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Open Access Original Article

Crescent Journal of Medical and Biological Sciences
Vol. 6, No. 3, July 2019, 375–380
eISSN 2148-9696

The Effect of Transactional Analysis Group Behavioral Therapy on Infertile Women's Marital Satisfaction

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Abstract

Objectives: Infertility causes psychological problems in infertile patients and exerts adverse effects on the marital life of couples. Therefore, the present study investigated the effects of transactional analysis (TA) group behavioral therapy on marital satisfaction of infertile women.

Materials and Methods: This before/after controlled trial was conducted on 30 infertile women referring to in vitro fertilization ward of Mahdieh hospital of Tehran in 2018. Patients were randomly assigned to intervention and control groups. The intervention group underwent TA for 4 weeks while the control group only received the routine treatment. Data were gleaned from Four ENRICH Couples Scale and analyzed by the SPSS software version 22.0 using independent and paired t-tests.

Results: The results of the paired *t* test showed a significant difference between the 2 groups after the intervention ($P=0.001$) compared to before the intervention while no significant change was observed in the control group ($P=0.789$). In addition, independent t-test indicated no significant change in the control group after the intervention ($P=0.000$) compared to before intervention ($P=0.949$).

Conclusions: In general, training in TA group behavioral therapy significantly increased marital satisfaction in the intervention group compared to the control group. Accordingly, the TA can serve as a useful treatment for infertile women. Therefore, psychological counseling and psychotherapy centers are recommended to be established and promoted in obstetric hospitals in order to improve the therapeutic course in infertile women.

Keywords: Group therapy, Transactional analysis behavioral therapy, Marital satisfaction, Infertility

Introduction

Pregnancy and motherhood form some part of a women's identity in any community. Hence, as a stressor, infertility affects women emotionally and socially (1). Infertility is defined as the inability to get pregnant after one year of unprotected coitus without using any contraceptive method (2). Infertility and its related sequelae are not just limited to the problems of the absence of an offspring; instead, many nuances like disturbed familial and marital relations, social seclusion induced by the relatives, and being scolded by self and others exert many influences on the personality and psychological aspects, familial functions, and communication skills leading to decreased quality of life of the couple and even a disintegrated life (3). According to the World Health Organization, about 80 million people suffer from infertility around the globe and the rate of prevalence varies from 5% to 30% in different countries. In addition, the average rate is 20% and most infertile people live in developing countries (4). Approximately one out of 10 couples is afflicted with infertility and one-fifth of the couples are infertile (5). Moreover, 2 million couples are annually added to this population (6) and more than one million infertile couples live in Iran. Since offspring-bearing is considered highly important in Iran religiously, historically, and culturally, infertility can be looked at as one cause of divorce (7). Based on the results of Demographic and Health Survey conducted in 2001, National Survey of Town Health, the National 2005 Survey, and the 2010 Survey, the current rate of prevalence of infertility is 2.5%, 1.6%, 3.4%, and 3.2%, respectively, in Iran. Further, the primary life-long infertility in Iran was 24.9% in 2005 and 26.1% in 2010 (8). The cases of infertility are due to female (1.3%) or male (1.3%) factors or the interaction between these 2 factors (1.3%). The remaining 20% of cases are idiopathic. However, women are constantly incriminated for infertility of the couples, which leads to a divorce. Nevertheless, their husbands may marry for the second time without leaving their first wife (9). Despite the fact that men and women contribute to infertility to

Received 15 December 2018, **Accepted** 27 January 2019, **Available online** 14 February 2019

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the same degree, the problem is rendered as a feminine one due to social dogmatism. This is because women usually assume a position of motherhood in their identity that gives meaning to life. Hence, women shoulder greater responsibility in the infertility of the couples even when the husband is the cause of infertility. Consequently, infertility may bring about negative psychological reactions such as depression, shame, jealousy, emotional imbalance (10), feelings of guilt, aggression, anxiety (11), and impaired familial and marital relations, social withdrawal by the relatives and friends (12), impaired sexual life, and marital dissatisfaction (13). Marital satisfaction can be defined as the amount of a spouse's perception of satisfaction with their wants and wishes provided with their partner (14). Therefore, marital satisfaction depends on the individual's expectations. Furthermore, marital life can be successful when both spouses enjoy the homogeneous culture and social stratum with similar or identical values since the man-woman relations have become complex by modern civilization and machinery. Indeed, the couples should be aware of the marital skills or they may face serious challenges that can lead to divorce (15). Efficacious psychological interventions may be applied to improve the sexual performance of infertile women. Transactional analysis (TA) is regarded as one of the significant approaches which have been extensively used in research in recent years (16). Moreover, TA is a rational and logical method that supports individuals in analyzing their behavior and gaining awareness, and thus, accepting responsibility with respect to what happens currently (17). Various studies investigated and approved the effectiveness of TA. For example, Rezaeifar et al demonstrated the effect of TA psychotherapy on improving marital intimacy and sexual satisfaction in women with non-clinical depression (18). Given these consequences, planning a treatment program for infertile women is of utmost importance. Investigations conducted so far have indicated that psychological interventions for infertile women are highly limited and many of these women are deprived of such programs and sustain much suffering for their infertility which causes serious mental damages and jeopardizes their mental health. Considering the above-mentioned explanations, the present study aimed to evaluate the effect of TA group behavioral therapy on infertile women's marital satisfaction to obtain high marital satisfaction despite their infertility.

Materials and Methods

A total of 30 infertile women were investigated in the current before/after controlled trial during 2018 after obtaining the approval of the Ethics Committee of Human Research, School of Nursing and Midwifery at Shahid Beheshti University of Medical Sciences, Iran (the ethical code of IR.SBMU.PHNM.1396.759) and registering the study in Iranian Registry of Clinical Trials (identifier: IRCT20170917036229N2). The samples under study were selected from among infertile women who referred to in vitro fertilization ward of Mahdieh obstetric hospital in Tehran, Iran during 2018. They were randomly selected using a simple sampling method based on the random number table and assigned to the intervention (15 patients) and control (15 patients) groups who had no contact with each other. Additionally, women observed the inclusion criteria including being diagnosed with infertility by a specialist, having literacy, a history of infertility for at least one year, and inclination for relaying one's experiences while not having psychological intervention over the past year or diagnostic criteria of expressive psychological impairments like major depression and obsessive-compulsive disorder. However, women were excluded from the study if they were absent for more than 2 sessions or had no inclination to continue the study. Then, they were given the right to leave the study freely and willingly at any stage and assured of patient information confidentiality and anonymity at the time of data collection and analysis. The study goals and procedures were explained and informed written consent was obtained from each patient. The intervention group underwent TA group behavioral therapy during eight 2-hour sessions for 4 consecutive weeks including 2 sessions per week. They were asked to present to the research center and all sessions were held in the in vitro fertilization ward of Mahdieh obstetric hospital in Tehran, Iran. The first session was devoted to introducing and greeting, reviewing the structure of the sessions, the related rules, and regulations, learning about the members, and talking about the group problems. The second session was devoted to talking about the child ego (i.e., I as a child), as well as normal, adjusted, and disobeying child. In addition, parent ego (i.e., I as a parent) and the types of parents such as supporter, controller, scolder, and feeding parents were discussed in the third session. The fourth session spent on speaking about adolescent personality and the method of plotting the sensual/carnal states. Further, personality disorder from the viewpoint of TA was the topic of the fifth session including expulsion/excommunication, mastery/dominance, contamination, and elucidation of the concept of execution in TA. The sixth session pertained to investigating 4 states of life and a brief explanation of communication/relation and communication/relation units. Furthermore, various relations/communications were surveyed from the viewpoint of TA in the seventh session. Finally, the eighth session was devoted to examining healthy relations and the method of achieving them, as well as investigating the concept of caressing and different types of caressing. Conversely, the control group only received ordinary hospital training including some pamphlets which contained brief instructions on infertility and marital satisfaction (Table 1). They completed the demographic questionnaire of infertile women and Olson's Four ENRICH Couples Scale, which was developed by Fowers and Olson (19). The latter scale was completed by infertile

Table 1. Training Sessions

Sessions	Brief Session Description	Session Goals
One	Introducing and greeting, review of session structure, related rules, and regulations, familiarity of the members with each other, talking about the group problems	1. Establishing more relations with each other and the method of providing feedback; 2. Motivating, encouraging, and emphasizing the useful and effective presence in future sessions and its effect on future relations;
Two	Talking about "child ego" or "I as a child", normal child, adjusted child, and disobeying child;	Familiarizing with the first aspect of personality in transactional analysis theory;
Three	Discussing "parent ego" or "me as a parent", as well as the types of parents, supporter, controller, scolder, and feeder;	Learning about "parent" part of personality in transactional analysis theory;
Four	Speaking about "adult" of personality and method of plotting sensual/carnal states;	Discussing "adult ego" of personality;
Five	Talking about personality disorders from the viewpoint of transactional analysis, excommunication/expulsion, mastery/dominance, contamination, and elucidating the concept of execution in transactional analysis;	Debating about personality disorders from the viewpoint of transactional analysis including expulsion, mastery/dominance, and contamination;
Six	Reviewing the previous session, investigation of 4 states of life, and a brief explanation of relation and relation/communication units;	Reviewing the assignment of the previous at the beginning of the session, followed by is discussing how individuals look at the world through the 4 windows and how they are placed in 4 positions;
Seven	Investigating various types of relations from the transactional analysis viewpoint including parallel, cross-sectional, latent/covert;	Demonstrating various relations through giving different examples, followed by grouping the members and working collectively as a team;
Eight	Evaluating healthy relations and the way of achieving them, exploring the concept of caressing, and surveying types of caressing.	Speaking about healthy relations and the way of achieving it, Explaining the concept of transactional analysis and investigating various types of caressing.

women before and after the intervention. Moreover, the demographic questionnaire included the age, education level, occupational status, marriage duration, and a history of physical or mental disorder. The validity of Olson's 47-item 5-point Likert-type scale was determined as Cronbach alpha=0.92 (20). Additionally, Sahraian et al estimated the test-retest correlation coefficient of this scale as 0.40-0.65, internal consistency coefficient as Cronbach alpha=0.69-0.70, and the differentiation and classification power test of 90.90% (21). The following values were assigned to responses provided for Likert Scale items: Completely agree=1, Agree=2, Indifferent=3, Disagree=4, and Completely disagree=5. The total score ranged between 47 and 235 points and a higher score indicated the respondent's greater satisfaction and vice versa. In this study, the women were assured of the continuation of their treatment in the case left the study and could participate in the study freely and willingly. They further could leave the study at any stage and were assured of patient information confidentiality and anonymity. To observe ethical issues, educational pamphlets were given to the control patients after data collection.

The obtained data were analyzed with SPSS software, version 22 (SPSS Inc., Chicago, IL, USA) using descriptive and inferential statistics. The normality of data distribution was confirmed using the Kolmogorov-Smirnov test.

Results

The results indicate no significant differences in demographic information of the patients under study including the age ($P=0.438$), the education level ($P=0.663$), occupational status ($P=0.416$), marriage duration ($P=0.301$), and a history of physical or mental disorder ($P=0.543$). The mean ± SD of the pretest and post-test scores of marital satisfaction in the intervention and control groups are represented in Table 2. As shown, the mean score of marital satisfaction in the intervention group is 151.67 ± 20.02 and 175.20 ± 15.75 before and after the intervention. Moreover, this score is 151.20 ± 19.53 and 149.40 ± 16.82 for the control group before and after the intervention. Furthermore, the mean marital satisfaction is almost at the same level in both groups in the pretest. However, the results of the paired *t* test show that the mean marital satisfaction increased significantly in the intervention group after the intervention compared to before intervention, indicating a significant difference between the 2 groups ($P=0.001$) with no significant difference in the control group ($P=0.789$).

Additionally, based on the results of the independent *t* test, no significant change is observed in the control group after the intervention ($P=0.000$) compared to before the intervention ($P=0.949$).

Discussion

Given the importance of marital satisfaction, especially for infertile women, the present study sought to investigate the effect of TA of group behavioral therapy on marital satisfaction of infertile women. TA is regarded as an interactive therapeutic method that emphasizes the cognitive, rational, and behavioral aspects of the treatment

Table 2. The Total Means Score of Marital Satisfaction in Infertile Women Before and After Intervention in Terms of Groups

Group	Before Intervention	After Intervention	The Difference Between Before and After Intervention	Critical t-value (paired t-test)	*P* Value
Intervention	151.67 (20.02)	175.20 (15.75)	23.53 (6.58)	3.576	0.001
Control	151.20 (19.53)	149.40 (16.82)	-1.80 (6.65)	-0.270	0.789
Independent t-test	0.065	4.336	8.996	-	-
P value	0.949	0.000	0.000	-	-

process. It aims at increasing the awareness and power of individuals to make novel decisions and change the course of their lives. The findings of the current study suggested a significant difference in the rate of marital satisfaction between the intervention and control patients, indicating that TA group behavioral therapy had a significant effect on the infertile women's marital satisfaction (F=18.798, $P<0.05$). Based on the comparison of the mean of marital satisfaction after TA intervention, a significant difference was found regarding this factor, showing increased marital satisfaction and enhanced use of some strategies for increasing its level in the intervention group. The results of the present study are consistent with those of Nosrati (22), Shahrestani et al (23), Mehdizadegan andRenani (24), and Rasti et al. (25). In addition, the results of the study by Hasanzadeh et al (26) revealed that training the patients in TA group behavioral therapy exerted significant effects on positive strategies (coping) and negative strategies (non-coping) of the excitement adjustment in the post-test, representing an increase in the mean score of positive strategies (coping) of the excitement adjustment while a decrease in the mean score of negative strategies (non-coping). Further, the findings are in line with the results of repeated measures ANOVA, indicating the stability of the effect of TA up to the time of repeated follow-up. In this regard, Keshavarzi (27) concluded that TA exerts a significant effect on adjusting the students' emotional behavior. Additionally, Whitley-Hunter (28) demonstrated the effect of TA on emotional intelligence. Moreover, the study by Sarrami et al (29) suggested that psychodrama pedagogy with TA content had a positive effect on adjusting excitements in mal-parented young girls and increased their efficacy regarding employing effective strategies for adjusting excitements leading to improved relations, especially peer relations. Furthermore, based on the findings of the study by Monajem and Aghayousefi (30), TA group psychotherapy had an effect on cognitive discipline-seeking behavior of the withdrawing addicts. In addition, Rezaeifar et al (18) reported that psychotherapy based on TA positively affected marital intimacy and sexual satisfaction in women with non-clinical depression, which is conformity with the results of the current study. Moreover, Zhang and Wang explored the effect of TA group behavior therapy on the couples' happiness and showed that TA group training had a significant effect on married men and women after training and increased their pleasure and self-sufficiency in their relations (31). Finally, Copeland and Borman examined the effect of TA group training on university students and found that this approach fostered the factors related to their happiness. Further, this training caused the students to betray a better efficacy compared to before training (33). Similarly, Ardeshiri-Lordejani et al investigated the effect of TA on spiritual intelligence of young couples in Isfahan, Iran and reported that the spiritual intelligence of the couples who underwent TA group training improved in the post-test period (34), which corroborates with the results of the present study. Allameh et al further demonstrated that TA group training increased the happiness-related variables (35). Moreover, the findings by Khodabakhshi Koolaee et al concerning the efficacy of group hope therapy in improving the perceived body image and sexual satisfaction of men revealed that the intervention enhanced their perceived body image and sexual satisfaction after therapeutic interventions (36). No study was found to contradict the findings of the current study. Based on the results of the present study, TA training enables men and women to convey their intended messages more vividly and readily and gain a better understanding of each other. Furthermore, practicing TA principles encourages the couples to add these habits to their behavioral reservoir and apply them in challenging and controversial situations in order to avoid using disturbing behaviors like inappropriate criticism, scolding, sarcasm, sneering, and irony (37). Consequently, individuals under the influence of TA enjoy greater marital satisfaction compared to those who have just received *in vitro* fertilization treatment. Indeed, TA group training promotes marital satisfaction skills and empowers women in facing life fluctuations and detrimental experiences. In addition, it enhances the positive performance of women under difficult conditions making them more resistant against the sufferings and sorrows of life. Thus, applying TA bestows a greater ability upon individuals to find greater marital satisfaction, adjust themselves to life difficulties, and cope with infertility problems. As a result, training the women in TA obviously predisposes the improved marital satisfaction in infertile women since women with a higher level of marital satisfaction can more readily cope with the life problems and do not succumb to the backbreaking load of the problems due to their high flexibility. Further, a high rate of marital satisfaction enables women to successfully manage the stressful conditions and adapt themselves to such contexts.

Marital satisfaction helps them to survive the untoward sequelae of ups and downs of life and acquire a new stage of development and interaction. In this way, they enjoy a greater dynamism with strengthened capabilities through adjustment and positive performance.

Conclusions

In general, the results indicated that TA group behavioral therapy was effective in improving marital satisfaction of infertile women. Hence, based on the findings, employing TA may serve as a useful interventional strategy for infertile women. Given that infertility entails some psychological aspects and consequences, TA can be effective not only in improving many chronic disorders but also in helping infertile women to relieve the negative psychological effects of their disorder. Therefore, alleviating psychological symptoms affects the use of effective treatments and future advancements and is useful in promoting supportive programs, coping skills, and rehabilitation intervention. The results further suggested that TA can reduce the stubborn problems leading to the diagnosis and treatment of infertility. Furthermore, it can play a significant role in the treatment course of patients and help them gain greater adaptability. Accordingly, infertility consultation centers and psychotherapy facilities are recommended to be established at obstetric hospitals in order to facilitate the course of treatment related to this patient population. Finally, interventions should not be limited to medical or surgical interventions.

Limitations of the Study

One of the limitations of the present study was the small sample size since some infertile patients' were unwilling for cooperation or their occupational business hindered their proper participation in the training sessions. Therefore, it probably affected the generalizability of the results and the external validity of the study. Accordingly, future studies are suggested to use a greater sample size with longer follow-ups, which may help in perceiving the long-term effects of this treatment on infertile women.

Conflict of Interests

The authors declare that they have no conflict of interest.

Financial Support

The study was supported by Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Acknowledgements

This paper is derived from an MSc thesis of psychiatric nursing. Our special thanks should go to all those who supported us spiritually and financially during all stages of the research, especially the infertile patients.

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