

Efficacy of Spiritual Group Psychotherapy on the Infertility Consequences: A Randomized Clinical Trial

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Abstract

Background: Infertility has mental, social, and reproductive consequences. Health professionals need to consider all aspects of holistic care when caring for women with fertility problems. The aim of this study is the unique impact of spiritual group therapy on the infertility consequences.

Materials and Methods: This research is a randomized clinical trial from 800 infertile women who were referring to gynecological clinics of Jahrom University of Medical Sciences. Those who have inclusion criteria selected, then sampling continued by 63 people that randomly divided into two groups of experimental and control groups. The experimental group received 13 sessions of spiritual group psychotherapy. For gathering data used persian version of Depression Anxiety Stress Scale (DASS) to assessed psychological distress and Penn State Worry Questionnaire (PSWQ) in pre- post test.

Results: Results showed the severity of psychiatric symptoms in the experimental group was lower than control group. There was significant difference in psychological distress (depression, anxiety, stress and worry) pretest-posttest between and within groups by repeated measure analysis of variance (ANOVA). Rate of pregnancy in experimental group was 4 (12.9%) and in control group was 1 (3.2%), but there wasn't significant difference between them.

Conclusion: The findings indicated that the spiritual group therapy could decrease psychological severity symptoms. It seems to be, psychological interventions as a group education is a good choice for improved mental health among infertile women.

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Introduction

By some estimates, as much as 50% of those who need more advanced infertility care never receive it [1]. The studies revealed that the average of infertility is almost 20% [2]. In addition to these dichotomous classifications, there are also graded classification systems of infertility in use, with grading ranging from fertile to infertile based on the duration of one's unfulfilled wish for a child and clinical characteristics [3, 4]. The stress experienced by many infertile couples may be more a consequence than a cause of infertility [5]. Besides, Williams, et al. stated "infertility has mental, social, and reproductive consequences" [6]. The scientific evidences indicated that psychological approaches could be useful and applicable for treatment of mental illness or problems due to infertility [8, 9]. Many the studies assessed other dimensions as well (e.g. self-efficacy, implantation rate, intensity of the wish for a child, and the positive impact of psychological interventions on pregnancy rates [10]. Other studies have summarized these controversial findings and concluded that psychosocial factors like psychosocial distresses, anxiety and depression may possibly lower one's chances of pregnancy [11, 13]. Roudsari, et al. argued that "holistic care considers not only the psychological, social and cultural needs of

individuals, but also their religious and spiritual needs [14]. The spiritual group therapy efforts to combining to the psycho and spiritual aspects of clients and then use a collection of concepts and techniques from a psychological theories and spiritual traditions that can be applied to all forms of therapy [13]. According to the latest census, 76.8% of people claim to have a religion. It is recognized that while people may not have a religious affiliation, they may have spiritual needs [14]. Spiritual group therapy is the pursuit of that meaning for one's life. There are three main components that are at the heart of the Franklian Philosophy: 1) Each person has a healthy core, 2) The primary focus is to enlighten a person to their own internal resources and provide them with the tools to use their inner core, 3) Life offers you purpose and meaning; it does not owe you a sense of fulfillment or happiness [15-17]. Kirsty et al., revealed that "it is applicable in cases where people have to deal with loss, tragedy, terminal illness and diseases, chronic pain or disablement, or any other stress-provoking situation causing a crisis of meaning in their lives" [18]. The effect of spiritual group therapy on mental health has been known, but the effect of this approach on important outcome of this approach on rate of pregnancy has debate. The aim of this study is the unique impact of spiritual

group therapy on the infertility consequences as the effect of this approach on psychological symptoms and rate of pregnancy.

Materials and Methods

The study population included all infertile couples that visited maternity and gynecology clinic, at Jahrom University. Infertility was defined as at least 1 year of unprotected coitus without conception. Education of participants is very important. The research method of this project was experimental study (randomized clinical trial) by convenient sampling from 800 infertile women who were referring to gynecological clinics of Jahrom University of Medical Sciences. Sampling was from women who have inclusion criteria to our study. All of the participants who had (2-10 year), primary infertility, no somatic problems, Jahrom residents, between 20-40 years of age, have a privet mobile, ability to reading massage and interested to participate in regular group meetings were selected to research. Then, sampling continued by 63 people that randomly by random allocation (pair numbers were selected based on the specified list) and invited to participate in the intervention. The experimental group received 13 sessions of spiritual group therapy. There wasn't any psychological and educational approach for control group (this group received routine care), but due to ethical consideration. Informed consent was taken from participants and the study protocol was approved by the Institutional Ethics Committee of Jahrom University of Medical Sciences. Also after finishing the research, we trained all of control group by educational approach about new method of infertility treatment in one session. The results of pregnancy confirmed and reported by gynecologist.

Objectives of sessions:

1. Identify goals and rules of meeting, familiarity of member with each other and the expression the meaning of life. (This step aims to create trust in the groups and promote group dynamics) (1 session).
2. Understanding their characteristics and capabilities as a center of self-consciousness and reflection in to its, anxiety related factors and finding all of strategies to expose it (2 sessions).
3. Necessary to maintain one's personal identity and how to interact with others as a way to find the meaning of love (1 session).
4. How to establish good relations with families and using different approaches to consolidation families. So that, search for meaning in life through strengthening family ties (1 session).
5. The meaning of suffering, find the hidden meaning of the infertility problem from emphasizes the philosophy of life and marriage (2 sessions).
6. Identifying assisted reproductive therapy and provides information about all types of treatment as a way to create hope (There are always ways to solve problems in the future) (2 sessions).

Recognizing the value of creative:

1. Create the kind of work and service to others who can give life meaning (Helping charities-organ donation) (1 session).

2. Understanding the empirical values the meaning of life and its value in addressing the nature, deepening of life through interaction with nature, pursuing art. (Seeing the beauty that exists in our nature and art which induce motivation to living with all the hardiness) (1 session).

Trend values: discussion about situations where people have no power to deal with it and be forced to accept it. (Living without child) (1 session).

Measurement: For gathering data was used the (DASS test). This test was the short-form Depression Anxiety Stress Scales (DASS-21), which served as the reference standard. The DASS-21 is a 21-item instrument designed to measure the 3 negative affective states of depression, anxiety, and stress. The depression scale assessed dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia, and inertia. The anxiety scale assessed autonomic arousal, situational anxiety, and subjective experience of anxious affect. The stress scale assessed difficulty relaxing, nervous arousal, and being easily upset or agitated, irritable, or over-reactive and impatient. Using the cutoff scores suggested by Lovibond. The psychometric properties of the DASS have been extensively evaluated, and there is evidence for the convergent and discriminative validity of data obtained with the instrument [17]. This test normalizes in Iranian society [18]. Other questionnaire was the Penn State Worry Questionnaire (PSWQ) .This tool consisted of 16 Likert items and showed excellent internal consistency, test-retest reliability, and concurrent and discriminative validities. Later, in a clinical group study by Brown et al., the PSWQ again displayed high reliability and validity [19]. This test has been used by Iranian researcher [20]. All above tests were completed by participants and if need additional explanations, the researcher attempt to carry out further comment. Samples in both groups were compared by the questionnaire above before and after intervention and mean score of questionnaire compared in two groups and between groups. Data were analyzed using descriptive statistic for distribution of data as a mean and standard deviation, and analytic statistics as a student *t*-test to compare the pretest- post test between group, paired *t*-test to compare mean of variable within groups and Repeated-Measures Analysis of Variance (ANOVA) used to evaluate intervention effects between and within groups by SPSS-15 (SPSS Inc., Chicago, IL).

Results

Most people were in the 31-40 age range. Most people in two groups had middle to high school education. Duration of infertility in two groups was between 7-10 years. Also, the most of infertility etiology in both groups was related to female causes (Table 1). Two groups justified and there was no significant difference between

them. Level of severity at the beginning and the end of the study for both treatment and control groups showed that, the depression, stress and anxiety decreased in the experiment group, but there was no distinct change in the control group. Although the severity of the disorder after the intervention in the experimental group was decreased, but there wasn't any significant change within groups before and after intervention ($p>0.05$) (Table 1). Groups were studied and follow up for 6-12 month, fertility rate (clinical pregnancy diagnosed by gyneco-logist) in experiment group was 4 (12.9%) but in control group was 1 (3.2%). Difference between two groups was not significant ($T=-1.44$).

Comparison of differences between pretest and posttest within and between groups by repeated measure analysis of variance (ANOVA) showed that spiritual psychotherapy effects to infertile psychological distress (depression, anxiety, stress and worry). Interactive effects of variable with repeated measures indicated that the differences between the two groups are significant (Table 2). Figures 1-4 approved all above results.

Other finding showed that mean score of psychological symptom in pregnant was lower than non pregnant women, although this rate was significant in worry state of inventory only ($p=0.02$) (Table 3). There wasn't significant relationship between demographic characteristics, education level (0.84), etiology of infertility (0.15), age (0.67), duration of infertility (0.85), age (0.54) and pregnancy rate.

Discussion

The relationship between spirituality and medical approaches has been the focus of considerable interest in recent years. Recent study showed that psychological approach by using the spiritual group decreased psychiatric symptoms. Our result also showed that severity of psychiatric symptoms in experimental group was lower than control group. Studies suggest that many patients believe spirituality plays an important role in their lives, that there is a positive correlation between a patient's spirituality and health outcomes [21].

Table 1. Severity of disorder from DASS in two groups before and after intervention

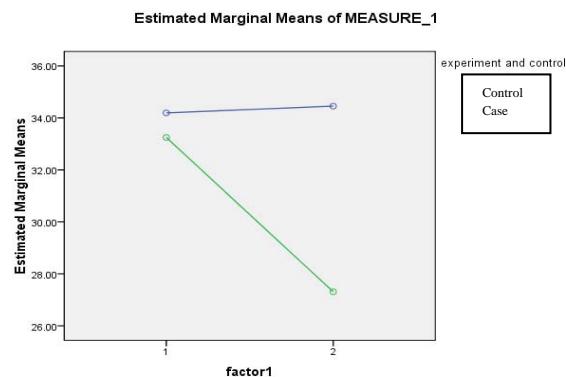
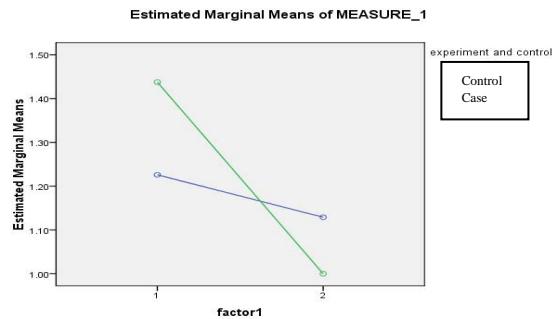
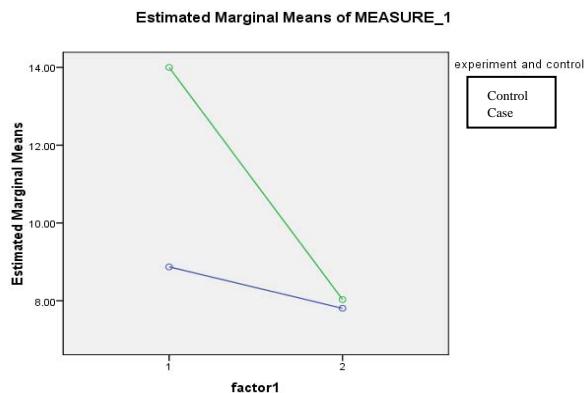
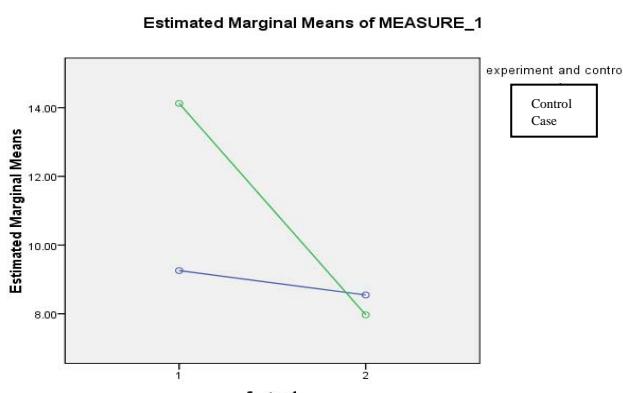
DASS	Group	Severity	Before N(%)	After N(%)
Stress	Experiment N=32	Normal	19(59.4)	26(74.6)
		Mild	12(37.5)	6(25.4)
		Moderate	1(3.1)	0(0)
		Sever	0(0)	0(0)
		Normal	24(77.4)	21(67.7)
	Control N=31	Mild	7(22.6)	6(19.3)
		Moderate	0(0)	4(13)
		Sever	0(0)	6(0)
		Normal	23(71.9)	27(84.4)
		Mild	8(25)	5(15.6)
Anxiety	Experiment N=32	Moderate	1(3.1)	0(0)
		Sever	0(0)	0(0)
		Normal	20(64.5)	16(51.6)
		Mild	7(22.6)	9(29)
		Moderate	4(12.9)	6(19.4)
	Control N=31	Sever	0(0)	0(0)
		Normal	24(75)	32(100)
		Mild	8(25)	0(0)
		Moderate	0(0)	0(0)
		Sever	0(0)	0(0)
Depression	Experiment N=32	Normal	19(61.3)	15(48.4)
		Mild	12(38.7)	16(51.6)
		Moderate	0(0)	0(0)
		Sever	0(0)	0(0)
		Normal	19(61.3)	15(48.4)
	Control N=31	Mild	12(38.7)	16(51.6)
		Moderate	0(0)	0(0)
		Sever	0(0)	0(0)
		Normal	19(61.3)	15(48.4)
		Mild	12(38.7)	16(51.6)

Table 2. Psychological disorder in experimental and control groups before and after intervention

Group	Variable	State	Mean Square	F	p-Value
DASS	DASS Total	Within group	3666.997	162.308	0.0001
		Between group	1622.552	71.817	0.0001
	Anxiety	Within group	371.142	106.138	0.0001
		Between group	233.554	66.791	0.0001
	Depression	Within group	389.453	95.248	0.0001
		Between group	189.358	46.311	0.0001
	Stress	Within group	2.247	16.532	0.0001
		Between group	914	6.724	0.012
	Pen worry state of inventory	Within group	253.952	7.700	0.007
		Between group	302.206	9.163	0.004

Table 3. Differences psychological disorder in pregnant and non pregnant groups**p*-Value is significant (*p*<0.05)

Variable	Group	Mean
Worry	Pregnant	22(21.43)*
	Non Pregnant	34.55(49.2)
Stress	Pregnant	7.75(1.89)
	Non Pregnant	10.36(3.26)
Depression	Pregnant	7.75(0.95)
	Non Pregnant	8.5(3.06)
Anxiety	Pregnant	7.75(0.95)
	Non Pregnant	8.70(3.06)
Total Dass	Pregnant	26.50(7.32)
	Non Pregnant	28.4(4.59)

**Figure 4.** Mean score of Pen Worry State of Inventory in two groups**Figure 1.** Mean score of stress in two groups**Figure 2.** Mean score of depression in two groups**Figure 3.** Mean score of anxiety in two groups

It has been suggested that clinicians can facilitate healing by helping their patients find meaning in their illness [22]. Results from our study emphasize on the effect of psychological approach on decreasing the severity of psychological symptoms. Other study confirms these results. Spirituality may be a source of support but in some cases may be a source of emotional turmoil and stress [23]. Spirituality plays a vital role in helping people to cope with the emotional distress [24]. Also, Koenig, et al. states that “the meaning of life is purely a measure of emotional and functional well-being” [25]. Some studies reported the impact of this approach on chronic diseases. Others investigate the efficacy of group spiritual therapy on life expectation in patients suffering from cancer and showed that group logo therapy increases life expectation in patients suffering from cancer [26]. Depression and anxiety were negatively correlated with spiritual well-being and is closely related to the physical and psychological symptoms of distress. It should be addressed appropriately and adequately in palliative care settings [27].

The results of this study suggest that spirituality/religiosity plays an important role in the psychological health of infertile women. As a result, severity of psychiatric symptom in experimental group was lower than other group after intervention, but there wasn't any significant difference between them. In attention to the importance of this approach, academic researchers had recognized the need to teach the requisite skills for communicating to harmful situations and also for addressing patient issues related to spirituality [28]. The results of the present study showed that the chance of pregnancy increases as levels of worry and distress decrease, but this result wasn't significant. This result approves by some research. Some studies showed that psychological approaches not only impact on the psychiatric symptoms, but also effects to rate of pregnancy [29, 30]. Some of researches were indicated the effectiveness of psychological intervention on pregnancy rate in infertile undergoing ART. Implemented during treatment and diagnosis cause of infertility especially before IVF results showed in positive pregnancy tests [31-32]. A series stress related factors that

potentially impact on fertility in the general population and the population undergoing ART. Moreover, the summation of evidence reported that infertility counseling intensity of child wish decreased and pregnancy rate was higher after intervention [33]. Psychiatric approach led to significant decreases in psychiatric symptom (anxiety and depression) and increases in the rate of pregnancy [34]. However some studies do not confirm the effect of psychological interventions to increases the pregnancy rates after implement the treatment [35]. These results approved our results about the effects of this psychological approach on fertility and psychiatric problems. However the attendance of people to group sessions and fallowing all of sessions without absence and filling of questionnaire in pretest-post test, also self disclosure in a group discussion and interfere to personal private was a research limitation. It is also important to note that due to the small number of pregnant patients in each group. Statistical evaluations was not possible to be more precise. In general, the results of current research showed that spiritual group therapy can help couples to promote their mental health due to decreased psychiatric symptoms, help them to looking for treatment and increasing the chance of pregnancy. Over all, the results of this study suggest that attention to spirituality plays an important role in the psychological health of infertile women. This interventions is beneficial for infertile

patients, but more randomized controlled trials are needed. Also, view to treatment of infertility is holistic approach. It is mean that health professionals must see a problem at the all of the aspects and not at just one perspective like, physical. The treatment approaches when implement a correct way, which look at the two components of people including; Soma and Psyche.

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Authors' Contributions

All authors had equal role in design, work, statistical analysis and manuscript writing.

Conflict of Interest

The authors declare no conflict of interest.

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