

# Utilisation of maternal health services in rural field practice area of Kakatiya medical college, Warangal, Telangana, India

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## Abstract

**Introduction:** Maternal mortality and morbidity continue to be high despite the enormous inputs and efforts imposed through National Health Programmes. Proper utilization of maternal health care services plays an important role in reducing the maternal mortality rate. Hence assessment of factors influencing the utilisation of these services become essential. The objective is to estimate the proportion of women utilising the maternal health services and to determine the factors associated with utilisation.

**Methods:** A cross sectional study carried out in mothers of under five children. One village was selected by simple random technique from the 3 villages of rural field practice area of Kakatiya Medical College (KMC), Warangal. All the eligible mothers for the study after obtaining consent, were interviewed using pretested semi-structured questionnaire. Data collected was compiled and exported to SPSSV20 and analysed using chi-square test.

**Results:** Of the 180 women, 6.7% had teenage pregnancies, 97.8% registered the pregnancies, 97.8% had minimum 4 antenatal care (ANC) visits, 95.6% completed TT, 81.1% consumed recommended iron folic acid (IFA) tablets, 98.9% had institutional deliveries and 47.8% had postnatal care (PNC) with minimum of six visits. Full ANC showed statistically significant association with education and socio-economic status.

**Conclusion:** Though the utilisation has improved, there is still a lag in the IFA intake and post-natal care received by mothers. This can be improved by giving separate incentive to health care workers for post-natal visits.

**Keywords:** Utilisation, maternal health, rural field practice area

## Introduction

As per the estimates of the WHO regarding Maternal Mortality, every day in 2017, approximately 810 die from pregnancy and child birth related causes globally <sup>[1]</sup>. The global MMR was estimated as 211 maternal deaths per 1,00,000 live births. Though there is a decrease in trends from the last two decades when MMR was 342 per 1, 00,000 live births, mortality is unacceptably high even now. MMR rate in India is about 103 per 1,00,000 live

births <sup>[2]</sup>. The major factors that accounts for nearly two thirds of maternal deaths are anaemia related complications, maternal sepsis, eclampsia during pregnancy and complications from unsafe abortions <sup>[3]</sup>. To combat the maternal deaths, WHO released a full strategy paper on Ending Preventable Maternal Mortality (EPMM). It targets for reducing the global MMR as adopted by UN SDG target 3.1: reduce global MMR to less than 70/1,00,000 live births by 2030 <sup>[4-5]</sup>. Also Government of India targets for reducing MMR to 100/1,00,000 live births by 2020 according to National Health Policy by focussing on maternal health through various programmes such as Reproductive Maternal Newborn Child Health and Adolescent (RMNCH+A), Janani Sishu Suraksha Karyakram (JSSK), Janani Suraksha Yojana (JSY) and so on.

Though there is an improvement in the utilisation of Maternal Health Care (MHC) services with at least 4 ANC visit from NFHS-I (26.9%) <sup>[6]</sup> to NFHS- V (58.1%) <sup>[7]</sup> And Institutional births from 26.1% to 88.6%, India has a long way to go. Utilisation of antenatal services is an important determinant both for institutional delivery and postnatal care <sup>[8]</sup> Also poor women in the remote areas are the least likely to receive the adequate care <sup>[1]</sup>. Hence this study was conducted to estimate the proportion of women utilising the maternal health services in rural Warangal and to determine the factors associated with it.

## Materials and Methods

A community based cross sectional study was conducted among 180 participants in the rural field practice area of Kakatiya Medical College (KMC), Warangal, Telangana, India. Three villages come under the field practice area of KMC and by lottery method one village (Bollikunta) was chosen. Prior Permission was obtained from the Institutional Ethical Committee of KMC. The study was conducted during the period of January 2021 to April 2021. All mothers with children less than five years of age were included and those who are not residents of study area and who are not willing to participate were excluded from the study. A total of 180 mothers were interviewed during the above mentioned study period.

Informed consent was obtained from the participants before interviewing them. A pre-tested, semi-structured questionnaire was prepared with the help of previous literatures for data collection. It consists of four parts: Part I covers the sociodemographic details, part II covers antenatal services such as registration of pregnancy, frequency of ANC visit, vaccination for TT and intake of IFA tablets, part III regarding institutional births and type of delivery and part IV on the postnatal care received by the mother with minimum of six visits. Dependent variable is the ANC utilization status while the independent variables are the socio-demographic profile of the participants. Full ANC utilization was defined according to NFHS-4 as the mother who had at least 4 ANC visits, at least one TT injection and taken IFA for 100 or more days <sup>[7]</sup>. The data thus obtained were entered in MS Excel, transferred to SPSS Version 20.0 and analysed. Descriptive statistics were used and chi square test was used to obtain the association between the dependent and independent variables. P value <0.05 was considered statistically significant.

## Results

**Table 1:** Distribution of study participants on socio-demographic profile (N=180)

Variables	Categories	Frequency (percentage)
Age at child birth	≤19	12 (6.7)
	>19	168 (93.3)
Education	Illiterate	8 (4.4)
	Middle school	8 (4.4)
	High school	38 (21.1)

	Intermediate	48 (26.7)
	Under graduate	60 (33.3)
	Post graduate	18 (10.0)
Occupation	Employed	42 (23.3)
	unemployed	138 (76.7)
Socio-economic status	Upper class	26 (14.4)
	Upper middle	46 (25.6)
	Middle	68 (37.8)
	Lower middle	28 (15.6)
	Lower class	12 (6.7)
Type of family	Nuclear family	108 (60)
	Joint family	72 (40)

As seen from Table 1 that of the 180 mothers, the mean age is  $23.46 \pm 3.027$  and ranges from 18 to 35. Of them, 12 (6.7%) had teen age pregnancies and 168 (98.3%) had pregnancies above teen age. 8 (4.4%) were illiterate, 8 (4.4%) completed middle school, 38 (21.1%) completed high school, 48 (26.7%) completed intermediate/ diploma, 60 (33.3%) completed under graduate and 18 (10%) completed post graduate. Of them 42 (23.3%) were employed and 138 (76.7%) were unemployed in the study. Among the study participants 26 (14.4%) belong to upper class, 46 (25.6%) to upper middle class, 68 (37.8%) to middle class, 28 (15.6%) to lower middle class and 12 (6.7%) to lower class according to Modified BG Prasad classification. More than half of them 108 (60%) lives as a nuclear family and 72 (40%) as a joint family.

**Table 2:** Distribution of study participants on antenatal, natal and postnatal care utilisation (N=180)

Variables	Categories	Frequency (percentage)
Registration of pregnancy	Registered	176 (97.8)
	Not registered	4 (2.2)
Frequency of ANC visit	$\geq 4$	176 (97.8)
	$< 4$	4 (2.2)
At least one dose of TT vaccination	Yes	172 (95.2)
	No	8 (4.4)
No. of IFA tablets consumed	$\geq 100$	93 (51.9)
	0-99	87 (48.1)
Full ANC received	Yes	166 (92.2)
	No	14 (7.8)
Delivered at	Institution	178 (98.9)
	Home	2 (1.1)
Type of delivery	Normal	60 (33.3)
	LSCS	120 (66.7)
PNC with minimum 6 visits	Received	86 (47.8)
	Not received	94 (52.2)

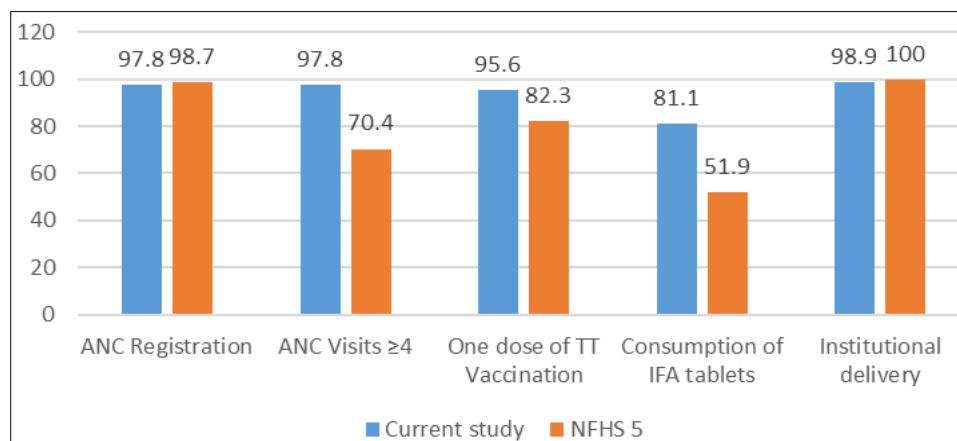
It was seen from Table 2 that mostly 176 (97.8%) had registered their pregnancies with Government and 4 (2.2%) did not register. Also 176 (97.8%) had undergone minimum of 4 ANC visits and 4 (2.2%) did not undergo 4 ANC visits. Among study participants 172 (95.6%) took one dose TT vaccination and 8 (4.4%) did not take. 87 (48.1%) consumed 0-99 tablets, and 93 (51.9%) consumed more than 100 IFA tablets. So 166 (92.2%) had full ANC and 14 (7.8%) did not have full ANC. We had 60 (33.3%) normal delivery and 120 (66.7%) caesarean section. Also 178 (98.9%) occurred in institutions and 2 (1.1%) home delivery. 86 (47.8%) received the full PNC with minimum of six visits. Remaining 94 (52.2%) did not receive the complete PNC.

**Table 3:** Factors influencing the utilisation of ANC services (N=180)

Variables	Categories	Full ANC received	Full ANC not received	P-value
Age at child birth	≤19	12	0	0.603
	>19	154	14	
Education	Illiterate	8	0	0.028*
	Middle school	8	0	
	High school	30	8	
	Intermediate	46	2	
	Under graduate	58	2	
	Post graduate	16	2	
Occupation	Employed	36	6	0.097
	unemployed	130	8	
Socio-economic status	Upper class	24	2	0.017*
	Upper middle	46	0	
	Middle	60	8	
	Lower middle	24	4	
	Lower class	12	0	
Type of family	Nuclear family	98	10	0.532
	Joint family	68	4	

\*P value ≤0.05 is considered statistically significant

It was observed that the full ANC showed statistically significant association with the education and socio economic status [As seen in Table 3].



**Fig 1:** Comparison of indicators of current study with NFHS 5 Warangal Rural

As Figure 1 shows the comparison of indicators of current study with NFHS 5 of Warangal Rural. Only institutional birth was higher when compared to the current study.

## Discussion

Studies have shown that utilisation of maternal health care services is affected by multitude of factors and many studies have tried to identify the factors that led to the differentiation in the utilisation of these services [8]. Access to the basic medical services during antenatal, delivery and postnatal period reduces maternal mortality to a greater extent [9]. However, women rarely perceive childbearing as problematic and therefore many times do not seek care, which affects the utilization of these services where poverty and illiteracy are widespread, especially in rural areas.

In this study, 97.8% of people have at least 4 ANC visits. This is in contrary to NFHS 5

where the percentage was 70.4% <sup>[10]</sup>. The reason may be that our study confined to the small area may not represent the National scenario. In a study by Kolli *et al.*, it was 62.10% <sup>[9]</sup> and by Danasekaran R *et al.* it was 36.27% because study population differs in later which is done among the fisherwomen <sup>[11]</sup>. Regarding intake of IFA, in a study by Srivastava A *et al.* in UP only 7.9% took recommended 100 tablets <sup>[8]</sup>. In the current study, IFA intake was low when compared to other indicators. This may be because women are not much aware of maternal anaemia and its role in maternal mortality. Also 100% institutional births are must which is achieved as per NFHS-5 <sup>[10]</sup> but in the current study it was 98.9% which is in accordance with the study by Kolli *et al.* in Andhra which was 95% <sup>[9]</sup>. Postnatal care (PNC) is crucial for the health of the new-born as studies have found that neonatal deaths were significantly less when delivery is combined with post-natal check-ups <sup>[12]</sup>. The low level of PNC in our study with minimum of six visits is 47.8% was also in accordance with other studies <sup>[13]</sup>. This is because healthcare workers are much negligent towards post-natal visits.

Our study found that education of the mother and socio economic status of the family were found to be significantly associated with the utilisation of maternal health care services. This was consistent with many studies done in India as well as abroad <sup>[11, 13, 14]</sup>. Studies have proven that, the more the women is educated, the more they are aware about their health and the availability of maternal health care services and use this awareness and information in accessing and availing of health care services. <sup>[15]</sup> But in our study illiterates and lower class people have utilised the services to maximum. This may be due to benefits of Amma void scheme and KCR kit from Telangana government. Many studies have shown the positive association between socio-economic status and utilisation of health care services <sup>[11, 16, 17]</sup>. But in our study it is contradicted.

### Limitations

The study population were mothers of the under 5 children. Being delivered five years ago, recall bias could have been more. Reason for inadequate utilisation of MCH services were not taken into account in this study.

### Conclusion

Factors influencing maternal health care services operate at various levels like individual, house, community and state. In our study, Full ANC received were 92.2%. Recommended IFA intake was not satisfactory (51.6%) which constitutes the majority of remaining 7.8% of those who did not receive Full ANC. Though education and SES plays a role in maternal health care services utilisation, it can be achieved through Government schemes too. Also there has been an increase in ANC visit, vaccination and institutional births, we are still lagging in PNC with minimum of six visits. The improvement of PNC visits can be done by giving separate incentive to health care workers for PNC visits. Increased awareness should be given to people regarding intake of IFA and its importance in maternal health.

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