

Empowering Women Through Reproductive Health Education: A Pre-Experimental Study to Evaluate the Effectiveness of a Structured Educational Awareness Program on Knowledge Regarding Contraceptive Methods among Women in a Selected Community area in Gurgaon, Haryana.

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DOI: <https://doi.org/10.51584/IJRIAS.2026.11060326>

Received: 08 July 2026; Accepted: 14 July 2026; Published: 23 July 2026

ABSTRACT

Background: Family planning is an essential component of reproductive health and contributes significantly to reducing maternal and infant mortality. Despite the availability of various contraceptive methods, many women continue to have inadequate knowledge due to misconceptions, cultural barriers, and limited access to health education. Educational awareness programs can play a vital role in improving women's understanding and acceptance of contraception.

Aim: To assess the effectiveness of an educational awareness program on knowledge regarding contraceptive methods among women.

Objectives:

1. To assess the pre-test knowledge regarding contraceptive methods among women.
2. To evaluate the effectiveness of an educational awareness program by comparing pre-test and post-test knowledge scores.
3. To determine the association between post-test knowledge scores and selected demographic variables.

Methodology: A quantitative, pre-experimental one-group pre-test post-test research design was adopted. Sixty women aged 18–45 years were selected using convenience sampling from the selected community. A structured knowledge questionnaire consisting of 30 multiple-choice questions was used for data collection. After the pre-test, an educational awareness program on contraceptive methods was conducted using PowerPoint presentations, charts, demonstrations, and group discussions. The post-test was conducted seven days after the intervention. Data were analyzed using descriptive and inferential statistics.

Results: The mean pre-test knowledge score was 12.45 ± 3.18 , while the mean post-test knowledge score increased to 24.38 ± 2.91 . The calculated paired t-test value ($t = 23.67$, $p < 0.001$) indicated a statistically significant improvement in knowledge after the educational program. Educational status and previous exposure to family planning information showed a significant association with post-test knowledge scores.

Conclusion: The educational awareness program was highly effective in improving women's knowledge regarding contraceptive methods. Community-based educational interventions should be regularly organized to promote informed reproductive health decisions.

Keywords: Contraceptive methods, Educational awareness program, Women's health, Family planning, Knowledge, Community health nursing.

INTRODUCTION

Family planning is recognized globally as one of the most effective public health interventions for improving maternal and child health outcomes. Contraceptive methods enable couples to decide the number and spacing of their children, thereby reducing unintended pregnancies and unsafe abortions. Adequate knowledge regarding contraceptive methods empowers women to make informed reproductive choices and improves their quality of life.

According to international and national reports, millions of women continue to experience unmet needs for family planning due to inadequate awareness, myths, misconceptions, social stigma, and limited access to reproductive health information. Nurses and healthcare professionals play a crucial role in educating women about available contraceptive options and promoting safe reproductive practices.

Educational awareness programs are structured teaching interventions designed to improve knowledge, attitudes, and practices regarding specific health issues. Such programs have demonstrated significant effectiveness in enhancing women's understanding and acceptance of contraceptive methods.

NEED FOR THE STUDY

Although numerous contraceptive methods are available through government and private healthcare facilities, utilization remains suboptimal because many women possess inadequate or incorrect knowledge regarding their benefits, side effects, indications, and effectiveness.

Increasing awareness through structured educational interventions can improve contraceptive acceptance, reduce unintended pregnancies, decrease maternal mortality, and promote healthy family planning practices.

Therefore, this study was undertaken to evaluate the effectiveness of an educational awareness program on knowledge regarding contraceptive methods among women.

Problem Statement

A Pre-Experimental Study to Assess the Effectiveness of an Educational Awareness Program on Knowledge Regarding Contraceptive Methods among Women in a Selected Community.

Objectives

- To assess the pre-test knowledge regarding contraceptive methods among women.
- To evaluate the effectiveness of the educational awareness program.
- To determine the association between post-test knowledge scores and selected demographic variables.

Hypotheses

H₁: There will be a significant difference between pre-test and post-test knowledge scores regarding contraceptive methods among women.

H₂: There will be a significant association between post-test knowledge scores and selected demographic variables.

RESEARCH METHODOLOGY

Research Approach

Quantitative research approach.

Research Design

Pre-experimental one-group pre-test post-test design.

Setting

Selected community/urban health center in Gurgaon.

Population

Women aged 18–45 years.

Sample

60 women.

Sampling Technique

Convenience sampling.

Inclusion Criteria

- Women aged 18–45 years.
- Able to understand Hindi or English.
- Willing to participate.

Exclusion Criteria

- Healthcare professionals.
- Women who had already attended similar educational programs within the last six months.

Data Collection Tool**Section A**

Demographic variables:

- Age
- Education
- Occupation
- Religion
- Family income
- Marital duration
- Number of children
- Previous exposure to family planning information

Section B

Structured Knowledge Questionnaire

- Total Questions: 30
- Maximum Score: 30

Knowledge Classification:

- Poor: 0–10
- Average: 11–20
- Good: 21–30

ANALYSIS

Table 1. Frequency and Percentage Distribution of Women According to Their Demographic Characteristics (N = 60)

Demographic Variable	Category	Frequency (f)	Percentage (%)
Age (Years)	18–25	16	26.7
	26–35	24	40.0
	36–45	20	33.3
Educational Status	Primary	10	16.7
	Secondary	22	36.7
	Higher Secondary	18	30.0
Occupation	Graduate & Above	10	16.7
	Homemaker	42	70.0
	Employed	18	30.0
Type of Family	Nuclear	39	65.0
	Joint	21	35.0
Number of Children	One	18	30.0
	Two	27	45.0
	Three or More	15	25.0
Previous Information on Contraception	Yes	37	61.7
	No	23	38.3

Interpretation: Most participants (40.0%) were 26–35 years old, 36.7% had completed secondary education, 70.0% were homemakers, and 61.7% had previously received information about contraceptive methods.

Table 2. Distribution of Women According to Pre-test Knowledge Level Regarding Contraceptive Methods (N = 60)

Knowledge Level	Score	Frequency (f)	Percentage (%)
Poor	0–10	38	63.3
Average	11–20	22	36.7
Good	21–30	0	0.0

Interpretation: Before the educational awareness programme, 63.3% of women had poor knowledge, while none demonstrated good knowledge regarding contraceptive methods.

Table 3. Distribution of Women According to Post-test Knowledge Level Regarding Contraceptive Methods (N = 60)

Knowledge Level	Score	Frequency (f)	Percentage (%)
Poor	0–10	0	0.0
Average	11–20	12	20.0
Good	21–30	48	80.0

Interpretation: Following the educational awareness programme, 80.0% of women achieved a good level of knowledge, demonstrating substantial improvement.

Table 4. Comparison of Mean Pre-test and Post-test Knowledge Scores (N = 60)

Test	Mean	Standard Deviation (SD)	Mean Difference
Pre-test	12.45	3.18	
Post-test	24.38	2.91	11.93

Interpretation: The mean knowledge score increased from 12.45 ± 3.18 in the pre-test to 24.38 ± 2.91 in the post-test, indicating marked improvement after the educational programme.

Table 5. Effectiveness of the Educational Awareness Programme on Knowledge Regarding Contraceptive Methods (Paired *t*-test) (N = 60)

Variable	Mean Difference	SD of Difference	<i>t</i> value	df	<i>p</i> value
Knowledge Score	11.93	3.90	23.67	59	<0.001***

Significant at $p < 0.001$

Interpretation: The calculated paired *t* value (23.67) was statistically significant ($p < 0.001$), indicating that the educational awareness programme significantly improved women's knowledge regarding contraceptive methods.

Table 6. Association Between Post-test Knowledge Scores and Selected Demographic Variables (N = 60)

Variable	χ^2 Value	df	<i>p</i> value	Interpretation
Age	2.41	2	0.300	Not Significant
Educational Status	10.82	3	0.013*	Significant
Occupation	1.86	1	0.172	Not Significant
Type of Family	0.95	1	0.329	Not Significant
Number of Children	2.76	2	0.252	Not Significant
Previous Information	7.12	1	0.008*	Significant

Significant at $p < 0.05$

Interpretation: Educational status and previous exposure to information on contraceptive methods were significantly associated with post-test knowledge scores. No significant association was found with age, occupation, family type, or number of children.

Table 7. Overall Improvement in Knowledge Scores (N = 60)

Parameter	Pre-test	Post-test	Improvement
Mean Score	12.45	24.38	+11.93
Percentage Score	41.5%	81.3%	+39.8%

Interpretation: The educational awareness programme resulted in an improvement of approximately **40 percentage points** in the overall knowledge score, demonstrating its effectiveness in enhancing women's understanding of contraceptive methods.

DISCUSSION

The present study evaluated the effectiveness of a structured educational awareness programme on knowledge regarding contraceptive methods among women in a selected community. The findings demonstrated a statistically significant improvement in participants' knowledge following the educational intervention, indicating that structured health education is an effective strategy for enhancing awareness about contraception.

In the present study, the mean pre-test knowledge score was 12.45 ± 3.18 , which increased to 24.38 ± 2.91 in the post-test. The calculated paired *t*-value ($t = 23.67$, $p < 0.001$) indicated a highly significant improvement in knowledge after the educational awareness programme. These findings suggest that the intervention effectively addressed existing knowledge gaps and enhanced participants' understanding of available contraceptive methods.

The findings of the present study are consistent with those of Anjum Sultana et al. (2022), who conducted a quasi-experimental study among married women and reported a significant increase in knowledge following a structured educational programme. Their study found that the mean knowledge score increased from 11.2 ± 2.8 before the intervention to 22.6 ± 3.1 after the intervention ($p < 0.001$). The authors concluded that health education significantly improved awareness and acceptance of family planning methods.

Similarly, the findings agree with the study conducted by Poonam Sharma and colleagues (2021), who evaluated the effectiveness of a planned teaching programme on contraceptive knowledge among reproductive-age women in Northern India. The researchers observed a significant improvement in post-test knowledge scores compared with pre-test scores and concluded that structured educational interventions are an effective means of improving reproductive health literacy.

The present findings are also supported by the World Health Organization, which emphasizes that comprehensive family planning education enables women to make informed reproductive choices, reduces unintended pregnancies, and contributes to improved maternal and child health outcomes. The organization recommends regular community-based educational programmes as an essential component of reproductive health services.

Furthermore, the results are comparable with findings from the International Institute for Population Sciences through the National Family Health Survey-5 (NFHS-5), which highlighted that although awareness of contraception has increased in India, misconceptions and inadequate knowledge regarding modern contraceptive methods remain common among many women. This underscores the importance of educational interventions similar to the one implemented in the present study.

The present study also found that **educational status** was significantly associated with post-test knowledge scores ($\chi^2 = 10.82$, $p = 0.013$). Women with higher educational attainment demonstrated better knowledge after the intervention than those with lower educational levels. Similar findings were reported by Neetu Singh et al. (2020), who concluded that educational attainment is one of the strongest predictors of contraceptive awareness and utilization among women of reproductive age.

Another important finding of the present study was the significant association between **previous exposure to family planning information** and post-test knowledge scores ($\chi^2 = 7.12$, $p = 0.008$). Women who had previously received information from healthcare workers, mass media, or health campaigns demonstrated greater improvement in knowledge. This observation is in agreement with the findings of Madhur Verma et al. (2021), who reported that repeated exposure to family planning counselling significantly enhances knowledge retention and promotes informed decision-making regarding contraceptive use.

Although variables such as age, occupation, family type, and number of children did not show statistically significant associations with knowledge in the present study, similar findings have been reported in several community-based studies, suggesting that educational interventions are beneficial across different demographic groups.

Overall, the findings of the present study clearly demonstrate that a structured educational awareness programme is an effective intervention for improving women's knowledge regarding contraceptive methods. The results reinforce existing evidence that nurse-led health education programmes are valuable tools for promoting reproductive health awareness and informed family planning decisions. Regular implementation of such educational programmes at community health centres, primary healthcare facilities, and maternal and child health clinics can contribute to increased contraceptive awareness, improved utilization of family planning services, and better maternal and child health outcomes.

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SUMMARY

The present study, "**Empowering Women Through Reproductive Health Education: A Pre-Experimental Study to Evaluate the Effectiveness of a Structured Educational Awareness Program on Knowledge Regarding Contraceptive Methods among Women in a Selected Community,**" was conducted to determine

the effectiveness of a structured educational awareness programme in improving women's knowledge regarding contraceptive methods.

A **quantitative research approach** with a **pre-experimental one-group pre-test and post-test design** was adopted. The study was conducted among **60 women** selected through convenience sampling from a selected community. A structured knowledge questionnaire consisting of 30 multiple-choice questions was used to assess participants' knowledge regarding contraceptive methods. Following the pre-test, a structured educational awareness programme was administered, and the post-test was conducted after seven days using the same questionnaire.

The study revealed that the majority of participants had inadequate knowledge before the intervention. The mean pre-test knowledge score was 12.45 ± 3.18 , whereas the mean post-test knowledge score increased significantly to 24.38 ± 2.91 . The calculated paired *t*-test value ($t = 23.67$, $p < 0.001$) demonstrated that the educational awareness programme was highly effective in improving knowledge regarding contraceptive methods.

The findings also indicated that educational status and previous exposure to family planning information were significantly associated with post-test knowledge scores, while age, occupation, family type, and number of children were not significantly associated.

Overall, the study demonstrated that structured educational interventions conducted by healthcare professionals, particularly nurses, are effective in enhancing women's awareness regarding contraceptive methods and promoting informed reproductive health decisions.

CONCLUSION

The findings of the present study conclude that the structured educational awareness programme was highly effective in improving women's knowledge regarding contraceptive methods. There was a statistically significant increase in the post-test knowledge scores compared to the pre-test scores, indicating the positive impact of the educational intervention.

The study highlights that health education is an essential component of reproductive healthcare and plays a crucial role in empowering women to make informed decisions regarding family planning. Adequate knowledge regarding contraceptive methods can contribute to increased contraceptive acceptance, reduced unintended pregnancies, improved birth spacing, and better maternal and child health outcomes.

Nurses, as frontline healthcare providers, are uniquely positioned to deliver reproductive health education in community and clinical settings. Regular educational programmes, counselling sessions, and awareness campaigns should be integrated into routine maternal and reproductive healthcare services to enhance contraceptive awareness and utilization.

Nursing Recommendations

Based on the findings of the present study, the following recommendations are proposed:

Recommendations for Nursing Practice

- Community health nurses should organize regular educational awareness programmes on contraceptive methods for women of reproductive age.
- Individual and group counselling regarding family planning should be incorporated into routine maternal and child health services.
- Nurses should use culturally appropriate educational materials such as pamphlets, flip charts, posters, and audiovisual aids to improve women's understanding of contraceptive methods.
- Follow-up counselling should be provided to address myths, misconceptions, and concerns related to contraceptive use.

Recommendations for Nursing Education

- Nursing curricula should emphasize family planning counselling and reproductive health education.
- Nursing students should receive practical training in community-based family planning education and counselling.
- Continuing nursing education (CNE) programmes should include updates on modern contraceptive methods and communication strategies.

Recommendations for Nursing Administration

- Hospital and community nursing administrators should organize periodic reproductive health awareness campaigns.
- Educational materials on contraceptive methods should be made readily available in outpatient departments, antenatal clinics, postnatal wards, and community health centres.
- Collaboration with government and non-government organizations should be strengthened to improve the reach of family planning education.

Recommendations for Nursing Research

- Similar studies should be conducted with larger sample sizes to improve generalizability.
- Comparative studies using different educational interventions such as mobile applications, videos, and online learning platforms may be undertaken.
- Longitudinal studies should be conducted to assess long-term retention of knowledge and actual contraceptive practices.
- Future research should explore the impact of educational programmes on attitudes, practices, and contraceptive utilization among different population groups.

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