Original Research Article

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A study on evaluation of utilization of antenatal care services in a rural area of North Kerala, India

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ABSTRACT

Background: Antenatal care is the care of the woman during her pregnancy. The primary aim of antenatal care is to achieve at the end of a pregnancy a healthy mother and a healthy baby National Health Mission mainly aims at reduction in maternal, neonatal, infant mortality and increasing institutional deliveries. This study was conducted to evaluate the antenatal care services utilization in a rural area of North Kerala among the women who delivered in the past six months. The objective of the study was to evaluate the antenatal care services utilization among the women who delivered in the past six months in a rural area of North Kerala.

Methods: A cross sectional study was conducted in the rural field practice area of Kannur Medical College, Kannur among women who delivered in the past 6 months by using convenient sampling method. A total of 150 mothers were interviewed using pre-validated, semi structured questionnaire. Descriptive statistics were used to analyze the data.

Results: The mean age of the participants was 27.2±3.4 years. About 98% (147) mothers had at least four ANC visits, all mothers had two doses or one booster dose of TT injections and 90% (135) consumed minimum hundred IFA tablets during pregnancy. Around 96% (144) of the mothers have received the full antenatal care during pregnancy. **Conclusions:** Our study showed that, the full antenatal care services utilization by the mothers is better compared to

Conclusions: Our study showed that, the full antenatal care services utilization by the mothers is better compared to National and State averages. But there is slightly increased level of delivery by caesarean which is a matter of concern.

Keywords: Antenatal care, Utilization, Antenatal services, Rural area, North Kerala

INTRODUCTION

Healthy newborn in any community depends mainly on the antenatal care (ANC) received by the mother during her pregnancy. Also, maternal mortality and neonatal mortality in a community is influenced by the antenatal services provided and utilized in the community.

Antenatal care is the care of the woman during her pregnancy. The primary aim of antenatal care is to achieve at the end of a pregnancy a healthy mother and a healthy baby by promoting, protecting and maintaining the health of the mother during pregnancy, by identifying

high risk cases and by foreseeing complications to prevent them early.¹ To deliver antenatal services to the community Government of India has launched so many maternal and child health programmes in the past.¹ At present, we have National Health Mission which mainly aims about reduction in maternal, neonatal, infant mortality and increasing institutional deliveries by providing incentives to the mother and health workers.²

According to National Family Health Survey-4 (NFHS-4) Kerala state report 2015-16, around 61.2% mothers had full ANC services [i.e., minimum of 4 ANC visits, two doses or one booster dose of tetanus toxoid (TT) and

minimum of 100 iron and folic acid tablets consumed.] and in Kannur district it was found to be 71.5%.^{3,4}

A study done by Sruthi et al in coastal areas of Kerala found that 62.6% of the mothers had optimal ANC services and there was an association between socioeconomic status of pregnant mothers and services like family planning advice and Hb estimation and screening at first trimester.⁵

There were few studies on utilization of ANC services among mothers in rural Kerala, hence the present study was conducted to evaluate the antenatal care services utilization in a rural area of North Kerala among the women who delivered in the past six months in the study area.

METHODS

Study design

It was a cross sectional study.

Study setting

Study was conducted in a rural field practice area of Department of Community Medicine, Kannur Medical College, Kannur.

Study population

Women who delivered in the past 6 months in the rural field practice area were included in the study.

Inclusion criteria

Women who delivered (includes live birth, still birth, abortion, intra uterine death) in the past 6 months and received the ANC services from the area covered under rural filed practice area were included.

Exclusion criteria

Mothers who have not taken ANC services in the rural field practice area.

Study duration

2 Months (November – December 2017).

Sample size

The mothers who had full antenatal care in Kerala according to National Family Health Survey 4 was 61.2%.³ The sample size was calculated using the formula n=4pq/d² (where p is prevalence, q=100-p and d is allowable error) with an allowable error of 15%. The sample size derived was 114 which was rounded off to 150.

Sampling method

A convenient sampling method was used to collect data by visiting house to house with the help of health workers.

Data collection

The study was started after taking ethical clearance from the Institutional Ethics Committee. Data were collected after explaining the purpose of the study and taking informed written consent from mothers those who were willing to participate in the study. The data were collected by using pretested semi-structured questionnaire which contained details of basic sociodemography and antenatal care.

Data analysis

Data entered in and analyzed using Microsoft Excel, descriptive statistics were analyzed and presented in the form of frequencies and proportions.

RESULTS

A total of 150 mothers of children less than 6 months were assessed and their mean age was 27.2±3.4 years. About 54% (81) of then studied up to higher secondary (class 12), 69.3% (104) were housewives and 16% (24) belongs to below poverty line (Table 1).

Table 1: Socio-demographic profile of the mothers.

Socio-demographic Profile	Frequency	Percentage (%)
Education status		
Up to 10 th standard	48	32.0
Up to higher secondary	81	54.0
Graduate and above	21	14.0
Occupation		
House wife	104	69.3
Skilled worker	22	14.7
Unskilled worker	9	06.0
Professionals	15	10.0
Economic status		
Above poverty line (APL)	126	84.0
Below poverty line (BPL)	24	16.0

Among them, 13.3% (20) were primigravida and 86.7% (130) were multigravida women. Among multigravida mothers (130), the outcome of their last to last pregnancy was as follows 88.5% (115) of live births, 7.7% (10) of abortion and 3.8% (5) of still births.

About 98% (147) women had at least four ANC visits in their last pregnancy and only 2% (3) were did not had minimum four ANC visits. All study participants have

taken two doses or one booster dose of TT injections at appropriate gestational age. About 90% (135) women have taken minimum hundred iron and folic acid tablets during their ANC care and 10% (15) have not taken. All 150 women have done basic blood investigations and urine routine (Table 2).

Among the mothers, 78% (117) had taken ANC services from government health care centers and 76% (114) of mothers delivered in government health centers. Around 98% (147) of the mothers delivered live babies and 2% (3) were still births. About 60% (90) of them had normal delivery whereas 40% (60) had cesarean section. Around 94% (141) of children born were of term gestation and 52.7% (79) of the children were females. All the children (147) were immunized up to age according national immunization schedule (Table 2).

Table 2: Antenatal care (ANC) services utilization by study population.

Antenatal care services	Frequency	Percentage (%)	
ANC visits			
Four or more	147	98.0	
Less than four	3	02.0	
IFA supplementation			
100 or more IFA taken	135	90.0	
Less than 100 IFA taken	15	10.0	
Place of ANC care			
Government	117	78.0	
Private	33	22.0	
Place of delivery			
Government	114	76.0	
Private	36	24.0	
Type of delivery			
Normal	90	60.0	
Caesarean section	60	40.0	
Gestational age of the child			
Term	141	94.0	
Preterm	9	06.0	

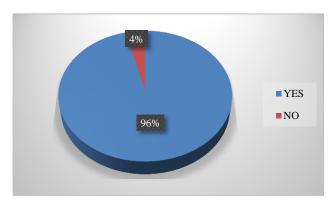


Figure 1: Full ANC care* utilization by mothers. *Full ANC Care means had minimum of four ANC visits, taken

two doses or one booster dose of TT and taken hundred IFA tablets).

Around 96% (144) of the mothers have received the full antenatal care (had minimum of four ANC visits, taken two doses or one booster dose of TT and taken hundred IFA tablets) (Figure 1).

DISCUSSION

Pregnancy is a normal physiological process and in most of the cases it will be uneventful and only in few cases there may be complications.² Also, utilization of ANC services and institutional delivery are dependent on so many social, cultural and administrative factors.

In our study around 98% of mothers had four or more ANC visits during their pregnancy and it is higher compared to studies done by Paudel et al and Sruthi et al.5,6 But, it is similar to NFHS-4 Kannur district rural data (97.1%) and only slightly of higher compared to NFHS-4 Kerala rural data (90.2%).^{3,4}

In this study, all the mothers have taken two doses or one booster dose of TT which is similar to study of Sruthy MV et al and higher compared to the studies done by Paudel et al and Ponna et al in Andhra Pradesh. 5-7

This study showed that, 90% of the mothers consumed minimum of 100 IFA during their pregnancy and it is similar to the study of Sruthi et al but higher compared to other studies and NFHS-4 Kerala and Kannur report.³⁻

Around three fourth of the mothers received ANC services from government set up in our study and it is greater than study done by Paudel et al.⁶ All mothers had institutional delivery and is similar to NFHS-4 Kerala and Kannur report.^{3,4} About three fourth of the mothers delivered in the government health facilities and it is higher compared to NFHS-4 Kerala and Kannur data.^{3,4} The births delivered by caesarean section is around 40% in our study and it is higher compared to NFHS-4 Kannur rural report (18.9) whereas slightly higher compared to NFHS-4 Kerala rural report (34.6%).^{3,4}

In this study, 96% mothers had received full ANC services and it is very good compared to other studies and NFHS-4 India, Kerala and Kannur. 3-10 The ANC services utilization in the study area is better.

The limitation of the study was usage of convenient sampling method and sample size was slightly less.

CONCLUSION

Our study showed that, four or more ANC visits by mothers are good, all mothers are protected against tetanus and almost all mothers have taken 100 IFA tablets during their pregnancy. The full antenatal care services utilization by the mothers is better in our study compared to National and State averages. But there is slightly increased level of delivery by caesarean which is a matter of concern.

There is still scope to improve the antenatal care services by creating awareness among the women of reproductive age.

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