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Original Article

Effectiveness of transdiagnostic integrated treatment in cognitive emotion regulation strategies and social adjustment among infertile women

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Abstract

Introduction: Infertile women faced high emotional problems and psychological stress that affected their social adjustment and quality of life. In this study our main purpose is assessment of effectiveness of transdiagnostic integrated treatment to improve cognitive emotion regulation strategies and social adjustment among infertile women.

Materials and Methods: In this clinical trial 40 infertile women referring to family clinic of Shahid Beheshti University were selected and located in the experimental group (n= 20) and control group (n= 20). Participants in the experimental group (each 90 minutes) received transdiagnostic integrated treatment for 8 sessions. Collection tool data in this study was cognitive emotion regulation questionnaire (CERQ) and social adjustment questionnaire, as well as Clinical Interview for Axis I and II disorders were used. Data were analyzed by using SPSS software and descriptive statistics methods.

Results: The findings showed that the treatment unified transdiagnostic significant effect on cognitive emotion regulation strategies and social adjustment in infertile wome.
This change of variables planning, positive evaluation, acceptance, and blaming the other, 0.35, 0.28, 0.56, 0.43 respectively. Also for compatibility variables at home, emotional adjustment and social adjustment changes made to the 0.53, 0.46, and 0.16, respectively.

Conclusion: The result of this study showed that transdiagnostic integrated treatment as an approach based on emotion and use the adaptive emotion regulation strategies in infertile women uses the different techniques, avoidance of emotional suppression, flexibility, psychological and social adjustment in infertile women to enhance mental acceptance.

Keywords: Cognition, Emotion, Infertile women, Social adjustment, Transdiagnostic

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Introduction

The phenomenon of infertility makes it challenging to accept and adapt to it due to its unpredictable and variable nature (1). From the medical point of view, it is defined as the inability to conceive after one year (or more) of regular sexual intercourse without prevention of pregnancy or as the inability to give birth to a live child, if there are some pregnancies, is defined (2,3). Since infertility treatment is often focused on the medical and technical aspects of the infertility problem, some emotional and social aspects, such as psychological disturbance and the drop in daily functions (self-efficacy), have not been given much attention. So far, there has been no research on overdiagnosis treatment in reducing problems. Furthermore, the psychology of these people has not been done (4); among the stresses that strongly affect a person's psychological structure, and interpersonal relationships is the stress caused by infertility. Several studies show that infertility and its attitude make couples face emotional disturbances (5). Researchers have reported the incidence of impulsive behavior, scattered anger, depression, helplessness and feelings of worthlessness and inadequacy, anxiety and worry, especially with long-term and sometimes unsuccessful treatments, and negative beliefs about themselves. Often these Reports indicate the frequency and severity of these disorders in infertile women compared to men (6).

Infertile people experience considerable emotional distress, considering that most infertile women are at the peak of family, social and individual responsibilities at the age of having children (7). This phenomenon disrupts the quality of marital relationships and decreases intimacy and fear. There is a feeling of helplessness and despair from the termination of marital relations, separation, and disruption in friendships and daily life activities. The feeling of not being able to have children causes frustration, a severe drop in self-esteem, and helplessness, which lowers a person's sense of self-efficacy in occupational, social, academic, and family situations (8). Also, considering that infertility is a factor that threatens married life, reducing daily functions and emotional disturbances. Therefore it will be essential to deal with a type of psychotherapy that leads to an increase in the emotional regulation of these patients (9).

The logic behind the formation of transdiagnostic treatments has been based on theoretical concepts and experimental results regarding common factors between emotional disorders, which were designed mainly to target these causative factors (10). Metadiagnostic protocols target cognitive and behavioral processes involved in a wide range of psychological disorders (10). Among others, we can mention the Barlow group's integrated transdiagnostic treatment protocol, which was presented for people with anxiety and unipolar mood disorders with potential applicability for other emotional disorders (11). Metadiagnostic therapy is an emotion-based therapeutic approach. In other words, the treatment is designed to teach patients how to face their unpleasant emotions, experience them, and respond to their emotions more adaptively (12) while correcting their emotional regulation habits. The treatment aims to reduce the intensity and incidence of maladaptive emotional experiences and improve the functioning of patients (13). The integrated protocol is a cognitive-behavioral treatment based on confrontation, which primarily emphasizes changing maladaptive responses to emotional experiences (14). By integrating the typical components of cognitive-behavioral therapy for emotional disorders and using the latest advances in emotional science, this treatment method tries to target the main processes that cause emotional disorders (15).

The effectiveness of integrated metadiagnostic treatment has been shown in various studies. In a case study, Barlow et al. investigated the effectiveness of integrated transdiagnostic treatment on patients with obsessive-compulsive disorder along with generalized anxiety and panic disorders, and this treatment approach was confirmed (16). Farchione et al. investigated the effectiveness of the integrated transdiagnostic treatment protocol on 37 patients with the primary diagnosis of one of the anxiety disorders, which indicated the effectiveness of this treatment model (17). In G. Riccardi's research, the effectiveness of brief meta-diagnostic treatment for anxiety disorders was investigated,

and significant results were obtained in the post-test (18). Finally, in Laird Bilek's research, transdiagnostic therapy was used on people with anxiety and depression in a mental health clinic. The results showed that the participants showed significant improvement in the severity of clinical symptoms and all related diagnoses (19). Considering the above contents and the lack of clinical research regarding the effectiveness of transdiagnostic treatment, our primary goal in this research is the effectiveness of integrated transdiagnostic treatment in improving the cognitive regulation strategies of emotions and social adaptation of infertile women.

Materials and Methods

The current research is of clinical type, and in it, pre-test-post-test was used with random selection. The statistical population of this research consists of all fertile women referring to the Infertility Research Center of Shahid Beheshti University of Medical Sciences. First, the people willing to participate in this research were evaluated by structured clinical interview (TR-DSM-IV) for Axis I and II disorders. Then 40 infertile couples were randomly selected and placed in the integrated metadiagnostic treatment group (20 people) and the control group (20 people). In order to eliminate disturbing variables, groups were homogenized based on interventions such as age, gender, education, and level of beliefs. The criteria for entering the study were: lack of fertility after at least five years of marriage, women who were at least 30 and at most 45 years old, having at least a diploma education, full consent to participate in the research based on the research participation certificate form.

Exclusion criteria include: infertility under five years, suffering from any apparent psychological disease (such as personality disorders, major depression, obsessive-compulsive disorder, bipolar disorder, etc. based on clinical interview and DSM-IV-TR criteria), Suffering from major or chronic physical diseases such as endocrine diseases, cardiovascular diseases, diabetes, etc. based on the personal report, decision or action to divorce, not living together with a spouse for a maximum of 6 months. After determining the intervention and control group and obtaining their consent, information about the goals of the interventions, how they attended the meetings, and the number and time of the meetings, was presented to all the women. Confidentiality was also explained as a fundamental principle in the treatment so that people from Ensure that personal information is kept confidential. Then, experimental and control groups completed the questionnaire on cognitive regulation of emotion and social adjustment (pre-test). After the meeting, the relevant forms are completed by the test groups. The structure of the sessions was based on the principles and method of meta-diagnostic treatment taken from the plan of Barlow et al. (16). The sessions included eight 90-minute sessions that were held weekly. The structure and techniques presented in each session are as follows:

The first and second sessions: getting to know the group members each other and establishing a therapeutic relationship, familiarizing people with the research topic and preliminary explanations, problem conceptualization, psychological signs and symptoms of infertility, drug and non-drug treatments, muscle relaxation training, and visualization A positive mind, answering questionnaires (implementation of the pre-test), concluding a therapeutic contract and general plan of sessions and treatment, increasing non-judgmental and momentary awareness of emotional experiences, orientation towards "here and now", evoking positive and negative emotions. Avoiding emotional suppression, psychological flexibility, psychological acceptance, receiving feedback, and providing homework.

The third and fourth sessions: a review of the previous assignment, muscle relaxation and positive mental imagery, the role of cognitive evaluation in the development and maintenance of emotional responses, identification and revision of thinking patterns to create flexibility in thinking, focusing on two basic wrong revision methods in anxious thinking and depression, overestimating probability and catastrophizing, receiving feedback, presenting homework (writing primary negative emotions and recording them in the relevant form).

The fifth and sixth sessions: reviewing the previous assignment, muscle relaxation, and positive mental imagery; in these two sessions, Emotion-Driven Behaviors (EDBs) were

discussed. Identifying behaviors affected by emotion and creating discordant behaviors and emotional exposure, awareness of the effect of behavioral and cognitive-emotional avoidance, signs of security in the continuity of emotional responses, recognition of the contradictory effect of suppression and control of emotion, and recognition and prevention of emotional avoidance patterns were taught.

This means that withdrawing from emotions leads to their long-term maintenance. Clients learned to face their emotions in this meeting instead of suppressing them. As an example of EDBs related to generalized anxiety disorder, contact with relatives is to check security, which is used as the opposite behavior of limiting contact with relatives, or EDBs associated with depression disorder are withdrawal from society, which is the opposite behavior. That is, behavioral activation is used, receiving feedback and providing homework.

The seventh and eighth session: a review of the previous task, muscle relaxation and positive mental imagery, introduction of a three-dimensional behavioral model to express the mutual relationship between behavior/emotions, psychological functions, and observable behavior, and discuss efforts to change behavior based on it. Expressing positive emotions, discussing the standardization of activities, emphasizing encounters on emotional experience, which are created in the situation and carried out in imaginary and living forms in the session, preventing relapse by focusing on the prevention of emotional avoidance and emotional tolerance in the last session—receiving feedback, providing homework (the extent of action to what has been learned, review, thoughts, emotions, replacing positive emotions instead of negative emotions).

Research instrument

A) Questionnaire of Demographic Characteristics: personal information questionnaire including age, education level, marital status, history of physical illness, history of neuropsychiatric illness, history of using non-prescription drugs, history of alcohol and drug use, duration of illness, and It is the stage of the disease.

B) Cognitive Regulation of Emotion Questionnaire (CERQ): The Cognitive Regulation of Emotion Questionnaire is a multi-dimensional questionnaire designed to identify cognitive coping strategies of people after experiencing negative situations and events (20). This questionnaire is a 36-question self-assessment tool that includes nine different cognitive coping strategies (self-blame, acceptance and objectification, rumination, positive refocusing, refocusing on planning, positive reappraisal, and facilitating the incident through a holistic view). Catastrophizing and blaming others). The answers to this questionnaire are collected in a 5-point continuum (0-4). A total score is obtained from the total scores of 36 items, which indicates the use of cognitive strategies for emotional regulation and can range from 36 to 180. Panishtegar and Heydari have reported Cronbach's alpha reliability coefficient between 0.68 and 0.79 for adolescents not referred to psychiatric centers and between 0.72 and 0.85 for patients referred to psychiatric centers (21).

C) Social Adaptation Questionnaire: This questionnaire was compiled by Bell. This questionnaire measures five dimensions of adjustment, which are: a) adjustment at home, b) health adjustment, c) social adjustment, d (emotional adjustment) job adjustment. The test-retest reliability was 0.70 to 0.93 and the coefficient. The internal consistency was from 0.74 to 0.90. In a research on 15 master's students of Mashhad University, the validity of the 80-question Bell test was obtained using Cronbach's alpha coefficient of 0.88 (22).

Results

Based on the demographic variables, the control and the experimental group are homogeneous in the age class, employment status, education status, and duration of the marriage. The chi-square test results also show that the difference between the two groups is insignificant in any of the demographic variables ($P > 0.05$). However, examining the descriptive information for the cognitive emotion regulation strategies variable showed that in the subscales of the cognitive emotion regulation questionnaire, the average of the experimental group in the post-test stage

compared to the pre-test in the variables of positive refocusing/planning (14.60), positive evaluation/broader perspective (9.40), acceptance (12.30), and blaming others (7.50), have changed compared to the control group. Also, the meta-diagnostic intervention in the social adjustment scale caused changes in the scores of the subscales of adjustment at home (15.20), emotional adjustment 14.6), job adjustment (14.20), and social adjustment (16.40).

Therefore, based on the results, it can be described that the integrated transdiagnostic treatment has caused a change in the cognitive regulation strategies of emotion and social adaptation in infertile women.

Table 1. One-way analysis of variance test for the variable of cognitive emotion regulation strategies

Statistical index	SS	df	F	P	Effect size	Test power
Positive refocusing/planning	37.34	1	7.06	0.006	0.35	0.88
Positive evaluation/broader perspective	39.20	1	10.20	0.002	0.28	0.80
Rumination	3.30	1	0.75	0.550	0.05	0.12
Acceptance	140.35	1	38.42	0.001	0.56	0.99
Catastrophizing	6.47	1	1.20	0.250	0.03	0.40
Self-blame	1.45	1	0.30	0.550	0.04	0.06
Blaming others	55.68	1	13.01	0.001	0.43	0.99

As can be seen from Table 1, the significance level obtained for the subscales of positive refocus/planning, positive evaluation/broader perspective, acceptance, and blaming others is compared to the significance level of 0.007 obtained from the Bonferroni correction (Dividing the significance level of 0.05 by seven components of cognitive emotion regulation strategies) is smaller. The effect of the "practical meaningfulness" test group for the variables of positive refocusing/planning, positive evaluation/broader perspective, acceptance, and blaming others was 0.35, 0.28, 0.56, and 0.43, respectively. For example, 35% of the total variance or individual differences in positive refocusing/planning of infertile women in the experimental group was related to the effect of the integrated extra diagnostic treatment intervention.

In addition, the high power of the statistical test in the present study indicates that the meta-diagnostic treatment has improved the cognitive regulation strategies of emotions in infertile women.

Table 2. One-way covariance analysis test in the context of multivariate covariance analysis for the variable of social adjustment

Statistical index	SS	df	F	P	Effect size
Adjustment at home	8.30	1	0.80	0.530	0.02
Emotional adjustment	11.20	1	0.70	0.460	0.03
Social adjustment	34.10	1	1.70	0.160	0.07
Health adjustment	300.40	1	30.50	0.001	0.59
Job adjustment	72.60	1	6.20	0.011	0.24

Based on Table 2, the significance level for the emotional adjustment scale is smaller than the significance level of 0.010 obtained from the Bonferroni correction (dividing the significance level of 0.05 by five dependent variables).

As a result, according to the obtained averages, it can be said with 95% confidence that the components of the social compatibility of the test group are relative has increased in the control group, and the integrated diagnostic treatment has increased the social and emotional development of the experimental group.

Discussion

Based on the findings of this integrated meta-diagnostic treatment, it increases cognitive emotion regulation strategies. The social harmony of women has become infertile.

The implementation of 8 integrated meta-diagnostic intervention sessions resulted in significant results in the research variables.The participants in the research performed muscle relaxation training exercises and positive mental imagery, identifying positive and negative emotions, increasing non-judgmental and momentary awareness of emotional experiences, orienting towards the "here and now", avoiding emotional suppression, and avoiding Experiential, psychological flexibility, psychological acceptance and other training related to integrated meta-diagnostic treatment reached psychological flexibility and learned to accept their emotions, feelings, and negative thoughts and avoid experiential avoidance. Providing mindfulness exercises and accepting and experiencing emotions to patients made them use adaptive emotion regulation strategies such as positive refocusing/planning, positive evaluation/broader perspective, and acceptance in the face of unfortunate events and less maladaptive strategies, self-blame, others, catastrophizing) resorted. Finally, the use of psychological flexibility and adaptive emotion regulation strategies increased the social adaptation of infertile women. These results are consistent with the findings of Post (23), Wilamowska et al. (24), Pyne et al. (25), Farchione et al. (26), and Abdi et al. (27). The transdiagnostic treatment model is based on emotion regulation skills and is used for many emotional disorders (28). Psychoeducational strategies, self-control of thoughts, exposure, prevention, and response management, all of which have shown promising results in previous studies, were part of the techniques used in the integrative group therapy protocol (29). These techniques facilitate the identification of thoughts affecting emotions and behaviors that cause anxiety and depression (30). Therapy sessions teach clients that all positive and negative emotions are important and necessary. Our goal is not to eliminate but to identify, tolerate and cope with negative emotions. Emotional exposure as an intervention strategy that targets anxiety sensitivity was used in this intervention, and significant results were obtained in variables of social adaptation and cognitive regulation of emotion in infertile women.

Conclusion

This study showed that integrated transdiagnostic treatment is an emotion-based therapeutic approach that increases the use of adaptive emotion regulation strategies in infertile women and uses various techniques to avoid emotional suppression, psychological flexibility, and psychological acceptance in order to increase social adaptation.

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