International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge and Practice Regarding Family Planning Methods Among Mothers in Selected Hospitals, Meerut, U.P

Ms. Shweta Singh[1], Prof. Shaini P.C[2], Prof. S Balamani Bose[3]

[1]M.Sc. Nursing, Obstetrics and Gynecological Nursing, College of Nursing, L.L.R.M Medical College, Meerut
[2]Professor, Obstetrics and Gynecological Nursing, College of Nursing, L.L.R.M Medical College, Meerut
[3]Principal, College of Nursing, L.L.R.M Medical College, Meerut

Abstract:
India was the first country in the world to implement National Family Planning Programme in 1952. Despite having a wide range of contraceptives available and various campaigns and programs to educate and inform the public, achieving population control remains a distal goal.
Objectives: Assess the knowledge and practice of the mothers on family planning methods, Evaluate the effectiveness of structured teaching programme on knowledge and practice regarding family planning methods among mothers, Compare the post-test level of knowledge and practice score of mothers on family planning methods after administration of STP in experimental and control group and Determine the association between knowledge of mothers on family planning methods with their selected demographic variables.
Methodology: The study has adopted a Quantitative approach (True-experimental research design, Pre-test post-test control group research design). 60 samples who fulfills the criteria, selected using simple probability random sampling technique knowledge and practice of the mothers.
Major findings and results: The findings show that effectiveness of structured teaching programme on level of knowledge which indicate the difference in pre and post-test level of knowledge scores. In this study the mean post score on the level of knowledge among experimental group was 12.66 respectively. The obtained paired "t" value was = 12.36 respectively which was significant at P = < 0.001 level. This finding reveals that level of knowledge gradually increases in experimental group. This finding shows STP is highly effective in improving the level of knowledge hence research H_1 hypothesis is accepted.
Conclusion: The results showed that mothers had an adequate understanding of family planning methods after the programme.

Keywords: Family planning, Knowledge, Practice, Structured teaching programme, Mothers.

Introduction

India is the largest country in the world with over one billion people of diver's socio-cultural background. The population of the world is increasing in an exponential manner. The population of India 1901 was 238.4 million.[1]

The family is a unit consisting of husband, wife and children. They are dependent on each other. Family planning for long has been recognized as part of maternal and child health services. Even through emphasis on it has been placed only during the recent past. [2]

Family planning is a way of thinking and living that is adopted voluntarily upon the bases of knowledge, attitude and responsible decision by couples and individuals.[3] Family planning refers to conscious effort by a couple to limit or space the number of children they have through the use of contraceptive methods.[4] Family planning deals with the reproductive health of the mother, having adequate birth spacing, avoiding undesired pregnancies and abortion, prevent sexually transmitted diseases and improving the quality of life of mother, fetus and as a whole.[5]

India was the first country in the world to implement National Family Planning Programme in 1952. Despite having a wide range of contraceptives available and various campaigns and programs to educate and inform the public, achieving population control remains a distal goal. The low usage of spacing method is evident in early childbirth and short intervals between births.[6]

In order to assess the effectiveness of Family Planning Programmes, a method proposed by a WHO expert in 1975 involves evaluating people knowledge, attitude, and behavior towards family planning methods. The KAP - GAP theory, introduced by Bongaarts in 1991, "refers to the proportion of married women who do not want more children but are not using contraception, known as the unmet need. That is a discrepancy between contraception use and reproductive intentions is seen as an indication of the need for contraception. These measures can be quickly obtained from fertility surveys using just two items pieces of information: desire for more children and current practice of contraception."[7]

According to the WHO, Family planning enables individuals and couples to plan and achieve their desired number of children as well as control the spacing and timing of their birth. This is accomplished use of contraceptive methods and addressing involuntary infertility. Women's ability to space out and limit pregnancies directly affects their health, well-being and the outcome of each pregnancy.[8]

Review of Literature

Yadav Mamta, Venkadalakshmi V, Das K, Singla R. (2024) an exploratory cross-sectional study was carried out to examine the knowledge about contraception and past contraception practices among antenatal women. The study used the total enumeration sampling technique and included 120 participants. Data was gathered through interviews based on a set interview schedule. The findings of the study revealed that the majority (76.6%) of antenatal women had inadequate knowledge about contraception, while 23.3% had average knowledge. Furthermore, it was observed that a majority (81.07%) of the participants had previously used contraception, with condoms and the calendar method being the most commonly utilized methods.[9]

Saini Lal Roshan, Youtham Sahay Sneha. (2024) the study aimed to evaluate the effectiveness of a planned teaching program (PTP) on knowledge regarding temporary family planning methods among primigravida mothers in selected maternity hospitals in Jhunjhunu, Rajasthan. An evaluative research approach with a one-group pretest-posttest design was adopted, involving 30 samples selected through non-probability purposive sampling. Data was collected using a structured knowledge questionnaire on

temporary family planning methods, and the study was conducted at the Government Maternity Hospital, Rajasthan. The results showed a 36 % increase in posttest knowledge scores compared to the pretest, indicating the effectiveness of the PTP. Prior to the intervention, the pretest knowledge of mothers was significantly associated with their education level ($\chi^2 = 13.15$, $p < 0.05$). Statistical analysis using the Pearson chi-square test and yates-corrected chi-square test confirmed that the results were significant at the 0.01 level.[10]

CONCEPTUAL FRAMEWORK

A conceptual framework is a precursor of a theory. Conceptual framework plays several interrelated roles in the progress of the science

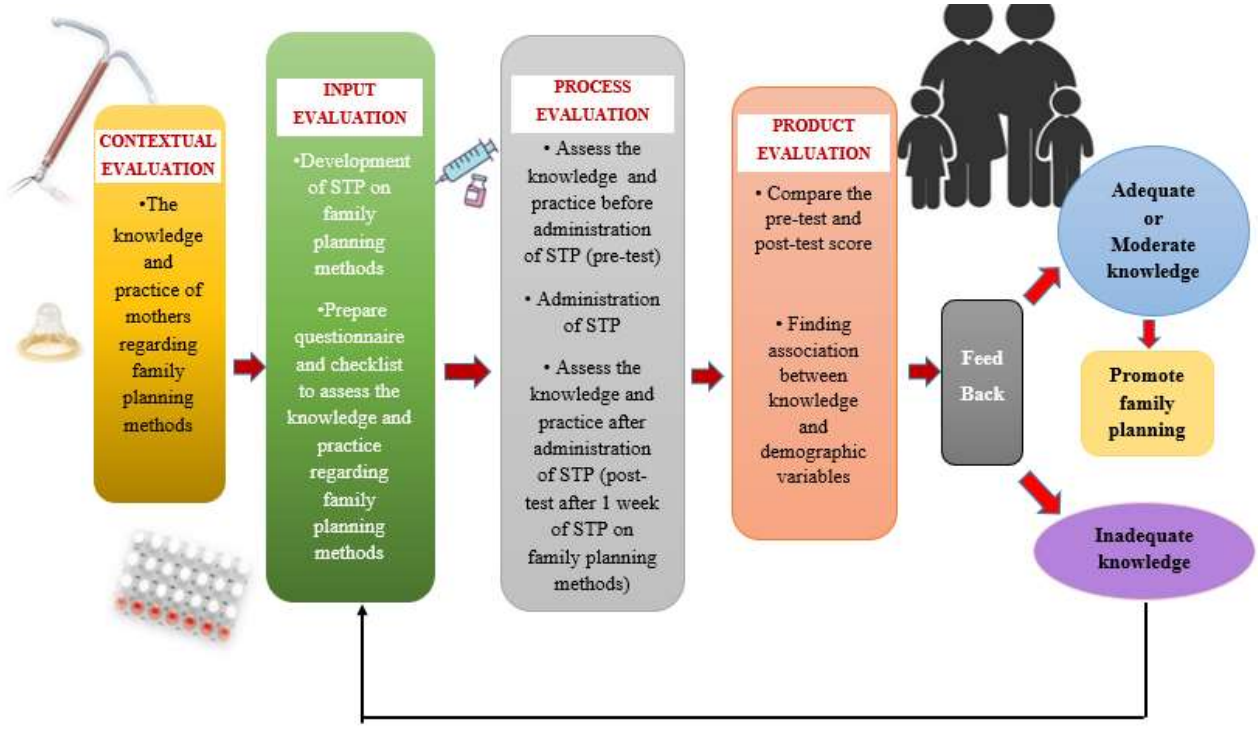
STUFFLEBEAMS (CIPP) EVALUATION MODEL

The CIPP Evaluation Model was developed by Daniel Stufflebeam in the 1960s. Specifically, it was first introduced in 1966 as a response to the need for comprehensive program evaluation in education and other fields.

STUFFLEBEAMS (CIPP) EVALUATION MODEL CONSISTS OF THE FOLLWING STEPS -

- Context evaluation (goals)
- Input evaluation (plan)
- Process evaluation (action)
- Product evaluation (outcome)

FIGURE:1 STUFFLE BEAMS (CIPP) EVALUATION MODEL



Material and Methods

Research Approach

The research method adopted for the present study was Quantitative approach.

Research Design

In the present study, True-experimental, Pre-test post-test control group research design.

Setting of the Study

The study was conducted in selected hospitals.

Population

The population of the present study comprised of mothers.

Sample and Sampling Technique

Sample size for this study was 60 Mothers. Randomly selected mothers considering inclusion and exclusion criteria was thought to be the most appropriate for this study.

Data Collection Technique

The present study aimed at assessing the knowledge and practice of family planning methods among mothers in selected hospitals Thus, simple random sampling technique was used.

Development of The Tool

The structured questionnaire was prepared for assessing the knowledge and practice regarding family planning methods among mothers. Opinions and suggestions of experts in the field and the exposure of investigator in the area of research were considered.

Scoring

A score of (1) is assigned to correct response and (0) assigned to each wrong answer. Total score of the knowledge of Family planning methods was 30 and for practice 10. score range from a minimum of zero to a maximum of 30 for knowledge and for practice minimum zero and maximum 10.

Validity of Tool

Content validity of health education was assessed by distributing to the research expert in the field of nursing, obstetrics and community department who validated the structured questionnaire and checklist.

Content validity

The structured questionnaire, along with the checklist, was submitted to a panel of nine experts for content validation. The expert panel included six professionals from the nursing field and two medical doctors specializing in obstetrics and community medicine. Additionally, a language expert specializing in Hindi was consulted to ensure linguistic clarity and appropriateness.

Criteria based validity

To establish criterion-based validity instrument was administered to mothers. It was found that instrument was tapping the area of knowledge successfully for which it was structured.

Reliability

After establishing the validity of the tool to be used for the study, the final tools were made and then the reliability of the tool was done. In this study, the reliability determined by administering structured questionnaire to 10 mothers. Items of the tool were coded and the reliability co-efficient of correlation was calculated using ‘Split half method’. The method of Split half is used to test internal consistency of the tool as well as correlation to the item with the test as a whole. The correlation was obtained by using the Karl Pearson Formula. This was found as ‘0.9’ which is significant.

Pilot Study

The pilot study was conducted to assess the feasibility of the study and to decide data analysis plan. Administrative permission was granted formally. The pilot study was conducted on 10 mothers. The Data was analyzed by statistical tests. The pilot study did not show any major change in the design of questionnaire and checklist developed by the researcher.

Procedure for data collection

Formal permission was obtained from the relevant authorities prior to the data collection process. After identifying the sample group, the objectives of the study were clearly explained to the participants, and written informed consent was secured. Participants were assured that the confidentiality of their responses would be strictly maintained throughout the research process. The investigator personally administered a self-structured questionnaire to ensure consistency and accuracy in data collection. After completing the questionnaire, participants were thanked for their time and contributions to the study. The collected data were systematically tabulated and analyzed using statistical methods. Both descriptive and inferential statistics were employed for a comprehensive analysis. Data were processed using a licensed version of SPSS software (Version 20). The analysis included frequency and percentage distributions of the demographic variables, as well as participants' knowledge scores regarding the use of family planning methods.

RESULTS

Table 1.1: Frequency and Percentage Distribution of Selected Demographic Variables among Mothers in Selected Hospitals in Experimental and Control Group

N=60

S. No.	Demographic variables	Background information	Experimental		Control	
			Frequency (f)	Percentage %	Frequency (f)	Percentage %
1	Age	18 – 22 years	3	10 %	7	23.3 %
		23 - 27 years	10	33.3 %	11	36.7 %
		28 - 32 years	11	36.7 %	10	33.3 %
		>32 years	6	20 %	2	6.7 %
2	Education	Illiterate	13	43.3 %	12	40 %
		Primary	12	40 %	12	40 %
		Secondary	2	6.7 %	3	10 %
		Graduation and above	3	10 %	3	10 %
3	Religion	Hindu	16	53.4 %	17	56.7 %
		Muslim	13	43.3 %	13	43.3 %
		Christian	1	3.3 %	0	0 %
		Others	0	0 %	0	0 %
4	Occupation	House wife	26	86.7 %	28	93.4 %
		Laborer	1	3.3 %	1	3.3 %
		Private job	3	10 %	1	3.3 %
		Government job	0	0 %	0	0 %
5	Type of family	Nuclear	10	33.3 %	5	16.7 %
		Joint	20	66.7 %	25	83.3 %
6	Residence	Rural	3	10 %	10	33.3 %
		Urban	27	90 %	20	66.7 %
7	Family Income per month in rupees	Below 5000	0	0 %	3	10 %
		5001 - 15,000	18	60 %	20	66.7 %
		15,001 -25,000	9	30 %	6	20%
		> 25,000	3	10 %	1	3.3 %
8	Duration of marriage	Less than 3 years	6	20 %	10	33.3 %
		4-5 years	7	23.3 %	9	30 %
		6-8 years	9	30 %	6	20 %
		More than 8 years	8	26.7 %	5	16.7 %
		Zero	0	0 %	6	20 %

9	No. of children	One	9	30 %	10	33.3 %
		Two	19	63.3 %	6	20 %
		More than two	2	6.7%	8	26.7 %
10	Sources of information about contraception	Family	14	46.7 %	14	46.7 %
		Friends	2	6.7 %	2	6.7 %
		Media and literature	1	3.3%	5	16.6 %
		Health team members	13	43.3%	9	30 %

Figure 5.1: Percentage Distribution of Pre-test Level of Knowledge among Mothers in Experimental and Control Group

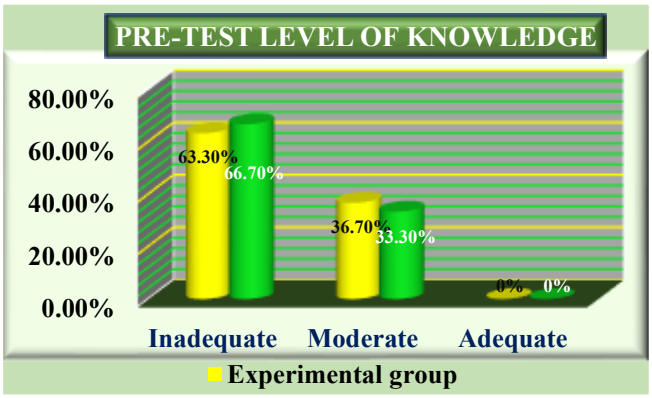


Figure 5.2: Percentage Distribution of Pre-test Level of Practice among Mothers in Experimental and Control Group

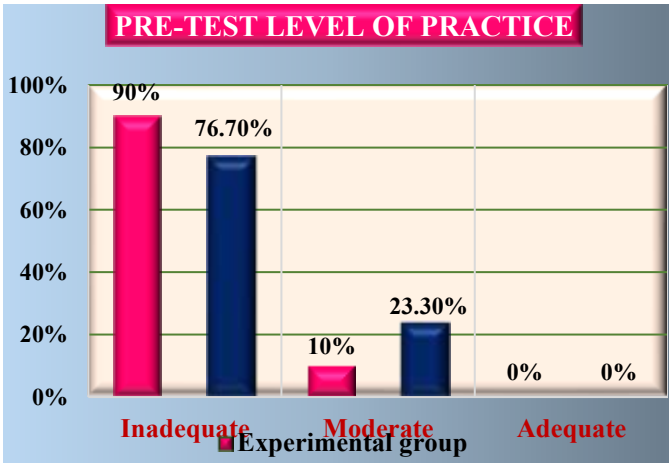


Figure 5.3: Percentage Distribution of Post-test Level of Knowledge among Mothers in Experimental and Control Group

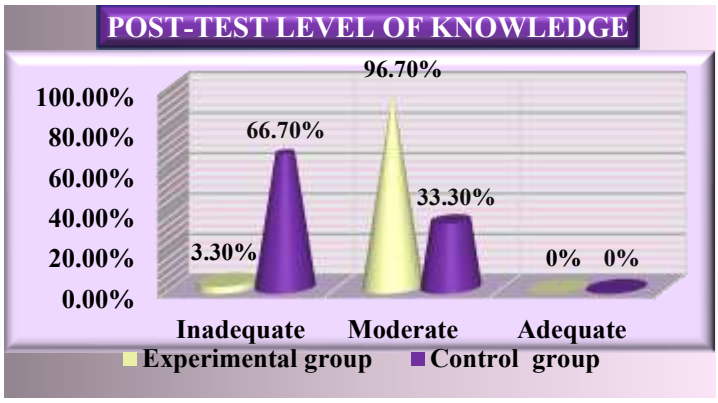


Figure 5.4: Percentage Distribution of Post-test Level of Practice among Mothers in Experimental and Control Group

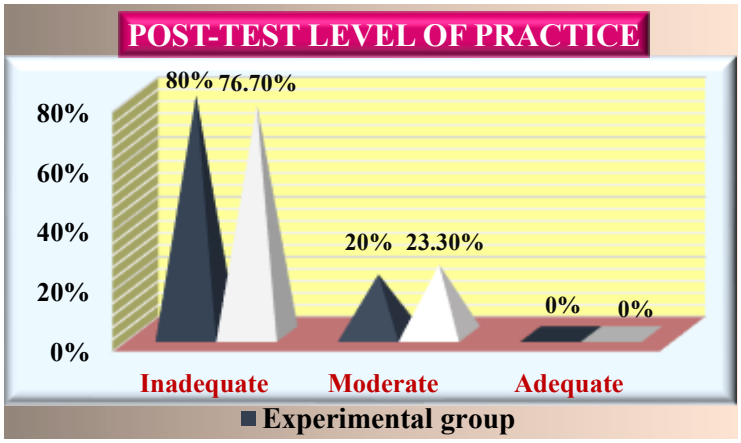


Table 4.1: Descriptive Statistics of Pre-test Knowledge Score regarding Family Planning Methods among Mothers

N=60

GROUP	Mean	SD	IQR	MIN.	MAX.
Experimental Group (30)	7.9	3.4	4	2	19
Control group (30)	8	2.6	4	3	15
SD= Standard deviation, **IQR**= Interquartile range, **Min**= Minimum, **Max**= Maximum					

Table 4.2: Descriptive Statistics of Pre-test Practice Score regarding Family Planning Methods among Mothers

N=60

GROUP	MEAN	SD	IQR	MIN.	MAX.
Experimental Group (30)	0.6	1.3	0	0	4
Control group (30)	1.2	1.7	3.25	0	4
SD= Standard deviation, **IQR**= Interquartile range, **Min**= Minimum, **Max**= Maximum					

Table 5.1: Effectiveness of STP on Knowledge among Mothers in Selected Hospitals in Experimental Group

N=60

Knowledge score	Mean	SD	MD	Paired "t" Value	DF	p Value
Pre-test knowledge	7.9	3.41	4.76	12.36	29	3.66 P = <0.001***
Post-test knowledge	12.67	2.73				

SD= Standard deviation**, MD=**Mean difference, **DF**= Degree of freedom, *** **Significant at < 0.001 level**

Table 5.2: Effectiveness of STP on Practice among Mothers in Selected Hospitals in Experimental Group

N=60

Practice Score	Mean	SD	25th	50th	75th	IQR	Wilcoxon signed rank test p value
Pre-test	0.6	1.3	.00	.00	.00	0	P= >0.05 NS
Post-test	1.1	1.73	.00	.00	3.00	0	

Table 6.1: Comparison of Level of Knowledge Score among Mothers in Selected Hospitals in Experimental and Control Group

N=60

GROUP	Mean	SD	MD	Unpaired "t" Value	DF	p Value
Experimental group	12.67	2.7	4.87	7.29	58	3.46 P=<0.001***
Control group	7.8	2.4				

*** **Significant at < 0.001 level**

Table 6.2: Comparison of Level of Practice Score among Mothers in Selected Hospitals in Experimental and Control Group

N=60

Practice Score	Mean	SD	25th	50th	75th	IQR	Mann-Whitney U test p value
Experimental group	1.1	1.3	.00	.00	3.00	3	0.83366 P= >0.05 NS
Control group	1.2	1.73	.00	.00	3.25	3.25	

Table 7.1: Find Out Association between Pre-test Level of Knowledge Score among Mothers regarding Family Planning Methods with their Selected Demographic Variables in Experimental Group
N=30

Demographic variables		Inadequate	Moderate	Adequate	DF	χ2	p value
Age	18 - 22 years	2	1	0	6	0.091 NS	12.59
	23 - 27 years	6	4	0			
	28 - 32 years	7	4	0			
	> 32 years	4	2	0			
Education	Illiterate	10	3	0	6	2.478 NS	12.59
	Primary	7	5	0			
	Secondary	1	1	0			
	Graduation and above	1	2	0			
Religion	Hindu	9	7	0	6	3.107 NS	12.59
	Muslim	10	3	0			
	Christian	0	1	0			
	Others	0	0	0			
Occupation	House wife	18	8	0	6	6.151 NS	12.59
	Laborer	1	0	0			
	Private job	0	3	0			
	Government job	0	0	0			
Types of family	Nuclear	5	5	0	2	1.148 NS	5.99
	Joint	14	6	0			
Residence	Rural	3	0	0	2	1.93 NS	9.21
	Urban	16	11	0			
Family income	Below 5000	0	0	0	6	5.119 NS	12.59
	5001 - 15,000	14	4	0			
	15,001 - 25,000	3	6	0			
	>25,000	2	1	0			
Duration of marriage	Less than 3 years	4	2	0	6	0.19 NS	12.59
	4-5 years	4	3	0			
	6-8 years	6	3	0			
	More than 8 years	5	3	0			
	Zero	0	0	0			
	One	5	4	0			

No. of children	Two	12	7	0	6	1.392 NS	12.59
	More than two	2	0	0			
Sources of information	Family	11	3	0	6	3.784 NS	12.59
	Friends	1	1	0			
	Media and literature	0	1	0			
	Health team members	7	6	0			

(NS= Not significant)

Table 7.2: Find Out Association between Post-Test Level of Knowledge Score among Mothers regarding Family Planning Methods with their Selected Demographic Variables in Experimental Group
N=30

Demographic variables		Inadequate	Moderate	Adequate	DF	χ2	p value
Age	18 - 22 years	0	3	0	6	4.137 NS	12.59
	23 - 27 years	0	10	0			
	28 - 32 years	0	11	0			
	>32 years	1	5	0			
Education	Illiterate	1	12	0	6	1.353 NS	12.59
	Primary	0	12	0			
	Secondary	0	2	0			
	Graduation and above	0	3	0			
Religion	Hindu	0	16	0	6	1.353 NS	12.59
	Muslim	1	12	0			
	Christian	0	1	0			
	Others	0	0	0			
Occupation	House wife	1	25	0	6	0.206 NS	12.59
	Laborer	0	1	0			
	Private job	0	3	0			
	Government job	0	0	0			
Types of family	Nuclear	0	10	0	2	0.517 NS	5.99
	Joint	1	19	0			
Residence	Rural	1	2	0	2	**9.31****	9.21
	Urban	0	27	0			

Family income	Below 5000	0	0	0	6	0.689 NS	12.59
	5001 - 15,000	1	17	0			
	15,001 - 25,000	0	9	0			
	>25,000	0	3	0			
Duration of marriage	Less than 3 years	0	6	0	6	2.845 NS	12.59
	4-5 years	0	7	0			
	6-8 years	0	9	0			
	More than 8 years	1	7	0			
No. of children	Zero	0	0	0	6	* **14.483**	12.59
	One	0	9	0			
	Two	0	19	0			
	More than two	1	1	0			
Sources of information	Family	0	14	0	6	*** **29.99**	22.46
	Friends	0	2	0			
	Media and literature	1	0	0			
	Health team members	0	13	0			

(* Significant at < 0.05 level, ** Significant at < 0.01 level, * Significant at < 0.001 level, NS = Not significant)**

DISCUSSION

The purpose of this study was to evaluate the effectiveness of a structured teaching programme on improving knowledge and practice related to family planning methods among mothers at selected hospitals, Meerut, U.P. The study was designed to determine whether the educational intervention could significantly enhance the understanding and behavior of the mothers in regard to family planning methods. The study clearly demonstrated that the structured teaching programme (STP) was effective in significantly improving mothers' knowledge regarding family planning methods. Pre-test results confirmed that both experimental and control groups had inadequate knowledge and poor practices, ensuring a common baseline. Post-test analysis revealed a significant increase in knowledge scores in the experimental group ($p < 0.001$), validating the effectiveness of the STP and supporting research hypothesis H_3.

However, improvement in practice was minimal, with no statistically significant change observed after the intervention. This indicates that while knowledge was enhanced, it did not immediately translate into better practice, possibly due to cultural, social, or logistical barriers.

The study also identified a significant association between knowledge levels and demographic variables such as residence, number of children, and sources of information, supporting hypothesis H_4. No such association was found with age, education, religion, occupation, or income.

CONFLICT OF INTEREST

There is no conflict of interest related to this study.

FUNDING

This research received no specific grant or financial support from funding agency in the public, commercial. Or not for profit sectors.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from medical college ethics committee prior data collection. Informed consent was taken from all participants. Confidentiality, anonymity and voluntary participation were ensured. Participation were ensured. Participants were informed of their right to withdraw at any stage without any consequences.

REFERENCES

1. Basavanthappa, B. T. (2017). Essentials of community health nursing: Family planning (1st ed.). Jaypee Publishers.
2. Kamalam, S. (2022). Essentials of community health nursing practice: Family planning (4th ed.). Jaypee Publishers.
3. Dixit, R., & Bandhani, A. (2019). Contraceptive knowledge, practices among women in Garhwal region. International Journal of Community Medicine and Public Health, 6(2), 793–796. https://doi.org/10.18203/2394-6040.ijcmph20190165
4. Fathalla, M. F., & Mohamed, M. F. (2017). Sexual and reproductive health: Overview. In Elsevier Reference Module in Biomedical Sciences (Vol. 6, pp. 481–490). Elsevier.
5. Semachew Kasa, A., Tarekegn, M., & Embiale, N. (2018). Knowledge, attitude and practice towards family planning among reproductive age women in a resource limited setting of Northwest Ethiopia. BMC Research Notes, 11(1), 1–6. https://doi.org/10.1186/s13104-018-3689-7
6. Sharma, B., Sharma, S., Nagar, S., & Raj, K. (2005). Awareness among women towards aspects of family planning in Kullu district of Himachal Pradesh. Journal of Social Sciences, 11(3), 249–251. https://www.semanticscholar.org/paper/Awareness-Among-Women-Towards-Aspects-
7. Singh, A., Singh, K. K., & Verma, P. (2016). Knowledge, attitude and practice gap in family planning usage: An analysis of selected cities of Uttar Pradesh. Contraception and Reproductive Medicine, 1(20), 1–10. https://doi.org/10.1186/s40834-016-0031-4
8. Institute of Medicine (US) Committee on a Comprehensive Review of the HHS Office of Family Planning Title X Program, Stith Butler, A., & Wright Clayton, E. (Eds.). (2009). A review of the HHS family planning program: Mission, management, and measurement of results (Chapter 2). National Academies Press (US). https://www.ncbi.nlm.nih.gov/books/NBK215219/
9. Yadav, M., Venkadalakshmi, V., Das, K., & Singla, R. (2024). Knowledge regarding contraception and previous practices of contraception among antenatal women. Nursing and Midwifery Research Journal, 20(2), 112–123. https://doi.org/10.1177/0974150X241239438

10. Saini, L. R., & Sahay, S. Y. (2024). Effectiveness of planned teaching programme on knowledge regarding temporary family planning methods among primigravida mothers in selected maternity hospitals at Jhunjhunu, Rajasthan. International Journal of Nursing Education, 12(4), 987–995.