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# A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON KNOWLEDGE REGARDING INFERTILITY AND ITS MANAGEMENT AMONG INFERTILE COUPLES IN SELECTED INFERTILITY CENTRE DHIRAJ HOSPITAL VADODARA

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## ABSTRACT

**Background:** Infertility is a potentially life-changing diagnosis for couples who are trying to conceive. A diagnosis of infertility and the associated management plan can lead to psychological stress, anxiety, and depression for one or both partners. Infertility affects 6% of married women of reproductive age in the United States**. Material and methods:** A Quantitative approach was used in this study. One group pre-test and post-test design was used. Non-Probability Purposive sampling technique was used to collect the 80 samples of infertile couples. The selection criteria for this study are divided into inclusion and exclusion criteria. Inclusion criteria encompass infertile couples attending infertility clinics, expressing a willingness to participate, physically present during data collection, and capable of reading and writing in Gujarati, Hindi, and English. Conversely, exclusion criteria pertain to infertile couples with obstetric complications, chronic illnesses, or those who decline to provide consent for data collection. Data collection done by using structured knowledge questionnaire. Where during the pre-test the infertile couples were attended the video assisted teaching regarding infertility and its management. Post-test were collected after implementation of video assisted teaching. Data was analysed by using descriptive and interferential statistic.

**Conclusion:** The video assisted teaching was effective and improved the knowledge regarding infertility and its management among infertile couple.

**Keywords: Assess, Effectiveness, Video assisted teaching, knowledge, infertility and its management, Infertile couples**

## INTRODUCTION

Infertility, defined as the inability of a couple to conceive after a year of regular unprotected intercourse, impacts approximately 10-15% of couples worldwide. Notably, male factor infertility contributes to 50% of cases, emphasizing the critical need for evaluation **[1-3]**. While assisted reproductive techniques can sometimes overcome semen parameter issues, the assessment of infertile men remains essential. Current evaluation methods, starting with a basic workup and progressing to advanced steps, have remained consistent, but new tools are emerging to pinpoint underlying causes. Understanding male fertility and evolving diagnostic and treatment technologies are promising **[4-6]**. Reproduction is vital for mammalian species, with thousands of 'sex' genes conserved through evolution. Basic research plays a crucial role in defining these genes and the mechanisms behind male and female reproductive systems' development and regulation. However, a substantial number of infertile couples are labeled with idiopathic infertility or given vague diagnoses, hindering effective cures despite the availability of assisted reproductive technologies. Progress in reproductive research has been made, but translating findings to clinical practice remains a challenge. Recent advances in assisted reproductive technology have offered hope to couples with severe infertility, yet stem cells hold the potential to revolutionize infertility treatment **[7-10]**. Stem cells, known for their differentiation potential, can be stimulated in vitro to develop specialized functional cells, including male and female gametes. Epigenetic modifications, influenced by drug exposure or lifestyle changes, offer avenues for treating epigenetics-related disorders **[11-13]**.

The psychological impact of infertility is profound, leading to stress, anxiety, and depression for affected couples **[14]**. Infertility affects 6% of married women in the United States, necessitating prompt referral to specialists and personalized treatment plans based on the underlying cause. Globally, infertility remains a significant issue, with about 15% of couples experiencing reproductive challenges. Both male and female factors contribute to infertility, often with a genetic component. High-throughput sequencing technologies have facilitated the

identification of gene mutations associated with infertility. However, understanding the relationship between leiomyoma's (uterine fibroids) and infertility remains a subject of debate, necessitating further research for conclusive results. Various risk factors, such as age, eating disorders, alcohol consumption, environmental toxins, and chronic conditions, can affect fertility. The World Health Organization (WHO) estimates that 2-10% of couples worldwide are unable to conceive a child, with an additional 10-25% experiencing secondary infertility. Around 15% of childbearing-age couples seek medical help for infertility, but in a significant number of cases, the cause remains unexplained. WHO suggests that approximately 60-80 million couples worldwide are affected by infertility, highlighting the pressing need for comprehensive research and effective interventions This study aims to uncover the determinants of infertility among affected couples.

**MATERIAL AND METHODS:**

A Quantitative approach was used in this study. One group pre-test and post-test design was used. Non-Probability Purposive sampling technique was used to collect the 80 samples of infertile couples. The selection criteria for this study are divided into inclusion and exclusion criteria. Inclusion criteria encompass infertile couples attending infertility clinics, expressing a willingness to participate, physically present during data collection, and capable of reading and writing in Gujarati, Hindi, and English. Conversely, exclusion criteria pertain to infertile couples with obstetric complications, chronic illnesses, or those who decline to provide consent for data collection. Data collection done by using structured knowledge questionnaire. Where during the pre-test the infertile couples were attended the video assisted teaching regarding infertility and its management. Post-test were collected after implementation of video assisted teaching. Data was analysed by using descriptive and interferential statistic.

Ethical approval for conducting the study was taken from Sumandeep Vidyapeeth Institutional ethics committee (SVIEC), Vadodara. Administrative approval and permission were taken from concern authorities of selected Dhiraj Hospital, Vadodara. The consent form was prepared for the study participant regarding their willingness to participate in the research study. The research tool for data collection it consists two sections:

Section 1: Demographic Data:

The section include socio demographic variables such as Age, Education, Religion, Type of family, Family, income, Knowledge about infertility, Source of information, Treatment option.

Section 2: structured knowledge questionnaire

**RESULT**

**Table 1** depicts the frequency and percentage distribution of demographic variables of adolescent girls. According to their age majority 26(43.3%) were in 15-16 years of age, 19(31.7%) were in 12-14 years of age and 15(25%) were in 16-18 years of age.

**Table 2** depicts the pre-test and post-test level of knowledge regarding Infertility and it's management among infertile couples. Results revealed that in pretest majority 580(72.5%) had poor knowledge and 22(27.5%) had average knowledge where as in posttest majority 76(95%) had good knowledge and 4(5%) had average knowledge regarding Infertility and it's management among infertile couples.

**Table 3** depicts the effectiveness of video assisted teaching on knowledge regarding Infertility and it's management among infertile couples which was tested by using paired t test. Mean pretest knowledge score was 12.11± 1.484 and in post test mean knowledge score was 23.61±1.811 with mean difference of 11.50 and obtained (t value=43.29, df=79, p=0.001) was found statistically highly significant at $p<0.05$ level. Findings indicate that video assisted teaching was effective in improving the knowledge regarding Infertility and it's management among infertile couples.

**Table 4** depicts the association between pre-test level of knowledge regarding Infertility and it's management among infertile couples with their selected demographic variables which was tested by using chi-square test. Result revealed that demographic variables such as source of information was found significant information at $p<0.05$ level but other demographic variables such as age, educational qualification, religion, type of family, family income, Do you have knowledge about infertility and treatment option were not found any significant association at $p<0.05$ level with pre-test level of knowledge regarding Infertility and it's management among infertile couples.

**Table 1: Frequency and Percentage Distribution of Demographic Variables (N=80)**

| S. No. | Demographic Variables | Frequency(f) | Percentage (%) |
|---|---|---|---|
| 1 | **Age in years** | | |
| | a. 20-25 | 27 | 33.8 |
| | b. 26-30 | 13 | 16.2 |
| | c. 31-35 | 16 | 20 |
| | d. 35-45 | 24 | 30 |
| 2 | **Educational status** | | |
| | a. Primary and secondary | 24 | 30 |
| | b. Higher secondary | 16 | 20 |
| | c. Graduate | 23 | 28.8 |
| | d. Post graduate | 17 | 12.2 |
| 3 | **Religion** | | |
| | a. Hindu | 25 | 31.2 |
| | b. Muslim | 19 | 23.8 |

| | | | |
|---|---|---|---|
| | c. Christian | 22 | 27.5 |
| | d. Others | 14 | 17.5 |
| 4 | Type of family | | |
| | a. Nuclear | 45 | 56.3 |
| | b. Joint | 13 | 16.2 |
| | c. Extended | 22 | 27.5 |
| 5 | Family income (Rs/month) | | |
| | a. Less than 5,000 | 22 | 27.5 |
| | b. 5,001 – 10,000 | 16 | 20 |
| | c. 10,001 – 15,000 | 18 | 22.5 |
| | d. More than 15,000 | 24 | 30 |
| 6 | Do you have knowledge about infertility | | |
| | a. Yes | 40 | 50 |
| | b. No | 40 | 50 |
| 7 | Source of information | | |
| | a. Family members/ relatives | 25 | 31.2 |
| | b. Health personal | 10 | 12.6 |
| | c. Print media | 20 | 25 |
| | d. Electronic media | 25 | 31.2 |
| 8 | Treatment option | | |
| | a. Drug therapy | 22 | 27.6 |
| | b. Hormonal therapy | 5 | 6.2 |
| | c. IVF | 15 | 18.8 |
| | d. Surrogacy | 21 | 26.2 |
| | e. Adoption | 17 | 21.2 |

**Table 2: Pre-test and post-test level of knowledge regarding Infertility and it's management among infertile couples (N=80)**

| LEVEL OF KNOWLEDGE | Pre-Test | | Post-Test | |
|---|---|---|---|---|
| | f | % | f | % |
| Poor knowledge | 22 | 27.5 | 0 | 0 |
| Average knowledge | 58 | 72.5 | 4 | 5 |
| Good knowledge | 0 | 0 | 76 | 95 |

**Table 3: Effectiveness of video assisted teaching on knowledge regarding Infertility and it's management among infertile couples (N=80)**

| Level of Knowledge | Mean | SD | Mean D | t value | df | P value |
|---|---|---|---|---|---|---|
| Pre-test | 12.11 | 1.484 | 11.50 | 43.29 | 79 | 0.001* |
| Post-test | 23.61 | 1.811 | | | | |

*p<0.05 level of significance

**Table 4: Association between pre-test level of knowledge regarding Infertility and it's management among infertile couples with their selected demographic variables (N=80)**

| Sr. No | Demographic Variables | Pre-test knowledge | | χ2 value | df | p value |
|---|---|---|---|---|---|---|
| | | Poor | Average | | | |
| 1 | Age in years | | | | | |
| | a. 20-25 | 7 | 20 | 3.635 | 3 | $0.304^{NS}$ |
| | b. 26-30 | 4 | 9 | | | |
| | c. 31-35 | 7 | 9 | | | |
| | d. 35-45 | 4 | 20 | | | |
| 2 | Educational status | | | | | |
| | a. Primary and secondary | 6 | 18 | 0.242 | 3 | $0.970^{NS}$ |
| | b. Higher secondary | 5 | 11 | | | |
| | c. Graduate | 6 | 17 | | | |
| | a. Post graduate | 5 | 12 | | | |
| 3 | Religion | | | | | |
| | a. Hindu | 7 | 18 | 2.185 | 3 | $0.535^{NS}$ |
| | b. Muslim | 3 | 16 | | | |
| | c. Christian | 8 | 14 | | | |
| | a. Others | 4 | 10 | | | |
| 4 | Type of family | | | | | |
| | a. Nuclear | 13 | 32 | 0.365 | 2 | $0.833^{NS}$ |
| | b. Joint | 4 | 9 | | | |
| | d. Extended | 5 | 17 | | | |
| 5 | Family income (Rs/month) | | | | | |
| | a. Less than 5,000 | 7 | 15 | 2.422 | 3 | $0.490^{NS}$ |
| | b. 5,001 – 10,000 | 2 | 14 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | c. 10,001 – 15,000<br>d. More than 15,000 | 5<br>8 | 13<br>16 | | | |
| 6 | Do you have knowledge about infertility<br>a. Yes<br>c. No | <br>12<br>10 | <br>28<br>30 | <br>0.251 | <br>1 | <br>0.617[NS] |
| 7 | Source of information<br>a. Family members/ relatives<br>b. Health personal<br>c. Print media<br>d. Electronic media | <br>5<br>2<br>12<br>3 | <br>20<br>8<br>8<br>22 | <br>14.59 | <br>3 | <br>0.002* |
| 8 | Treatment option<br>a. Drug therapy<br>b. Hormonal therapy<br>c. IVF<br>d. Surrogacy<br>b. Adoption | <br>7<br>0<br>1<br>9<br>5 | <br>15<br>5<br>14<br>12<br>12 | <br>7.883 | <br>4 | <br>0.096[NS] |

*p value < 0.05 level of significance; NS-Non Significant

## CONCLUSION:

In summary, this study aimed to evaluate the impact of video-assisted teaching on the knowledge of infertility and its management among infertile couples. Using a quantitative approach and a one-group pre-test and post-test design, 80 infertile couples were included based on specific criteria. The results revealed a significant improvement in knowledge after the video-assisted teaching intervention, with post-test scores significantly higher than pre-test scores. This indicates the effectiveness of the teaching approach in enhancing understanding. The study highlights the potential benefit of educational interventions in improving knowledge among infertile couples, which could lead to better management of infertility-related challenges.

## Consent:

As per international standard or university standard, infertile couple's written consent has been collected and preserved by the author(s).

## Ethical Approval

The study was approved from ethical committee of Sumandeep Vidyapeeth institutional ethical committee and ethical approval number is SVIEC/ ON/ NURS/ SRP/OCT/23/44.

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