RESEARCH PAPER

A Pilot Study To Assess The Effectiveness Of Relaxation Technique In Reducing The Stress And Anxiety Among Infertile Women Undergoing Infertility Treatment In Selected IVF Center, U.P..

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ABSTRACT
Background: Infertility affects millions of women worldwide and can lead to increased levels of stress and anxiety. Relaxation technique have emerged as potential interventions to alleviate stress and anxiety in infertile women.
Aims/Objectives: The main objective was to assess the effectiveness of relaxation technique in reducing the stress and anxiety among infertile women undergoing infertility treatment in selected IVF center at Meerut.
Methodology: The research design which was adopted in the study was quasi experimental – Non randomized control group design. Participants were divided into two groups: an experimental group, which received relaxation techniques, and a control group, each consisting of six sample, total 12 women were selected using purposive sampling technique. The relaxation technique was given to the experimental group by conducting 2 session/ week for 6weeks period. The Infertility Related Stress Scale was used to measure stress and generalized anxiety disorder scale was used to measure anxiety score.
Results: shows that 70.7% difference in stress level while comparing posttest value of experimental and control group and 71.02% difference in anxiety level while comparing post test value of experimental and control group. So we reject null hypothesis as P value is <0.05.
Conclusion: The findings suggest that the intervention applied to the experimental group significantly decreased stress levels and anxiety level as compared to the control group. These results highlight the substantial impact of the intervention (relaxation technique) on infertility-related stress and anxiety.
Keywords: Infertility treatment, relaxation techniques, stress, anxiety, IVF center, infertile women, pilot study.
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INTRODUCTION

One in seven couples suffer from an infertility issue. The range of infertility, according to the most current World Fertility Survey or Demographic and Health Survey, is 8.6% to 21.5%. Infertility, either primary or secondary, affects almost one in ten couples.

A disease of the reproductive system characterized by failure to achieve clinical pregnancy after 12 months or more of regular unprotected sexual intercourse" is the definition of infertility. There are 48.5 million infertile couples in the world. Of these, 29.3 million couples experience secondary infertility, whereas 19.2 million couples experience original infertility. Primary infertility is the condition in which a woman is unable to conceive. Secondary infertility is the inability of a woman to conceive after either a prior pregnancy or an earlier successful pregnancy and delivery.

Infertility cause significant distress , stigma and financial hardship, affecting peoples mental and psychosocial wellbeing.

One significant element influencing both fertility and the success rate of in vitro fertilization is stress. According to reports, couples receiving infertility treatments and women in particular are more likely than their male counterparts to experience stress associated to infertility. Compared to women without infertility, infertile women have been found to have poorer psychological status in terms of trait anxiety and depressive symptoms.

In vitro fertilization (IVF) is a common treatment for infertile women. Because the results of IVF are unknown, the procedure itself may be viewed as stressful. The psychological stress that women experience throughout IVF/intracytoplasmic sperm injection procedures is further increased by social and familial pressure. Women who experience psychological distress, anxiety, or despair as a result of infertility frequently seek out nonpharmacological therapy instead of using psychotropics. Yoga and other traditional healing practices have recently acquired popularity as nonpharmacological treatments for common mental illnesses including depression and anxiety.

Sobhaninejad (2004) thought that almost all infertile couples would go through periods of stress and depression. There are numerous approaches available and employed to manage stress. One of the most popular and efficient ways to achieve this is through relaxation techniques. The body's stress levels can be balanced with this method. In addition

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to being low-risk, relaxation techniques are frequently free or inexpensive. They can also be carried out any place. Start de-stressing your life, finding easy ways to unwind, and enhancing your general health and well-being.

BACKGROUND

WHO (2023), Around 1 in 6 persons are affected by infertility, suggesting urgent need to enhance access to cheap, high quality fertility care for those in need.

Health world (2023), India's overall fertility rate has been steadily dropping. The general fertility rate decreased by 28.5% in the capital with the largest population of working-eligible couples, according to data from the recent sample registration survey (SRS).

Many times, infertility is a silent battle. Infertility patients often experience feelings of isolation, anxiety, depression, and a loss of control. Patients with cancer have been compared to those with infertility in terms of their depression levels. An estimated 12% of married women, or 1 in 8 couples, struggle to conceive or maintain a pregnancy. Even though infertility is common, most infertile women do not talk about their experience with friends or family, which makes them more vulnerable psychologically. Being unable to conceive naturally can lead to low self-esteem, guilt, and feelings of humiliation. A low quality of life and various degrees of anxiety, despair, and discomfort can result from these negative emotions. (Rooney K, 2018)

Infertile men and women experience extreme stress due to infertility, which also creates psychological and emotional strain in partnerships. One strategy that lowers stress and helps people balance their emotions is relaxation. The purpose of this study was to ascertain how relaxation affected the stress score of infertile women. This study was a clinical trial that was semi-experimental. Participants were split into two groups at random. Newton's infertile stress questionnaire was initially used to evaluate the stress levels in both groups. After assessing the participants' stress levels, the intervention group was given the relaxation technique. Twelve sessions were used to practice this method. All the surveys were performed under supervision of the researcher after embryo was transplanted to the uterus (after 2 weeks) and before doing the pregnancy test. Independent t-test showed that the total stress score did not have a significant difference in groups before the intervention ($p > 0.05$) however independent t-test indicated a significant difference in stress levels between the two groups after the intervention ($p < 0.05$). Compared to the intervention group, the control group's stress score was greater. As a complementary and alternative medicine approach, relaxation techniques help lower the stress score of infertile women. (Mahboubeh Valiani, 2010)

Aims and objectives:- The main objective is to assess the effectiveness of relaxation technique in reducing the stress and anxiety among infertile women undergoing infertility treatment in selected IVF center at Meerut.

METHODS

Study Design :- Quasi experimental- Non Randomized control group design.

Study Setting :- In this study the setting selected IVF center, Meerut, UP, India.

Sample :- Purposive sampling was used to select participants.

Ethical considerations

Institutional Ethical Committee experts of Teerthanker Mahaveer college of nursing, TMU, Moradabad, approved the study along with written information about the study was given to the participants and also a written consent was obtained via informed consent from the participants and primary investigator of the study maintained the anonymity of the participants along with the confidentiality of data throughout the study.

Development and Description of tool

Tools for data collections consist of:

Section A- Demographic Performa

It includes :- Age in years, Education, occupation, Religion, Type of family, Duration of married life, Monthly family income in Rupees, Current length of infertility Rx, History of miscarriage, Type of infertility and Area of Residence.

Section B - Infertility Related Stress Scale (IRSS)

Casu and Germigni, (2016)

The IRSS (Casu and Gremigni, 2016) is a 12item self – report measure to assess the amount of stress the infertility problem places on different aspects of life. It consists of two 6-item subscales referring to the intrapersonal (e.g., mental well – being) and interpersonal (e.g., friends) domains of life affected by infertility stress.

Scoring Procedure:

To obtain the score of the Intrapersonal domain, compute the sum of the following items : 1, 4, 5, 6, 9 and 12. To obtain the score of the Interpersonal domain , compute the sum of the following items : 2, 3, 7, 8, 10 and 11. The total 12-item scale score is obtained by summing all items. IRSS total score for the twelve items is 84. The method of scoring is a interpretation of IRSS score (0-21) minimal stress, score (22-42) mild stress, score (43-63) moderate stress and a score (64-84) high stress.

Section C- Generalized Anxiety Inventory (GAD-7)

Spitzer and colleagues, (2006)

Generalized Anxiety Disorder scale -7(GAD-7) is a 7-item, self- rated scale developed by Spitzer and colleagues (2006) as a screening tool and severity indicator for GAD, GAD - 7 total score for the seven items ranges from 0 to 21. The method of scoring is a interpretation of GAD-7 score (0-4) minimal anxiety, score (5-9) mild anxiety, score (10-14) moderate anxiety and a score (15-21) severe anxiety.

Data collection

After selection of subject, investigator collect the information about demographic data, Infertility Related Stress Scale (IRSS) and Generalized Anxiety Inventory (GAD-7). Pretest will do in both experimental and control group each with 06 samples, before intervention of relaxation technique. In experimental group relaxation technique will provide which include yoga techniques for

10 min each and music therapy for 15 min, by conducting 2 session/ week for 6weeks, for one hour i.e on Monday and Thursday. And follow up will do daily basis by what's app messages and information, after 6 wks of intervention of relaxation technique post-test will collect from both the group. In experimental group researcher ensure that each participant receive 6-7 session before give the post test.

Data analysis

The data was analyzed using experimental group and control group absolute stress and anxiety level outcome.

Results

Table no 1 Comparison of experimental group and control group stress level.

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Posttest	E	6	17.33	2.422	.989
	C	6	59.17	4.491	1.833

Unpaired Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Posttest	Equal variances assumed	2.691	.132	-20.083	10	.000	-41.833	2.083	-46.475	-37.192
	Equal variances not assumed			-20.083	7.682	.000	-41.833	2.083	-46.672	-36.995

Table 1 Shows the independent samples t-test indicates that there is a statistically significant difference in posttest scores on the Infertility Related Stress Scale, total mean (combining the Intrapersonal and Interpersonal domains) between the experimental group and the control group ($t(10) = -20.083$, $p < 0.001$). The mean difference between the two groups is -41.833 with a 95% confidence interval ranging from -46.475 to -37.192.

Since the p-value is much less than the common alpha level of 0.05, we reject the null hypothesis. This suggests that there is a significant difference in the posttest scores between the experimental group and the control group. Specifically, the experimental group has a significantly lower mean stress score (17.33) compared to the control group (59.17) at the posttest stage.

In summary, the analysis provides strong evidence of a significant decrease in infertility- related stress in the total mean score (combining psychological and social functioning) for the experimental group compared to the control group at the posttest stage. This indicates that the intervention or condition applied to the experimental group significantly impacted their overall stress levels related to infertility.

Unpaired Samples Test										
		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
									Lower	**Upper**
Posttest	**Equal variances assumed**	**4.450**	**.061**	**-4.211**	**10**	**.002**	**-8.167**	**1.939**	**-12.488**	**-3.845**
	Equal variances not assumed			**-4.211**	**7.441**	**.003**	**-8.167**	**1.939**	**-12.698**	**-3.635**

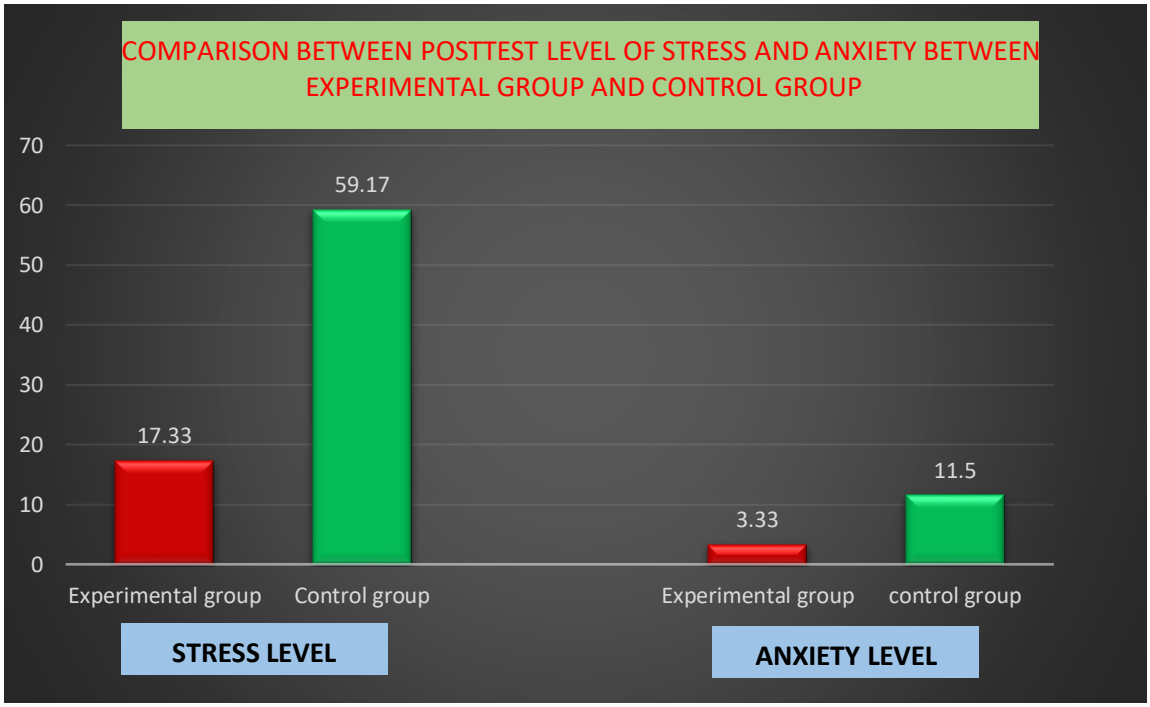
Table no 2 Comparison of experimental group and control group anxiety level.

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Posttest	E	6	3.33	2.160	.882
	C	6	11.50	4.231	1.727

Table 2 Shows the independent samples t-test indicates that there is a statistically significant difference in posttest scores on Generalized anxiety score between the experimental group and the control group (t (10) = -4.211, p = 0.002). The mean difference between the two groups is -8.167 with a 95% confidence interval ranging from -12.488 to -3.845.

Since the p-value is less than the common alpha level of 0.05, we reject the null hypothesis. This suggests that there is a significant difference in the posttest anxiety scores between the experimental group and the control group. Specifically, the experimental group has a significantly lower mean anxiety score (3.33) compared to the control group (11.50) at the posttest stage. Finally we can say that, the analysis provides strong evidence of a significant decrease in anxiety levels in the experimental group compared to the control group at theposttest stage

Graph no -1



Graph no 1- shows that 70.7% difference in stress level while comparing post test value of experimental and control group and 71.02% difference in anxiety level while comparing post test value of experimental and control group. So we reject null hypothesis as P value is <0.05.

Discussion

What is known so far about the topic

Females with infertility have been reported to have poor psychological status in terms of anxiety and depressive symptoms compared to females without infertility.

Relaxation technique including yoga and music practice that lowers one's level of discomfort, anxiety, tension, or anger.

Relaxation technique was documented to cause impact to reduce level of stress and anxiety among infertile women.

The absolute stress and anxiety level at 95% CI was found to be significant as p<0.05.

What new findings the researcher found

The researcher found that there was greater need for the relaxation technique among infertile women.

The level of stress and anxiety among infertile women decrease significantly after implementation of relaxation technique.

The researcher was exposed to the ground realities like facilities available at IVF Center and barriers of relaxation technique for better understanding and implementation of the sessions.

The researcher found variables like duration of married life found associated with pretest score of stress among infertile women.

Infertile women feel relaxed after attending 6-7 sessions.

Study limitations

The present study was undertaken limited to infertile women undergoing infertility treatment in selected IVF center at Meerut, samples were selected using non-probability purposive sampling technique, sample size was limited to 06 in each experimental and control group.

CONCLUSION

The findings suggest that the intervention applied to the experimental group significantly decreased stress levels in both psychological and social functioning domains, as well as in the overall stress score and anxiety score as compared to the control group. Result shows that 70.7% decrease of stress level in experimental group as compared to control group and 71.02% decrease of anxiety level in experimental group as compared to control group. So we reject null hypothesis as P value is <0.05.

These results highlight the substantial impact of the intervention (relaxation technique) on infertility-related stress and anxiety on experimental group, indicating a need for further research and potential modifications to intervention strategies to mitigate stress and anxiety in infertile women

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