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Research Article

Knowledge and Attitude Regarding Antenatal Diet Among Primigravida Mothers Residing in a Selected Community Area: A Descriptive Study

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Abstract:

Background: Adequate nutrition during pregnancy is essential for maternal well-being and fetal development. Primigravida mothers, who are experiencing pregnancy for the first time often lack prior experience and may hold inadequate knowledge or ambivalent attitudes toward antenatal diet, placing them at higher risk of nutritional deficiencies. **Aim:** To assess the level of knowledge and attitude regarding antenatal diet among primigravida mothers. **Methods:** A descriptive, cross-sectional design was used among 60 primigravida mothers residing in the Maduravoyal Urban Primary Health Centre community area, Chennai, selected through non-probability convenience sampling. Data were collected using a structured knowledge questionnaire (15 items) and a 5-point Likert attitude scale (15 items). Data were analyzed using descriptive statistics, the chi-square test, and Karl Pearson's correlation coefficient. **Results:** Most participants (65.0%) had average knowledge, 28.3% had poor knowledge, and only 6.7% had good knowledge regarding antenatal diet. In contrast, the majority (88.3%) held a positive attitude and 11.7% a neutral attitude, with none showing a negative attitude. A statistically significant mild positive correlation was found between knowledge and attitude scores ($r = 0.371$, $p = 0.004$). Knowledge was significantly associated with age, dietary pattern, educational status, occupation, monthly family income, type of family, duration of pregnancy, and source of information ($p < 0.05$). Attitude was significantly associated with dietary pattern, religion, educational status, occupation, type of family, area of residence, and source of information ($p < 0.05$). **Conclusion:** Primigravida mothers demonstrated only average nutritional knowledge despite a largely positive attitude toward antenatal diet, and the two were positively correlated.

Keywords: antenatal diet, knowledge, attitude, primigravida, maternal nutrition.

INTRODUCTION

Nutrition during pregnancy is a corner stone of maternal and child health. Pregnancy substantially increases the demand for calories, protein, iron, calcium, folic acid, and other micronutrients to support fetal growth, maternal tissue expansion, and physiological adaptation. Inadequate dietary intake during this period is linked to anemia, low birth weight, preterm birth, and higher maternal and neonatal morbidity and mortality.

Maternal malnutrition remains a significant global public health concern, particularly in developing countries, where deficiencies in iron, vitamins, and overall caloric intake are wide spread. In India, despite national health programmes, a large proportion of pregnant women still do not meet recommended dietary allowances. Low educational status, poverty, limited access to health services, cultural food taboos, and reliance on informal, non-professional sources of dietary advice all contribute to this gap.

Knowledge enables pregnant women to make informed dietary choices, while attitude the beliefs, perceptions, and feelings a woman holds toward nutrition shapes whether that knowledge is translated into practice. Primigravida mothers are particularly vulnerable in this respect, as they lack prior pregnancy experience and depend heavily on external guidance. Although antenatal care services and nutrition programmes are widely available, gaps in awareness and attitude persist in community settings. Identifying these gaps is essential to designing targeted health education interventions.

This study was therefore undertaken to assess the knowledge and attitude regarding antenatal diet among primigravida mothers residing in a selected community area, and to examine how these variables relate to one another and to selected demographic characteristics.

AIM

To assess the knowledge and attitude regarding antenatal diet among primigravida mothers residing in a selected community area.

METHODOLOGY

A quantitative research approach with a descriptive research design was adopted to assess the knowledge and attitude regarding antenatal diet among primigravida mothers. The study was conducted among 60 primigravida mothers residing in the community area served by Maduravoyal Urban Primary Health Centre (UPHC), Chennai, Tamil Nadu, selected through non-probability convenience sampling. Mothers who were primigravida, willing to participate, and able to understand Tamil or English were included, while multigravida mothers and those with severe illness or pregnancy complications were excluded. Data were collected using a structured tool comprising three sections: demographic variables (10 items), a 15-item knowledge questionnaire, and a 15-item five-point Likert attitude scale. Knowledge scores were categorized as poor (0–4), average (5–8), and good (9–15), while attitude scores were classified as negative (15–35), neutral (36–55), and positive (56–75). The tool was validated by experts from relevant nursing and medical specialties.

MATERIAL AND METHODS

A quantitative research approach with a descriptive research design was adopted. The study was conducted at Sri Manakula Vinayagar Medical College and Hospital, Puducherry. The accessible population comprised antenatal mothers attending the antenatal outpatient department. A total of 50 antenatal mothers were selected using a convenient sampling technique. Antenatal mothers who were willing to participate, had a gestational age of 20 weeks or above, and could understand Tamil or English were included. Mothers diagnosed with medical or obstetric complications other than PIH and those unwilling to participate during data collection were excluded.

Data were collected using a structured questionnaire consisting of demographic variables and knowledge questions related to the predisposing factors of pregnancy-induced hypertension. Knowledge scores were categorized as adequate (>75%), moderate (50–75%), and inadequate (<50%). Descriptive statistics were used to summarize demographic variables and knowledge levels, while the Chi-square test was used to determine associations with selected demographic variables.

RESULT

Table 1 shows that among 60 primigravida mothers, 51.7% were aged 26–30 years, 75.0% followed a non-vegetarian diet, 66.6% were Hindu, 61.7% were graduates and homemakers, 48.3% had a monthly family income of ₹20,001–30,000, 56.7% belonged to joint families, 35.0% were in the second trimester, and 60.0% obtained antenatal diet information mainly from media. Regarding knowledge, 65.0% had average knowledge, 28.3% had poor knowledge, and 6.7% had good knowledge (Table 2). Regarding attitude, 88.3% had a positive attitude and 11.7% had a neutral attitude, with none having a negative attitude (Table 3). The mean knowledge score was 5.62 ± 2.03 , while the mean attitude score was 64.42 ± 9.07 . A significant mild positive correlation was found between knowledge and attitude ($r = 0.371$, $p = 0.004$), indicating that higher knowledge was associated with a more favorable attitude (Table 4). Knowledge level was significantly associated with age, dietary pattern, education, occupation, family income, type of family, trimester, and source of information ($p < 0.05$), but not with religion or area of residence (Table 5). Attitude level was significantly associated with dietary pattern, religion, education, occupation, type of family, area of residence, and source of information ($p < 0.05$), whereas age, family income, and trimester showed no significant association (Table 6).

DISCUSSION

The findings showed that most primigravida mothers had average knowledge (65.0%), while 28.3% had poor knowledge and only 6.7% had good knowledge. In contrast, 88.3% demonstrated a positive attitude, indicating that mothers were generally receptive to healthy antenatal dietary practices despite limited knowledge. A significant mild positive correlation was found between knowledge and attitude ($r = 0.371$, $p = 0.004$), suggesting that better knowledge was associated with a more favorable attitude towards antenatal diet. This finding supports the importance of structured nutrition education during antenatal care. Knowledge was significantly associated with age, dietary pattern, educational status, occupation, family income, type of family, trimester, and source of information ($p < 0.05$). Media was the major source of information (60.0%), highlighting its potential for disseminating nutrition education while emphasizing the need for accurate, professionally guided information. Overall, the findings highlight the need for regular nutrition education and counselling during antenatal care to improve mothers' knowledge and promote healthy dietary practices.

CONCLUSION

Primigravida mothers demonstrated only average nutritional knowledge despite a largely positive attitude toward antenatal diet, and the two were positively correlated. Structured, continuous nutrition education delivered by nurses during antenatal care is recommended to close this knowledge gap and support healthy dietary practices.

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Table 1. Frequency and Percentage Distribution of Selected Demographic Variables (N = 60)

Demographic variable	Category	f	%
Age (years)	<20	9	15.0
	21–25	20	33.3
	26–30	31	51.7
Dietary pattern	Vegetarian	6	10.0
	Non-vegetarian	45	75.0
	Both	9	15.0
Religion	Hindu	40	66.6
	Muslim	10	16.7
	Christian	10	16.7
Educational status	No formal education	3	5.0
	Primary	6	10.0
	Secondary	14	23.3
	Graduate & above	37	61.7
Occupation	Home maker	37	61.7
	Private job	13	21.6
	Govt. job	9	15.0
	Self-employed	1	1.7
Monthly family income(₹)	<10,000	11	18.4
	10,001–20,000	12	20.0
	20,001–30,000	29	48.3
	>30,000	8	13.3
Type of family	Nuclear	22	36.6
	Joint	34	56.7
	Extended	4	6.7
Duration of pregnancy	1 st trimester	20	33.3
	2 nd trimester	21	35.0
	3 rd trimester	19	31.7
Primary source of information	Health workers	1	1.7
	Media	36	60.0
	Family/Friends	5	8.3
	Doctor	18	30.0

Table 2. Level of Knowledge Regarding Antenatal Diet (N=60)

Level of knowledge	f	%
Poor(0–4)	17	28.3
Average(5–8)	39	65.0
Good(9–15)	4	6.7

Table 3. Level of Attitude Regarding Antenatal Diet (N=60)

Level of attitude	f	%
Negative(15–35)	0	0.0
Neutral(36–55)	7	11.7
Positive(56–75)	53	88.3

Table 4. Correlation Between Knowledge and Attitude Scores (N=60)

Variable	Mean	SD	Karl Pearson'sr	p-value
Knowledge	5.62	2.03	0.371	0.004*
Attitude	64.42	9.07		

Table5.Association Between Level of Knowledge and Demographic Variables (N=60)

Demographic variable	χ^2	df	p-value	Inference
Age	19.138	4	0.001	S
Dietary pattern	16.199	4	0.003	S
Religion	8.914	4	0.063	NS
Educational status	16.855	6	0.01	S
Occupation	45.438	6	0.0001	S
Monthly family income	40.972	4	0.0001	S
Type of family	22.937	4	0.0001	S
Area of residence	2.602	4	0.626	NS
Duration of pregnancy	26.595	4	0.0001	S
Primary source of information	13.583	6	0.035	S

Table6.Association Between Level of Attitude and Demographic Variables (N=60)

Demographic variable	χ^2	df	p-value	Inference
Age	1.45	2	0.484	NS
Dietary pattern	44.906	2	0.0001	S
Religion	9.784	2	0.008	S
Educational status	26.038	3	0.0001	S
Occupation	11.686	3	0.009	S
Monthly family income	4.707	3	0.195	NS
Type of family	34.859	2	0.0001	S
Area of residence	9.586	2	0.008	S
Duration of pregnancy	4.613	2	0.1	NS
Primary source of information	25.553	3	0.0001	S

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