

Original Research Article

Knowledge, attitude and practices for antenatal care, danger signs of pregnancy and family planning among pregnant women in a rural area of Kerala, India

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ABSTRACT

Background: Maternal health services have a potentially critical role in the improvement of reproductive health. The use of health service related to availability, quality and cost of services as well as the social structures, health beliefs and personal characteristics of the users. Objective was to determine the level of knowledge, attitude, and practice related to antenatal care (ANC), danger signs and family planning among the pregnant women.

Methods: This cross-sectional study was carried out in May 2020 to August 2020 in a rural area of Thrissur district of Kerala, India. 150 pregnant women (aged 18-35 years) attending the antenatal clinics were interviewed using a predesigned, pretested questionnaire.

Results: The knowledge and attitude of the participants towards antenatal care, danger signs of pregnancy and adopting family planning methods was adequate in the study population. The total score of knowledge was 80%, positive attitude was 91% and practice was 77%. The participants also had knowledge regarding pregnancy danger signs. Nearly 92% were aware of bleeding per vagina being a danger sign, 85% stated weak or no movement of baby as a danger sign, 75% knew that pain in abdomen was a danger, 68% knew excessive vomiting as a danger sign while a mere 41% reported that convulsions were a danger sign.

Conclusions: The role of health workers in increasing awareness among mothers about the importance of ANC, the danger signs of pregnancy and adopting family planning methods are of paramount concern.

Keywords: Antenatal care, Attitude, Danger signs, Family planning, Knowledge, Obstetrics, Practice, Pregnancy

INTRODUCTION

Pregnancy is a normal process that results in a set of both physiological and psychological changes in expecting mothers. It is a very important event from both social and medical points of view. However, normal pregnancy's may be accompanied by some problems and complications which is potentially life threatening to the mother and foetus. Therefore, pregnant women should receive special care and attention from the family, community and the health care system.¹

ANC is the care given to pregnant women so that they have safe pregnancy and healthy babies. The main objective of ANC is to assure that every pregnancy ends in the delivery of a healthy baby without harming the health of the mother. Antenatal care service is an important goal concerning in the health status of the pregnant women during their reproductive period and its health beneficial accounting for nearly one quarter of all pregnant worldwide.² It helps in early detection, treatment and prevention of conditions that are associated with maternal morbidity and mortality. Unfortunately, many women in developing countries do not receive such care.

Understanding knowledge and practices of the community regarding care during pregnancy and delivery are required for the program implementation.³

Danger signs of pregnancies are a warning signs that women encounter during pregnancy, child birth and postpartum. Awareness of the danger signs of obstetric complications is the essential first step in accepting appropriate and timely referral to obstetric and newborn care. Raising awareness of women on danger signs of pregnancy, childbirth and the postpartum period improve mother's attitude to seek medical care and is crucial for safe motherhood.⁴

Family planning is defined by WHO as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of family groups and thus contribute effectively to the social development of a country". The three main elements that contribute to achieving these purposes are knowledge, attitude, and practices and the disproportion between any of these elements affect family planning outcome.⁵

Barriers that limit access to quality maternal health services must be identified and addressed at all levels of the health system to improve the maternal health. Health knowledge is an important element to enable women to be aware of their health status and the importance of appropriate ANC. Very few studies were carried out in India especially in Kerala about this aspect of maternal health and hence data in this regard is barely available. With this background the present study was conducted to determine the knowledge, attitude and practice (KAP) score to ANC among the pregnant women and to assess the awareness about their own health during pregnancy.

METHODS

Study design and subjects

A cross sectional study was conducted for a period of three months from May 2020 to August 2020 in the rural areas of Thrissur district, Kerala. The study used a prospective audit of 150 pregnant women living in the rural areas of Thrissur district aged from 20 to 45 attending antenatal clinics (ANCs). Pregnant mothers who were unable to hear, speak and severely ill and those who were not willing to participate were excluded from the study.

Participant recruitment and study method

Permission was obtained from ethical clearance committee before beginning of study. 150 pregnant females attending antenatal clinics were included in the study after obtaining their prior consent. The data was

collected by interviewing all the eligible subjects willing to participate in the study. A 25 item predesigned, pretested questionnaire was used to assess the knowledge attitude and practice for antenatal care, danger sign during pregnancy and method of adopting family planning method after marriage and present pregnancy. Women were asked regarding registration of pregnancy, minimum 4 antenatal check-up visits, taking iron and folic acid tablets, type of family planning method adopted by them after marriage and what is their knowledge to adopt the family planning method. They were also asked about the danger sign during pregnancy. The danger signs were dizziness, swelling of feet, persistent vomiting, bleeding per vagina, and blurring of vision, less movement of baby inside uterus and pain abdomen.

RESULTS

A total of 150 pregnant women completed the study and the demographic status is depicted in Table 1.

Table 1: Socio demographics of participants (n=150).

Variables	Frequency	Percentage
Age in years		
<20	4	3
20-25	46	29
25-30	47	29
30-35	63	39
Education		
Primary	2	1
Secondary/senior secondary	20	13
Degree/diploma	112	75
Post-graduation	16	11
Occupation		
House wife	80	53
Others	70	47
Gestational age in months		
1-3	37	25
3-6	62	41
6-9	51	34
Total number of children		
0	49	32
1	45	30
2	54	36
3	2	2

The knowledge attitude and practice for antenatal care, danger sign during pregnancy and method of adopting family planning method after marriage and present pregnancy is shown in Table 2-4 respectively. The score of knowledge about antenatal care, danger sign during pregnancy and adopting family planning methods was 80%, attitude was 91% and practice was 77%.

Table 2: knowledge about antenatal care, danger sign during pregnancy and adopting family planning methods.

Knowledge of pregnant women		Responds	
		Correct	Incorrect
1	Knowledge about registration of pregnancy	125 (83%)	17 (17%)
2	Knowledge on minimum five antenatal check-ups throughout pregnancy	74 (49%)	76 (51%)
3	Knowledge regarding urine and blood test before pregnancy	97 (65%)	53 (35%)
4	Knowledge on intake of non- prescription medicines	144 (96%)	6 (4%)
5	Knowledge on doses of injection TT should be given to pregnant mother	102 (68%)	48 (32%)
6	Knowledge on iron and folic acid tablets given to pregnant women	121 (81%)	29 (19%)
7	Knowledge on changes to be made in diet during pregnancy	144 (96%)	6 (4%)
8	Knowledge on danger signs of pregnancy	139 (93%)	11 (7%)
9	Knowledge on what to be done in case of danger signs	150 (100%)	0
10	Knowledge regarding contraceptive methods	111 (74%)	39 (26%)

Table 3: Attitude about antenatal care, danger sign during pregnancy and adopting family planning methods.

Attitude of pregnant women		Responds		
		Agree	Disagree	Can't say
11	Antenatal check-up is necessary for women after becoming pregnant to monitor mother's and foetus health	120 (80%)	2 (1%)	28 (19%)
12	Blood pressure should be checked regularly during pregnancy	129 (86%)	14 (9%)	7 (5%)
13	Pregnant women should change dietary habit as advised by doctor	146 (97%)	0	4 (3%)
14	Supplementation of iron and folic acid are good for the mother and foetus	146 (97%)	0	4 (3%)
15	Screening of blood for infections should be carried out during antenatal check-up	131 (87%)	12 (8%)	7 (5%)
16	Hospital delivery is better than home delivery	146 (97%)	4 (3%)	0
17	Pregnant women should know about danger signs during pregnancy	143 (95%)	7 (5%)	0
18	Necessary to know about which family planning method to adopt after marriage and after child birth	131 (87%)	0	19 (13%)

Table 4: Practice about antenatal care, danger sign during pregnancy and adopting family planning methods.

Practice of pregnant women		Responds		
		Yes	No	Can't say
19	Registered during first trimester	126 (84%)	22 (15%)	2 (1%)
20	Regular in your antenatal visits for check-up	110 (73%)	16 (11%)	24 (16%)
21	Taken tetanus toxoid injection	129 (86%)	17 (11%)	4 (3%)
22	Taken IFA (iron folic acid) supplementation	129 (86%)	16 (11%)	5 (3%)
23	Ever smoked or consumed alcohol during pregnancy	2 (1%)	146 (98%)	2 (1%)
24	Ever taken medicine without consulting doctor	0	148 (99%)	2 (15%)
25	Use of any contraceptive methods	27 (18%)	123 (82%)	0

The study also determined the knowledge of obstetric danger signs and its associated factors among pregnant women and it is shown in Table 5. The results suggest that vaginal bleeding was found to be the most commonly cited danger sign 138 (92%) and convulsion was the least commonly cited danger sign 61 (41%).

$$\text{Score of knowledge} = \frac{\text{Sum of correct responses given by all respondents}}{\text{Total number of responds}} \times 100$$

$$\frac{125 + 74 + 97 + 144 + 102 + 121 + 144 + 139 + 150 + 111}{10 \times 150} \times 100$$

Score of knowledge = 80%

Score of knowledge about antenatal care, danger sign during pregnancy and adopting family planning methods was 80%.

$$\text{Score of positive attitude} = \frac{\text{Sum of positive responses given by all respondents}}{\text{Total number of responds}} \times 100$$

$$\frac{120 + 129 + 146 + 146 + 131 + 146 + 143 + 131}{8 \times 150} \times 100$$

Score of positive attitude = 91%

Score of positive attitude about antenatal care, danger sign during pregnancy and adopting family planning methods was 91%.

$$\text{Score of good practice} = \frac{\text{Sum of responds given by all respondents}}{\text{Total number of responds}} \times 100$$

$$\frac{126 + 110 + 129 + 129 + 146 + 148 + 27}{7 \times 150} \times 100$$

Score of good practice = 77%

Score of good practice about antenatal care, danger sign during pregnancy and adopting family planning methods was 77%.

Table 5: Knowledge of danger signs in pregnancy among the study participants.

Danger signs	Aware	Not aware
Swelling of hand/feet/face	89 (59%)	61 (41%)
Giddiness/weakness	102 (68%)	48 (32%)
Visual disturbance	83 (55%)	67 (45%)
Convulsion	62 (41%)	88 (59%)
Weak or no movement of baby	127 (85%)	23 (15%)
Pain in abdomen	112 (75%)	38 (25%)
Excessive vomiting	96 (64%)	54 (36%)
Vaginal bleeding/discharge	138 (92%)	12 (8%)

DISCUSSION

Maternal health services have a potentially critical role in the improvement of reproductive health. The use of health service related to availability, quality and cost of services as well as the social structures, health beliefs and personal characteristics of the users. The ANC provides an estimate of essential health issues, including health promotion, disease prevention, screening, and diagnosis. All struggles commenced to preserve the physical and mental well-being of the mothers, to prevent premature labour, to predict difficulties and complications at birth. Thus, ANC aims at reducing maternal, neonatal and infant mortality and increasing institutional deliveries.

A cross sectional study was carried out by assessing the knowledge, attitude and practices among 150 pregnant women about ante natal care, danger sign during pregnancy and adopting family planning method.

Among the total participants, age was taken into consideration by dividing into 4 age groups being kept an interval of 5 years each. Maximum number of participants was found in age group of 30-35 (39%) followed by 25-30 and 20-25 (29%) and least were found in age group of <20 (3%). The age group characteristics were similar to the study conducted by Prachi et al.⁶ The data suggests that increase in age increases the use of ANC. So it can be inferred that the increase in ANC visits with the increase in age could be attributed to the fact that better health education is given to pregnant mothers during previous antenatal care sessions. Pregnant women enrolled in the study had a mixed educational background. Majority of the participants 112 (75%) were having degree/diploma.

Some participants were having secondary/senior secondary 20 (13%), post-graduation 16 (11%) and primary 2 (1%) educational levels. Higher level of education tends to positively affect health seeking behaviours and the education may increase a women's control over her pregnancy. Majority of the participants in the study were house wives 80(53%) which signifies that they were unemployed followed by others 70 (47%) including nurses, dentists, government employees, teachers, etc. of participants (41%) are at 2nd trimester i.e. 3-6 months of pregnancy, followed by 51 (34%) at 3rd trimester and 37 (25%) at 1st trimester of pregnancy. The same is shown in Table 1.

Among 150 pregnant women, maximum number of respondents 125 (83%) knew about the registration of pregnancy and almost half of the 74 (49%) respondents knew that pregnant women need to go for at least 5 antenatal check-ups. About 97 (65%) participants knew regarding the blood and urine test and 144 (96%) participants knew that the medicines other than those prescribed by doctor can cause harm to their baby. Almost 81 (73.6%) participants responded that 2 tetanus toxoid doses required to immunize against tetanus during pregnancy. 121 (81%) pregnant women had awareness regarding the iron and folic acid supplementation during pregnancy and 144 (96%) had knowledge regarding changes to be made in diet during pregnancy. 139 (93%) pregnant females reported that they know about the danger signs during pregnancy and all the participants (100%) knew that they should report to health centre in case of danger signs. Around 111 (79%) participants knew about contraceptive method to be used after marriage. This observed that more number of participants had adequate knowledge and it is presented in Table 2. The total score for knowledge among the pregnant women was 80%. The data suggests that many women were well informed about the aspects of ANC, danger signs of pregnancy and family planning. The reason of good knowledge among the pregnant women was might be because of health education given to them by doctors, nurses and social workers or by the accredited social health activists in the villages or through books, magazines and media. This finding was similar to other study Eram et al in which the respondents had adequate knowledge about need to go for ANC checkups (95%), ANC registration, IFA tablet supplementation, TT injection, and increase in food intake.⁷

In this study, outcome on the attitude towards the antenatal care reveals that around 120 (80%) participants believe that antenatal check-up is necessary for women after becoming pregnant to monitor mothers and foetus health. 129 (86%) participants have an attitude that blood pressure should be checked regularly during pregnancy and 146 (97%) have an attitude that pregnant women should change dietary habit as advised by doctor. Around 146 (97%) of pregnant women agreed that supplementation of iron and folic acid are good for the mother and foetus and 131 (87%) agreed that screening of

blood for infections should be carried out during antenatal check-up. Majority of the participants 146 (97%) considered that hospital delivery is better than home delivery. 143 (95%) and 131 (87%) of pregnant women believe that it's necessary to know about the danger signs during pregnancy and about the family planning method to adopt after marriage and after child birth, respectively. These results suggest that pregnant women's have better attitude towards antenatal care, danger signs of pregnancy and family planning except few and the same is shown in Table 3. Score for positive attitude of pregnant women's was 91%. Akhtar et al in their study showed that the outcome on attitude towards ante-natal care among the interrogated females was positive (69.6%).⁸ But as per the study conducted by Patel et al 100% of pregnant women were having a positive attitude toward ANC.⁹ According to health belief model, the individual perception of a health condition and likelihood adoption of positive attitude and practices depend on four parameters such as perceived seriousness of the condition, perceived susceptibility to the condition, perceived benefits of positive attitude and perceived barriers that prevent the individuals from making the positive changes.

In our study, observation on practices of pregnant women's showed that around 126 (84%) registered the pregnancy during first trimester and majority of the participants 110 (73%) are regular in their antenatal visits for check-up. Around 129 (86%) took tetanus toxoid injection and regular doses of IFA supplementation. Only 2 (1%) told that they smoked or consumed alcohol during pregnancy. No participants (0%) are having the practice of taking medicines without consulting doctor. Only few, 27 (18%) had the practice of using contraceptives and adopting family planning methods. Score for good practice of pregnant women's was 77%. The result shows that women were practicing adequately on antenatal care except few and practicing poorly on adopting family planning methods. The same is represented in Table 4. As per the study conducted by Patel et al 69.3% study subjects followed adequate ANC practices and has showed the results similar to our study.⁹

Studies show variations in KAP scores in pregnant females. In our study, the knowledge (80%), attitude (91%) and practice (77%) score has not reached towards 100%. The knowledge and attitudes are better in percentage than practices towards antenatal care and family planning. The study highlights that knowledge and awareness doesn't always lead to the good practice. There is still a need to educate and motivate the pregnant women and improve antenatal care and family planning services to achieve more effective and appropriate practices.

The study also determined the knowledge of obstetric danger signs and its associated factors among pregnant women. Knowledge about vaginal bleeding/discharge was found to be highest 138 (92%), which was followed by weak or no movement of baby 127 (85%), pain in

abdomen 112 (75%), giddiness/weakness 102 (68%), excessive vomiting 96 (64%), swelling of hand/feet/face 89 (59%) and visual disturbance 83 (55%). Only 61 (41%) of study participants reported convulsion as danger sign in pregnancy. The results suggest that vaginal bleeding was found to be the most commonly cited danger sign. This could be because danger signs such as bleeding are visible and perceived to cause maternal deaths. Table 5 represent the same. A similar finding was reported in a study conducted by Haleema et al in which 67.10% were aware of bleeding per vagina being a danger sign, 50.0% stated excessive vomiting as a danger sign, 23.50% knew that blurring of vision was a danger, while a mere 20.0% reported that convulsions were a danger sign.¹⁰

In Kerala, few studies were carried out for assessing the quality and utilisation of ANC/maternity care services among pregnant women. Moreover, no studies were carried out to assess the Knowledge, attitude and practices of pregnant women regarding antenatal care, danger signs and family planning. The study conducted by Satheesh and Rajeev showed that around 96% of mothers received full antenatal care during pregnancy showing better utilization of antenatal care services.¹¹ On the other hand Soman et al in their study in coastal areas of Kerala reported insufficient antenatal care services in coastal areas compared to other areas of Kerala.¹² In a state like Kerala with high human development index, there is a scope to improve antenatal care services by creating awareness among the women of reproductive age.

The one main limitation of the study was that it was conducted in a small number of pregnant women. Therefore the finding cannot be generalized to women who live in urban areas. In addition, our study failed to measure the statistical significance of knowledge, attitude and practice of each pregnant woman with the independent variables such as education.

CONCLUSION

The study observed that the knowledge and attitude of the participants towards antenatal care, danger signs of pregnancy and adopting family planning methods was adequate in the study population. These higher scores of knowledge and attitude do not warrant equal scores of practice. Despite of good literacy rate in the study population there seemed a discrepancy in the practices. The poor practice of participants on adopting family planning methods in spite of the availability of various methods of temporary contraception indirectly reflects the insecurities they feel towards the contraceptive methods. Majority of the study participants had adequate knowledge of danger signs in pregnancy including the knowledge of specific obstetric danger signs. To improve community, spousal and family awareness on ANC, information, education and communication activities should be increased on ANC through community

campaigns and mass media like local television channel, radio and local newspapers.

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