



“A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING INFERTILITY IN WOMEN AMONG YOUNG ADULTS STUDYING IN SELECTED COLLEGES OF AHMEDABAD.”

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ABSTRACT :

BACKGROUND: Infertility is the inability to conceive after one year of unprotected intercourse, with earlier evaluation recommended for women aged 35 and above. It is a global concern affecting about 17.5% of women, while in India it ranges from 3.9% to 16.8%, with Gujarat reporting 7.4%. Infertility can affect both men and women. Treatment options include Assisted Reproductive Technology (ART), where eggs and sperm are combined outside the body and embryos are transferred to the uterus, with in vitro fertilization being the most common method.

OBJECTIVE: A study to evaluate the effectiveness of structured teaching programme on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad.

METHODOLOGY: A quantitative research approach with a one-group pre-test and post-test design was used. Sixty young adults were selected through non-probability convenience sampling. Data were collected using a structured knowledge questionnaire.

RESULTS: The mean post-test score (21.95) was significantly higher than the pre-test score (13.50), with a mean difference of 8.45, indicating improved knowledge. The calculated t-value showed statistical significance at the 0.05 level, leading to rejection of the null hypothesis. A significant association was also found between pre-test knowledge and demographic variables.

CONCLUSION: The structured teaching programme was effective in improving knowledge regarding infertility among young adults.

KEYWORDS: Infertility, Awareness about infertility, Structured Teaching Programme, Young adults, Knowledge.

I. INTRODUCTION

Infertility is increasingly linked to modifiable lifestyle factors such as unhealthy diet, delayed childbearing, smoking, alcohol use, stress, and poor reproductive health practices. In India, 10–15% of couples face infertility, with conditions like PCOS affecting many women due to unhealthy lifestyles. Urban women are particularly at risk, with over 40% showing factors that may lead to hormonal imbalance and reproductive issues. Early lifestyle education and behavior changes—like healthy eating, exercise, stress management, and hygiene—are essential to prevent infertility and improve reproductive outcomes.

A study by the Indian Council of Medical Research (ICMR, 2019) showed that more than 40% of female in urban areas exhibited risk factors for future reproductive health issues due to poor lifestyle practices. These behaviors, if unaddressed, may contribute to hormonal imbalances, menstrual irregularities, and ovulatory dysfunction—common precursors of infertility in later life. Biological factors are the primary cause, factor like social, health, and lifestyle factors can all have an adverse effect on a couple's ability to reproduce.

Therefore, the present study is essential to evaluate the awareness and practices of female regarding lifestyle modification and its role in preventing infertility. The findings can inform health education programs and policy initiatives aimed at promoting female reproductive health and reducing the future burden of infertility.

OBJECTIVES OF STUDY:

1. To assess the pre-test knowledge score on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad.
2. To assess the post-test knowledge score on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad.
3. To evaluate the effectiveness of structured teaching programme on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad.
4. To find out the association between selected demographic variables with pre-test knowledge score on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad.

HYPOTHESIS:

H₀ – There will be no significant difference in knowledge score after administration of structured teaching programme on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad.

H₁ – There will be significant difference in post-test knowledge score after administration of structured teaching programme on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad.

H₂ – There will be significant association between pre-test knowledge score with selected demographic variables among young adults studying in selected colleges of Ahmedabad.

II. REVIEW OF LITERATURE

The literature review defines the research process as a systematic identification and critical evaluation of existing scholarly works to contextualize a new study. The current body of research focuses on two primary areas: the baseline knowledge and attitudes of various populations regarding infertility, and the measurable impact of structured teaching programs on improving that understanding. The literature review explores the global challenge of infertility, focusing on prevalence, risk factors, and the significant gap in public knowledge. Research indicates that infertility is often linked to lifestyle factors (smoking, obesity), physiological conditions (PCOS, tubal blockages), and socio-economic barriers. A recurring theme across the studies is that both urban and rural populations—as well as students—often possess inadequate knowledge regarding infertility causes and treatments, leading to increased anxiety and delayed medical intervention. Knowledge and Awareness (Bhoomika Patel et al., 2021): A study conducted in Mehsana, Gujarat, among infertile women in urban areas revealed that participants had inadequate knowledge regarding the management of infertility. The researcher used a random sampling technique (n=60) to identify this gap, emphasizing the urgent need for information booklets and educational tools to help women navigate treatment options. Effectiveness of Teaching Programs (Trupti Bhrambhatt, 2019): This study in Ahmedabad, Gujarat, evaluated a planned teaching programme among 80 infertile women. The results showed a dramatic improvement in understanding: the mean pre-test knowledge score was only 9.56 (38%), which rose significantly to 19.53 (78%) after the intervention. This confirms that structured educational programs are highly effective in enhancing the knowledge and management capabilities of women facing infertility. Clinical Causes and Demographics (Bhadkaria, S. et al., 2023) This study, conducted in Uttar Pradesh, India, analyzed the demographic and clinical causes of infertility among 150 couples in a tertiary care setting. Overall the review of literature consistently indicates a Gap between awareness of infertility. Although educational interventions have been proven effective in improving knowledge, consistent implementation of structured teaching programs among young adults studying in selected colleges of Ahmedabad. Therefore, the present study aims to evaluate the effectiveness of Structured Teaching Program regarding Infertility in terms of knowledge among young adults from selected colleges of Ahmedabad.

III. RESEARCH METHODOLOGY

A quantitative research approach was adopted to evaluate the effectiveness of a Structured Teaching Program (STP) on knowledge regarding infertility in women among young adults studying in selected colleges of Ahmedabad. The study utilized a pre-experimental one-group pre-test post-test research design. The independent variable was the Structured Teaching Program, while the dependent variable was knowledge regarding infertility.

The study was conducted in selected colleges of Ahmedabad. The target population comprised young adults studying in colleges, and the accessible population included those who were available and willing to participate during the data collection period. A total of 60 young adults were selected using a non-probability convenient sampling technique. Inclusion criteria included young adults who could read and write in English and were available at the time of data collection.

Data were collected using a self-structured knowledge questionnaire consisting of 30 multiple-choice questions, with a maximum score of 30. Content validity of the tool was established by five nursing experts, and reliability was determined using the test-retest method ($r = 0.84$), indicating good reliability. A pilot study was conducted to assess feasibility and clarity of the tool. The pre-test was administered, followed by the Structured Teaching Program using lecture-cum-discussion and audiovisual aids. A post-test was conducted after seven days to evaluate knowledge gain. Data were analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (paired t-test and Fisher's chi-square test).

IV. RESULTS AND ANALYSIS

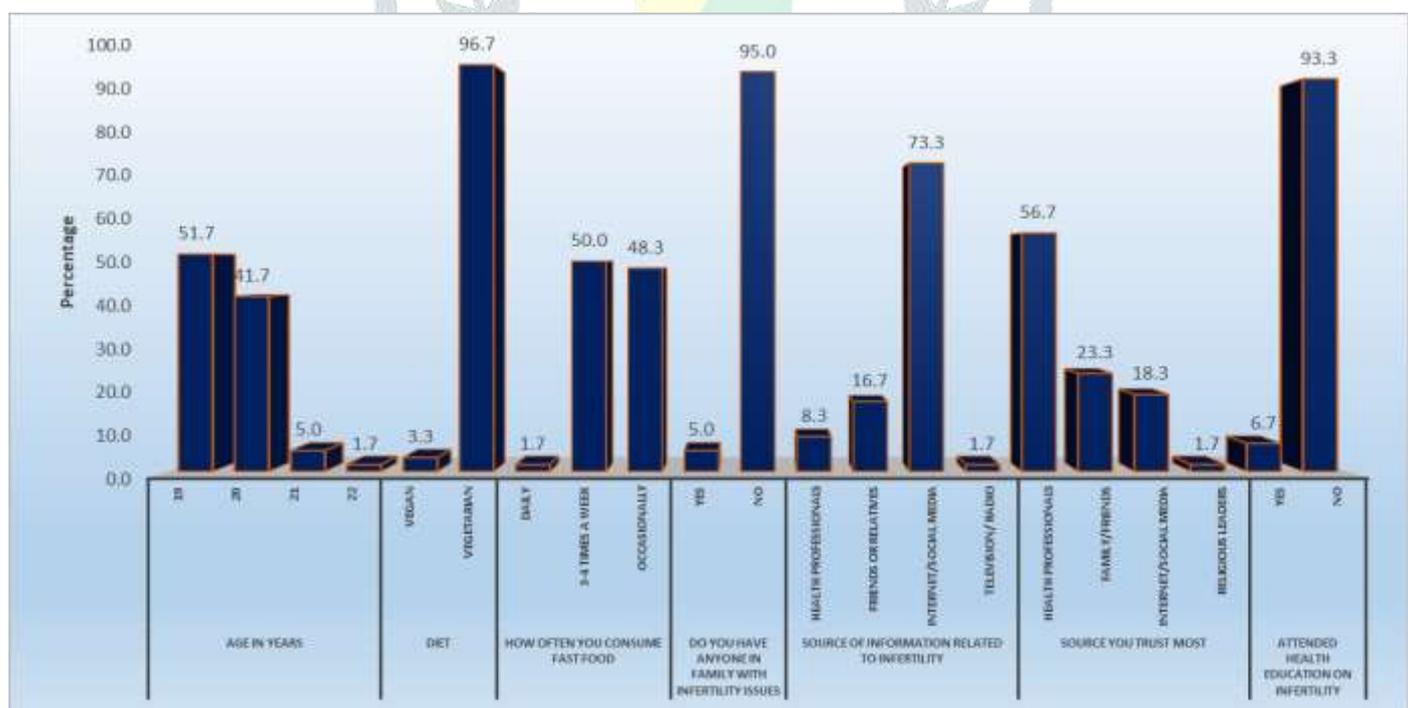
The data collected from 60 young adults were analyzed using descriptive and inferential statistics to evaluate the effectiveness of the Structured Teaching Program (STP) on knowledge regarding Infertility.

4.1 Demographic Characteristics

Majority of participants belong to age 19 years 31 (51.7%). Most of them were vegetarian 58 (96.7 %) and 30 (50 %) consumes fast food 3-4 times a week. A large proportion 57 (95 %) does not have any family history of Infertility. Majority of the participants 44 (73.3 %) gained knowledge by social media / Internet. Most of the participants 34 (56.7 %) trusts health professionals and 56 (93.3 %) had not attended health education.

Sr. No.	Demographic Variables	Frequency	Percentage (%)
1.	Age in Years: A. 19 years B. 20 years C. 21 years D. 22 years	31 25 3 1	51.7 41.7 5.0 1.7
2.	Diet: A. Vegan B. Vegetarian C. Non - Vegetarian	2 58	3.3 96.7
3.	How often do you consume fast food A. Daily B. 3-4 times a week C. Occasionally D. Never	1 30 29	1.7 50.0 48.3
4.	Do you have anyone in family with Infertility issues? A. Yes B. NO	3 57	5.0 95.0
5.	Source of Information related to Infertility		

	A. Health professionals	5	8.3
	B. Friends or relatives	10	16.7
	C. Internet/ Social media	44	73.3
	D. Television/ Radio	1	1.7
6.	Source you trust the most		
	A. Health professionals	34	56.7
	B. Family/ Friends	14	23.3
	C. Internet/ Social media	11	18.3
	D. Religious Leaders	1	1.7
7.	Attended Health Education on Infertility		
	A. Yes	4	6.7
	B. No	56	93.3



4.2 Comparison of Pre-Test and Post-Test Knowledge Scores

In the pre-test, no young adults had good level of knowledge on Infertility, 49 (81.7%) young adults had average level of knowledge and 11 (18.3%) young adults had poor knowledge on Infertility. After administration of structured teaching programme post-test knowledge score was 45 (75.0%) young adults had good knowledge on Infertility, 15 (25.0%) young adults had average knowledge and none of them had poor knowledge on Infertility.

The calculated paired ‘t’ value was 22.833, which was greater than the table value (t = 2) at 0.05 level of significance with 59 degrees of freedom. Hence, the difference was statistically significant, indicating that the Structured Teaching Program was effective in improving knowledge regarding Infertility.

Level of Knowledge	Pre – test		Post – test	
	Frequency	Percentage	Frequency	Percentage
Poor (1–10)	11	18.3 %	0	0 %
Average (11–20)	49	81.7 %	15	25.0 %
Good (21-30)	0	0 %	45	75.0 %
Total	60	100 %	60	100 %

4.3 Area-wise Knowledge Gain

Area-wise analysis revealed maximum percentage gain in definition (36.67%) and incidence (56.67%). A slight decline was observed in knowledge related to types (11.67%). Overall mean percentage increased from 42.11% in pre-test to 66.94% in post-test.

Items	Score	Pre Test			Post Test			Mean Diff	% Gain
		Mean	Std. Deviation	Mean %	Mean	Std. Deviation	Mean %		
Related to introduction and definition	3	1.78	0.94	59.44	2.88	0.32	96.11	1.1	36.67
Related to incidence	1	0.40	0.49	40.00	0.97	0.18	96.67	0.6	56.67
Related to types	1	0.80	0.40	80.00	0.92	0.28	91.67	0.1	11.67
Related to causes	6	3.00	1.12	50.00	4.50	1.08	75.00	1.5	25.00
Related to sign and symptoms	3	1.57	0.85	52.22	2.05	0.91	68.33	0.5	16.11

Related to diagnostic evaluation	6	2.47	1.38	41.11	4.02	1.08	66.94	1.6	25.83
Related to management	3	1.17	0.94	38.89	1.75	0.86	58.33	0.6	19.44

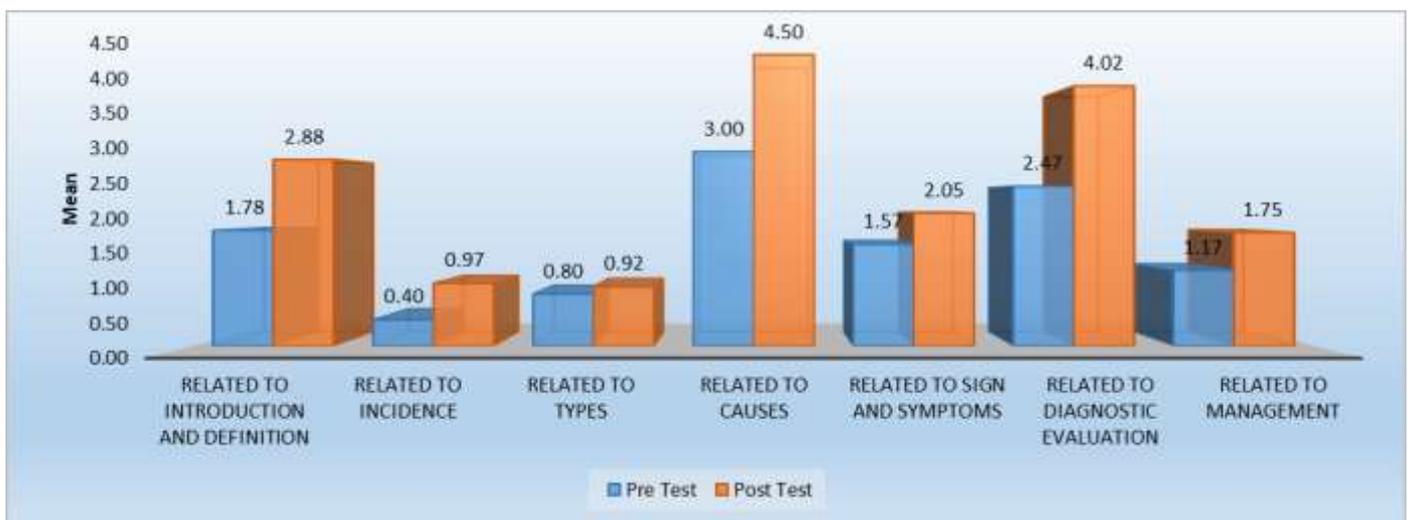


Table 4.4 shows the comparison of Pre-test and Post-test knowledge scores on Infertility. The mean Pre-test score was 13.50, while the mean Post-test score was 20.02 , with a mean difference of 7.38. The standard deviation of the Pre-test score was 2.97 and the Post-test score was 2.31.

The calculated t-value (22.83) was higher than the tabulated t-value (2) at 0.05 level of significance with 59 degrees of freedom. Therefore, the null hypothesis was rejected, indicating that the structured teaching programme was effective in improving the knowledge of respondents regarding Infertility.



4.5 Association Between Pre-Test Knowledge and Demographic Variables

Chi-square analysis revealed that diet ($\chi^2 = 9.216, p < 0.05$) and consumption of fast food ($\chi^2 = 6.192, p < 0.05$) had significant association with pre-test knowledge scores. Other variables such as age, family history with infertility, sources of infertility whom they trust, and attended health education on infertility showed no significant association.

Demographic variable		Pre TOTAL		Total	Chi Square	DF	Table Value	S/NS
		Average	Poor					
Age in year	19	26	5	31	1.535	3	7.82	NS
	20	19	6	25				
	21	3	0	3				
	22	1	0	1				
Diet	Vegan	0	2	2	9.216	1	3.84	S
	vegetarian	49	9	58				
How often do you consume fast food?	Daily	0	1	1	6.192	2	5.99	S
	3-4 times a week	23	7	30				
	Occasionally	26	3	29				
Do you have anyone in family with infertility issues	Yes	3	0	3	0.709	1	3.84	NS
	No	46	11	57				
Sources of information related to infertility:	Health professionals	4	1	5	1.316	3	7.82	NS
	Friends or relatives	7	3	10				
	Internet/Social media	37	7	44				
	Television/Radio	1	0	1				
Which source would you trust most for infertility information?	Health professionals	27	7	34	1.057	3	7.82	NS
	Family/Friends	11	3	14				
	Internet/Social media	10	1	11				

	Religious Leaders	1	0	1				
Have you ever attended a health education program on infertility?	Yes	4	0	4	0.962	1	3.84	NS
	No	45	11	56				

Conclusion of Analysis

The findings clearly indicate a statistically significant improvement in knowledge scores after the administration of the Structured Teaching Program. Therefore, the null hypothesis (H_0) was rejected and the research hypothesis was accepted, confirming the effectiveness of the intervention.

V. DISCUSSION, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

The study evaluated the effectiveness of a Structured Teaching Program (STP) on knowledge regarding infertility in women among young adults studying in selected colleges Ahmedabad. The findings showed a significant improvement in knowledge after the intervention. The mean pre-test score (13.50) increased to 21.95 in the post-test, and the calculated 't' value (22.833) was statistically significant at 0.05 level.

Diet and consumption of fast food showed significant association with pre-test knowledge, while other demographic variables did not. The findings indicate that structured health education plays an important role in improving awareness and promoting preventive health practices among young adults.

Conclusion: The study concluded that a knowledge deficit existed before the intervention. The Structured Teaching Program was effective in significantly improving knowledge regarding Infertility among young adults. Regular educational programs are essential to promote awareness related to Infertility.

Implications and Recommendations: The study suggests that nurses should organize regular awareness programs in college settings. Nursing education should emphasize on awareness related to Infertility. Future research can be conducted with larger samples, experimental designs, and long-term follow-up to assess awareness.

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