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The study of utilization pattern of antenatal care services in Urban field practice area, Kims, Koppal, Karnataka

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Abstract

Introduction: Health Care Utilization overall, and for maternal health specifically has improved in India. The progress has been attributed to NRHM, that has increased the number of community health workers and resulted in more institutional deliveries. Motherhood is the basis of family life. Antenatal Care (ANC) is a pivotal factor for safe motherhood. Mothers who had not received good ANC were found to be more at risk of having Low birth weight babies.

Aims

1. To assess the utilization pattern of ANC services
2. Association between the socio demographic factors and the utilization pattern

Methods: A cross sectional study was conducted in Urban Field Practice area, KIMS, Koppal. 327 women who delivered in one year were interviewed between 1st October 2018 to 30th September 2019 by using pre designed and semi structured questionnaire. House to house visit was done to obtain information about the antenatal care utilization and socio demographic factors. The data was entered in excel

Results: Out of 328 study participants, majority 282(86%) had their ANC Checkup at Urban Health Centre, 273 (83.3%) had early antenatal registration during first trimester, 267 (81.7%) received IFA tablets.

Conclusions: Due to the implementation of NRHM and the frequent monitoring of ANM and ASHA workers, our results have shown better ANC services utilization pattern in our study area.

Keywords: ANC services, IFA tablets, Utilization

Introduction

ANC is one of the most important pillar of safe motherhood, other components are essential obstetric care, safe delivery and family planning ^[1]. Maternal healthcare remains a major challenge to the global public health care system, especially in developing countries ^[2]. The World Health Organization (WHO) recommends a minimum of four antenatal visits, comprising interventions such as Tetanus toxoid (TT) vaccination, screening and treatment of infections, identification of warning signs during pregnancy ^[3].

Health Care Utilization overall, and for maternal health specifically has improved in India. The progress has been attributed to NRHM, that has increased the number of community health workers and resulted in more institutional deliveries ^[4]. The Maternal mortality Ratio is 122 and 97 per 1,00,000 live births in India and Karnataka respectively according to special bulletin SRS 2019 ^[5]. Even though India has made significant progress in reducing its maternal mortality rate, India accounts nearly 17 percent of total maternal deaths in the world. As a part of sustainable development Agenda, the target is to reduce the global maternal mortality ratio to less than 70 per 1,00,000 live birth ^[6].

The Present study highlights the antenatal care utilized by the delivered mothers in Urban field practice area of KIMS Koppal and to identify socio economic factors that affect the utilization of antenatal care and delivery care.

Aims

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Materials and Methods

Study Area: The present community based cross sectional study was conducted in urban field practice area, Department of Community Medicine, Koppal Institute of Medical Sciences, Koppal

Study period: 1st October 2018 to 30th September 2019

Inclusion criteria: All women who delivered in past one year and those who consented to be part of the study.

Exclusion criteria: Mothers outside the field practice area and who did not give consent

Sample size: Total of 327 women were taken as convenience sample

Analysis: The data was entered in excel 2010 and analyzed using SPSS 16 software. Chi square test was used to find the p value. $P < 0.05$ was considered to be statistically significant.

Results

Among 327 participants, 168 (41.8%) belonged to 20-24 years age followed by 101(30.9%) 25-29 years. 194 (59.3%) were Hindu, 121(37%) were muslim. 244 (74.6%) were housewife, 154(47.1%) belonged to three generation family, 230 (70.3%) belonged to Class IV SES (BG Prasad classification), 255 (78%) were educated.

Table 1: Distribution of study participants based on Socio Demographic Characteristics

Particular		Number of Mothers	%
Age group (in years)	<19	19	15.3
	20-24	168	41.8
	25-29	101	30.9
	30-34	33	10.1
	35-39	5	1.5
	>40	1	0.3
Religion	Hindu	194	59.3
	Muslim	121	37.0
	Christian	5	1.5
	Others	7	2.1
Occupation	Housewife	244	74.6
	Workers	83	25.4
Type of family	Nuclear	145	44.3
	Three generation	154	47.1
	Joint family	28	8.6%
Socio Economic Status	Class V	21	6.4
	Class IV	230	70.3
	Class III	72	22
	Class II	4	1.2
Education	Educated	255	78
	Illiterate	72	22
Consanguineous	Yes	53	16.2
	.No	274	83.8

Table 2: Distribution of study participants based on utilization of Antenatal care services

Particular		Number of mothers	%
Health worker visit to home	Yes	314	96
	No	13	4
Place of delivery	Government	300	91.7
	Private	27	8.3
Which health centre did you visit for ANC	Government	291	89
	Private	36	11
Birth order	1	153	46.8
	2	112	34.3
	3	51	15.6
	4	9	2.8
	>5	2	0.6
What is the Importance of ANC	Better care	267	81.7
	Free services	14	4.3
	To plan delivery	37	11.3
	Problem solving	9	2.8
Number of TT	1	149	45.6
	2	178	54.4
IFA tablets taken	Yes	225	68.8
	No	102	31.2
Confirm pregnancy	Govt	266	81.3
	Private	61	18.7
Number of ANC checkups	3/ <3	291	88.8
	>3	36	11.2

Table 3: Association of Mothers age and recommended Number of ANC, Socio Economic Status

Age group (years)	Recommended ANC visits			Socio Economic Status (Modified BG Prasad)				
	<3	>3	Total	Class II	Class III	Class IV	Class V	Total
<19	14 (4.3%)	5 (1.5%)	19 (15.3%)	1 (0.3%)	3 (0.9%)	12 (3.6%)	3 (0.9%)	19 (15.3%)
20-24	124 (37.9%)	44 (13.5%)	168 (41.9%)	1 (0.3%)	37 (11.3%)	119 (36.3%)	11 (3.5%)	168 (41.9%)
25-29	72 (22.0%)	29 (8.9%)	101 (30.9%)	2 (0.6%)	21 (6.4%)	73 (22.2%)	5 (1.5%)	101 (30.9%)
30-34	28 (7.6%)	8 (2.4%)	33 (10.1%)	0 (0.0%)	8 (2.4%)	23 (7.0%)	20.6%	33 (10.1%)
35-39	1 (0.3%)	4 (1.2%)	5 (1.5%)	0 (0.0%)	3 (0.9%)	2 (0.6%)	0 (0.0%)	5 (1.5%)
>40	1 (0.3%)	0 (0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)	1 (0.3%)
Total	237 (72.47%)	90 (27.53%)	327 (100%)	2 (0.6%)	72 (21.3%)	230 (70.1%)	21 (6.4%)	327 (100%)

$\chi^2 = 7.695, df=5, p=0.174$ $\chi^2 = 12.31, df=15, p=0.65$

Table 4: Association of type of family and Number of ANC visits

Type of family	Number of ANC visits		Total
	3/<3	>3	
Nuclear	125 (38.1%)	20 (6.1%)	145 (44.2%)
Three generation	139 (42.4%)	15 (4.6%)	154 (47.0%)
Joint	27 (8.2%)	1 (0.3%)	28 (8.5%)
Total	291 (88.8%)	36 (11.0%)	327 (100%)

$\chi^2 = 17.39, df=5, p=0.05$

Table 5: Association of Socio Economic Status with Place of delivery

SES	Place of delivery		Total
	Government	Private	
Class II	4 (1.22%)	0 (0.0%)	4 (1.3%)
Class III	64 (19.5%)	8 (2.4%)	72 (22.0%)
Class IV	214 (65.3)	16 (4.9%)	230 (70.0%)
Class V	18(5.5%)	3 (0.9)	21 (6.5%)
Total	300 (91.5%)	27 (8.5%)	327 (100%)

$\chi^2 = 2.65, df= 3, p=0.4$

Table 6: Association of Education with importance of ANC checkup

Education	Importance of ANC checkup				Total
	Better care	Free services	To plan delivery	Problem solving	
Educated	206 (63%)	11 (3.4%)	30 (9.2%)	8 (2.4%)	265 (80.8%)
Uneducated	61 (18.7%)	3 (0.9%)	7 (2.1%)	1 (0.3%)	72 (22.2%)
Total	267 (81.7%)	14 (4.3%)	37 (11.3%)	9 (2.8%)	327 (100%)

$\chi^2 = 0.940, df=3, p=0.8$

Table 7: Association between Socio economic Status and intake of Iron and Folic Acid tablets

Socio Economic Status	Intake of IFA tablets		Total
	Yes	No	
Class II	4 (1.2%)	0 (0.0%)	4 (1.2%)
Class III	57 (17.4%)	15 (4.6%)	72 (22%)
Class IV	153 (46.8%)	77 (23.5%)	230 (70.3%)
Class V	11 (3.4%)	10 (3.1%)	21 (6.4%)
Total	225 (68.8%)	102 (31.2%)	327 (100%)

$\chi^2 = 8.613, df= 3, p=0.05$

Discussion

This study was conducted to assess the utilization pattern of antenatal services among pregnant women in urban field practice area. Among 327 participants, 168 (41.8%) belonged to 20-24 years age followed by 101(30.9%) 25-29 years. 194 (59.3%) were Hindu, 121 (37%) were muslim. 244 (74.6%) were housewife, 154(47.1%) belonged to three generation family, 230 (70.3%) belonged to Class IV SES (BG Prasad classification), 255 (78%) were educated. Majority of them 291 (89%) of the participants had visited Government centre for health checkups, 314 (96%) of participants told that the health worker had visited them for

health checkup, 46.8% of them delivered their first baby. 81.35 had confirmed their pregnancy in government sector. In our study 267 (81.7%) participants told that better care would be available if regular ANC checkups were done, and 80.8% of the women were educated in our study, among them 63% told the advantage of ANC checkup was for their better care.

According to National nutritional anemia prophylaxis programme Iron and Folic Acid Tablets should be provided for at least 100 days for antenatal women. It is considered as one of the most cost effective measure to control anemia in antenatal period [9, 11]. 222 (68.8%) told they have consumed IFA tablets regularly, there was a statistically association between SES and IFA consumption, similar to the study done by Agarwal *et al.* [8].

In our study 291 (88.8%) participants had 3/<3 ANC checkups, Almost 100% of women had atleast one ANC checkup which was similar to study done by Bhaire KA *et al.*, in Thane District [7] and Uppadhaya SK *et al.* (32.8%) done at western Rajasthan [10]. The difference could be due to the observation is for 3 or more antenatal visits.

In our study the proportion of women utilizing full ANC check up was 12%, even though the literacy rate was 80.8%, which was in contrast to the study done by Uppadhaya SK *et al.* (32.8%) done at western Rajasthan [10].

300(91.7%) of the women delivered in government institution, similar to the study done by Bhaire KA *et al.*, in Thane District [7] and in contrast to the NFHS-3.

Conclusion

After the implementation of NRHM the ANC awareness has been increased, coverage of ANC services was good but need to be improved in our area. The minimum ANC checkup of 4 should be reached by the people in our area.

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