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Original Research Article

## Study to assess knowledge attitude and practices of antenatal care among antenatal women attending outdoor clinic in tertiary care hospital

Neetu Ahirwar\*

Department of Obstetrics and Gynecology, Gandhi Medical College, Bhopal, Madhya Pradesh, India

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**\*Correspondence:**

Dr. Neetu Ahirwar,

E-mail: [neetuahirwarbharang@gmail.com](mailto:neetuahirwarbharang@gmail.com)

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### ABSTRACT

**Background:** Maternal mortality rate in India continues to be a national challenge despite of the various measures taken by the Indian government, Non profit organizations in and outside the country including the World Health Organization. To find out the gaps between the providers and beneficiaries we tried to find out what actually prevents our pregnant women to seek Regular Antenatal Care by evaluating their knowledge, attitudes and practices towards antenatal care.

**Methods:** All antenatal women attending outpatient clinic of department of obstetrics and gynae Gandhi medical college Bhopal over a period of one year were included in the study. Study group was of unbooked antenatal women and control group consisted of booked women at the hospital. All subjects were given a predesigned, pretested questionnaire to fill in their local language and the data thus obtained was analysed statistically.

**Results:** 86.16% subjects visited ANC clinic during first trimester, 66.33% knew correctly about frequency of antenatal visits, 97.50% knew about Tetanus immunization. Likewise, 78.33% had positive attitude towards antenatal checkups and early registration. Similarly, 70.4% took adequate antenatal care, 93.33% took iron folic acid tablets.

**Conclusions:** Thus, the study shows that the knowledge, attitude and practice of antenatal care is good in the booked subject the same is not the case in unbooked subjects coming to the hospital with complications or being referred to the hospital.

**Keywords:** Antenatal care, Attitude, Booked, Knowledge, Practices

### INTRODUCTION

Introduction: Antenatal care is defined as a comprehensive antepartum care programme that involves co-ordinated approach to medical care and psychosocial support that optimally begins before conception and extends throughout antepartum period. Antenatal care (ANC) is a key strategy to decreasing maternal mortality in low-resource settings. ANC clinics provide resources to improve nutrition and health knowledge and promote preventive health practices.

Pregnant mothers contribute to a major vulnerable and priority group in any community, no less in India. According to the census 2011, maternal mortality rate in India accounts to an enormous figure of 212.<sup>1</sup> Major causes include hemorrhage, obstructed labor, hypertension and other conditions.<sup>2</sup> The reason being lack of proper antenatal care coverage and lack of awareness among mothers particularly from rural parts of India, contributing the major population, about the need of early

registration and compliance with proper and regular ante natal checkups.<sup>2</sup>

Although numerous health programs are in vogue as run by the Government of India, State governments and also initiated by numerous Non Government Organizations (NGOs), the scenario of coverage of ante natal care in India is far from satisfactory. Poverty, lack of education and awareness are mainly responsible for this. In context of the present situation, it is obvious that proper antenatal care services can definitely alleviate the major burden of maternal and child mortality and morbidity in this country. As reflected from outcome from the private sector, good maternal and fetal outcome is directly related to good antenatal care. So, with following objectives, we are conducting this study in government set up to find out the lacunae in the antenatal care, which will help the government agencies to frame and implement policies there by reducing maternal and perinatal mortality and morbidity.

Objective of present study was to assess the knowledge of antenatal care among pregnant women attending out patient clinic, to assess the knowledge of antenatal care among pregnant women attending out patient clinic and to measure co-relation between knowledge and antenatal care.

## METHODS

This is hospital based descriptive case control study on the antenatal women attending Outpatient clinic of department of obstetrics and gynae Gandhi Medical College, Bhopal, India with study duration of 1 year.

Study group includes all unbooked antenatal women and control group were antenatal women booked to department of obstetrics and gynae Gandhi medical college Bhopal.

Data collection was done using predesigned, pretested, structured questionnaire with prior verbal consent. The participants were traced prospectively and fetomaternal outcome was noted.

After data collection, statistical calculation and subsequently analysis was carried by using SPSS 16.0 version. Results has been presented in the forms of tables and graphs.

## RESULTS

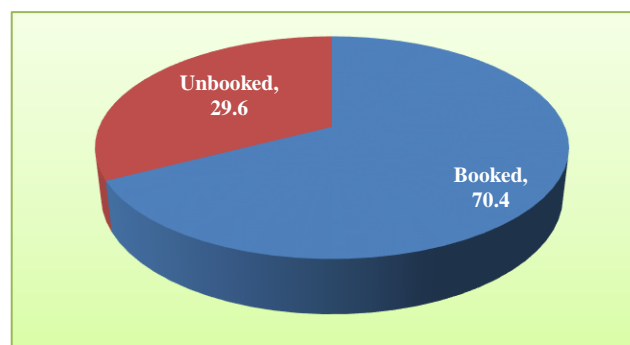
58.7 percent of study population was in 20-25 age group and due to a hospital-based study most of the subjects belong to urban population constituting 72.4 percent of the study.

In the study most of the subjects (70.4%) were booked. This is probably because patient with booked status were under our follow up.

**Table 1: Distribution of subjects as per demography.**

Age in years	No. (n=600)	%
<20	77	12.8
20-25	352	58.7
26-30	148	24.7
3>30	23	3.8
<b>Place of residence</b>		
Rural	165	27.6
Urban	435	72.4
<b>Religion</b>		
Hindu	180	30.1
Muslim	420	69.9
<b>Education of subject</b>		
Illiterate	103	17.1
Primary	195	32.4
Middle school	124	20.7
High school	96	16.1
Graduate	53	8.9
Post graduate	29	4.8
<b>Education of subject's husband</b>		
Illiterate	63	10.5
Primary	149	24.8
Middle school	73	12.1
High school	53	8.9
Secondary	183	30.4
Graduate	55	9.2
Post graduate	24	4.1
<b>Occupation of subject</b>		
Housewife	467	77.9
Skilled worker	23	3.8
Unskilled worker	110	18.3

In this study 80.5% of subject had knowledge that pregnancy is confirmed by urine pregnancy test and scanning.



**Figure 1: Distribution of subjects according to booking status.**

86.16% of subject had correct knowledge that a pregnant woman should visit a doctor after first missed period. 72.66% of subject had correct knowledge that fetal movement is first felt between 4th and 5th month of pregnancy. And 62.65% subjects had correct knowledge that fetal well being is known by regular antenatal check up.

**Table 2: Distribution of subjects according to knowledge of antenatal care.**

Knowledge about	Correct		Incorrect	
	No.	%	No.	%
Confirmation of pregnancy	483	80.5	117	19.5
Time of 1 <sup>st</sup> visit to doctor	517	86.16	83	13.83
Frequency of antenatal check up to 7 <sup>th</sup> month	398	66.33	202	33.66
Frequency of antenatal check up between 7 <sup>th</sup> -9 <sup>th</sup> of pregnancy	392	65.33	208	34.66
Frequency of antenatal check up after 9 <sup>th</sup> month of pregnancy	382	63.66	118	36.33
Perception of 1 <sup>st</sup> fetal movement	436	72.66	164	27.33
Knowledge about fetal well being	375	62.65	225	37.50
Knowledge about warning signs during pregnancy	385	64.16	215	35.83
Action to be taken in case of vaginal bleeding	555	92.5	45	7.5
Examinations during antenatal check ups	470	78.33	130	21.66
No. of TT immunizations	585	97.50	15	2.50
Reasons for adequate diet during pregnancy	495	82.50	105	17.5
Reasons for need of extra iron during pregnancy	560	93.33	40	6.66
Necessity of folic acid during pregnancy	304	50.66	296	49.33

**Table 3: Association of demographic profile with booking status.**

Demographic profile	No. of subjects	Booked		Unbooked		p-value <sup>1</sup>
		No.	%	No.	%	
<b>Age in years</b>						
<20	77	54	70.12	23	29.8	
20-25	352	242	68.75	110	31.25	
26-30	148	100	67.56	48	32.4	
>30	23	16	69.56	7	30.4	
<b>Place of residence</b>						
Rural	165	100	60.60	65	39.4	0.001*
Urban	435	310	71.26	125	28.7	
<b>Religion</b>						
Hindu	180	128	70.4	52	28.9	0.02*
Muslim	420	270	64.28	150	35.7	
<b>Education of subjects</b>						
Illiterate	103	51	49.5	52	50.4	0.0001*
Primary	195	137	70.2	58	29.7	
Middle school	124	87	70.15	37	29.8	
High School	96	90	93.75	6	6.25	
Graduate	53	53	100.0	0	0.0	
Post graduate	29	29	100.0	0	0.0	
<b>Education of subject's husband</b>						
Illiterate	63	32	50.8	31	49.2	0.0001*
Primary	149	90	60.4	59	39.6	
Middle school	73	50	68.5	23	31.5	
High School	53	34	64.2	19	35.8	
Secondary	183	138	75.41	45	24.6	
Graduate	55	40	72.72	15	27.3	
Post graduate	24	23	95.83	1	4.16	
<b>Occupation of subjects</b>						
Housewife	467	315	67.45	152	32.5	0.03
Skilled worker	23	20	83.0	3	13.0	
Unskilled worker	110	72	65.45	38	34.5	

64.18% of subjects had knowledge about warning signs during pregnancy and 92.5% knew that they should

report to a doctor in case of vaginal bleeding during antenatal period. 78.33% of subjects had knowledge

regarding essential examinations during antenatal check up. 97.50% of study subjects had correct knowledge regarding tetanus immunisation. 82.50% of subjects had correct knowledge that adequate diet during pregnancy helps for growth and development of fetus. 93.33% of

subjects had knowledge that extra iron is needed during pregnancy to prevent anaemia. While only 50.66% of subject had knowledge that folic acid is needed during pregnancy to prevent anaemia and birth deformities.

**Table 4: Association of knowledge about maternal care with booking status.**

Knowledge about	No. of subjects	Correct knowledge				p-value <sup>1</sup>
		Booked		Unbooked		
		No.	%	No.	%	
Confirmation of pregnancy	483	348	72.04	135	27.9	0.0001*
Time of 1 <sup>st</sup> visit of antenatal care to doctor	517	371	71.60	146	28.2	0.0001*
Frequency of antenatal check up before 7 <sup>th</sup> month	398	295	74.12	103	25.9	0.0001*
Frequency of antenatal check up between 7 <sup>th</sup> -9 <sup>th</sup> of pregnancy	392	295	75.25	97	24.7	0.0001*
Frequency of antenatal check up after 9 <sup>th</sup> of pregnancy	382	300	78.53	82	21.4	0.0001*
Perception of 1 <sup>st</sup> fetal movement	439	328	74.71	111	25.3	0.0001*
Knowledge about fetal well being	375	268	71.46	107	28.5	0.002*
Knowledge about warning signs during pregnancy	385	264	68.57	121	31.4	0.33
Action to be taken in case of vaginal bleeding	555	384	68.19	171	30.8	0.03*
Examinations during antenatal check ups	470	320	68.08	150	31.9	0.84
No. of TT immunizations	585	388	66.32	197	33.7	0.0001*
Reasons for adequate diet during pregnancy	495	350	70.70	145	29.3	0.003*
Reasons for need of extra iron during pregnancy	560	390	69.64	170	30.4	0.91
Necessity of folic acid during pregnancy	304	225	74.03	134	79	0.001*

<sup>1</sup>Chi-square test, \*Significant

There is significant association of booking status with place of residence, education of subject and subject's husband, occupation of subject's.

There is significant association between place of residence and booking status. Among urban people 71.26 % of subjects were booked and 28.7% unbooked. While booking is 60.6% in rural subject. There is also significant association between booking status and education status of subjects. Graduate and post graduate subjects are 100% booked but among illiterate only 50.8% of subjects were booked, those educated upto primary school among them 60.4% were booked but 39.6% were unbooked.

There is significant association between the knowledge about fetal well being, Tetanus Toxoid immunization, need for adequate diet and necessity of folic acid during pregnancy with booking status of subjects.

## DISCUSSION

A descriptive case control study was carried out in Department of Obstetrics and Gynaecology, Gandhi Medical College, Bhopal, Madhya Pradesh, India for a period of 1 year.

Objective of study was to assess the knowledge of antenatal care among antenatal women attending

outpatient clinic. To determine the association between the knowledge of antenatal women attending OPD with selected demographic variables.

In present study 58.7% of respondents belonged to age group 20-24 years. In a study conducted by Rozliza et al majority of the respondents (46.2%) were from age group 20-29 year.<sup>3</sup> study conducted by Shirin S et al mean age of women was 33.5±10.4 years.<sup>4</sup> In study conducted by Alam AY et al the mean age of women was 29.57±7.1 years.<sup>5</sup>

This may be explained by the fact that mothers between the ages of 15 to 24 years do not have enough information on maternal healthcare services, while those of age 35 to 44 years take things for granted.

Similar study conducted by Manas P et al most of the respondents were more than 25 years.<sup>6</sup>

In present study most of the subjects were belongs to age group 20-25 years among this age group 68.75% were booked while 31.2% were unbooked (p value <0.87). There by, the age group of 25-35 appears to be most careful regarding antenatal care.

In present study there is significant association of booking status with place of residence, education of

subject and subject's husband, occupation of subject's husband.

Most of the subjects were Muslims i.e. 69.9% out of them 64.28% of subjects were booked, and 35.7% were unbooked while 30.1% were Hindu 70.4% of them were booked while 28.9% of them unbooked. This shows Hindu's are practicing more antenatal care.

In present study 72.4% were resident of urban areas and 27.6% from rural areas. This is because our study is an Urban hospital based study. In contrast, study conducted by Padam Singh et al 63.7% respondent belongs to rural areas while 36.3% belongs to urban areas, probably they were catering to predominantly rural population.

In present study 32.4% of subjects were educated upto primary and half of the total subjects were not educated beyond high school. In similar study conducted by Rozliza et al 42.3% didn't received any primary or secondary education. In similar study conducted by Alam AY et al 69.5% of subjects were illiterate.

In present study most of the (32.4%) subjects were educated upto primary I out of them 70.2% were booked. 8.95 and 4.8% of total subjects were graduate and post graduate respectively and all were booked. So, this shows there is significant impact of level of education on their acceptance and utilisation of antenatal care.

In present study 30.44% of subject's husbands were educated upto senior secondary school. In a similar study conducted by Padam Singh et al 27.3% of subject's husband were educated to higher secondary school.<sup>7</sup>

The present study reported that there was a significant effect of subject's husband education on booking status of subjects 27% of total subject's husband were educated upto secondary school and 75.41% of this group were booked. And booking was 95.83% in post graduate husband. As husband is the head of family so he acts as motivator for subject for practicing antenatal care. Study conducted by Simkhada B et al also shows significant association of utilisation of antenatal services with husband's education status.<sup>8</sup>

In traditional societies where restrictions are placed on women's freedom of movement and contact with unrelated men, a husband's attitude toward prenatal care may be an important factor in determining whether prenatal care is received. While men's approval of formal prenatal care may be culturally patterned along ethnic and religious lines, there may also be significant variation within ethno-religious groups based on levels of education, exposure to modern healthcare practices, individual interpretations of religious values and adherence to traditional beliefs. It is, therefore, expected that having a husband who approves of prenatal care significantly increases the likelihood that a woman uses

prenatal care, irrespective of the husband's background characteristics.

In present study maximum respondent 77.9% were housewives. Because most of the women of India especially in this part of country are housewives. This is in line with the study conducted by Alam AY et al 81.5% of respondent were housewives.

Similar result was found in study conducted by Sonia Shirin et al i.e. 96% were housewives. Study found significant relationship between husband's occupation and booking conducted by Ziyoy FY et al.<sup>9</sup>

In present study 79% of total subjects had correct knowledge about confirmation pregnancy and early registration i.e. in first trimester and 71% of them utilized antenatal services adequately (p value <0.01). Similar results were seen in a study conducted by Rosliza AM et al 73.1% of subjects had knowledge regarding early registration.<sup>3</sup>

About 66.33% of subjects had correct knowledge regarding the adequate frequency of antenatal check-ups during pregnancy trimester wise, out of them 71.6% took adequate antenatal care and 72.66% of total subjects had correct knowledge regarding perception of fetal movement and among this 70% of subjects utilises antenatal services.

72.66% of total subjects had correct knowledge regarding perception of fetal movement and among this 70% of subjects utilises antenatal services.

In present study 70% of total subjects had correct knowledge about TT immunisation, requirement of adequate diet and need for folic acid during pregnancy. Among them 74.54% utilised adequate antenatal services. These results show positive relationship with booking status.

64.16% of total subjects had correct knowledge about warning signs during pregnancy in contrast to study conducted by Shirin S et al where they found that respondent's knowledge about warning signs during pregnancy was poor.<sup>4</sup>

Knowledge regarding warning signs during pregnancy and need for extra iron during pregnancy shows no relationship with booking status.

Therefore, adequate knowledge has positive relationship with booking status. This in turn results in better maternal and fetal outcome as evidenced in many other studies.

## CONCLUSION

Improving maternal health is one of the millennium development goal. Antenatal women form a large section of our society. Pregnancy and birth of a baby is generally

a celebrated event in India. 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.

There is a need to target certain groups of population such as rural, uneducated and economically backward and find the way through which the attendance of ANC visit can be increased. Moreover, strong political commitment, coordination between program implementing agencies, monitoring, evaluation and follow up of the programs will be needed.

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