Research Article

A Cross-Sectional Knowledge Attitude Practice Study on Assessment Of Selfcare, Nutrition, Medication and Postpartum Care To Be Taken in Antenatal Period During Pregnancy

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ABSTRACT: Background: The primary goal of antenatal care is to ensure the health of both the mother and the baby. Maternal mortality is quite high, although it can be lowered via regular check-ups, early detection of pregnancy-related problems, and rapid treatment. The current study aims to analyse pregnant women's knowledge, attitude, and practice attending Seth Mohandas Tulsidas Maternity Hospital in Mysuru.

Methods: A cross-sectional study was conducted on 140 women for period of six months. Questionnaires documented electronically in Google-form, entered in MS-Excel sheet.

Results: A total of 79-[rural area], 61-[urban area]. Age group of patients were 42-[<20 years], 87-[21-30 years], 11-[<31 years]. Total of 42-high school education, 35 passed intermediate, 40-graduation and 23-illiterate. On validation overall, I-CVI(%)-95%, S-CVI(%)-95.85, 94.25,93.75,95.25% for relevance, clarity, simplicity, ambiguity. Cronbach's alpha coefficient-0.71, indicating questionnaire is accepted and validated. KAP results shows moderate knowledge practice(n=59,42.14%) (n=61,43.57%), good attitude (n=78,55.71%), 16.42%(n= 23) having poor overall KAP scores, age found to influence it.

Conclusion: Increase Education, awareness program to motivate women to utilize maternal care services. Government should provide easily accessible ANC facilities to all rural areas, to improve maternal health, resolve maternal-infant deaths in India.

Keywords: Antenatal care (ANC), pregnancy, maternal health, adolescent pregnancy rural-urban.

INTRODUCTION:

Antenatal care is considered as the backbone of obstetrical services and the health of pregnant women. It includes not only providing nutrition and care but also risk identifications and screening, prevention and management of maternal and foetal complications during ANC period.[1] Globally 80% of pregnant women receive at least one ANC visit with skilled person.[2] The World Health Organization (WHO) describes antenatal care (ANC) as the care provided by skilled health-care professionals to pregnant women and adolescent girls in order to ensure the best health conditions for both mother and baby during pregnancy. Antenatal Care is an opportunity to promote the benefits of skilled attendance at birth and to encourage women to seek postpartum care for themselves and their new-born. It is also an ideal time to counsel women about the benefits of child spacing. [1] Maternal health refers to the health of women throughout pregnancy, childbirth, and the postpartum period. [3]

Maternal mortality is one of the major causes of death among women between the age of 15 to 19 years. [4] Annually, 810 women die globally as a result of pregnancy and childbirth. [3] India has the highest number of maternal deaths in the world. [4] Nearly two-thirds of all maternal deaths are caused by serious complications, which include severe bleeding (typically after childbirth), infections, high blood pressure throughout pregnancy (pre- and eclampsia), problems during delivery, and botched abortions.[4,5] In India it is heartening to note that Maternal Mortality Ratio (MMR) has declined from 130/100,000 live births in 2014–16 to 113/100,000 live births in 2016-18.[4] 95% of

maternal death occur in low- income and lower-middle- income countries like India[5]. According to WHO guidelines there must be at least four ANC should be done [6]. The advice regarding nutrition, prevention of anemia, iron calcium and folic acid supplements, hygiene, physical activity, breastfeeding and social and emotional support are the parts of ANC. [7,8,9] Overall, these interventions result in healthy pregnancies and lower rates of maternal mortality. There are various obstacles that lower the quality of maternal health services, including ignorance, negligence, abuse in basic health facilities, hunger, poverty, and early marriages that exacerbate the problem [6].

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 [5]. Practice is defined as the observable actions of a pregnant women that could affect her to go to the hospital for an antenatal check-up, after knowing the danger signs during pregnancy, how she is making the arrangement to attend the hospital and how she had adapted to the family planning methods after marriage, in the previous and present pregnancy.[10] Better access to high-quality care prior to, during, and after childbirth can lower the risk of maternal death [5].

Most of the pregnant mothers were from rural areas and were young who did not know much about the importance of antenatal visits, screening for infectious diseases and advantages of taking supplements on time during pregnancy, so necessity of education, antenatal care and awareness program can resolve the current scenario of maternal and infant deaths in India. Current study was conducted in order to assess the knowledge, attitude, and practice related to ANC among the pregnant women attending antenatal clinic Seth Mohandas Tulsidas Maternity Hospital, Mysuru. This may be useful to further planning of health intervention program.

MATERIALS AND METHODOLOGY:

Study Setting: A study was conducted over six months among pregnant women aged between 18-36 years in Seth Mohandas Tulsidas Maternity Hospital, Mysuru.

Inclusion and Exclusion criteria: We randomly selected the respondents between 18-36 years of age and who were willing to participate in the study, were included after taking consent from them or their caretakers through the informed consent form. Whereas pregnant women who don't have relevant data were excluded from the study.

Ethical issues: written informed consent was taken from the individual subjects before the commencement of the study.

Sample size: Total number of subjects enrolled in the study: 140.

Selection of subjects: We randomly selected the subjects who met all the required inclusion and exclusion criteria.

Data collection: All the relevant information like demographic details, and medical and medication history of the patient were collected and documented using a suitable annexure.

Study Tools:

a. Informed Consent Form: Informed consent is a process by which a subject voluntarily confirms his/her willingness to participate in a particular trial, after having been informed of all aspects of the survey that are relevant to the subject's decision to participate. It is documented using a written, signed, and dated informed consent form.

b. KAP questionnaire: A Knowledge, Attitude, and Practices (KAP) survey is a quantitative method (predefined questions formatted in standardized questionnaires) that provides access to quantitative and qualitative information. It is a 40-point questionnaire with 10 knowledge-based questions, 6 attitude questions and 6 practice-based questions scored and analysed.

c. Patient Data collection Form: It included demographic details like name, age, gender, gestational period, weight, social history (education, place of residence, diet, parity, abortion, miscarriage, interpregnancy interval, smoking and alcohol), non-oral hormonal contraceptive, oral hormonal. contraceptive, regular menstrual cycle, history of anaemia before pregnancy, Hb (g/dl) level in 2 months of interval, past medical history, past medication history, present medical history and present medication history.

Analysis: The quantitative variables were described using their number and mean. Microsoft word and Excel have been used to generate graphs, tables etc. Chi-square test, mean and P-value were used in our study.

QUESTIONNAIRE:

To access the knowledge of pregnant women.

1. Is antenatal care essential for pregnant women?
   Yes (76) No (1) Don't know (63)
2. Is it necessary to do at least 4 visits to antenatal clinic?
   Yes (45) No (4) Don't know (91)
3. Is it necessary to give inj. TT during pregnancy?
   Yes (96) No (6) Don't know (38)
4. How many inj. TT should be given to the pregnant mother?
   1 (20) 2 (110) 3(4) Don't know (6)
5. Is it necessary for pregnant women to undergo screening for Hepatitis B, C, HIV, blood grouping and haemoglobin?
   Yes (58) No (4) Don't know (78)
6. Are you aware of the alarming signs during pregnancy?
   Yes (49) No (73) Don't know (18)
7. Do pregnant women need vitamin supplements, folic acid, and iron supplements during their pregnancy?
   Yes(82) No(6) Don't know(52)
8. Do you know milk and sunlight are good sources of calcium?
   Yes(46) No(6) Don't know(88)
9. Are you aware of any family planning methods?
   Yes (54) No(52) Don't know(34)
10. Are you familiar with breastfeeding concepts?
    Yes(73) No(51) Don't know(16)

To access Attitudes among pregnant women.

1. The First visit to the antenatal clinic must be done in the first trimester of pregnancy.
   Agree(81) Neutral(50) Disagree(9)
2. At least 4 visits are a must during pregnancy
   Agree(54) Neutral(16) Disagree(70)
3. Blood pressure should be monitored regularly during pregnancy
   Agree(78) Neutral(12) Disagree(50)
4. Dietary habits should be changed as advised by the doctor
   Agree(86) Neutral(22) Disagree(32)
5. Iron and folic acid supplements are a must for pregnant women during pregnancy
   Agree(83) Neutral(21) Disagree(36)
6. Antenatal follow-up is good for the mother and child's health
   Agree(111) Neutral(28) Disagree(1)

To access Practice among pregnant women

1. Are you regular for antenatal care visit schedule?
   Yes(92) No(48)
2. How many antenatal visits did you make?
   1(7) 2(40) 3(46) 4(44) >4(3)
3. Are you involved in any physical activities like walking, yoga, meditation, and exercise?
   Yes(85) No(55)
4. Are you taking supplements as prescribed by your doctor?
   Yes(87) No(53)
5. Do you take proper rest as advised by your doctor?
   Yes(102) No(38)
6. Did you make changes in your diet as advised by your doctor?
   Yes(74) No(66)

DEMOGRAPHIC DISTRIBUTION OF STUDY POPULATION:

Out of 140 subjects, 56.4% (79) and 43.5% (61) were from rural and urban areas respectively. 42 (30%) of pregnant women were from the age group of <20 years, 62.1% (87) from 21-30 years, and 7.8% (11) were from <31 years. 63 (45%) subjects were vegetarian and 77 (55%) were non- vegetarian. A total of 42 (30%) had got high school education, 35(20%) passed intermediate, 40(28.5%) had graduated, and 23(16.4%) were illiterate (Table 1)

Table 1: Demographic Distribution of Study Population

Demographics		Numbers (%) (n=140)
Age Group	<20 years 21-30 years >31 years	42 (30%) 87 (62.1%) 11 (7.8%)
Literacy	High school Intermediate (PUC) Degree Illiterate	42 (30%) 35 (25%) 40 (28.5%) 23 (16.4%)
Diet	Veg Non veg	63(45%) 77 (55%)
Residency	Rural Urban	79 (56.4%) 61 (43.5%)
Parity	1 2 3 >4	89(63.57%) 29(20.71%) 19(13.57%) 3(2.1%)

RISK FACTOR ANALYSIS BY USING OVERALL KAP SCORES:

The probable risk factors such as age, residency, parity and educational status were considered for risk factor analysis, the following results are shown in the following (Table 3)

Table 3: Details of risk factors analysis: influencing KAP

Factors		Overall KAP scores		Chi-square value	p-value
		0-20 (poor)	21-40 (good)		
Age	18-26	52	54	20.25	0.000434
	27-36	2	32		
Place of residency	Rural	38	41	7.9	0.088225
	Urban	15	46		
Parity	1	44	45	18.74	0.09656
	2	8	21		
	3	0	19		
	>4	2	1		
Literacy	High school	24	18	91.1	1.24
	Intermediate (PUC)	14	21		
	Degree	2	38		
	Illiterate	14	9		

RESULT:

A study includes 140 subjects. Out of these, 56.4% (79) and 43.5% (61) were from rural and urban areas respectively. 42 (30%) of pregnant women were from the age group of <20 years, 62.1% (87) from 21-30 years, and 7.8% (11) were from <31 years. A total of 42 (30%) had got high school education, 35(20%) passed intermediate, 40(28.5%) had graduated, and 23(16.4%) were illiterate. Knowledge-based questionnaires revealed that 76 of 140 subjects agree that receiving antenatal care is essential.

The remaining 64 subjects were teenagers from rural areas who were unaware of the benefits of antenatal care and it was their first visit. Out of which majority of the respondents (n=91) had little awareness of antenatal visits, and 45 of them agreed that at least four visits were required. Only 58 of the 140 applicants had knowledge of infectious disease screening. Multiparous subjects had an experience with prenatal care. 49 out of 140 subjects were aware of warning symptoms like vaginal bleeding, discharge, persistent weight loss, and excruciating abdominal pain throughout pregnancy. About 96 pregnant women agreed that injection of Tetanus Toxoid is required but was unaware of its importance during pregnancy. 82 subjects were aware of the intake of iron, folic acid, and vitamin supplements during pregnancy. Iron and folic acid were taken merely because of the doctor's advice. The majority of subjects (88) were unfamiliar that milk and sunlight are good sources of calcium. Only 54 multigravida subjects were aware of utilizing copper T for the inter-pregnancy gap and family planning methods. 73 subjects were cognizant of breastfeeding principles.

DISCUSSION AND CONCLUSION:

The study included 140 pregnant women who are visiting the Seth Mohandas Tulsidas Maternity Hospital, Mysore. Predominantly subjects were belonging to age group of 18-26 (75%) and other belongs to 27-36 (25%) age group. However, 16% (23) of pregnant women were illiterate and 30% (42) of them completed their High school education and 25% (35) of them completed their Intermediate and remaining are graduated. 61 (43%) subjects reside in urban areas while the remaining 79 (56%) reside in rural areas. According to studies 63% (89) possess first pregnancy and 51(36%) possess multi pregnancy. Whereas 45% of pregnant women following vegetarian diet and remaining 55% of them are following non-vegetarian diet. A study conducted by *Assefa Philipos kare et al*[1] share almost similar demographic details like age, literacy, place of residency.

Vuppu Sitalakshmi et al[11] conducted a study on KAP study on antenatal care among pregnant women attending antenatal tertiary care institution in which 20% of pregnant women completed 3 of their ANC visits. In our study 54% of subjects agreed that antenatal care is essential Similarly, 45% of also agreed to the necessity of at least 4 antenatal visits during their gestational period. Based on studies 57% of them visited the ANC clinic during their first trimester of pregnancy, 46% of pregnant women completed their 3rd ANC visit, 44% of pregnant women completed their 4th during their gestational period, and 79% of subjects are willing for further follow up for better mother and child health.

The study depicts that 68% of subjects are incognizant about TT injection (n=96) and 78% of them have knowledge about the number of TT injection that needs to be taken during pregnancy (n=110) which is similar to the study conducted by *Shahnaz Akhtar et al*[12] about KAP among pregnant women in the rural area of Lahore in which 51% of pregnant women agreed to take TT injection.

41% of pregnant women agreed to undergo a screening test for Hepatitis B, HIV, blood grouping and haemoglobin, which correlates with the study conducted by *Vuppu Sitalakshmi et al*[11] also, the study conducted by *Shahnaz Akhtar et al*[12] shows that 82% of pregnant women agreed to monitor Blood pressure regularly, which is similar to our study in which 55% of them were agreed to monitor Blood pressure during pregnancy.In our study 35% of subjects are sensible of alarming signs during pregnancy, which corelates with the study by *Abayneh Akililu Solomon et al*[13] in which 38% of pregnant women having knowledge about alarming signs during pregnancy.

Fida F et al[14] observational study on use of

dietary supplementation among pregnant women in the centre of Jordan in which 71% of subjects were taking iron supplements regularly. Comparably, in our study 82% of pregnant women having knowledge about need of vitamin, folic acid and iron supplements during pregnancy and also 83% of them agreed to take during gestational period and 62% of them are regularly intakes.In our study, 46% of subjects were aware of milk and sun light as a source of calcium, which is similar to study by *Zelalem Tenaw et al*[15] in which 82% of pregnant women were practicing regular milk intake for the source of calcium. Relatively 86% of pregnant women have a favorable attitude towards changing their dietary habits and also 74% of them practice proper diet guided by their doctors.

A study by *Jody R et al*[16] regards improving health literacy through group antenatal care, in which pregnant women have significant knowledge about breastfeeding (90% in group care and 66% in individual care). Equivalently 73% of pregnant women were familiar with the breastfeeding concept and 54% of them were familiar with family planning concept. 85% of pregnant women were practicing physical activities like yoga, meditation etc.

Most of the pregnant mothers were from rural areas and were young who did not know much about the importance of antenatal visits, screening for infectious diseases and advantages of taking supplements on time during pregnancy, so necessity of education, antenatal care and awareness program can resolve the current scenario of maternal and infant deaths in India. The study found that adolescent pregnancy was associated with a higher risk of late booking and fewer ANC visits, which could contribute to negative mother and birth outcomes. According to the information acquired from interviews, an adolescent's access to ANC services is restricted by the nurse's attitude, a fear of HIV testing, health system barriers, a lack of understanding, and financial barriers. A crucial component of the strategy would be to precisely identify the obstacles to individual counselling at the clinic level and implement suitable actions to guarantee that each pregnant woman's unique situation is addressed.

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