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Original Research Article

Study on knowledge, attitude and practice of ante-natal care among pregnant women attending antenatal tertiary care institution

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ABSTRACT

Background: The primary aim of antenatal care is to achieve a healthy mother and baby. Antenatal care helps to identify the complications and to remove anxiety and dread associated with delivery. Current study designed to assess knowledge, attitude and ante natal care practice among pregnant women attending to antenatal tertiary care hospital.

Methods: A cross-sectional study was conducted on 500 pregnant women attending antenatal care centre at department of obstetrics and gynecology, Narayana Medical College and Hospital, Nellore during June 2017 to June 2019 under Narayana Mathru Seva Pathakam. Face to face interview was conducted to assess their knowledge, attitude and practice using a structured questionnaire.

Results: A total 86% belongs to 20-29 years age group and 71.4% belongs to multiverdial. 20.6% women responded that they had completed 3 antenatal visits, 26.6% are those who thought that at least more than 5 ANC checkup should be done during pregnancy. 96.1% pregnant responded that registration for antenatal care and visits is essential. 87.2% responds to take iron and folate during pregnancy and 11% responds does not taken the same. 92% pregnant responded that tetanus toxoid (TT) should be given during pregnancy but 3.2% told don't know. When they asked about resting period, 24.2% responded 5-6 hours, 35.4% responded 7-8 hours, 35.6% responded > 8 hours per day to rest they are taking. 55.8% pregnant responded that they had taken decision to give birth the baby in the hospital. 71.2% pregnant females reported that they knew about the danger signs during pregnancy. The reasons for not attending antenatal check-up were financial reasons, illiterate (15.4%), transport and unaware about ANC.

Conclusions: Information, education and communication activities should be increased on ANC through community campaign and mass media to motivate women to utilize maternal care services.

Keywords: Antenatal care, Attitude, Danger signs, Knowledge, Practices, Pregnant women

INTRODUCTION

Appropriate antenatal care (ANC) is one of the pillars of maternal and perinatal health. Antenatal care is considered as a backbone of obstetrical services and health of pregnant women. It includes not only providing nutrition and care but also detection and management of maternal and fetal complications during ANC period. ANC is the care a woman receives throughout her pregnancy in order to ensure that both the mother and child remain healthy. Almost 90% of maternal deaths

occur in developing countries and over half a million women die each year due to pregnancy and childbirth related causes.¹ Annually, 5 lakh women die globally as a result of pregnancy and childbirth.²

In India, it is heartening to note that maternity mortality rate has declined from 212 in 2007-2009 to 178 in 2010-12.² The World Health Organization estimates that 300 million women in the developing world suffer from short-term or long-term morbidities brought about by pregnancy and childbirth. The current maternal mortality

ratio in India is 167/100,000 live births (2011-2013), whereas the country's millennium development goal in this respect is 109/100,000 live births by 2015. High levels of infant mortality (50/1000 births), neonatal mortality (29/1000 live births), and maternal mortality (167/100,000 live births), and lower levels of deliveries with skilled assistance (45%-NFHS-3) remain major public-health challenges in India.^{3,4} Understanding maternal knowledge and practices of the community regarding care during pregnancy and delivery are required for program implementation.⁵

Knowledge refers to a pregnant women's understanding of components of antenatal care which include registration of pregnancy, danger signs during pregnancy, intake of prophylactic Iron and Folic Acid tablets during pregnancy and adapting family planning methods. Attitudes are emotional, motivational, perceptive and cognitive beliefs that positively or negatively influence the behaviour or practice of an individual. A pregnant female's antenatal check-up, adapting family planning behaviour is influenced by her emotions, motivations, perceptions and thoughts. Practices are defined as the observable actions of a pregnant women that could affect her to go to the hospital for antenatal check-up, after knowing the danger signs during pregnancy, how she is making the arrangement to attend hospital and how she had adapting the family planning methods after marriage, in the previous and present pregnancy.

Data related to this very important issue are scarce or less in Andhra Pradesh state. In spite of all efforts to reach and register every antenatal mother, the results are not up to desired level. Current study was conducted to determine the level of knowledge, attitude, and practice related to ANC among the pregnant women and to assess the awareness about their own health during pregnancy. This may be useful to further planning of health intervention program.

METHODS

A cross-sectional study was undertaken to assess the knowledge, attitude, and practices regarding ANC among pregnant women attending to department of obstetrics and gynecology, tertiary Care teaching Hospital Narayana Medical College, Nellore, Andhra Pradesh from June 2017 to June 2019 under Narayana Mathru Seva Pathakam.

Demographic characteristics namely age, parity, type of family, education and occupation, and socioeconomic status (SES) were selected for studying association with knowledge, attitude and practices regarding ANC.

Inclusion criteria

- all pregnant women came to antenatal check-up and follow-up.

Exclusion criteria

- pregnant women those were not willing to answer any questions relating to ANC knowledge, attitude and practices.

The data were collected by interviewing all the eligible

subjects willing to participate in the study.

Knowledge was assessed about ANC visits, tetanus immunization, investigations, and nutritional factors, danger signs of pregnancy.

Attitude variables were an opinion on the ANC registration, visits, diseases, dietary changes, and iron and folic acid (IFA) intake and its regularity in the intake.

Practices questions with regards to ANC visit, dietary changes made during pregnancy, folic acid tablets recorded.

Score of knowledge (percentage)

Percentages used as indicators of knowledge are determined from the numerical indicators.

Score - For a score-based indicator of knowledge, each respondent is given a score based on the number of correct responses provided.

Knowledge score of pregnant will be calculated for each question as the total number of correct responses to one question divided by the total number of responses.

$$\text{Score of knowledge} = \frac{\text{Sum of correct response given by all respondents}}{\text{Total number of respondents.}}$$

Total 13 questions were asked about knowledge aspect of antenatal care, perceived danger signs during pregnancy. Then score for knowledge about antenatal care is calculated.

Attitude score: this will be measured by asking the respondents to judge whether they are positively or negatively inclined towards Antenatal check-up, diseases during pregnancy and diet.

The practices followed by the pregnant female regarding antenatal care, delivery site, occupation and education of pregnant were asked. The questions regarding practices contain 7 questions. Then score for practices regarding antenatal care was calculated.

Statistical analysis

The data thus collected were tabulated and analysis was done by using SPSS-version 24 version. Descriptive statistics like mean and percentage were used.

RESULTS

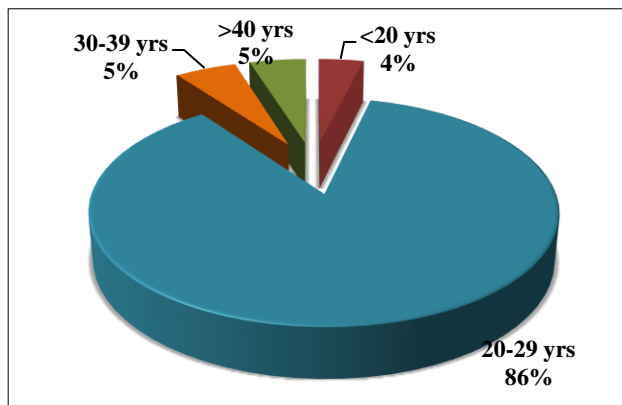


Figure 1: Age wise distribution of pregnant women.

Total number of 500 participants were contacted and interviewed. The mean age of the pregnant were 25 ± 3.61 years (range: 18-40 years). Maximum number of

pregnant women (86%) lying between 20 to 29 years age group followed by 30 to 39 years age group (5%), > 40 years age group (5%), and < 20 years age group (4%) respectively (Figure 1).

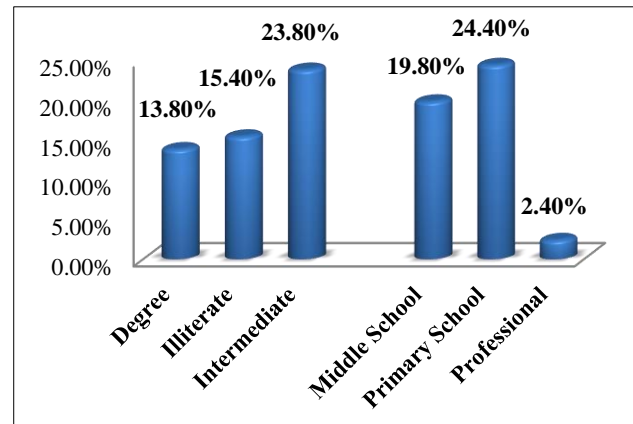


Figure 2: Level of education of the pregnant women.

Table 1: Attitude of pregnant female about antenatal care.

Q. No.	Questions asked	Option	Frequency	Percentage
1	Necessary to register during pregnancy for antenatal check-up	Strongly agree	171	34.2
		Agree	232	46.4
		Neutral	76	15.2
		Dis agree	14	2.8
		Strongly dis agree	2	0.4
2	Antinatal follow-up is good to monitor mother and fetus health	Strongly agree	155	31.0
		Agree	238	47.6
		Neutral	78	15.6
		Dis agree	19	3.8
		Strongly dis agree	4	0.8
3	Number of antenatal visits required	1	30	6.0
		2	100	20.0
		3	103	20.6
		4	81	16.2
		5	49	9.8
		More	133	26.6
4	Number of TT doses received during the present pregnancy	1	54	10.8
		2	386	77.2
		3	43	8.6
5	What changes in the diet during the present pregnancy			
6	Are your taking iron and folic acid tablets	Yes	436	87.2
		No	55	11.0
7	If yes, number of iron and folic acid tablets	< 50	53	10.6
		50-99	133	26.6
		100-149	202	40.4
		150-200	96	19.2
		> 200	5	1.0
8	How many hours of rest do you take per day	5-6	121	24.2
		7-8	177	35.4
		> 8 hours	178	35.6
		Others	19	3.8

Q. No.	Questions asked	Option	Frequency	Percentage
9	Did you ever take medicines without consulting doctor	No	244	48.8
		Yes	246	49.2
10	In current pregnancy, hyper tension, diabetes, thyroid, anemia	No	308	61.6
		Yes	192	38.4
	If yes	Self-medication	143	28.6
		Hosp	10	2.0
		Ignore	44	8.8

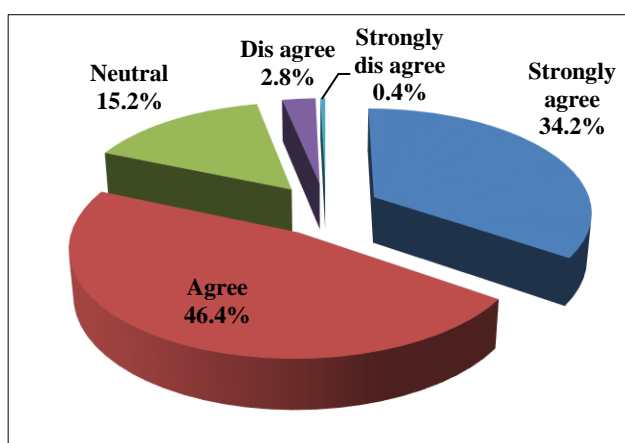


Figure 3: ANC check-up is essential as told by respondent.

Equal number of the respondents lived in nuclear and joint families while a quarter of them lived in rented house. Maximum no. of pregnant women (71.4%) possesses their multiverdia and 27.6% pregnant women are those who possess first pregnancy.

According to Figure 2, maximum no. of respondents (24.4%) are well educated having Primary school, 23.8% respondents are those who have intermediate education, 19.8% respondents are those who have educational qualification till middle School and 13.8% respondents are those who have qualification till degree, 15.4% respondents are illiterate, and only 2.4% respondents are those who have professional qualification (Figure 2). A total 67.2 population belongs to rural and remaining were from urban residence.

Table 1 showing the attitude score of pregnant females about antenatal care. The pregnant females were asked about the benefit they are getting by attending antenatal care centre.

When they asked about regular check-up, 46.2% respondent agreed, 34.2% strongly agreed, 15.2% neutral about that it was necessary to register during pregnancy for antenatal check-up (Figure 3).

According to Figure 3, 100% respondents are those who are agreed that the ANC check-up is necessary for pregnant women for safe and healthy delivery (Table 1).

According to Table 1, maximum number of respondents (26.6%) are those who thought that at least more than 5 ANC check-up should be done during pregnancy, and 9.8% respondents are who thought that at least 5 ANC check-up should be done during pregnancy.

Table 2: Question number 5 regarding the attitude of pregnant female about antenatal care: Changes in the diet during the present pregnancy.

Option	Frequency	Percentage
A	45	9.0
A, B, C	2	0.4
A, B, C, D	4	0.8
A, B, C, E	10	2.0
A, B, E	2	0.4
A, C, D, E	4	0.8
A, C, E	1	0.2
A, E	1	0.2
ALL	254	50.8
B	60	12.0
B, C	4	0.8
B, C, D	6	1.2
B, C, E	12	2.4
B, D	1	0.2
C	47	9.4
C, D	5	1.0
C, D, E	4	0.8
D	27	5.4
E	4	0.8
Y	2	0.4

A - intake of diet (Increase/decrease); B - intake of green leaf veg (Increase/decrease); C - intake of milk (Increase/decrease); D - intake of fruits (Increase/decrease); E - intake of meat (Increase/decrease).

Maximum number of respondents (87.2%) are take iron and folic acid tablets during pregnancy and 11% respondents do not take iron and folic acid tablets during pregnancy. Among these, 10.6% responded < 50, 26.6% responded 50-99, 40.4% responded 100-149, 19.2% responded 150-200 and 1% responded > 200 micrograms of iron and folate tablets were required to maintain their pregnancy according to their condition.

When they asked about resting period, 24.2% responded 5-6 hours, 35.4% responded 7-8 hours, 35.6% responded > 8 hours per day to rest they are taking.

Table 3: Practices of pregnant females on antenatal care.

Q. No.	Questions asked	Option	Frequency	Percentage
1	Gestation period visited health centre for Antenatal check-up	1-2 M	84	16.8
		2-3 M	183	36.6
		3-4 M	180	36.0
		Other	50	10.0
2	Are you regular in your antenatal visits for check-ups	No	108	21.6
		Yes	373	74.6
	If No,	Don't feel like	16	3.2
		Family non cooperation	51	10.2
		Not in statia	38	7.6
		Transportation problem	78	15.6
3	Mother's occupation	Government	24	4.8
		Home maker	293	58.6
		Private	108	21.6
		Working women	73	14.6
4	Husband's education	Degree	110	22.0
		High school	93	18.6
		Illiterate	31	6.2
		Intermediate	122	24.4
		Middle school	72	14.4
		Primary school	31	6.2
		Professional	38	7.6
5	Occupation of father	Government	91	18.2
		Private	382	76.4
	Family income	8000 Rs. Per month		
7	Place of delivery	Home	62	12.4
		Hospital	279	55.8
		Other	2	0.4
		PHC	22	4.4
8	If home delivery	Comfortable conditions at home	2	0.4
		Easy labour	5	1.0
		Easy labour	14	2.8
		Feel shy	7	1.4
		No co-operation in the family	4	0.8
		No nearby health facilities	7	1.4
		Not aware of medical facilities	7	1.4
		Transportation problem	18	3.6
9	If hospital delivery	All	20	4.0
		B, D, F	1	0.2
		Encouraging family	7	1.4
		For a healthy child	151	30.2
		Free care	29	5.8
		Free care, nearby facility	1	0.2
		Good hospital services	22	4.4
		Nearby health facility	49	9.8
		On health workers motivation	9	1.8
		Transport problem	2	0.4

When they asked about medication without consulting doctors, 48.8% responded no and 49.2% responded yes that they have taken medicines without consulting doctor. When they asked about any ailment, 61.6% responded no and 38.4% responded yes that they had hypertension or

diabetes or thyroid problem or anemia problems. In these diseases, 28.6% responded that they are taking self-medication, 2% responded that they are consulting to doctors and 8.8% responded that they ignore these conditions.

When they asked about the diet, 50.8% responded that they increased the diet, both veg diet, milk, fruits and meat diet (Table 2).

When the pregnant were asked about the practise related questions, they responded well.

Gestation period visited health centre for antenatal check-up

When they asked about regular check-ups, Maximum no. of respondents (74.6%) are those pregnant women who are regular in ANC check-ups during their pregnancy and remaining respondents are those who are not regular in ANC check-ups during their pregnancy (Table 3). When they asked about what gestation period you visited to health centre for Antenatal check-up, 16.8% responded 1-

2 months, 36.6% responded 2-3 months, 36% responded 3-4 months of gestation period.

When they asked about occupation, 58.6% responded as home maker. When they asked about their husband's occupation, 76.4% responded as private employment. When they asked for husband's education, 22% responded as degree, 18.6% responded as high school, 24.4% responded as intermediate, 7.6% responded as professional, 14.4% responded as middle school and 6.2% responded as illiterate. The average family income 8000 rupees.

When pregnant asked about place of delivery, 55.8% responded to have hospital based, 12.4% responded to have home, 4.4% responded to have primary health centres near to their home.

Table 4: Knowledge among pregnant female about antenatal care.

Q. No.	Question	Options	Frequency	Percentage
Q	Check-up is necessary when and why ? A - to know the condition of the baby B - to know the health of the mother C - to avoid complications D- for safe delivery	A	82	16.4
		A, B	1	0.2
		A, B, C	1	0.2
		A, B, D	1	0.2
		A, C	1	0.2
		All	10	2.0
		B	40	8.0
		C	85	17.0
		D	135	27.0
		E	9	1.8
1	1 st antenatal check-up is done during 1 st -3 rd months	Can't say	57	11.4
		Don't know	4	0.8
		No	68	13.6
		Yes	358	71.6
2	Pregnant need to come for antenatal check-ups throughout the pregnancy	Can't say	49	9.8
		Don't know	8	1.6
		No	139	27.8
		Yes	283	56.6
3	Why TT Inj. given to pregnant women?	To protect child from tetanus	160	32.0
		To protect mother from tetanus	101	20.2
		Both	176	35.2
		Don't know	55	11.0
4	How many Inj. TT should be given to pregnant mother?	1	67	13.4
		2	325	65.0
		3	68	13.6
		Don't know	16	3.2
5	Any need for pregnant mother to undergo the following tests during pregnancy – blood tests-	Hepatitis B and thyroid	1	0.2
		All tests	11	2.2
		Blood grouping and typing	3	0.6
		HCV	3	0.6
		HCV, hemoglobin, blood grouping and typing	1	0.2
		Hemoglobin	4	0.8

Q. No.	Question	Options	Frequency	Percentage
		Hemoglobin, blood grouping and typing, blood sugar	1	0.2
		Hemoglobin, blood grouping and typing, BP examination	3	0.6
		Hemoglobin, blood sugar, BP examination	1	0.2
		Hepatitis B, thyroid	1	0.2
		Hepatitis B	13	2.6
		Hepatitis B, HIV, HCV, hemoglobin, blood grouping and typing	1	0.2
		Hepatitis B, HIV, HCV, hemoglobin, blood sugar, BP examination	1	0.2
		HIV	9	1.8
		Thyroid test: No	25	5.0
		Thyroid-can't say	38	7.6
		Thyroid test: Yes	127	25.4
6	Can high PP affect the fetal growth	Can't say	26	5.2
		No	97	19.4
		Yes	350	70.0
7	What are the change to be made in diet of a pregnant mother	Intake of green vegetable	252	50.4
		Intake of milk	109	21.8
		Intake of fruits	114	22.8
		Intake of meat	16	3.2
8	Why iron and folic acid given to pregnant women?	To increase blood of mother	121	24.2
		To relieve weakness	86	17.2
		Both	230	46.0
		Don't know	51	10.2
9	In your opinion where should a pregnant woman deliver her baby ?	health care facility/hospital	311	62.2
		Home	98	19.6
		Can't say	69	13.8
10	Are you aware of any infection during pregnancy that can causes have to your baby	Don't know	47	9.4
		No	180	36.0
		Yes	266	53.2
11	Are you aware of any medicines other than prescribed by doctor can cause have to your baby	Can't say	38	7.6
		No	220	44.0
		Yes	224	44.8
12	What are the danger signals of pregnancy? A: excessive vomiting, B: persistent swelling of limbs, C: vaginal bleeding/discharge, D: convulsions, E: week or no fetal movements, F: visual disturbances, G: headache, H: pain abdomen.	A	18	3.6
		A-D, H	1	.2
		A, B	7	1.4
		A, B, C	3	0.6
		A, B, C, D	11	2.2
		A, B, C, D, E	4	0.8
		A, B, C, D, E, F	1	0.2
		A, B, C, D, G, H	1	0.2
		A, B, C, D, H	5	1.0
		A, B, C, F, G, H	2	0.4
		A, B, C, G	1	0.2
		A, B, C, G, H	2	0.4
		A, B, C, H	5	1.0
		A, B, D	1	0.2
		A, B, D, G	1	0.2

Q. No.	Question	Options	Frequency	Percentage
		A, B, D, F	3	0.6
		A, B, D, F, H	1	0.2
		A, B, D, G	3	0.6
		A, B, D, H	1	0.2
		A, B, E, F, G, H	1	0.2
		A, B, E, H	1	0.2
		A, B, F, G	1	0.2
		A, B, G, H	1	0.2
		A, B, G, H	1	0.2
		A, B, H	8	1.6
		A, C	2	0.4
		A, C, D	4	0.8
		A, C, D, F, G	1	0.2
		A, C, D, F, H	1	0.2
		A, C, D, G	2	0.4
		A, C, D, H	4	0.8
		A, C, D, G	1	0.2
		A, C, D, A	1	0.2
		A, C, E	3	0.6
		A, C, F, H	1	0.2
		A, C, G	1	0.2
		A, C, G, H	1	0.2
		A, C, H	7	1.4
		A, D	1	0.2
		A, D, E	2	0.4
		A, D, F	2	0.4
		A, D, F, G	2	0.4
		A, D, F, H	1	0.2
		A, D, G	4	0.8
		A, D, H	3	0.6
		A, E, H	3	0.6
		A, F, G, H	1	0.2
		A, G	1	0.2
		A, H	9	1.8
		All	32	6.4
		B	33	6.6
		B, C	17	3.4
		B, C, D	12	2.4
		B, C, D, E, F, H	1	0.2
		B, C, D, F	1	0.2
		B, C, E, H	3	0.6
		B, C, F	1	0.2
		B, C, G	2	0.4
		B, C, G, H	1	0.2
		B, C, H	3	0.6
		B, D	1	0.2
		B, D, F, G	3	0.6
		B, D, G	2	0.4
		B, D, H	5	1.0
		B, E	1	0.2
		B, E, F	1	0.2
		B, E, G	1	0.2
		B, E, H	3	0.6
		B, F	2	0.4

Q. No.	Question	Options	Frequency	Percentage
		B, G	1	0.2
		B, G	1	0.2
		C	60	12.0
		C, D	12	2.4
		C, D, E	1	0.2
		C, D, E, F, G	3	0.6
		C, D, H	2	0.4
		C, E	4	0.8
		C, G, H	2	0.4
		C, H	4	0.8
		D	32	6.4
		D, E	1	0.2
		D, G, H	1	0.2
		D, H	4	0.8
		E	20	4.0
		E, F	1	0.2
		F	8	1.6
		F, H	3	0.6
		G	6	1.2
		H	3	0.6
13	What do you do in such case	Report to health centre	356	71.2
		Home remedy/self-medicine/ignore	60	12.0

Reason-home delivery is better than hospital delivery

When they asked reason about delivery at home, 3.6% responded transportation problem, 2.8% responded easy labour, others were responded comfortable conditions at home, feel shy, no co-operation in the family, no nearby health facilities, and not aware of medical facilities (Table 3).

When pregnant asked reason for hospital delivery, 30.2% responded for a healthy child delivery, 9.8% responded to nearby health facility, 5.8% responded to free care and 4.4% responded good Hospital Services, and others were responded to On health workers motivation, nearby facility, and encouraging family (Table 3).

Table 4 shows the knowledge of the respondents on antenatal care. 71.6% of them responded that pregnant women need to go for ante natal check-up during 1st - 3rd months.

According to above graph, maximum no. of respondents (35.2%) are those who thought that during pregnancy the TT injection given to pregnant women is very important for care of both mother and baby, 32% respondents are those who stated that the TT injection given to pregnant women is very important for care of baby, 11% respondents don't know anything about importance of TT vaccination and only 20.2% respondents stated that the TT vaccine given to pregnant women is very important for mother (Figure 4).

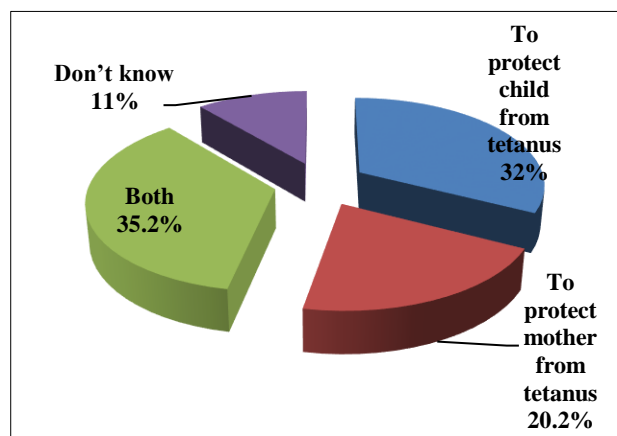


Figure 4: Importance of TT injection.

Ninety-two percent of the study population responded that Injection tetanus toxoid (TT) should be given during pregnancy but 3.2 % told don't know. 65% of these population given 2 tetanus toxoid doses required to immunise against tetanus during pregnancy. That means 65% knew the correct dose.

A total 2.2% of pregnant undergone all tests related to infections, grouping etc. 53.2% pregnant known about the aware of any infection during pregnancy that can affects to the baby, 36% pregnant responded no knowledge and 9.4% responded completely don't know about it.

Also, 70.2% of them reckoned that Iron folic acid is necessary during pregnancy and they knew correct doses needed.

A total 24.2% pregnant have the knowledge about iron and folate to increase blood of mother, 17.2% known these two will be used to relieve weakness, 46% known about the total benefits of iron and folate and remaining 10.2% doesn't know about these medications.

Danger signs like excessive vomiting, persistent swelling of limbs, vaginal bleeding/discharge, convulsions, week or no fetal movements, visual disturbances, headache, pain abdomen were observed in the studied pregnant. Upon these 12% shown vaginal bleeding/discharge, 6.4% shown convulsions, 6.4% shown all complaints, and 6.6% shown persistent swelling of limbs. In such case, 71.2% pregnant females reported that they know about the danger signs during pregnancy and these danger signs required immediate consultation with doctor or health care providers and 12% responded that these signs should be ignored (Table 4).

A total 50.4% of pregnant were advised to diet Intake of green vegetable, 21.8% advised Intake of milk, 22.8% advised intake of fruits, and 3.2% advised Intake of meat to change to be made in diet to get complete dietary requirements.

Financial reasons, unavailability of transport facility and thinking 'it is not necessary' were the main reasons for not accessing antenatal care.

DISCUSSION

Knowledge not only transforms, but also empowers women and improves their self-esteem. It is expected that educated women are more likely to be aware about their health status and seek health knowledge. Women who married after 18 years had more knowledge than those who got married earlier. This may be explained by the fact that those who got married earlier had less schooling than those who married later.

A total 86% lying between 20 to 29 years age group followed by 30 to 39-year age group (5%), > 40-year age group (5%), and < 20-year age group (4%). Another study from Bangladesh revealed maternal age as one of the important predictors for ANC.⁶ It was found that higher level of education, age at marriage and living in owned house were statistically associated with better knowledge.⁷

A total 71.4% possess their multiverdia and 27.6% pregnant women are those who possess first pregnancy.

Chandhiok N et al conducted a study on antenatal care utilization in different part of India found that 73.9% of women had completed 3 antenatal visits.⁸

In this study, 20.6% women responded that they had completed 3 antenatal visits, 26.6% are those who thought that at least more than 5 ANC checkup should be done during pregnancy, and 9.8% respondents are who thought that at least 5 ANC checkup should be done during pregnancy. In another study at least one antenatal clinic visit were made by 97.4% of pregnant women.⁹ A study done by Khatib N et al, in which the minimum 3 antenatal visits made by pregnant female is 33.6%.¹⁰

The knowledge of antenatal care and its importance was known to 82.8% women.¹¹ In our study 96.1% pregnant females responded that registration for antenatal care and visits is essential, in those 34.5% were Strongly agreed, 46.2% were agreed, and 15.2% were neutral.

Shafqat T et al, reported that 83.98% women had awareness regarding appropriate diet and 80.85% had knowledge regarding iron and vitamin supplementation during pregnancy.¹¹ According to a study done by Mithra et al in urban area of South India around 73.2% were aware of the importance of IFA tablets during pregnancy and only 58.7% consumed all the IFA tablets given to them.¹²

In this study, maximum no. of respondents (87.2%) are take iron and folic acid tablets during pregnancy and 11% respondents do not take iron and folic acid tablets during pregnancy. 24.2% pregnant have the knowledge about iron and folate to increase blood of mother, 17.2% known these two will be used to relieve weakness, 46% known about the total benefits of iron and folate and remaining 10.2% don't know about these medications. A similar type of study done by Pal PP et al in a rural area of India, showed that around 60 % consumed the IFA tablets regularly and adequately.¹³ Due to the increased demand, consumption of IFA tablets during pregnancy reduces the Iron deficiency anaemia among pregnant women and thereby reducing anaemia related death during pregnancy.

A study done by Chandhiok N et al in rural areas of India, showed that among those who had antenatal care, 91.3% had awareness about the importance of TT immunization during pregnancy.⁸

In this study, 92% pregnant responded that Injection tetanus toxoid (TT) should be given during pregnancy but 3.2 % told don't know. 65% of these population given 2 tetanus toxoid doses required to immunize against tetanus during pregnancy. That means 65% knew the correct dose.

A study done by Mathews et al, in rural Karnataka, showed around 97.5 had TT administered.¹⁴

Due to the changing hormone levels, fatigue and sleep problems are more common during pregnancy. It is thus necessary to adequate rest and sleep during pregnancy for positive outcomes.

In our study only, when they asked about resting period, 24.2% responded 5-6 hours, 35.4% responded 7-8 hours, 35.6% responded > 8 hours per day to rest they are taking.

In another study, 38.96% were aware about the importance of sleep and rest during pregnancy.¹⁵

In our study 55.8% pregnant females responded that they had taken decision to give birth the baby in the hospital.

In another study, hospital as a place of delivery was favored by 82.03% women while 17.96% women preferred to deliver at homes and private clinics.¹¹

The complications arise due to hypertension was not known by 39.8% of the women and also, they don't know that women with high blood pressure will affect the fetal growth in pregnancy.¹⁶ In our study, 71.2% pregnant females reported that they knew about the danger signs during pregnancy. These pregnant females had mentioned the danger signs during pregnancy as excessive vomiting, persistent swelling of limbs, vaginal bleeding/discharge, convulsions, week or no fetal movements, visual disturbances, headache, pain abdomen. When they asked about any ailment, 61.6% responded no and 38.4% responded yes that they had hypertension or diabetes or Thyroid problem or anemia problems.

The reasons for not attending antenatal check-up were financial reasons, illiterate (15.4%), and unaware about ANC. This finding is consistent with the findings of Sanjel S et al.¹⁷ Another study from China reported the financial difficulties as the most important reason for not attending ANC.¹⁸ Poor women usually have poor access to education, including health education due to lack of financial resources, early marriage and pregnancy, household responsibilities and unwillingness to invest in the hidden costs of education like fees, transport, etc.

The practices and attitudes are better in percentage than knowledge component.

The limitations of the present study were that it was conducted in a small number of pregnant female, the participants were of hospital based study.

To conclude, the study detected 96.1% pregnant female responded to attend antenatal check-up and its importance. The study recommends strengthening of health education by health care providers to improve the knowledge during pregnancy and post-partum period, and early reporting of danger signs.

CONCLUSION

Mother and child are considered as one unit. Utilisation of proper utilisation of antenatal care reduces both maternal and neonatal mortality. Women who are attempting for second or more than second pregnancy,

they have more awareness and knowledge about ANC check-ups during pregnancy. 15.4 respondents are illiterate so they are not aware about their health during their pregnancy. Regarding delivery, some of the respondents are delivered their baby at home because of own fear of miscarriage or risk at hospital.

To improve community awareness on ANC, information, education and communication activities should be increased on ANC through community campaign and mass media like local television channel, radio and local newspapers. There is a need to motivate women to utilize maternal care services which are freely available in all the government health setups.

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