar results were observed in a study done by Chandhoik N et al i.e. proportion of women obtaining antenatal care services increases with increasing age.⁹

Various socio demographic factors of family show a good response with utilization of antenatal services. It shows the impact of education on awareness and utilization of services. 83.5% of pregnant women had received TT booster dose and 6.5% received 1 TT dose and 2.2% pregnant didn't receive single dose of TT compared to 77.9% of pregnant women had 1 received TT2 / booster and 13.6% had not taken a single dose of TT in a study done by Singh P et al.¹⁰

It is important note to that more than 60% of women claimed that they heard about the service by health extension workers. This is an important finding because it heralds that mothers have trust on health extension

workers. As predicted by other studies elsewhere, majority of the respondents sensitization (72.04%) was by health workers; if health workers are encouraged and empowered, this would make ANC awareness better.¹¹⁻¹⁶

The literacy of women and age of the mother has significant effect on antenatal care of pregnant women. 12.2% of pregnant women's have registered in third trimester. Most (57.6%) of the eligible couples are unaware of contraceptive. According to NFHS-4 Telangana state fact, eligible couples with unmet needs of family planning were 7.3%.⁵ Majority of abortions were seen in consanguineous marriages.

Limitations

One of the limitations of the study was the use of a convenient sample. It limited the generality and ability of the study. In addition, it is important to remember that the results of this study are dependent upon the accuracy of the responses.

CONCLUSION

The study shows early and widespread use of antenatal care, but it also reveals that the antenatal visits occur late in the pregnancy.

Most of the eligible couples are with unmet needs of family planning. The literacy and age of women has significant bearing on antenatal care of pregnant women and increased incidence of abortions was seen in consanguineous marriages. Thus, measures should be adopted for improving female literacy and preventing consanguinity in marriages.

Recommendations

Increase the ANC utilization services and improve at least 4 visits by 100%. This means there is need of more health education awareness among pregnant mothers and their family. Educate and council the mothers and their parents not to encourage for consanguinity marriage and to reduce the prevalence of abortions.

Educate and council the public and antenatal mother's by ANM workers regarding awareness of utilization of antenatal services. The literacy of women has significant bearing on antenatal care of pregnant women. Thus, measures should be adopted for improving female literacy.

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