

A Study to Assess the Effectiveness of Planned Teaching Program on Warning Signs of Pregnancy Among Primigravida Mothers in NMCH, Jamuhar, Bihar

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Abstract- Lack of awareness of warning signs of pregnancy among primigravida mothers can delay care-seeking and increase maternal and fetal risks. Planned Teaching Programs (PTPs) may enhance knowledge and promote timely health-seeking behavior.

Objectives: To evaluate the effectiveness of a Planned Teaching Program on knowledge of warning signs of pregnancy among primigravida mothers at Narayan Medical College and Hospital, Jamuhar, Rohtas, Bihar.

Methods: A pre-experimental one-group pre-test post-test design was conducted with 60 purposively selected primigravida mothers. Data were collected using a structured questionnaire before and after administering a culturally appropriate PTP. Descriptive and inferential statistics were used for analysis.

Results: Pre-test scores showed 46.7% had poor knowledge and only 11.6% had excellent knowledge. Post-test findings indicated significant improvement, with 58.4% achieving excellent knowledge and only 8.3% remaining in the poor category ($p < 0.05$).

Conclusion: The Planned Teaching Program significantly enhanced primigravida mothers' knowledge regarding pregnancy warning signs.

Index Terms- Warning signs of pregnancy, primigravida mothers, planned teaching program, maternal health, knowledge assessment, antenatal education.

I. INTRODUCTION

Pregnancy is a crucial phase in a woman's life, and for primigravida mothers, the lack of prior experience often results in limited awareness of potential complications. Early recognition of warning signs—such as vaginal bleeding, severe headache, blurred vision, or reduced fetal movement—is essential to prevent maternal and neonatal morbidity. In rural regions like Rohtas district, Bihar, low health literacy and inadequate access to health education further increase risks. Health education during antenatal care

plays a vital role in empowering mothers to seek timely medical assistance. This study was conducted at NMCH, Jamuhar, to assess the effectiveness of a planned teaching program in improving knowledge of pregnancy warning signs among primigravida mothers.

II. MATERIAL AND METHOD

The study adopted a quantitative pre-experimental one-group pre-test post-test design to assess the effectiveness of a Planned Teaching Program (PTP) on warning signs of pregnancy among 60 purposively selected primigravida mothers at NMCH, Jamuhar, Rohtas, Bihar.

Independent Variable: Planned Teaching Program

Dependent Variable: Knowledge on warning signs of pregnancy

Demographic Variables: Age, education, occupation, religion, socio-economic status, family type, antenatal information

Inclusion: Primigravida mothers (20–40 years), willing, and able to understand Hindi/English.

Exclusion: Multigravida, critically ill/mentally challenged, or those who already received structured education.

Tools:

Section A – Demographic data

Section B – Structured questionnaire (20 MCQs, scored 0–20; classified as adequate, moderate, inadequate knowledge)

Intervention: Planned Teaching Program (30–40 min) based on WHO/national guidelines using charts, posters, and pamphlets.

Validity & Reliability: Content validated by experts; reliability tested using split-half method.

Data Collection: Pre-test → Planned teaching program → Post-test, maintaining consent and confidentiality.

Analysis:

Descriptive: Frequency, percentage, mean, SD

Inferential: Paired t-test (effectiveness), Chi-square (association with demographics)

III. TABLES & FIGURES

Study findings were organized and presented in following section-

Section A: Description of the demographic variable.

Socio demographic Variable	Category	Frequency(f)	Percentage (%)
Age	20–25	15	25.0%
	26–30	19	31.7%
	31–35	14	23.3%
	36–40	12	20.0%
Religion	Christian	13	21.7%
	Hindu	33	55.0%
	Muslim	11	18.3%
	Sikh	3	5.0%
Occupational Status	Government Employee	14	23.3%
	Housewife	12	20.0%
	Private Employee	22	36.7%
	Self-Employee	12	20.0%
Socio-Economic Status	High	26	43.3%
	Low	13	21.7%
	Middle	21	35.0%
Information on Antenatal Exercise	Yes	34	56.7%
	No	26	43.3%
Type of Family	Expanded	18	30.0%
	Joint	19	31.7%
	Nuclear	23	38.3%

Table 1: Description of sample characteristics in term of Frequency and Percentage.

Section B: Assessment of Pre-Test Level of Knowledge Regarding Warning Signs of Pregnancy Among Primigravida Mothers

Knowledge Level	Score Range	Frequency (f)	Percentage (%)
Poor	0–6	28	46.7%

Good	7–13	25	41.7%
Excellent	14–20	7	11.6%
Total	—	60	100%

Table .2: Assessment of Pre-test Knowledge Level Regarding Warning Signs of Pregnancy Among Primigravida Mothers.

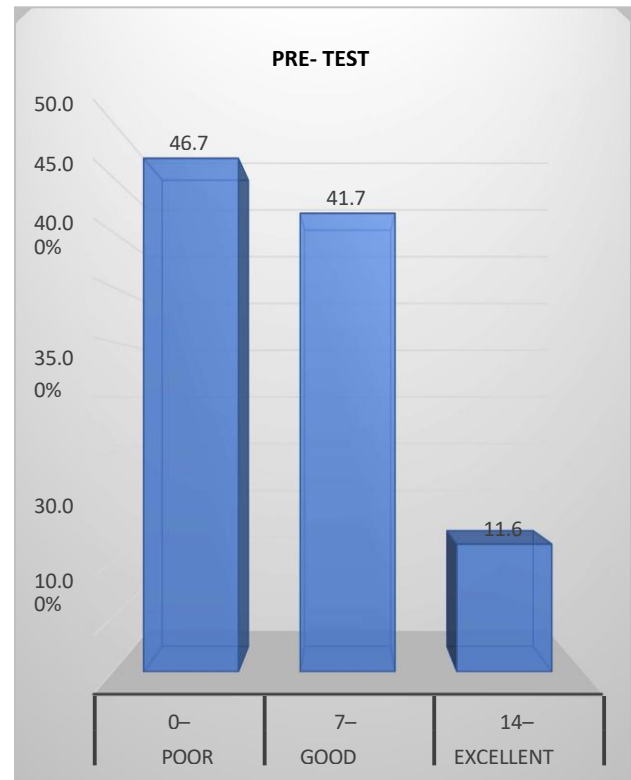


Fig.1:Assessment of Pre-test Knowledge Level Regarding Warning Signs of Pregnancy Among Primigravida Mothers.

Section C: Assessment of Post-Test Level of Knowledge Regarding Warning Signs of Pregnancy Among Primigravida Mothers After the Planned Teaching Program.

Knowledge Level	Score Range	Frequency (f)	Percentage (%)
Poor	0–6	5	8.3%
Good	7–13	20	33.3%
Excellent	14–20	35	58.4%
Total	—	60	100%

Table.3: Assessment of Post-test Knowledge Level Regarding Warning Signs of Pregnancy Among Primigravida Mothers

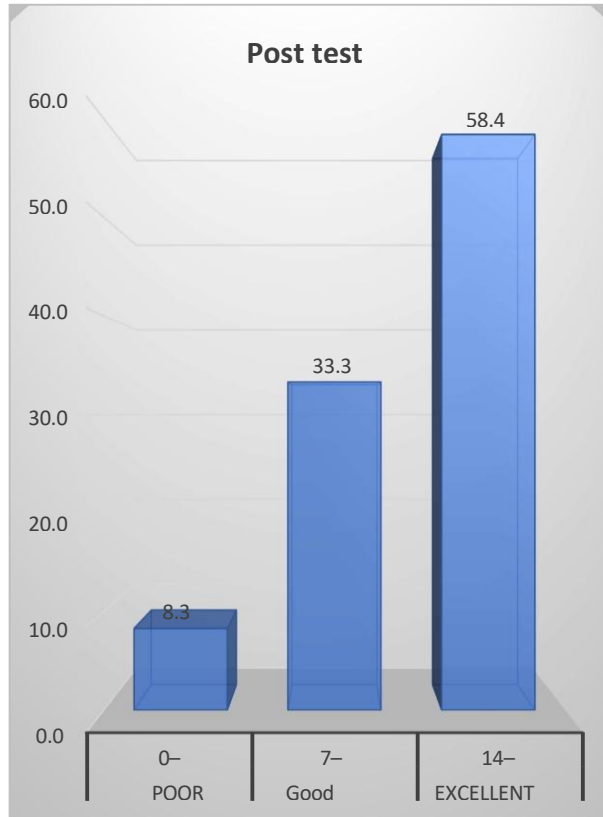


Fig.2: Assessment of Post-test Knowledge Level Regarding Warning Signs of Pregnancy Among Primigravida Mothers

Section D: Effectiveness of the Planned Teaching Program by Comparing Pre-Test and Post-Test Knowledge Scores.

Measurement	Mean	Std. Deviation	Std. Error Mean
Pre-test Knowledge Level	1.00	0.260	0.034
Post-test Knowledge Level	1.97	0.181	0.023

Table.4: Paired Samples Correlation

Mean Difference	Std. Deviation	t-value	df	p-value
-0.967	0.317	-23.612	59	0.001

Table.5: Paired Samples t-Test Results

Section E: Association Between Pre-Test Knowledge Scores and Selected Demographic Variables.

Variable	χ^2 Value	df	p-value	Interpretation
Age	4.455	6	0.615	Not Significant
Religion	4.400	6	0.623	Not Significant
Education Status	6.161	8	0.483	Not Significant
Occupational Status	5.485	6	0.483	Not Significant
Socio-Economic Status	2.057	4	0.725	Not Significant
Information on Antenatal Exercise	4.150	2	0.026	Significant
Type of Family	2.175	4	0.704	Not Significant

Table.6: Chi-Square Analysis Summary

IV. RESULT

Knowledge Levels: The mean pre-test score was 1.00 (SD = 0.260), while the mean post-test score increased to 1.97 (SD = 0.181). A paired t-test showed a significant difference ($t = -23.612$, $p = 0.001$), confirming the effectiveness of the Planned Teaching Program.

Paired Correlation: Correlation between pre- and post-test scores was very low ($r = 0.001$), but the t-test confirmed a significant improvement due to intervention.

Association with Sociodemographic Variables: Chi-square analysis revealed that only information on antenatal exercise had a statistically significant association ($\chi^2 = 4.150$, $p = 0.026$) with knowledge scores. Other variables (age, religion, education, occupation, SES, family type) were not significant.

Interpretation:

The Planned Teaching Program was highly effective in improving knowledge about pregnancy danger signs. Prior exposure to antenatal education positively influenced baseline awareness, whereas formal education alone did not. This highlights the importance of focused health education as part of routine antenatal care services..

V. DISCUSSION

The significant improvement in post-test scores validates the utility of structured educational interventions for primigravida women. The findings align with other national and international studies supporting maternal health education as a critical tool for risk reduction. Given that antenatal education was a significant predictor of knowledge level, the study underlines the necessity of continuing education throughout pregnancy. This can be particularly important in rural areas where misinformation, cultural myths, and poor access to services hinder safe motherhood.

VI. CONCLUSION

The present study has effectively demonstrated the positive impact of a Planned Teaching Program on improving knowledge about warning signs of pregnancy among primigravida mothers. The intervention resulted in a statistically significant

increase in knowledge levels, thereby validating the importance and effectiveness of structured antenatal education. The pre-test results showed that most mothers had insufficient awareness of the danger signs of pregnancy—a finding consistent with trends observed in low-resource settings. However, the post-test results revealed a nearly two-fold improvement, indicating that even a single, well-structured teaching session can lead to meaningful change.

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