



EFFECTIVENESS OF AN INTERVENTIONAL PROGRAMME ON LEVEL OF STRESS AMONG COUPLES UNDERGOING INFERTILITY TREATMENT IN A SELECTED INFERTILITY HOSPITAL.

Nursing

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ABSTRACT

The present study investigated the effectiveness of an interventional programme on stress among couples undergoing infertility treatment. The objectives of the study were to assess the level of stress experienced by couples undergoing infertility treatment, to evaluate the effectiveness of an interventional programme on level of stress experienced by the couples. A quasi experimental pre-test post-test control group design was employed. The study was carried out in the infertility clinic, Lifeline Hospital, Adoor. A total of 60 couples undergoing IUI were selected by purposive sampling, 30 each in control and experimental group. The tools used for data collection were Socio demographic data sheet and Modified fertility stress scale. Interventions included (1) teaching programme (2) Expressive writing and (3) audio CD assisted relaxation. Control group did not receive any intervention other than routine care. The experimental group received one session of teaching programme and one session of relaxation training, each of 15 minutes duration and they practiced expressive writing and relaxation interventions for two weeks on a daily basis. The results of the study revealed that majority of couples from both control and experimental group experienced moderate level of stress and it was found that interventional programme was effective in reducing level of stress in the experimental group compared to the control group ($p < 0.001$).

KEYWORDS

interventional programme, level of stress, couple undergoing infertility treatment.

INTRODUCTION:

Infertility, by definition, is the failure to conceive after having unprotected sex for at least one full year. There are two types of infertility: primary and secondary. Primary infertility is when a couple have never had children, or have been unable to achieve pregnancy after one year of living together despite having unprotected sexual intercourse. Secondary infertility is when a couple have had children or achieved pregnancy previously, but is unable to conceive at this time, even after one year of having unprotected sexual intercourse. (DC Dutta's Textbook of Gynecology EBook: Dutta, DC, Konar, Hiralal

The World Health Organization estimates that approximately 10 to 12% of couples experience some form of infertility problem. However, the incidence of infertility may vary from region to region (Mascarenhas et al., 2012). The overall prevalence of primary infertility in India was found to be between 3.9 and 16.8 per cent (Adamson et al., 2011). In Kerala, fertility is below the replacement level (2.1 children per woman). The substantial fertility decline in Kerala is taking place far beyond the boundaries. Compared to an all India decline of about 14 percent over 30 years, fertility decline in Kerala is by over 20 percent (3.4 to 2.6). (Joseph, 2007)

Statistics indicate that approximately 10 to 15 percent of infertility cases are due to physical problems. Sometimes behind these physical problems there is an emotional one that either causes or compounds difficulties with conception that are already present. Abnormal levels of stress hormones in the system can affect sperm production in males and also prevent or delay ovulation in females. (Agarwal & Said, n.d.)

Research on stress and infertility has shown that women with infertility have the same levels of anxiety and depression as that of women with cancer, heart disease and HIV positive status (Skiadas et al., 2011). When a couple is already stressed because of their infertility, a stress-leading-to-more-stress vicious cycle can be produced. Stress boosts levels of stress hormones such as cortisol which inhibits the body's main sex hormones gonadotrophin releasing hormone and subsequently suppresses ovulation, sexual activity and sperm count. It is responsible for the suppression of testosterone, oestrogens, and sexual behaviour. Chronic stress may cause lack of libido as well as a decrease in general fertility. In a study conducted by Harvard's Mind Body Institute, women who underwent stress reduction therapy saw dramatic increases in their ability to get pregnant. In fact, even women who were already undergoing fertility treatments had more successful outcomes when stress was kept under control. (Cousineau & Domar, 2007)

Objectives of the Study

Objectives of the study are;

1. To assess the level of stress experienced by couples undergoing infertility treatment.
2. To evaluate the effectiveness of an interventional programme on level of stress among the couples undergoing infertility treatment.

METHODS:

Research Approach: quantitative approach.

Research Design: a quasi-experimental pre-test post-test control group design.

Study Setting: Infertility Clinic, Lifeline Hospital, Adoor in Pathanamthitta district, Kerala.

Study Sample: The sample consisted of 60 couples (30 control and 30 experimental) posted for IUI procedure having primary infertility. **SAMPLING TECHNIQUE:** Non-probability purposive sampling.

Data collection tools

- Tool 1 : Socio-demographic data sheet
- Tool 2 : Modified fertility stress scale

Data collection:

Pre-test was conducted first for the control group using the modified fertility stress scale on the day of IUI procedure. No interventions were given other than routine care and post test was conducted on day fourteen using the same scale. Pre-test for the experimental group was done using modified fertility stress scale. The interventional programme was given in two sessions lasting for 30 minutes on the same day itself.

Session 1- Teaching programme (15 minutes) with the help of audio-visual aids (Power point) on the day of pre-test itself.

Anatomy and physiology of male and female reproductive system, Infertility-definition and factors contributing to infertility in males and females, Intrauterine insemination- procedure, what to expect before, during and after the procedure, effect of stress on infertility and infertility treatment, Illustration of expressive writing.

Session 2- Relaxation training orientation (15 minutes)

Audio CD assisted relaxation which includes deep breathing, guided imagery and progressive muscle relaxation which will be practiced by the subjects, 15 minutes daily after the expressive writing for 2 weeks after pre-test. Investigator demonstrated the relaxation technique and the subjects were made to practice the relaxation technique under the guidance of the investigator.

The subjects were asked to practice the relaxation technique daily from the day of IUI to the day of their next visit to the hospital which was scheduled on the 14th day of the first visit. They were telephonically communicated every day in the evening. Post test was conducted on day 14 of pretest using the same scale. The data thus obtained were tabulated and analyzed.

RESULTS:

The data collected from sixty couples, thirty couples each in

experimental and control group, who were posted for IUI procedure were analyzed using descriptive and inferential statistics

1) level of stress experienced by couples undergoing infertility treatment.

Table 1

Variable	Control group		Experimental group	
	f	%	f	%
Level of stress				
Mild (30-60)	0	0	0	0.0
Moderate (61-90)	23	76.6	25	83.3
Severe (91-120)	7	23.4	5	16.7

Table 1 shows that majority of couples (76.6% from the control group and 83.3% from the experimental group) experienced moderate level of stress and 23.4% from the control group and 16.7% from the experimental group experienced severe level of stress.

2) Effectiveness of an interventional programme on level of stress among the couples undergoing infertility treatment.

Table 2

Group	Level of stress		Z
	Mean ranks	Sum of ranks	
Control (n=30)	28.58	967.50	0.19
Experimental(n=30)	30.42	1060.00	

Mean ranks, sum of ranks and Z value of pre-test scores of level of stress among control and experimental group of couples undergoing infertility treatment. (n=60)

Table 2 shows that obtained Z value 0.19 is statistically not significant at 0.05 level. This shows that there was no significant difference between the pre-test values of control and experimental group. Hence both groups were homogenous in terms of level of stress.

Table 3

Mean ranks, sum of ranks and Z value of scores of level of stress among couples of control and experimental group.

(n=60)

Group	Level of stress		Z
	Mean ranks	Sum of ranks	
Control (n=30).	17.78	533.50	5.42***
Experimental(n=30)	43.22	1296.50	

*** Significant at 0.001 level

Table 3 shows the obtained Z value is statistically significant at 0.001 level. This shows that interventional programme was effective in reducing the level of stress among couples of experimental group compared to the control group.

Table 4

Mean ranks, sum of ranks and Z value of pre and post test scores of level of stress among couples of experimental group undergoing infertility treatment.

(n=30)

Experimental Group	Level of stress		Z
	Mean ranks	Sum of ranks	
Pre test	15.50	465.0	4.79***
Post test	0.00	0.00	

*** significant at .001 level.

Table 4 shows that the obtained Z value is statistically significant at 0.001 level. This shows that interventional programme was effective in reducing the level of stress among couples of experimental group.

RESULTS AND DISCUSSION:

The findings of the study have been discussed in terms of the objectives, and hypotheses. In the present study data were collected from sixty couples, thirty in the control group and thirty in the experimental group and an interventional programme was given to the experimental group. The results revealed that the interventional programme including expressive writing, audio CD assisted relaxation and teaching programme was effective in reducing the level of stress among couples undergoing infertility treatment.

The first objective of the study was to assess the level of stress experienced by couples undergoing infertility treatment. The analysis of obtained data showed that majority of couples (76.6% from the

control group and 83.3 % from the experimental group) experienced moderate level of stress and 23.4% from the control group and 16.7% from the experimental group experienced severe level of stress.

These findings were congruent with those of a study conducted in Iran which showed that infertile couples experienced a higher stress level than the healthy couples (valiani, 2011). Another clinical controlled trial conducted in Italy also supported the present study finding that moderate level of stress is experienced by infertile couples as measured by Newton's fertility problem inventory (Fassino et al., 2002).

The second objective was to evaluate the effectiveness of an interventional programme on level of stress among couples undergoing infertility treatment. The present study evaluated the level of stress between a control group and an experimental group before and after the interventional programme. The mean stress score of couples in the control group were higher than their corresponding mean experimental group stress scores. The findings were supported by the findings of experimental study conducted to determine the effect of relaxation on the infertile women's stress score. (Donkor & Sandall, 2007; Professor et al., 2011).

The present study also evaluated the mean level of pretest and posttest level of stress in couples of control group and couples of experimental groups. In the control group, the mean posttest values of level of stress in all couples were higher than the pretest values. The findings were congruent with a study which showed that with the control group, follow-up stress levels exceeded baseline stress scores, whereas the follow-up scores of experimental groups did not exceed baseline levels (Harrison, 1988; Sedighi et al., n.d.).

A study tested the effect of counseling and relaxation techniques showed that significant difference was there in stress level between experimental and control groups and inferred that moderately high stress of women in study group in experimental group was reduced to average level of stress after participated in counseling sessions an effective practice of relaxation technique, whereas women in control group did not have any change (Sengupta, 2012).

CONCLUSION:

The following conclusions were drawn on the basis of the study:

The obtained results of the study showed that,

- There was a significant difference in mean stress scores between experimental and control group. The mean level of stress rank of experimental group is lower than that of control group.
- Interventional programme was effective in reducing level of stress among the experimental group compared to the control group.
- There was a significant difference in mean pretest and posttest scores of level of stress of experimental group. It was concluded from the study that interventional programme has significant effect in reducing level of stress among the experimental group of couples undergoing infertility treatment.

Recommendations:

1. Patient focused relaxation techniques and education sessions can be conducted routinely in every infertility clinics.
2. A similar study can be replicated on a large sample using random sampling technique.
3. A similar study can be done focusing on any one of the couple-husband or wife.
4. A survey can be done to identify levels of stress among couples undergoing different modalities of infertility treatment.

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