

EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING RECENT TRENDS IN INFERTILITY MANAGEMENT AMONG INFERTILE WOMEN IN SELECTED INFERTILITY CLINICS, AT HASSAN

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ABSTRACT

Choking is a leading cause of accidental injury and death in children under four, often caused by food, coins, or small toys. This pre-experimental, evaluative study assessed the effectiveness of a demonstration on first aid management of choking among 60 B.Ed. students at NDRK College for Education in Hassan, Karnataka, selected via stratified random sampling. Data collected through structured questionnaires revealed that during the pre-test, 96.2% of students had inadequate knowledge, with an overall mean score of 10.37 (D = 3.233). Following the demonstration, post-test scores significantly improved, with 82.5% demonstrating adequate knowledge and an overall mean score of 25.18 (SD = 3.16). The study concluded that the educational demonstration was highly effective in improving the students' knowledge, while no significant association was found between their knowledge levels and demographic variables.

Keywords: Knowledge; B.Ed Students; First aid management of choking; Demonstration.

INTRODUCTION

Reproductive health encompasses complete physical, mental, and social well-being in matters related to the reproductive system. Parenthood is considered an important life goal, particularly in societies where childbearing is closely associated with marital fulfilment, family continuity, and social acceptance. Infertility is defined as the inability to achieve pregnancy after 12 months of regular, unprotected sexual intercourse. It may be classified as primary infertility, when pregnancy has never occurred, or secondary infertility, when conception cannot be achieved following a previous pregnancy. Infertility affects approximately 8–12% of couples worldwide, with male-related factors contributing solely or jointly to nearly half of all cases (Agarwal et al., 2021). Common causes include ovulatory disorders, tubal abnormalities, impaired sperm production or function, age-related factors, and unexplained conditions (Carson & Kallen, 2021).

Infertility is not only a reproductive disorder but also a significant psychological and social concern. Couples may experience anxiety, depression, grief, stigma, marital conflict, reduced self-esteem, and diminished quality of life. The repeated investigations, financial burden, uncertainty of treatment outcomes, and demands of assisted reproductive procedures may further intensify emotional distress (Rooney & Domar, 2018). Therefore, infertility management should integrate medical treatment with education, emotional support, and counselling. Nurses have an essential role in educating couples, clarifying diagnostic and treatment procedures, addressing misconceptions, promoting healthy coping strategies, and providing continuous psychological support. Structured infertility counselling education has been shown to improve nurses' counselling competence, thereby enhancing the quality of holistic care provided to infertile couples (Park & Shin, 2021).

NEED FOR THE STUDY

Infertility is a major reproductive health concern affecting couples across developed and developing countries. A systematic analysis of 277 reproductive health surveys demonstrated that infertility continues to affect a substantial number of couples worldwide, creating a need for accessible diagnostic, treatment, educational, and supportive services (Mascarenhas et al., 2012). Despite the growing availability of fertility treatments, many people have inadequate knowledge regarding fertility, age-related fertility decline, risk factors, investigations, and assisted reproductive procedures. Such knowledge deficiencies may contribute to delayed treatment-seeking, unrealistic expectations, misconceptions, and poor decision-making regarding infertility management (Pedro et al., 2018).

The management of infertility has become increasingly complex because of developments in ovulation induction, intrauterine insemination, in vitro fertilization, intracytoplasmic sperm injection, embryo transfer, cryopreservation, and other assisted reproductive technologies. Women undergoing infertility treatment need clear and accurate information regarding the purpose, procedure, benefits, limitations, possible complications, cost, and expected outcomes of these treatment modalities. Inadequate understanding may increase fear, confusion, emotional distress, and non-adherence to treatment.

Infertility treatment also involves repeated investigations, invasive procedures, uncertain outcomes, financial expenditure, and disruption of personal and marital life. Therefore, fertility care should not be limited to medical treatment alone. Evidence-based guidelines recommend that education, emotional assessment, psychosocial support, treatment-related information, and patient-centred communication should be incorporated into routine infertility care (Gameiro et al., 2015). Nurses are in a suitable position to identify misconceptions, provide individualized education, clarify treatment procedures, reduce anxiety, and support informed decision-making. Hence, it is necessary to assess the existing knowledge of infertile women and evaluate the effectiveness of a planned teaching programme regarding recent trends in infertility management.

OBJECTIVES OF THE STUDY

1. To assess the existing knowledge of infertility women regarding recent trends in infertility management.
2. To evaluate the effectiveness of planned teaching programme regarding recent trends in infertility management among infertile women.
3. To find the association between post-test knowledge scores of infertile women and their selected demographic variables.

HYPOTHESES:

H₁: There will be a significant difference between mean pretest and post-test knowledge scores regarding recent trends in infertility management.

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

OPERATIONAL DEFINITIONS:

Assess: In this study, assess means, gathering information for evaluation of knowledge regarding recent trends in infertility management.

Effectiveness: It refers to the determining the extent to which planned teaching programme regarding recent trends in infertility management to produce a specific effect on the knowledge of infertile women that can measured quantitatively.

Planned Teaching Programme (PTP): It refers to systematically organized teaching programme for one hour duration by using computer and other A.V aids for infertile women to provide information regarding recent trends in infertility management.

Knowledge: It refers to the level of understanding of the infertile women regarding recent trends in infertility management.

Recent trends in infertility management: It refers to the recent treatments which are available for women to manage infertility. these includes GIFT, ZIFT, IVF, ICSI, TET, IUI etc.

Infertility: It is “a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more regular unprotected sexual intercourse.”

Infertile women: It is defined as in which the legally married women who is unable to conceive after at least three years of unprotected, regular intercourse and confirmed as infertile by an obstetrician and attending infertility clinic for seeking treatment.

Selected infertility clinics at Hassan: It refers to infertility clinics available in Hassan town, to treat infertile women which are situated in Hassan.

ASSUMPTIONS:

- Women may have some knowledge regarding infertility.
- Planned teaching programme is an appropriate teaching method to improve the knowledge regarding recent trends in management of infertility.
- Structured knowledge questionnaire is an appropriate tool to measure the knowledge of a women regarding recent trends in infertility management.

DELIMITATIONS:

- 1) 40 infertile women in infertility clinics, at Hassan.
- 2) Study period is only for 6weeks.

RESEARCH METHODOLOGY

Research Approach

An evaluative research approach was adopted to assess the effectiveness of the planned teaching programme on knowledge regarding recent trends in infertility management.

Research Design

A pre-experimental one-group pre-test and post-test design was used.

$O_1 \quad X \quad O_2$

O₁ – Pre-test

X – Planned teaching programme

O₂ – Post-test on the eighth day

Variables Under Study

Independent Variable:

Planned teaching programme regarding recent trends in infertility management.

Dependent Variable:

Knowledge of infertile women regarding recent trends in infertility management.

Demographic Variables:

Age, religion, education, occupation, income, family type, dietary pattern, previous knowledge, and source of information.

Setting of the Study

The study was conducted at Vaatsalya Hospital and Mangala Hospital, Hassan.

Population

The population consisted of infertile women attending selected infertility clinics at Hassan.

Sample and Sample Size

The sample included 40 infertile women who fulfilled the selection criteria.

Sampling Technique

A non-probability purposive sampling technique was used.

Inclusion Criteria

Women who were available, willing to participate, able to read Kannada, and present during data collection were included.

Exclusion Criteria

Women who were absent, unwilling, illiterate, or unable to read Kannada were excluded.

Development of Planned Teaching Programme

The programme was prepared based on the objectives, literature review, expert guidance, and content validation.

Content of the Programme

The programme included female reproductive organs, infertility, causes, medical and surgical management, and recent assisted reproductive technologies.

Selection of the Tool

A structured knowledge questionnaire was developed to assess knowledge regarding infertility management.

Description of the Tool

Part I: Demographic variables.

Part II: Thirty-five knowledge questions regarding infertility and its management.

Scoring Procedure

Each correct answer was awarded one mark and each incorrect answer zero. The maximum score was 35.

Content Validity

The tool and teaching programme were validated by ten experts. The validity coefficient was 0.963.

Reliability

The reliability of the structured knowledge questionnaire was established using the split-half method and was found to be 0.96.

Pilot Study

The pilot study was conducted from 1 February 2016 to 8 February 2016 and confirmed the feasibility of the study.

Data Collection Period

The main study was conducted from 15 February 2016 to 15 March 2016.

Data Collection Procedure

The pre-test and teaching programme were conducted on the first day. The post-test was conducted on the eighth day using the same questionnaire.

Method of Data Analysis

Descriptive Statistics:

Frequency, percentage, mean, mean percentage, and standard deviation were used.

Inferential Statistics:

Paired t-test and chi-square test were used.

Summary

The methodology included the research approach, design, setting, variables, sample, sampling technique, tool development, validity, reliability, pilot study, data collection, and statistical analysis.

RESULTS

S. No.	Demographic Variables	Categories	Frequency	Percentage
1	Age (years)	21–25	20	50.0
		26–30	15	37.5
		31–36	5	12.5
2	Religion	Hindu	30	75.0
		Christian	5	12.5
		Muslim	5	12.5
3	Type of Family	Nuclear	28	70.0
		Joint	9	22.5
		Extended	3	7.5
4	Type of Diet	Vegetarian	20	50.0
		Non-vegetarian	20	50.0
5	Occupation	Housewife	30	75.0
		Government employee	5	12.5
		Private employee	5	12.5
6	Educational Status	Primary education	15	37.5
		Higher secondary education	10	25.0
		PUC/Degree	10	25.0
		Post-graduation	5	12.5
7	Monthly Family Income	Below Rs. 3,000	5	12.5
		Rs. 3,001–5,000	9	22.5
		Rs. 5,001–10,000	16	40.0
		Rs. 10,001 and above	10	25.0
8	Previous Knowledge Regarding Infertility Management	Yes	15	37.5
		No	25	62.5
9	Source of Information	Television/Radio	6	15.0
		Friends/Relatives/Neighbours	6	15.0
		Health personnel	3	7.5

	No source of information	25	62.5
Total		40	100.0

Half of the respondents, 20(50%), were aged 21–25 years, while the majority, 30(75%), were Hindus and 28(70%) belonged to nuclear families. Equal numbers of respondents, 20(50%), were vegetarian and non-vegetarian, and most, 30(75%), were housewives. A majority, 25(62.5%), had no previous knowledge or source of information regarding infertility management.

Table 2: Comparison of Overall Pre-test and Post-test Mean Knowledge Scores Regarding Recent Trends in Infertility Management

Assessment	Maximum Score	Mean	SD	Mean Percentage	SD Percentage	Paired t-test
Pre-test	35	15.83	5.1	45.2	14.5	15.77*
Post-test	35	29.45	2.9	84.1	8.4	
Enhancement	35	13.63	5.5	38.9	15.6	

Significant at the 5% level; $t(0.05, 39 \text{ df}) = 1.96$.

The pre-test mean knowledge score was 15.83(45.2%), whereas the post-test mean score increased to 29.45(84.1%). The mean enhancement was 13.63(38.9%). The calculated paired t-value of 15.77 was greater than the table value of 1.96, indicating that the planned teaching programme was statistically significant and effective in improving the respondents' knowledge regarding recent trends in infertility management.

Table 3: Association Between Demographic Variables and Post-test Knowledge Level Regarding Recent Trends in Infertility Management

Demographic Variables	Category	Sample	Moderate N (%)	Adequate N (%)	χ^2 Value	p-value
Age (years)	21–25	20	5 (25.0%)	15 (75.0%)	3.14 NS	$p > 0.05$
	26–30	15	6 (40.0%)	9 (60.0%)		
	31–36	5	0 (0.0%)	5 (100.0%)		
Religion	Hindu	30	8 (26.7%)	22 (73.3%)	0.54 NS	$p > 0.05$
	Christian	5	2 (40.0%)	3 (60.0%)		
	Muslim	5	1 (20.0%)	4 (80.0%)		
Type of Family	Nuclear	28	5 (17.9%)	23 (82.1%)	9.37*	$p < 0.05$
	Joint	9	6 (66.7%)	3 (33.3%)		
	Extended	3	0 (0.0%)	3 (100.0%)		
Type of Diet	Vegetarian	20	2 (10.0%)	18 (90.0%)	6.14*	$p < 0.05$
	Non-vegetarian	20	9 (45.0%)	11 (55.0%)		
Occupation	Housewife	30	6 (20.0%)	24 (80.0%)	7.90*	$p < 0.05$
	Government employee	5	1 (20.0%)	4 (80.0%)		
	Private employee	5	4 (80.0%)	1 (20.0%)		

Educational Status	Primary education	15	6 (40.0%)	9 (60.0%)	5.89 NS	p > 0.05
	Higher secondary education	10	0 (0.0%)	10 (100.0%)		
	PUC/Degree	10	4 (40.0%)	6 (60.0%)		
	Post-graduation	5	1 (20.0%)	4 (80.0%)		
Monthly Family Income	Below Rs. 3,000	5	2 (40.0%)	3 (60.0%)	1.92 NS	p > 0.05
	Rs. 3,001–5,000	9	2 (22.2%)	7 (77.8%)		
	Rs. 5,001–10,000	16	3 (18.8%)	13 (81.2%)		
	Rs. 10,001 and above	10	4 (40.0%)	6 (60.0%)		
Previous Knowledge Regarding Infertility Management	Yes	15	1 (6.7%)	14 (93.3%)	5.23*	p < 0.05
	No	25	10 (40.0%)	15 (60.0%)		
Source of Information	Television/Radio	6	0 (0.0%)	6 (100.0%)	5.23 NS	p > 0.05
	Friends/Relatives/Neighbours	6	1 (16.7%)	5 (83.3%)		
	Health personnel	3	0 (0.0%)	3 (100.0%)		
	No source of information	25	10 (40.0%)	15 (60.0%)		

Significant at the 5% level; NS: Non-significant.

A statistically significant association was found between post-test knowledge level and type of family, type of diet, occupation, and previous knowledge regarding infertility management ($p < 0.05$). No significant association was observed with age, religion, educational status, monthly family income, or source of information ($p > 0.05$). Therefore, selected demographic variables influenced the respondents' post-test knowledge level.

Conclusion

The study demonstrated that the planned teaching programme was highly effective in improving the knowledge of infertile women regarding recent trends in infertility management. The post-test mean knowledge score was considerably higher than the pre-test mean score, and the statistically significant paired t-test value confirmed the effectiveness of the educational intervention. The findings indicate that structured teaching using audiovisual aids can improve women's understanding of infertility, its causes, diagnostic procedures, medical and surgical treatments, and assisted reproductive technologies. Although the study was limited by its pre-experimental design, absence of a control group, small sample size of 40, and restriction to selected infertility clinics in Hassan, the results emphasize the importance of incorporating planned educational and counselling programmes into routine infertility care. Nurses and other healthcare professionals should provide accurate and understandable information to help infertile women make informed decisions, reduce misconceptions, cope with treatment-related anxiety, and participate actively in their care.

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Conflicts of Interest

The author declares that there were no financial, personal, or professional conflicts of interest related to the planning, implementation, data analysis, interpretation, or reporting of this study.

Funding and Sponsorship

The study did not receive any financial assistance or sponsorship from governmental, private, or institutional funding agencies. All expenses related to the development of the planned teaching programme, audiovisual materials, research tool, and data collection were borne by the investigator.

Ethical Considerations and Informed Consent

Formal administrative permission was obtained from the concerned authorities of the selected infertility clinics in Hassan before conducting the study. The purpose, procedure, expected benefits, and voluntary nature of participation were clearly explained to all eligible participants. Written informed consent was obtained from each participant before data collection. Confidentiality and anonymity of the information were maintained throughout the study, and the participants were informed of their right to withdraw from the study at any time without any consequences.

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