

Effectiveness of A Structured Teaching Programme On Knowledge and Practices Regarding Antenatal Diet Among Primigravida Women in Selected Hospitals of Jaipur, Rajasthan

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Abstract:

Background: Maternal nutrition significantly influences pregnancy outcomes. Poor knowledge regarding antenatal diet may adversely affect maternal and fetal health..

Methods: A pre-experimental one-group pretest-posttest design was adopted among 50 primigravida women attending antenatal OPD. Knowledge was assessed before and after a structured teaching programme.

Results: The mean knowledge score increased from 14.14±2.286 to 24.72±1.796. The paired t-value was 29.451 ($p<0.001$), indicating significant effectiveness of the intervention.

Conclusion: Structured teaching programmes effectively improve antenatal dietary knowledge among primigravida women.

Keywords: Antenatal diet, Primigravida, Structured teaching programme, Maternal nutrition, Knowledge.

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INTRODUCTION

Pregnancy is a critical period during which maternal health and nutrition directly influence fetal growth and pregnancy outcomes. Adequate antenatal care, including nutritional counseling, helps promote maternal well-being and supports healthy fetal development.¹ Proper nutrition during pregnancy requires additional energy, protein, vitamins, and minerals to meet the increased physiological demands of the mother and the growing fetus.²

A balanced antenatal diet should provide sufficient calories, protein, iron, calcium, folic acid, and other essential micronutrients.³ Adequate maternal nutrition supports fetal growth, prepares the mother for labor and lactation, and helps prevent nutritional deficiencies.⁴ In contrast, poor maternal dietary intake may contribute to anemia, inadequate gestational weight gain, low birth weight, preterm birth, and other adverse maternal and neonatal outcomes.⁵⁻⁶ Maternal anemia remains a major nutritional concern, particularly in developing countries. Inadequate dietary intake and poor iron stores during pregnancy may negatively affect fetal growth and increase the risk of low birth weight and preterm delivery.⁷ Adequate nutritional knowledge and appropriate dietary practices are therefore essential for maintaining maternal health and ensuring optimal pregnancy outcomes.⁸

Primigravida women may have limited knowledge regarding the nutritional requirements of pregnancy and may be influenced by dietary misconceptions, food taboos, and inadequate health information.⁹ Structured Teaching Programmes can improve maternal knowledge and encourage healthy dietary practices.¹⁰ Therefore, the present study was undertaken to assess the effectiveness of a Structured Teaching Programme on knowledge and practices regarding antenatal diet among primigravida women attending selected hospitals in Jaipur.

Objectives: To assess knowledge and practices regarding antenatal diet among primigravida women, evaluate the effectiveness of the Structured Teaching Programmed, and determine the association between post-test knowledge scores and selected demographic variables

MATERIALS AND METHODS

Research Design: Pre-experimental one-group pretest-posttest design.

Setting: Selected hospital, Jaipur, Rajasthan.

Sample Size: 50 primigravida women.

Sampling Technique: Non-probability convenient sampling.

Tool: Structured knowledge questionnaire consisting of 30 items.

Data Analysis: Frequency, percentage, mean, SD, paired t-test and chi-square test.

Ethical Considerations: Permission obtained from concerned authorities and informed consent obtained from participants.

RESULTS

Table 1. Socio-demographic Characteristics of Respondents (N=50)

Variable	Frequency (f)	Percentage (%)
Age (years)		
30 years and above	20	40
25–30 years	15	30
20–25 years	15	30
Educational Status		
10th Standard	20	40
12th Standard	15	30
Graduate	15	30
Variable	Frequency (f)	Percentage (%)
Religion		
Hindu	28	56
Muslim	22	44
Place of Living		
Urban	40	80
Rural	10	20

Most respondents were aged 30 years and above (40%), educated up to 10th standard (40%), Hindu (56%), and residing in urban areas (80%).

Table 2. Pre-test and Post-test Knowledge Levels (n= 50)

Knowledge Level	Pre-test n (%)	Post-test n (%)
Inadequate (0–10)	2 (4%)	0 (0%)
Moderately Adequate (11–20)	48 (96%)	0 (0%)
Adequate (21–30)	0 (0%)	50 (100%)

The findings revealed a substantial improvement in knowledge following the educational intervention.

Table 3. Comparison of Pre-test and Post-test Knowledge Scores

Test	Range	Mean	Median	SD
Pre-test	10–19	14.14	14.5	2.286
Post-test	21–28	24.72	25.0	1.796

The post-test mean score was significantly higher than the pre-test mean score, indicating improved knowledge following the Structured Teaching Programme.

Table 4. Effectiveness of Structured Teaching Programme

Group	Mean	SD	t-value	p-value
Pre-test	14.14	2.286	29.451	<0.001
Post-test	24.72	1.796	—	—

The calculated paired t-value of 29.451 demonstrated a highly significant increase in knowledge scores following the intervention.

Table 5. Area-wise Knowledge Scores

Knowledge Area	Pre-test Mean (%)	Posttest Mean (%)
Antenatal Diet and Needs	42.66	94.66
Constituents, RDA, and Foods to Avoid	48.28	81.14
Advantages and Practices	46.92	80.92

Knowledge improved across all domains after the Structured Teaching Programme.

Association Analysis

Chi-square analysis revealed no statistically significant association between pre-test knowledge scores and socio-demographic variables including age, education, religion, occupation, income, type of family, type of house, source of information, residence, and previous knowledge regarding antenatal diet ($p>0.05$).

Figure 4.1 Bar Diagram: Comparison of Pre-test and Post-test Knowledge Levels

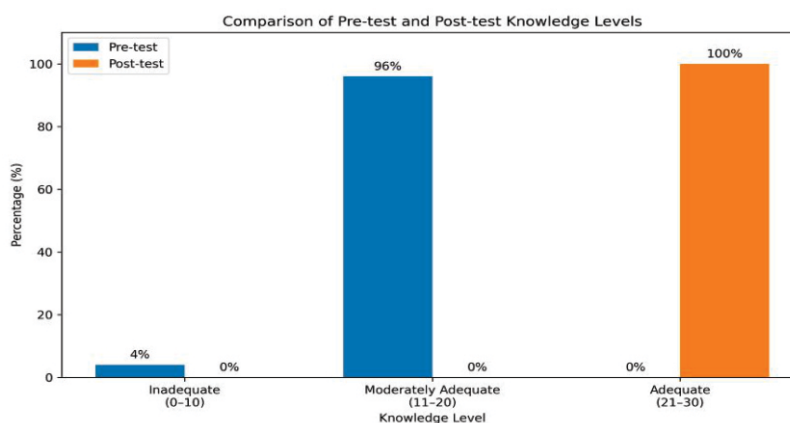


Figure 4.2 Bar Diagram: Comparison of Pre-test and Post-test Mean Knowledge Scores

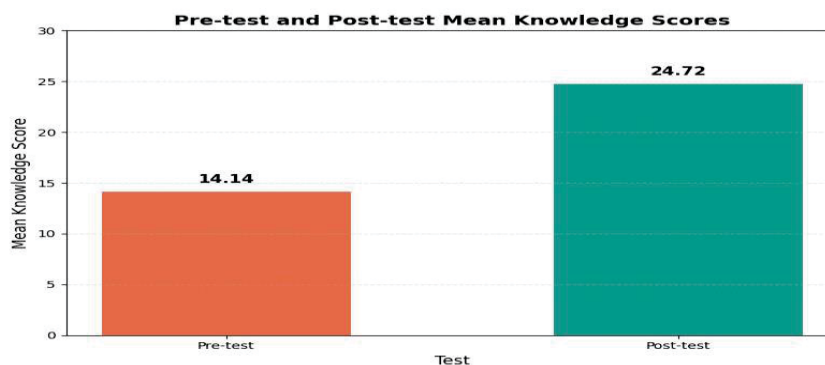
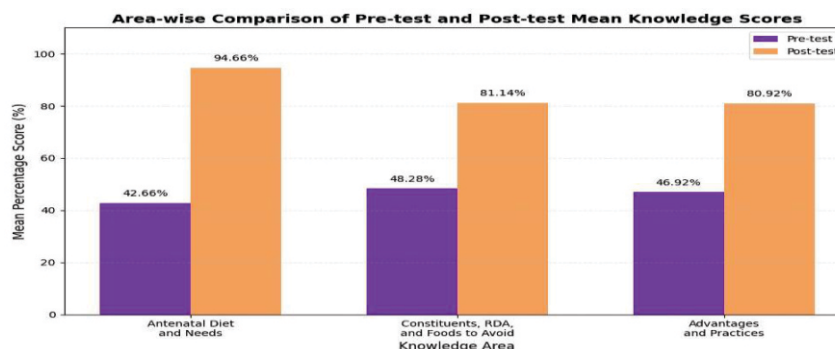


Figure 4.3 Bar diagram showing area-wise comparison of pre-test and post-test mean knowledge score



DISCUSSION

The study findings showed significant improvement in knowledge regarding antenatal diet after the Structured Teaching Programme. The highest post-test mean percentage score was observed in antenatal diet and nutritional needs (94.66%), followed by constituents, RDA, and foods to avoid (81.14%) and advantages and practices of antenatal diet (80.92%).

The findings indicate that nutritional education can improve maternal knowledge and promote healthy dietary practices during pregnancy. No significant association was found between pre-test knowledge scores and selected socio-demographic variables. Therefore, Structured Teaching Programmes should be incorporated into routine antenatal care to improve maternal nutritional knowledge and promote better maternal and fetal health outcomes.

CONCLUSION

The study found that the Structured Teaching Programme significantly improved knowledge regarding antenatal diet among primigravida women. The mean post-test knowledge score was higher than the pre-test score (24.72 ± 1.796 vs. 14.14 ± 2.286 ; $t = 29.451$, $p < 0.001$). Therefore, structured nutritional education should be included in routine antenatal care to promote maternal and fetal health.

Nursing Implications

Nurses should provide regular nutritional counseling, assess dietary needs, and use educational materials during antenatal visits to improve maternal knowledge and encourage healthy dietary practices.

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