Effectiveness of a Structured Teaching Program on Knowledge and Home Remedial Practices Regarding Minor Ailments during Pregnancy among Antenatal Mothers

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A R T I C L E I N F O

A B S T R A C T

Minor ailments during pregnancy, though not life-threatening, significantly affect maternal comfort and quality of life. A lack of awareness and reliance on unsafe practices further exacerbates the problem, especially in rural and semi-urban settings. Structured health education may enhance antenatal mother's knowledge and promote safe home-based management strategies. To evaluate the effectiveness of a structured teaching program on knowledge and practices. A pre-experimental one-group pre-test post-test design was adopted. 80 antenatal mothers attending SLBGMC&H, Nerchowk, were selected for data collection using a non-probability convenience sampling technique. A structured knowledge questionnaire and practice checklist were administered before and after a structured teaching program. Data were analysed using descriptive and inferential statistics, including chi-square tests and paired t-tests. Pre-test findings showed that 63.8% of participants had average knowledge, 23.8% had good knowledge, and 12.5% had poor knowledge. Regarding practices, 42.5% demonstrated poor practice, 25% average, and 32.5% good practice. Post-intervention, 92.5% of participants attained good knowledge, and 97.5% achieved good practice. The mean knowledge score increased from 16.71 to 25.39 (p < 0.001), and practice scores rose from 14.21 to 24.84 (p < 0.001), indicating statistically significant improvement. Educational qualification and previous knowledge were significantly associated with post-test knowledge (p < 0.05), while no sociodemographic variable showed a significant association with post-test practice levels. The structured teaching program significantly enhanced both knowledge and home remedial practices

regarding minor ailments during pregnancy. The findings affirm the effectiveness of educational interventions in empowering antenatal mothers with practical, safe self-care strategies. Incorporating structured health education into routine antenatal care is recommended to improve maternal outcomes, especially in resource-limited settings.

Keywords: Structured teaching program, minor ailments of pregnancy, antenatal mothers, knowledge, home remedial practices.

I. INTRODUCTION

Pregnancy is a natural physiological state accompanied by significant anatomical, hormonal, and emotional changes that can result in various minor ailments affecting a woman's daily life and overall well-being.[1] Common minor ailments during pregnancy, such as nausea, vomiting, heartburn, backache, constipation, and leg cramps, although not life-threatening, often lead to discomfort, anxiety, and reduced quality of life if not managed appropriately.[2] In India, particularly in rural and hilly areas like Himachal Pradesh, gaps in awareness, reliance on unscientific traditional practices, and lack of proper health-seeking behavior further exacerbate these issues.[3] Structured Teaching Programs (STPs) are evidence-based educational interventions designed to improve health knowledge and promote safe home remedial practices among pregnant women. Such interventions are known to enhance self-care abilities, reduce unnecessary medical visits, and prevent minor ailments from escalating into more serious health problems.[4,5] Nurses and midwives, as frontline healthcare providers, play a crucial role in imparting this structured health education during antenatal care. This study aims to evaluate the effectiveness of a structured teaching program on the knowledge and home remedial practices concerning selected minor ailments among antenatal mothers attending SLBSGMC&H Nerchowk, Himachal Pradesh. By improving awareness and promoting evidence-based self-care strategies, this research seeks to contribute to enhancing maternal well-being and aligning antenatal care practices with WHO recommendations for holistic maternal health.[6]

II. MATERIALS AND METHODS

Research Design: A quantitative, pre-experimental, one-group pre-test post-test design was used.

Research setting: The study was conducted at SLBSGMC&H Nerchowk District Mandi, Himachal Pradesh.

Study duration: The data was collected from April 2025-May 2025.

Target population: The target population for the study was all the antenatal mothers.

Accessible Population: The accessible population for this study was antenatal mothers at SLBSGNC&H Nerchowk Mandi, H.P.

Sampling Technique: A convenience sampling technique was used for this study.

Sample Size: The sample size for the study (N=80) was 80 antenatal motrhers which was calculated by Cochran's Formula.

Ethical Considerations: Institutional ethical clearance was obtained. Consent was taken from all participants. Confidentiality and anonymity were ensured.

Inclusion criteria:

- Antenatal mothers attending ANC OPD at SLBSGMC&H.
- Willing to participate in the study.

- Present at the time of data collection.
- Have minor pregnancy-related ailments.

Exclusion criteria:

- Antenatal mothers with severe medical conditions or complications that may interfere with participation or understanding of the program.
- Antenatal mothers who are not present at the time of study.
- Who are not willing to participate.

Tools Used for Data Collection

The tool consists of 3 sections:

Section A: - Socio-demographic data sheet.

The data sheet was developed by the investigator to collect socio. demographic data (age, gender, marital status, education, occupation, religion, source of information) of the subjects. It consists of 8 items.

Section B: - Self structured Questionnaire was developed by the investigator to evaluate the effectiveness of structured teaching programme on Knowledge and regarding minor ailments of pregnancy among antenatal women in SLBSGMC&H Nerchowk, Mandi (H.P). It consists of 30 items.

Section C: - A Checklist for Home Remedial Practices related to minor ailments of pregnancy developed by the investigator to assess home remedial practices with 28 items.

III.DATA ANALYSIS

Descriptive (mean, SD, frequency) and inferential statistics (paired t-test, chi-square test) were used.

Descriptive Statistics for frequency and percentage were used to describe demographic variables. Mean, standard deviation, and mean percentage were used to assess the level of knowledge and home remedial practices in both pre-test and post-test.

Inferential Statistics Paired t-test was used to evaluate the effectiveness of the Structured Teaching Program by comparing the pre-test and post-test scores of knowledge and practices. Chi-square test was used to find the association between the post-test knowledge and practice scores with selected demographic variables such as age, education, gravida, gestational age.

The statistical tests were interpreted at a 5% level of significance ($p < 0.05$). A result was considered statistically significant if the p-value was less than 0.05.

IV.RESULTS

Includes analysis of demographic variables, pre- and post-test knowledge scores, and statistical testing of associations.

- **Knowledge Scores:** Pre-test mean = 16.71 (SD ±5.00), post-test mean = 25.39 (SD ±2.50); $p < 0.001$
- **Practice Scores:** Pre-test mean = 14.21 (SD ±6.91), post-test mean = 24.84 (SD ±2.25); $p < 0.001$
- Significant associations were found between education and knowledge ($p < 0.05$); no demographic variable was significantly associated with home remedial practices scores.

Table no. 1 frequency (f) & percentage (%) distribution of socio- demographic profile of the subjects

Variables	Options	Percentage	Frequency
Age	Up to 20 years	17.5%	14
	21-25 years	32.5%	26
	26-30 years	38.8%	31
	31-35 year	11.3%	9
Educational Qualification	No formal education	0.0%	0
	Up to Metric	10.0%	8

Variables	Options	Percentage	Frequency
	10+2	42.5%	34
	Graduate & more	47.5%	38
Occupation	Working	10.0%	8
	Non-working	90.0%	72
Socioeconomic Status	Upper class	6.3%	5
	Upper middle class	15.0%	12
	Lower middle class	30.0%	24
	Upper lower class	48.8%	39
	Lower class	0.0%	0
Type of Family	Nuclear family	21.30%	17
	Joint family	77.50%	62
	Extended family	1.30%	1
Dietary Pattern	Vegetarian	62.50%	50
	Non-vegetarian	37.50%	30
Gravida	Primigravida	51.30%	41
	Multigravida	48.80%	39
Gestational Age	Less than 12 weeks	32.50%	26
	12–24 weeks	33.80%	27
	25–42weeks	33.80%	27
Previous Knowledge	Yes	71.30%	57
	No	28.80%	23
Yes, Source	Family members	46.40%	26
	Health care professionals	28.60%	16
	Internet/ Social media	19.60%	11
	~	5.40%	3

Table no. 2 Comparison of descriptive statistics of pre-test and post-test scores of knowledge

N=80

Paired T Test	Mean±S.D.	Mean%	Range	Mean Diff.	Paired T Test	P value	Table Value at 0.05
PRETEST KNOWLEDGE	16.71±5.077	55.7	1-26	8.68	20.932 *Sig	<0.001	1.99
POSTTEST KNOWLEDGE	25.39±2.953	84.63	16-30				
Maximum=30	Minimum=0						

Significant**

Table presents the results of a paired t-test comparing pre-test and post-test knowledge scores among 80 participants. The mean pre-test knowledge score was 16.71 ± 5.077, with a mean percentage of 55.7%, and a score range of 1 to 26. In contrast, the mean post-test score increased significantly to 25.39 ± 2.953, with a mean percentage of 84.63%, and a score range of 16 to 30. The mean difference between the pre-test and post-test scores was 8.68 points. The calculated paired

t-value was 20.932, which is substantially higher than the table value of 1.99 at the 0.05 significance level. The associated p-value was <0.001, indicating that the result is highly statistically significant. This confirms that the structured teaching program had a significant positive impact on participants' knowledge levels.
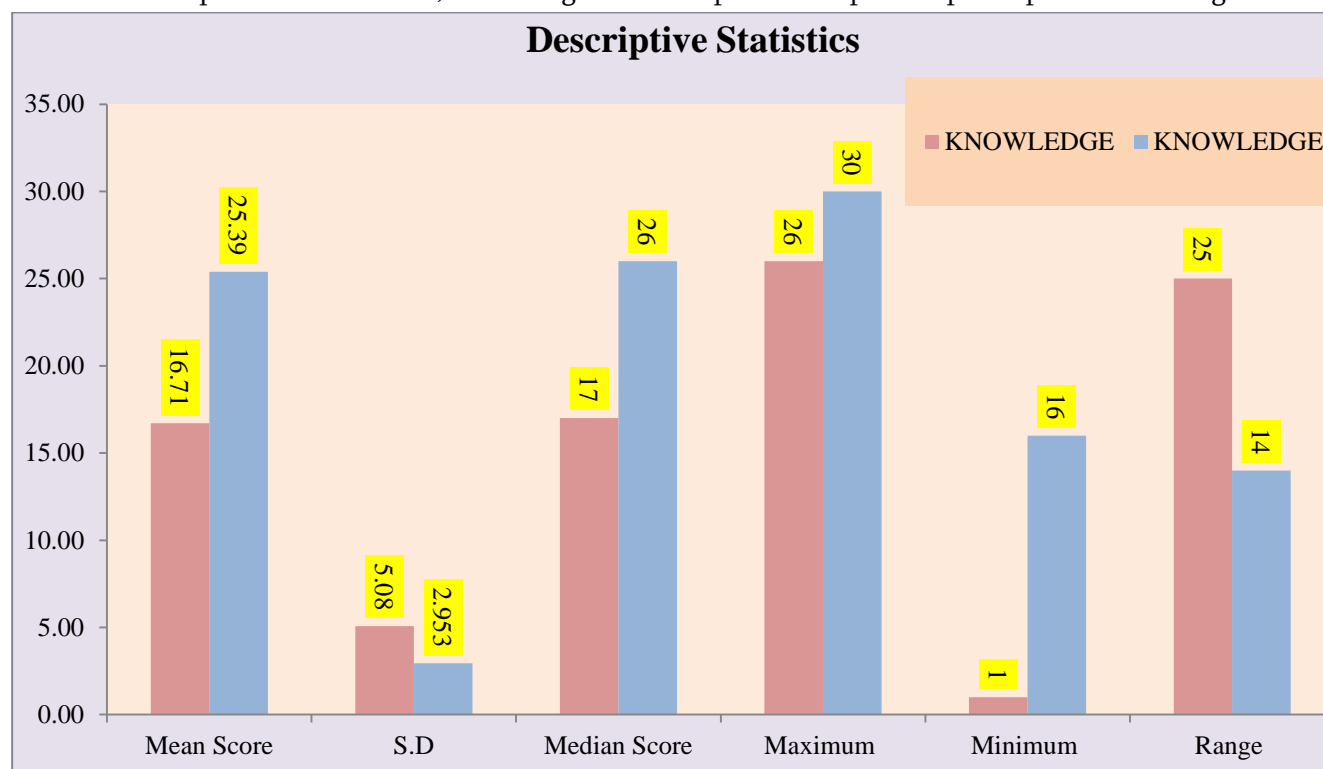

Figure 1 Bar diagram representing comparison of descriptive statistics of pre-test and post-test knowledge scores

Table 3 : Comparison of descriptive statistics of pre-test and post-test scores of home remedial practices.

N=80

Paired T Test	Mean ±S.D.	Mean%	Range	Mean Diff.	Paired T Test	P value	Table Value at 0.05
PRETEST PRACTICE	14.21±6.908	50.75	3-27	10.63	17.175 *Sig	<0.001***	1.99
POSTTEST PRACTICE	24.84±2.253	88.71	17-28				

KEY- ***Highly Significant p value (< 0.05)

Table presents the results of a paired t-test comparing pre-test and post-test practice scores among 80 participants. The mean pre-test practice score was 14.21 ± 6.908, with a mean percentage of 50.75% and a score range of 3 to 27. In contrast, the mean post-test practice score significantly increased to 24.84 ± 2.253, with a mean percentage of 88.71% and a score range of 17 to 28. The mean difference between pre- and post-test scores was 10.63 points. The calculated paired t-value was 17.175, which is far greater than the table value of 1.99 at the 0.05 level of significance. The p-value was <0.001, indicating that the difference is highly statistically significant. These results confirm that the structured teaching program had a substantial positive effect on improving the participants' home remedial practice levels.
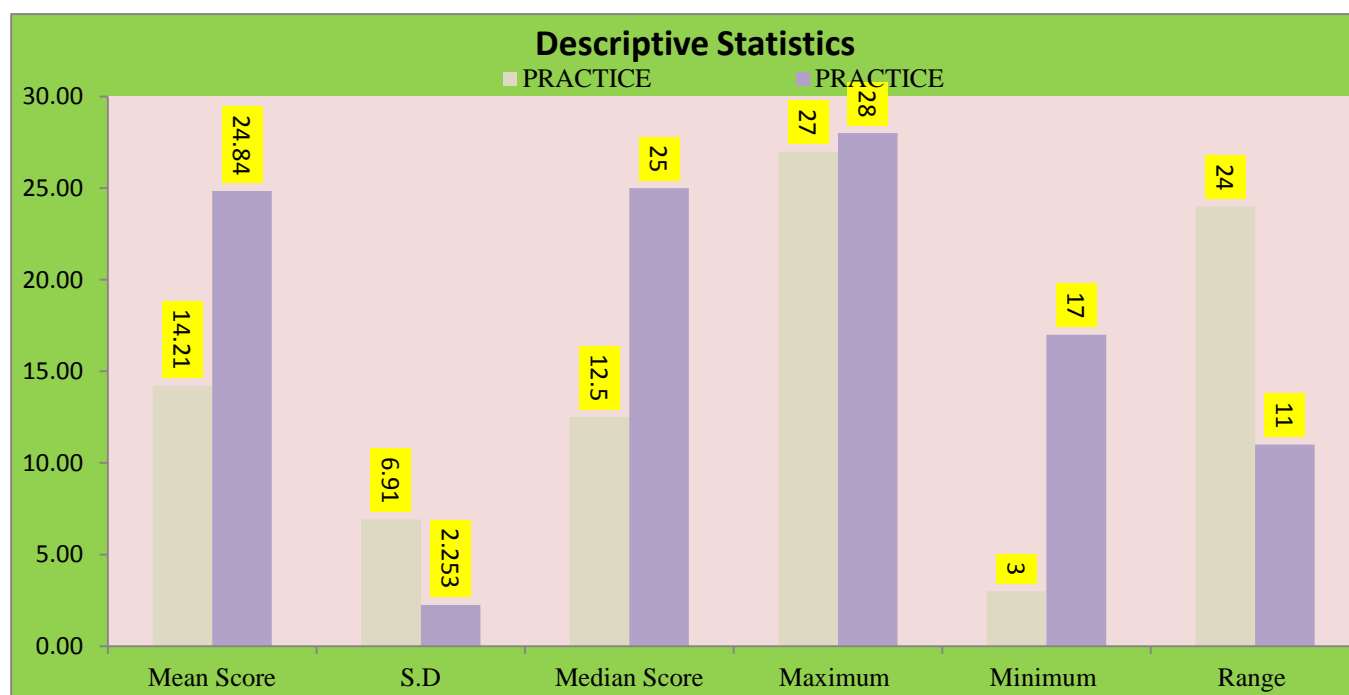
FIGURE 2 : bar diagram representing comparison of descriptive statistics of pre-test and post-test home remedial practice scores

Table 4:Association of pretest and post-test knowledge score with selected sociodemographic variables related to minor ailments of pregnancy.

ASSOCIATION OF PRETEST AND POSTTEST KNOWLEDGE SCORES WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.									
Variables	options	Pretest				Post-test			
		Chi Test	P Value	Df	Table Value	Chi Test	P Value	df	Table Value
Age	Upto 20 years	16.747	0.01	6	12.592	1.648	0.649	3	7.815
	21-25 years								
	26-30 years								
	31-35 years								
Educational Qualification	No formal education	17.583	0.001	4	9.488	11.805	0.003	2	5.991
	Up Metric								
	10+2								
	Graduate & more								
Occupation	Working	1.821	0.402	2	5.991	0.721	0.396	1	3.841
	Non-working								
Socioeconomic Status	Upper class	8.748	0.188	6	12.592	0.444	0.931	3	7.815
	Upper middle class								
	Lower middle class								
Type of Family	Nuclear family	4.175	0.383	4	9.488	0.174	0.917	2	5.991

ASSOCIATION OF PRETEST AND POSTTEST KNOWLEDGE SCORES WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.									
Variables	options	Pretest				Post-test			
		Chi Test	P Value	Df	Table Value	Chi Test	P Value	df	Table Value
	Joint family								
	Extended family								
Dietary Pattern	Vegetarian	1.745	0.418	2	5.991	2.354	0.125	1	3.841
	Non-vegetarian								
Gravida	Primigravida	3.107	0.211	2	5.991	0.004	0.949	1	3.841
	Multigravida								
Gestational Age	Less than 12 weeks	2.604	0.626	4	9.488	1.008	0.604	2	5.991
	12–24 weeks								
	25–42weeks								
Previous Knowledge	Yes	2.347	0.309	2	5.991	4.552	0.033	1	3.841
	No								
Yes, Source	Family members	1.846	0.933	6	12.592		N.A		N.A
	Health care professionals								
	Internet/ Social media								
	Others								

TABLE 4: Illustrates that the association of pretest and post-test knowledge scores regarding minor ailments of pregnancy with various selected sociodemographic variables. Statistical significance was assessed using the Chi-square test. Age showed statistically significant association with pretest knowledge scores (Chi² = 16.747, $p = 0.01$), indicating that knowledge varied across age groups before the intervention. However, the association was not significant in the post-test (Chi² = 1.648, $p = 0.649$), suggesting the intervention may have helped equalize knowledge across age groups. Educational qualification demonstrated a strong association with both pretest (Chi² = 17.583, $p = 0.001$) and post-test (Chi² = 11.805, $p = 0.003$) knowledge scores, indicating education level remained a significant factor influencing knowledge even after the intervention. Occupation and socioeconomic status were not significantly associated with knowledge scores in either the pretest (Chi² = 1.821 and 8.748 respectively; $p > 0.05$) or post-test (Chi² = 0.721 and 0.444 respectively; $p > 0.05$), suggesting these variables had minimal impact on knowledge. Statistical significance was assessed using the Chi-square test. Type of family, dietary pattern, gravida, and gestational age showed no significant associations in either pretest or post-test (all $p > 0.05$), indicating uniform knowledge levels across these subgroups. Previous knowledge did not show a significant association in the pretest (Chi² = 2.347, $p = 0.309$), but became significant in the post-test (Chi² = 4.552, $p = 0.033$), suggesting that those with prior knowledge benefitted more from the intervention. However, the variable "Yes, Source" for previous knowledge was not

statistically significant (Chi² = 1.846, p = 0.933), and post-test values were not available (N.A.). Overall, educational qualification was consistently and significantly associated with knowledge both before and after the intervention, while age and previous knowledge showed significant associations at specific stages. Other sociodemographic variables appeared to have limited influence on knowledge levels.

Table 5: Table no Aassociation of pretest and posttest home remedial practice scores with selected socio-demographic variables.

ASSOCIATION OF PRETEST AND POSTTEST HOME REMEDIAL PRACTICE SCORES WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.									
Variables	options	Pretest				Post-test			
		Chi Test	P Value	Df	Table Value	Chi Test	P Value	df	Table Value
Age	Upto 20 years	4.349	0.63	6	12.592	2.457	0.483	3	7.815
	21-25 years								
	26-30 years								
	31-35 years								
Educational Qualification	No formal education	9.062	0.06	4	9.488	4.284	0.117	2	5.991
	Up Metric								
	10+2								
	Graduate & more								
Occupation	Working	1.445	0.485	2	5.991	0.228	0.633	1	3.841
	Non-working								
Socioeconomic Status	Upper class	1.15	0.979	6	12.592	0.71	0.871	3	7.815
	Upper middle class								
	Lower middle class								
Type of Family	Nuclear family	5.104	0.277	4	9.488	1.024	0.599	2	5.991
	Joint family								
	Extended family								
Dietary Pattern	Vegetarian	3.687	0.158	2	5.991	3.419	0.064	1	3.841
	Non-vegetarian								
Gravida	Primigravida	1.653	0.438	2	5.991	0.001	0.971	1	3.841
	Multigravida								
Gestational Age	Less than 12 weeks	2.723	0.605	4	9.488	0.988	0.61	2	5.991
	12–24 weeks								
	25–42weeks								
Previous Knowledge	Yes	1.73	0.421	2	5.991	0.452	0.501	1	3.841
	No								

ASSOCIATION OF PRETEST AND POSTTEST HOME REMEDIAL PRACTICE SCORES WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.

Variables	options	Pretest				Post-test			
		Chi Test	P Value	Df	Table Value	Chi Test	P Value	df	Table Value
Yes, Source	Family members	4.403	0.622	6	12.592	1.175	0.759	3	7.815
	Health care professionals								
	Internet/ Social media								
	Others								

Table 5 : illustrates that pre-test home remedial practices of research subjects have no significant association between age and pretest practice scores (Chi² = 4.349, p = 0.630). Although graduates showed slightly better practices, the association between education and practice was not statistically significant (Chi² = 9.062, p = 0.060). Practice levels did not significantly differ between working and non-working participants (Chi² = 1.445, p = 0.485). No significant association was found (Chi² = 1.150, p = 0.979), showing that economic class had little effect on practice levels at the pretest stage. Practice scores were similar across nuclear, joint, and extended families (Chi² = 5.104, p = 0.277), showing no significant link. In case of post-test home remedial practice scores the research subjects have no significant association between age and post-test practice scores (Chi² = 2.457, p = 0.483), indicating that all age groups had similar levels of practice. Practice scores did not significantly vary with education level (Chi² = 4.284, p = 0.117), although graduates showed slightly better practice overall. There was no significant difference between working and non-working participants in practice levels (Chi² = 0.228, p = 0.633). Practice scores were consistent across different income groups (Chi² = 0.710, p = 0.871), showing no significant association. No significant relationship was observed between family type and practice level (Chi² = 1.024, p = 0.599). Vegetarians had slightly better practice than non-

vegetarians, but the difference was not statistically significant (Chi² = 3.687, p = 0.158). No significant difference in practice levels between primigravida and multigravida women (Chi² = 1.653, p = 0.438). Practice levels were not significantly different between those who had prior knowledge and those who didn't (Chi² = 1.730, p = 0.421). There was no significant impact of the source of knowledge on practice levels (Chi² = 4.403, p = 0.622). In case of pest-test vegetarians showed slightly better practice than non-vegetarians, the difference was not statistically significant (Chi² = 3.419, p = 0.064). There was no significant association between gravida status (primigravida vs multigravida) and practice scores (Chi² = 0.001, p = 0.971). Practice levels were similar across all gestational age groups (Chi² = 0.988, p = 0.610), showing no significant impact. There was no significant link between having prior knowledge and practice levels (Chi² = 0.452, p = 0.501). The source of prior information (family, healthcare professionals, internet, etc.) did not significantly affect post-test practice scores (Chi² = 1.175, p = 0.759)

V. DISCUSSION

The study findings revealed that a majority (63.8%) of antenatal mothers had average knowledge, while 23.8% had good knowledge, and 12.5% had poor knowledge. This suggests that although most participants had a moderate understanding of minor ailments during

pregnancy, a substantial proportion still lacked sufficient knowledge. Similarly, pretest practice scores showed that 42.5% of participants demonstrated poor practices, 25% had average practices, and only 32.5% reported good practices.

These findings are in line with previous literature which states that many antenatal mothers, especially in low- and middle-income settings, lack awareness of effective home management of common pregnancy ailments. Cultural beliefs and limited access to structured antenatal education may contribute to this gap.

These findings were consistent with the findings of Mohammed Umar et.al (2023) conducted a pre-experimental study to evaluate the effectiveness of structured teaching program on knowledge regarding minor disorders of pregnancy and its management among antenatal mother in selected village of Sasaram Rohtas. The total sample size was consisted 30 mothers were selected by using purposive sampling technique & semi-structured questionnaire was used to collect the data. The study results show out of 30 study participants that the highly majority of 80% of mothers had average knowledge, 20% of mothers had poor knowledge and 0% of mothers had excellent knowledge during the pre-test knowledge score.

VI. CONCLUSION

The structured teaching program was effective in improving knowledge and home remedial practices among antenatal mothers. Integration of STPs into routine antenatal care can lead to better self-care and maternal outcomes.

Acknowledgement

VII. RECOMMENDATIONS

- Incorporate STPs in antenatal OPDs.
- Conduct similar studies on a larger scale.
- Train nurses and midwives as educators on minor pregnancy ailments.

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