

Comparison of the Effectiveness Schema Therapy and Affective Reconstruction Therapy on Marital Relationship Quality of Infertile Couples

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Abstract

Aim: Health care providers explored various psychological, educational, spiritual, social, and medical interventions to ensure individuals diagnosed with infertility receive holistic treatment and attain optimal health. This study sets out to compare the effectiveness of couple therapy, based on schema therapy and affective reconstruction therapy on marital relationship quality in infertile couples. **Method:** This quasi-experimental study was conducted based on a pre-test, post-test, and control group design with follow-up. The statistical population of this study included all infertile couples referred to the Royan Institute for Biotechnology in Tehran in 2018-2019. The sample consisted of 30 couples who were selected via a purposeful sampling method and were randomly assigned to two experimental groups and one control group (n=5 couples in each group). Subsequently, the first experimental group underwent schema therapy (Young, & Brown, 2005) for 12 sessions, the second experimental group received affective reconstruction therapy (Snyder, & Mitchell, 2008) during 15 sixty-minute sessions (twice a week), while the control group was placed on the waiting list and received their psychological treatment process differently from the two approaches studied in this study. The Couple's Relationship Quality Questionnaire (Khoshkam, 2006) was conducted on three groups in all phases pre-testing and post-testing, and follow-up. A multivariate covariance analysis and a one-way covariance analysis were conducted using SPSS24 software. **Finding:** As

evidenced by the obtained results, schema therapy and affective reconstruction therapy had a significant effect on the marital relationship quality in infertile couples ($P < 0.05$). **Result:** According to the obtained results, it seems that the use of both schema therapy and affective reconstruction therapy to improve the marital relationship quality in infertile couples is effective and it is recommended to be used as a therapeutic approach.

Keywords: Schema therapy, Affective Reconstruction, Marital Relationship Quality, Infertile Couples.

Introduction

Infertility represents a major life crisis that threatens significant life goals and can be accompanied by a variety of psychological disorders (Renzi et al., 2019). However, all people have the right to enjoy the highest attainable standard of physical and mental health and to determine the number, timing, and spacing of children. Couples experiencing infertility long after marriage present a much lower level of psychological well-being, compared to couples with normal fertility (Shreffler et al. 2020). Poor psychological well-being contributes to numerous problems, like lack of independence and ineffective communication with the spouse. Infertile couples may encounter various emotional disorders, particularly emotional inefficiency (Grunberg, Miner &Zelkowitz 2020).It is estimated that 48 million couples and 186 million individuals worldwide experience infertility.Infertility diagnosis has a significant impact on infertile couples' marital and sexual satisfaction (Vizheh, Pakgohar, Rouhi, &Veisy, 2015). Previous studies have shown that a diagnosis of infertility may result in emotional distress, anxiety, and depression, which is more prevalent and more severe among women (LoGiudice and Massaro, 2018; Greil et al., 2019). Several fertility treatments, especially those involving outside-the-body fertilization, in vitro, are invasive, time-consuming, expensive, and are generally unsuccessful (Greil et al., 2019; Renzi A, Di Trani M, Solano L, Minutolo E, Tambelli, 2021).

Infertility has a deleterious impact on marital relationships (Çambel, &AkközÇevik, 2022). The obtained data revealed a significant positive association between marital commitment and relationship quality in fertile and infertile couples. However, this association was stronger in the fertile couples, compared to the infertile ones (Shahhossiani Tajik, Sayadi, & Taheri, 2019). Some research suggested that infertile individuals (both infertile males and females) experience greater dissatisfaction with themselves, their marriages, and infertility-related stress, and its treatment hurts the relationship both directly and indirectly (Shahhossiani Tajik et al., 2019; Çambel et al.,2022). Other authors showed infertility might be stressful, but their shared conditions made closer mutual support in the couple's thoughts and feelings, thus having a positive effect on their relationship (Dadkhah, Jarareh, & Akbari Asbagh, 2021). In addition, a Systematic Review of Marital Relationships in Infertility showed that infertile male participants expressed higher marital satisfaction than their wives. Infertile females had significantly less stable marital relationships compared to fertile females, who were associated with their sociodemographic and treatment experience. For infertile couples, the infertile subjects or their partners' marital relationships are affected by either member's infertility and experience special coping strategies. Moreover, other factors such as sexual satisfaction, age of the infertile couples, education level, and congruence of couples' perceptions of infertility are associated with the quality of marital relationships (Tao, Coates, &Maycock, 2012).

The infertile couple may experience this combination of physiological and psychological burdens, especially when treatment does not work (Chazan and Kushnir, 2019; Renzi et al., 2021).In addition to physical infertility in the wife or husband, there are underlying psychological issues that overshadow their marital lives and create a variety of psychological difficulties for them (Patel, VenkataNarasimha Sharma & Kumar 2020;

Vazirnia, Karimi, Goodarzi, & Sadeghi, 2021). Numerous psychosocial interventions such as positive couple therapy for improving empathy and intimacy in infertile couples (VahidiFarashah, Shafiabadi, & KhodabakhshiKoolaei, 2022), the effectiveness of wellbeing therapy among infertile women (Moeenizadeh, & Zarif, 2017), the impact of group positive psychotherapy on the quality of life and life satisfaction among infertile women (Asl et al., 2016), an exploration of psychoeducational interventions for reducing anxiety and depression in infertility among Nigerian women (Bello et al., 2020), as well as the effects of fertility-supporting health training on infertility self-efficacy among infertile women (Altiparmak, & Derya, 2018).

Various studies have found that psychosocial interventions can have a positive effect on infertile men, women, or couples. The purpose of this study is to compare the effectiveness of schema-based couple therapy and couple therapy based on affective reconstruction in enhancing the quality of a couple's marital relationship. Early maladaptive schemas are emotional and cognitive patterns that develop at the beginning of the development in the mind and are repeated in the course of life and affect how we interpret experiences and relationships with others (Khosravani et al., 2019). Young believes that these schemas are formed mainly in childhood and based on an individual's reality or experience, and are consistent throughout life. These constructs form the basis of the individual's cognitive structure and as a mediator, affect behavioral responses (Bach, Lockwood, & Young, 2018; Gong, & Chan, 2018).

Therefore, addressing infertility is important to ensure that everyone has the right to find a family (WHO, 2020). Additionally, the affective reconstruction approaches, which are insight-based therapies, intend to identify the origins of interpersonal problems and their manifestations in relationships. This approach identifies how each individual contributes to the continuation of interpersonal conflict in the relationship and examines their coping strategies during previous relationships. Adaptation strategies, which proved critical of previous relationships but which distort or lead to inappropriate strategies for achieving emotional intimacy and satisfaction in the current relationship, are discussed and implemented. According to national policies, infertility prevention, diagnosis, and treatment are often not given high priority, and the availability, access, and quality of interventions to combat infertility remain a challenge. For this study, we assessed infertile couples' marital relationships using schema-based couple therapy with affective reconstruction couple therapy to improve their marriages for the first time.

Methods

The quasi-experimental study was conducted based on a pre-test, post-test, and control group design with follow-up. The statistical population of this study included all infertile couples referred to the Royan Institute for Biotechnology in Tehran in 2018-2019. After obtaining permission from medical centers, the research subjects were selected by the purposive sampling method. The sample size was estimated at 15 couple cases ($n=5$ couples in each group) by G*Power software (version 3.1) (no need for formula and by specifying the type of statistical tests, the test power was 0.80, the effect size was 0.40,

and the error level was $\alpha = 0.05$). The selected participants were randomly assigned into two experimental groups of 20 (schema-based couple therapy in conjunction with affective reconstruction, Table 1). Inclusion criteria are as follows: visit an infertility center regardless of age or sexual orientation, have at least a high school diploma, both couples take part in the treatment sessions, and have not previously received schema-based couple therapy along with affective reconstruction couple therapy. Informed consent to participate in the study, treatment for infertility by one of the couples (either male or female), absence of any psychotropic drugs for at least two weeks before the beginning of the study, as well as no severe, physical or mental illness.

On the other hand, the exclusion criteria included the inability to attend two consecutive sessions or three consecutive nonconsecutive sessions, disobedience with the therapist, having a serious health problem disrupting the study process, and failing to complete the survey. According to the study's ethical considerations, all subjects received written information about the study and had the option of participating in it. Participants were assured that all information would be kept confidential and used for research purposes only. The names and surnames of the participants were not recorded to respect their privacy. In collecting the required data in the first stage, both (two experimental) and control groups were administered pre-tested, including the marital relationship quality of infertile couple questionnaire. Subsequently, the first experimental group underwent schema therapy (Young, & Brown, 2005) for 12 sessions, the second experimental group received affective reconstruction therapy (Snyder, & Mitchell, 2008) during 15 sixty-minute sessions (twice a week), while the control group was placed on the waiting list and received their psychological treatment process differently from the two approaches studied in this study. The marital relationship quality in infertile couple questionnaire was administered again to three groups after the experiment period. After two months, the questionnaire was distributed to three groups as a follow-up test. MANCOVA was used to evaluate the effectiveness of both couple therapy on the marital relationship quality in infertile couples. For analysis of covariance and repeated measurements, several assumptions must be met, including the assumption of normal distribution, that variables are linearly related, and that variance and slope of regression are homogeneous. This examination was performed before any analysis of each assumption was performed. In this study, we used SPSS24 to eliminate calculation errors.

Couple's Relationship Quality Questionnaire: This questionnaire was designed by Khoshkam, (2006) and consists of 4 questions in four areas; the first area is self-attention (2 questions), the second area is paying attention to the spouse (2 questions), the third area is planning to solve problems (4 questions) and the fourth area is communication styles (15 questions). To some extent, the person's score is calculated by adding the scores of the options at all. In this test, the higher the person's score indicates the higher quality of the marital relationship. The validity coefficient of this questionnaire is reported to be 0.90.

The training sessions are summarized in Table 1.

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Sessions	Schema Therapy	Affective Reconstructive Couple Therapy (ARCT)
1	Familiarization of group members with group rules and regulations, the introduction of group members to each other and the therapist, answering possible questions of group members, explaining the purpose and necessity of meetings, and empowering group members to determine the goals related to their problem.	Concluding a joint treatment contract
2	Familiarize participants with theoretical models in the field of psychological aspects of marital satisfaction, educate participants about the nature of marital relationships, and examine how theoretical models adapt to personal experiences in the field of satisfaction, emotion regulation, and coping styles.	Prevention of severe communication crises
3	Introducing members to the conceptual model of emotion-based schema therapy. Explain the basics of the conceptual model of emotion-based schema therapy by the therapist and emotion control.	Enabling couple interaction
4	Familiarize members with the schematic mentality and their response and confrontation in the face of marital and other personal life situations and their impact on quality of life, teach how to deal with marital situations and other situations, improve coping responses	Identify communication problems, increase appropriate communication skills
5	Familiarize people with the concept of life rules, use a questionnaire to determine each person's schema and teach the function of life rules and their role in the quality of life and marital satisfaction, know their schemas	Select, train and implement solutions
6	Familiarity with the anti-schematic process, writing a life scenario based on the schematic model and showing incompatible schemas in written scenarios to eliminate them, beginning the process of eliminating incompatible schemas	Identify feelings and beliefs, reflect feelings and beliefs to your partner
7	Introducing cognitive schema therapy strategies with an emphasis on the role of primary emotions, teaching and practicing cognitive schema therapy strategies with an emphasis on the role of primary emotions, correct use of cognitive strategies on emotions	Concluding executive communication contracts
8	Familiarity with cognitive strategies, a treatment plan with emphasis on the role of emotions in marital relationships, training to practice cognitive schema therapy strategies with an emphasis on the role of emotions in marital relationships, proper use of cognitive strategies on emotions in marital relationships	Focus on dysfunctional cognitive patterns involved in problems, identify interpretations and cognitive errors affecting the relationship
9	Familiarize participants with emotional strategies (part one), educate and train participants with emotional strategies (part one), and use appropriate emotional reactions	Targeting resistances in the treatment process according to cognitive processes

10	Familiarize participants with emotional strategies (part two), educate and train participants with emotional strategies (part two) and , use appropriate emotional reactions	Increase acceptance of new interactive answers
11	Familiarity of members with the role of emotions and rules of life in behavioral patterns, identifying behavioral modeling strategies with an emphasis on doubts and rules of life and emotions, training and practicing the role of emotions and rules of life in behavioral patterns, training and practicing behavioral modeling strategies with an emphasis on adjusting rules to live and emotions, using appropriate behavioral patterns and behavioral patterns that lead to appropriate change	Choosing an intervention strategy appropriate to the cognitive errors and mistakes
12	A review of the content presented throughout the course and its achievements, a review of the participants' achievements during the course, the improvement of marital relations, quality of life, and appropriate coping strategies	Investigation of different developmental stages of each couple

Results

The mean age of the female and male participants was 35.47 ± 5.81 years and 33.54 ± 5.27 years, respectively. In this study, 30 infertile couples in the three groups participated. The Mean±SD age of the schema therapy group was 36.29 ± 5.27 years, affective reconstruction therapy was 35.29 ± 5.43 , and for controls, it was 37.14 ± 4.89 years.

Normal distribution and homogeneity of variance were assumptions of the parametric test confirmed using the Kolmogorov-Smirnov test (P=0.284) and Levene’s test (P=0.556).

Table 2: Descriptive indicators of marital relationship quality of infertile couple by a group

Groups	Pre-test	Kalmogrov-Smirnov	p	Post-test	Kalmogrov-Smirnov	p	Follow-up	Kalmogrov-Smirnov	p
	Mean±SD			Mean±SD			Mean±SD		
							Mean		
schema therapy	115/17±24/01	.251	.008	122/74±17/01	.174	.200*	121/65±16/11	.313	.000
Affective Reconstruction	114/74±23/41	.183	.154	122/04±17/31	.323	.000	121/32±16/31	.349	.000
Control	115/87±24/81	.161	.200*	116/24±22/23	.170	.200*	116/24±22/23	.218	.041

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It can be seen in Table 2 that the Mean±SD scores of relationship quality of infertile couples in the Pre-test, Post-test, and Follow-up increased after the intervention (schema therapy and couples therapy based on affective reconstruction therapy groups).

Table 3. Results of covariance analysis

Sources	SS	df	MS	F	p	Eta
Pre-exam	25.812	1	25.812	16.732	.000	.276
Group	31.745	2	15.873	10.289	.000	.319
Error	67.876	44	1.543			
Total	120.813	47				

According to Table 3, in the post-test, a significant difference was found between the relationship quality scores of groups ($F_{2,44} = 10.289$; $p < 0.001$).

Table 4. Bonferroni post hoc test of 3 stages of Relationship Quality measurement

Group 1	Group 2	of group 1 Mean	of group 2 Mean	difference	error	P
schema therapy	Affective Reconstruction	8.487 ^a	8.542 ^a	-.056	.440	.900
schema therapy	Control	8.487 ^a	6.783 ^a	1.704 [*]	.440	.000
Affective Reconstruction	Control	8.542 ^a	6.783 ^a	1.759 [*]	.442	.000

Table 4 shows that the difference between the schema therapy and affective reconstruction groups was 0.56, which is not significant at the level of $p < 0.90$. Moreover, the difference between the two experimental groups and the control group was significant, which indicates that both couples therapy methods are effective.

Table 5. Mauchly's sphericity test was used to validate a repeated analysis of variance (ANOVA)

Mauchly's sphericity	χ^2	df	p
.835	7.949	2	.019

As can be seen in Table 5, the results of the Mochelli test are significant at the level of $p < 0.019$, and the data sphericity assumption is not established.

Table 6. Mixed Model Analysis of Variance

Sources	SS	df	MS	F	p	η^2
the level	40.542	2	20.271	27.179	.000	.377
Step * Group	35.667	4	8.917	11.955	.000	.347

Error	67.125	90	.746			
group	47.792	2	23.896	7.757	.001	.256
Error	138.625	45	3.081			

Table 6. shows that stage (pre-test, post-test, and follow-up) has a significant effect on scores of relationship quality ($F_{2,90} = 27.179$, $p < 0.001$, $\eta^2 = 0.377$). There is a significant interaction between the group and the step ($F_{4,90} = 11.955$, $p < 0.001$, $\eta^2 = 0.347$). Results indicate that there is a significant difference between the groups ($F_{2,45} = 7.757$, $p < 0.001$, $\eta^2 = 0.256$). According to these results, there is a significant difference between the relationship quality scores of the two experimental groups during the three phases.

Table 7. Bonferroni post hoc test of 3 stages of Relationship Quality measurement

Stage1	Stage2	Mean differences	SD	p
Pre-test	Post-test	-1.146*	.189	.000
Pre-test	Follow-up	-1.104*	.136	.000
Post-test	Follow-up	.042	.198	.834

As shown in Table 7, there is a significant difference between the mean relationship quality scores between pre-test and post-test. This table indicates that there is also a significant difference in the pre-test results with tracking these scores. However, the differences between post-test and follow-up are not significant. As shown in post-test and follow-up studies, schema therapy has a lasting impact on relationship quality.

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The way other concepts emerged was the same. In the fourth stage, the comparison process continued on a more abstract level, and by combining the three concepts of "family members' illness", "migration and marriage of other family members", "high responsibilities in a nomadic family", the category of "factors within the family" was

Participant	Basic codes	Secondary codes
First participant	You know, ma'am, we have a herd of sheep and we take care of them, and these things mean that my parents were alone in taking care of the animals and doing other household chores, so that I could not attend my classes.	Assisting the family in keeping livestock and inability to study
Tenth participant	When we return to Khuzestan, we have to do this plowing of agricultural lands and these things ourselves with the help of our families	Assistance in agricultural work
Seventh participant	We have cattle, we have sheep, in the mornings, my father always goes with them to the mountain	Assisting the mother in animal husbandry and household chore
Thirteenth participant	For example, we bake bread, we wash dishes, we help our parents, we have sheep, you help the sheep in the work, yes, we help our parents.	Help with household chores
Fourth participant	Really living conditions and the only thing we had was our housework	Large volume of household chore
Fifth participant	For example, we have to knead bread and dishes until the end of the night and take care of the animals.	Continuation of housework even until late at night

obtained. Analysis of the obtained data led to the identification of 191 primary codes, 96 secondary codes, 13 concepts and 5 categories. Findings indicate that nomadic life affects the educational decline of adolescent girls in five categories, which is summarized in Table 2.

Table 2: Concepts and categories of interviews

Categories	12
Factors within the family	Illness of family members, migration and marriage of other family members, high responsibilities in nomadic families
Cultural-family factors	Being an older child, traditional beliefs about hospitality, being pressured to marry
Individual factors	Psychological and mental conflicts, physical conflicts
Environmental-family factors:	Lack of living facilities in the nomadic context, difficult conditions for commuting to school

Educational-family factors

lack of educational facilities, lack of time to study

3-1. The category of factors within the family: One of the categories found in phenomenological interviews with nomadic adolescent female students who had dropped out of school is family problems, which include the three concepts of family members' illness, migration of other family members, and many responsibilities in the nomadic family

3-1-1. The concept of family members' illness: One of the concepts that was frequently seen in the experience of students suffering from nomadic education was that their life plan and order were disturbed after the illness of one of their family members. As a result, they were forced to perform the duties and responsibilities of a sick member or care for the family member until he or she recovered. Therefore, these students faced more responsibilities than before, and this increase in workload reduced their time to take care of their academic affairs, which according to the experience of research participants is one of the main causes of their academic failure. Twelve of the fifteen participants mentioned this in their experience, and here are a few examples. The tenth participant describes the relationship between his father's illness and his academic failure as follows: "For example, we, my father, are not very healthy now. He has back pain. They are really very old. My parents can no longer work as they are old. They are not old, but they have fallen a lot due to these tasks and difficulties. They can no longer work. "Most of the work is on us . The concept of migration and marriage of other family members: Nomadic female students who had a drop in education stated that the migration of a family member from home to the city to work or study was effective in their drop in education. Because with this event the work was previously divided among the family members or the responsibility of the family member who had emigrated; All these students had to do, and this increased the volume of their activities, and as a result they had less opportunity to study, and more to help and do the housework and animal husbandry, which was previously the responsibility of other siblings; They were paying. Ten out of fifteen participants mentioned the concept of migration of other family members and its role in academic failure, which we will mention a few examples in the following.

The first participant describes his experience of his brother's migration and its impact on academic failure. . The fourth participant describes his experience as follows: "My brother is a student and he goes to university to study in another city and we are the only ones who have to do things".

3-1-2. The Concept of Migration and Marriage of Other Family Members: Nomadic female students who had suffered from academic failure stated that the migration of a family member from home to the city to work or study was effective in reducing their education. Because with this event the work was previously divided among the family members or the responsibility of the family member who had emigrated; All these students had to do, and this increased the volume of their activities, and as a result they had less opportunity to study, and more to help and do the housework and animal husbandry, which was previously the responsibility of other siblings; They were paying.

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3-1-3. The concept of high responsibilities in nomadic families: Based on the experience of adolescent girls with academic failure, it seems that the large volume of responsibilities of girls in nomadic families is one of the main reasons for their academic failure. Participants in the study stated that they spent most of their day doing homework and had little time for study, which led to them accumulating homework or even taking time off from school to do homework. . This concept was present in the lived experience of fifteen participants in this study. The following are the experiences of several students. The first participant describes the effect of high responsibilities in a nomadic family on academic failure as follows: "It has had an effect and caused me to drop out of school. Well, if it were not for these things, I would have had free time and I would have taken better and more care of my lessons .

Category of cultural-family factors: Another category found during phenomenological interviews with nomadic female students was the academic decline of cultural-social factors. This category includes the three concepts of being an adult, traditional beliefs about hospitality, and being pressured into marriage.

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3-2-1. The concept of being the eldest child: In general, in the structure of most families, it is observed that the eldest child of the family has more responsibilities than other children. This was also evident in the experience of nomadic students who had suffered from academic failure, which in addition to assisting their parents in housekeeping and animal husbandry, led to more responsibilities such as maintenance, education and performance. Daily chores are in front of their younger siblings and extended family. This concept was seen in the experience of six participants. The experience of several participants will be mentioned below. The tenth participant describes his / her experience of taking care of a large family such as his or her grandparents. They are my family, they also want help, they also want maintenance, but finally, as the number increases, the situation becomes kind of more difficult. You have to help, you have to maintain, you have to respect them. "After all, everything affects my education".

3-2-2. The concept of traditional beliefs about hospitality: The nomadic and nomadic lifestyle is one of the oldest lifestyles and has very ancient roots and people who have this type of lifestyle according to the context in which they have traditional and old beliefs about many things. Live, which was mentioned in different ways in the experience of nomadic female students with academic failure. This concept is mentioned in different

ways in the experience of ten participants out of fifteen research participants. For example, the fourteenth participant considers the large number of guests and hospitality and the increase in his work as the reason for his academic decline. "We had many guests, but one of our problems is that we really have many guests, we can not study. "We have a lot to lose. One is because we have a lot of guests".

3-2-3. The concept of being pressured into marriage: The experiences of students with academic failure show that one of the concepts that causes them the most mental conflict is the issue of marriage. Based on the experience of the participants, the study of marriage in the cultural context of the nomads is one of the most important issues that is emphasized by the family and others, and this issue causes these students to be pressured to marry or to marry with predetermined options. Be pressured into not studying and marrying the choices made by the family. All of this puts research participants at risk with their families or internally, and this distracts them from their academic pursuits, and they suffer from academic failure. Seven out of fifteen participants in the study mentioned this issue, some examples of which will be mentioned below. The seventh participant says about the importance of marriage in relation to studying in a nomadic context: "It was important for nomadic people to marry girls more because of the words and sayings of the people . Individual factors: Examining the experiences of nomadic female students who had suffered from academic failure, it was found that one of the reasons for their academic failure is that sometimes psychological problems due to the context or culture that they face. In some cases, physical background issues cause them to drop out of school

3-3. Individual factors: Examining the nomadic female students who had suffered from academic failure, it was found that one of the universities outside their university has psychological problems due to the context or culture conditions that they face. In some cases, physical background issues cause them to drop out of school.

3-3-1. The concept of psychological and mental conflicts: Based on the experience of research participants, it seems that academic failure is caused by many issues that psychological issues or issues that affect the psyche of these students have a major impact. Disappointment, lack of motivation, mental conflict about the life and challenges of the nomads and the impact of family pressures on the psyche of these students have caused their academic failure. This concept was mentioned in the experience of eight participants out of fifteen participants in this study. In the following, some examples of participants' experiences in the field of psychological influencing factors will be mentioned. The seventh participant states that the mental conflict over the problems in the extended family has made it impossible for him to concentrate on his lessons. "My cousins and my cousin sit down. The one who died comes and we talk about our blood. We also subconsciously think about it.

3-3-2. The concept of physical conflicts: Based on the experience of research participants, it seems that physical factors such as extreme fatigue, their own illness have affected their learning and education, and this has led to their academic decline. This concept can be seen in the experience of eight participants out of fifteen research participants, some of which will be mentioned. The first participant states that physical problems have caused him to be unable to study. "I had back pain and my legs hurt. I wanted to have surgery. I went to Ahvaz and Dezful several times with my brother. "She has an operation, but then

she said no. Use pills and medicine. Until a few months later, if necessary, then have surgery. Well, ladies, these are the ones who are affected".

3-4. Category of environmental-family factors: A study of the experiences of students with academic failure who live in nomadic context shows that one of the important factors in their academic failure are environmental factors such as lack of living facilities and difficult travel conditions to school.

3-4-1. The concept of lack of living facilities in the nomadic context: Definitely one of the requirements for progress in any subject, including education, having the basic facilities for the development of personal talents. However, the participants' experiences showed the effect of the lack of nomadic life facilities such as the difficulty of meeting basic needs or lack of welfare facilities on the academic failure of female students participating in the study. Students participating in this study spent a lot of time to meet their basic needs such as water due to lack of tap water or due to lack of lights or electricity they had to study only part of the day when they had an empty opportunity. Heat, cold, and rain are all factors that deprive research participants living in black tents of the opportunity to study in minimal conditions and have a significant impact on their students' academic achievement. This concept was reflected in the experiences of all fifteen research participants in different ways, some of which will be mentioned, for example. The fourth participant says, "You know what, we live in tents now and we don't have electricity. Roads are ruined. It's really hard to come to our city's schools. We live in tents. "For example, in order to get water, we have to go and get water with a donkey. At the moment, we are like this and we do not have a road. I also have to help my family and we resist these conditions so that they can study".

3-4-2. The concept of the difficulty of commuting to school: Based on the participant's research experience, these students spend many hours commuting to school every day, which takes a lot of time, and the fatigue caused by the distance due to the lack of school near their place of residence leads to their academic failure. Has been impressive. All fifteen study participants mentioned the concept of distance from home and its impact on their academic failure. The ninth participant says, "Well, if our house was in a city, for example, when I came to school, it would be very different now, or it would be much better, or it would be much worse, but now that I want to go to the village and the nomads, get up from here." "Go to the city itself. It's very, very tired. For example, I wanted it to be true that we are nomads in the village. I also wanted the situation .

3-5. Category of educational-family factors: By examining the experience of students with academic failure, it was found that one of the factors affecting their academic failure is academic problems such as lack of educational facilities and lack of time to study.

The concept of lack of educational facilities: The experiences of research participants show that due to the difficult living conditions of nomads and the lack of sufficient facilities to study in various forms such as forced absence from school, dropout has affected their academic failure. Eight participants in this study mentioned the lack of educational facilities, which we will mention a few examples in the following.

The fourth participant states that the difference between the educational and welfare facilities in the city and the nomadic life has caused him to drop out of school. "They study but we are not like this and it is really hard for us in the rain".

3-5-1. Conceptual educational facilities: Companies The experiences of research participants show that they have been affected due to the difficult living conditions of nomads and the lack of sufficient facilities to study in forms such as forced absence from school, dropout to study. The eighth participant in this research pointed to the issue of an important feature, which is followed by a few examples.

3-5-2. The concept of lack of time for study: Considering the conditions mentioned in the experience of research participants, it seems that the issue of lack of time is one of the main factors affecting the academic failure of these students. The study participants noted that the high volume of home-school activities has reduced their time for studying, which in turn has affected their academic failure. This concept was mentioned in the experience of all participants in this research, which will be mentioned in several examples below. The fourth participant expresses his experience of lack of time as follows: "Migration and these things are good. Migration because we go there in the summer. Chaharmahal Bakhtiari summer. "It's very difficult to move when we no longer take this book with us at all".

Discussion

This study sets out to compare the effectiveness of couple therapy, based on schema therapy and affective reconstruction therapy on marital relationship quality of infertile couples. The results indicated that both couple therapies had a significant effect on the marital relationship quality in infertile couples. Moreover, schema therapy had a lasting impact on relationship quality. It should be noted that to date, no study with these two interventions and this variable has been conducted. Hence, this section attempts to mention their efficacy on other variables and explain the results. However, the findings of this research were in line with those reported by Hemmati, & Maddahi, (2018), Farshidmanesh, Davoudi, Heidari, & Zare Bahramabadi, (2019), Aghayi, Kahrazeni, & Farnam, (2019), Rad, Toozandehjani, & Golmakani, (2020), Alirezaee, Fathiaghdam, Ghamari, & Bazazian, (2020), Cheshmeh Noshi, Arefi, Afshari Nia, & Amiri, (2021), Farzinfar, Nejat, Doustkam, & TuzandehJani, (2021).

In explaining this finding, it can be argued that by taking advantage of experimental techniques, which reconstruct childhood cognition and memories, schema therapy can greatly help the expression of suppressed emotions; finally, it may result in emotional self-censorship, difficulty in the expression of emotions, and emotional coldness. Schema therapy establishes a good relationship between the past and the present (Mohammadian, Asgari, Makvandi, & Naderi, 2021). A study by Khatamsaz, Forouzandeh, & Ghaderi, (2017) confirmed the findings of previous studies that indicate schemes and cognitive structures are effective at forming interpersonal relationships and marital satisfaction. According to Young, & Brown (2005), schema therapy can effectively treat

psychological problems. As a result, the subjects in this research learn to use well-known strategies, such as: examining the evidence that confirms and rejects the schema, examining the benefits and harms of the plan, changing the plan, and starting a dialogue with the plan. The combination of irrational beliefs, ineffective attitudes, experimental techniques, such as imaginary talks, letting parents work with pictures, mental illustration of damaging events, writing letters to parents as a homework assignment, and mental development of all-group to promote emotional reorganization, new learning, regulation of interpersonal emotion and self-relaxation are the steps towards a successful and healthy marital relationship (Alirezaeeet al., 2020). Findings of a study conducted by Tanbakouchian, R., Zanganeh, F., & Bayat, M. R. (2021). showed that both emotion-focused and schema therapy approaches have a significant and lasting effect on increasing the resilience of ambiguity and self-control of women with marital burnout. Also, the result of comparing the two approaches showed that the effect of the schema therapy approach on the self-control of women with marital burnout is more than the emotion-focused approach.

Moreover, Hemmati, & Maddahi, (2018). showed that couple therapy based on schema therapy and couple's therapy based on acceptance and commitment significantly increased the family resilience of couples. Also, in comparing the effectiveness of schema-based couple therapy and couple's therapy based on acceptance and commitment, couple therapy based on schema therapy was more effective than couple's therapy based on acceptance and commitment in family resilience of couples. An additional study conducted by Farshidmanesh et al. (2019) revealed significant differences in intimacy, commitment, and couple happiness between the experimental and control groups. Furthermore, there was no significant difference between the efficacy of the two schema and mindfulness therapies for intimacy, but there was a difference in commitment and couple happiness. Schemas direct the behavior and interactions of spouses within the framework of the marital relationship. Moreover, the effectiveness of schema therapy on marital relationship quality illustrates how important communication is to a family's strength and stability in dealing with problems and crises (Pourshahabadi, & Einipour, 2020).

Additionally, the effects of affective reconstruction therapy on marital relationship quality were approved by the study results and are in line with Rajabi, Khoshnoud, Sodani, & Khojastehmehr (2020), Namagardi, Farzad, & Nooranipoor (2021).

Explaining the effectiveness of Couple therapy based on affective reconstruction is a pluralistic approach in which the evolutionary origins of problems and global distress in interpersonal relationships and how they manifest in the couple's relationship are explored. This method increases insight in people. In this way, the affective-reconstruction of the damage caused by previous relationships and the current relationship causes interpersonal injuries with stability and defense strategies that hinder intimate relationships. Based on the results of this study, we can conclude that couples who have

experienced global distress and emotional problems benefit from couple therapy that reconstitutes emotions. It seems natural that an intervention such as the present study, which reconstructs the couple's emotions, would take steps towards their complete confusion and help improve marital satisfaction in the form of traditional customary.

In light of the limitations of intergroup research methods (experimental research), it is suggested that researchers in the future employ single-subject designs to examine both couple therapy approaches. Taking into account the effectiveness of both couple's therapy methods in the marriage relationship in infertile couples, it is recommended that these two educational programs be taught to counselors and family therapists. Study participants were infertile couples, so the results cannot be generalized to other groups. To thoroughly address the emotional issues, will take more time and detailed counseling. Counseling is not effective for improving the overall emotional status score, in part, because the training sessions are not proportional to the depth of the problem. Furthermore, due to the individual's age, as well as his or her emotional development and maturity at this age, a lot of changes are not likely to occur at this time, so they cannot be easily addressed in counseling sessions. It would appear that education and counseling to couples would not be enough to change their emotions, since they are impacted by cultural factors and family interference with infertility.

Conclusion

The present study, conducted by the researchers, demonstrated that schema therapy and affective reconstruction therapy improve marital relationship quality in infertile couples. Consequently, a comprehensive planning process should be adopted from the time of diagnosis and initiation of treatment for comprehensive education and counseling to improve the marital relationship quality in couples.

Disclosure Statements

The Authors of this research has no conflict of interest.

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References

Aghayi, A., Kahrazeni, F., & Farnam, A. (2019). The comparison of the effectiveness of group schema therapy and group emotional-based couple therapy on couples' maladaptive schemas and life satisfaction. *Journal of psychologicalscience*, 18(73), 133-142.

- Alirezaee, M., Fathiaghdam, G., Ghamari, M., & Bazazian, S. (2020). Comparing the effectiveness of reality therapy and schema therapy on stress symptoms in women with marital conflict. *Iranian Journal of Psychiatric Nursing (IJPN) Original Article*, 8(2).
- Altıparmak, S., & Derya, Y. A. (2018). The effects of fertility-supporting health training on healthy lifestyle behaviors and infertility self-efficacy in infertile women: A quasi-experimental study. *European Journal of Integrative Medicine*, 20, 146-153.
- Asl, S. T. S., Sadeghi, K., Bakhtiari, M., Ahmadi, S. M., Anamagh, A. N., & Khayatan, T. (2016). Effect of group positive psychotherapy on the improvement of life satisfaction and the quality of life in infertile women. *International journal of fertility & sterility*, 10(1), 105.
- Bach, B., Lockwood, G., & Young, J. E. (2018). A new look at the schema therapy model: organization and role of early maladaptive schemas. *Cognitive behaviour therapy*, 47(4), 328-349.
- Bello, F. A., Adeolu, J. O., Abdulmalik, J. O., Abdus-Salam, R. A., Egbokhare, O. A., Otekunrin, O. A., ... & Adeniyi, A. F. (2021). Reducing anxiety and depression in infertility among Nigerian women: an exploratory psycho-educational intervention trial (RADIANT) study protocol. *The Pan African Medical Journal*, 39.
- Çambel, B., & AkközÇevik, S. (2022). Prevalence of intimate partner and family violence among women attending infertility clinic and relationship between violence and quality of life. *Journal of Obstetrics and Gynaecology*, 1-7.
- Chazan L and Kushnir T (2019) Losses and gains of psychosocial resources: Effects on stress among women undergoing infertility treatments and participating in social network systems. *Psychiatric Quarterly* 90: 717–732
- CheshmehNoshi, M., Arefi, M., Afshari Nia, K., & Amiri, H. (2021). The Effect of couple therapy based on schema therapy and training of couple communication program on marital conflict resolution styles. *Social Determinants of Health*, 7(1), 1-7.
- Dadkhah, S., Jarareh, J., & Akbari Asbagh, F. (2021). The relationships between self-compassion, positive and negative affect, and marital quality in infertile women: a systematic review and meta-analysis. *Iranian Rehabilitation Journal*, 19(1), 1-12.
- Farshidmanesh, F., Davoudi, H., Heidari, H., & ZareBahramabadi, M. (2019). Comparison of the effectiveness of the schema therapy training and mindfulness on intimacy, commitment, and happiness of women with couple burnout. *International Archives of Health Sciences*, 6(4), 136-142.

- Farzinfar, K., Nejat, H., Doustkam, M., & TuzandehJani, H. (2021). Comparison of the Effectiveness of Schema Therapy and Integrated Cognitive-Speech Approach in Emotional Regulation, and Distress Tolerance of Individuals Suffering from Stuttering. *Avicenna Journal of Clinical Medicine*, 27(4), 239-252.
- Gong, J., & Chan, R. C. (2018). Early maladaptive schemas as mediators between childhood maltreatment and later psychological distress among Chinese college students. *Psychiatry research*, 259, 493-500.
- Greil AL, Slauson-Blevins KS, Lowry M, et al. (2019) Concerns about treatment for infertility in a probability-based sample of US women. *Journal of Reproductive and Infant Psychology* 38: 16–24
- Grunberg, P., Miner, S., &Zelkowitz, P. (2020). Infertility and perceived stress: the role of identity concerns in treatment-seeking men and women. *Human fertility*, 1-11.
- Hemmati, M., &Maddahi, M. E. (2018). Comparison of the effectiveness of couple therapy based on schema therapy with couples therapy based on acceptance and commitment therapy on family resiliency of couples. *Journal of Woman and Family Studies*, 6(2), 145-163.
- Khatamsaz, B., Forouzandeh, E., &Ghaderi, D. (2017). Effectiveness of schema therapy on marital satisfaction and marital relationship quality in married women. *International Journal of Educational and Psychological Researches*, 3(1), 11.
- Khoshkam, S. (2006). *The Effect of Couple's Relationship Training Course in the Improvement of the Relationship and Mental Health of the Isfahan's Couples* (Doctoral dissertation, MA thesis]. Isfahan: Isfahan University).
- Khosravani, V., Mohammadzadeh, A., Bastan, F. S., Amirinezhad, A., &Amini, M. (2019). Early maladaptive schemas and suicidal risk in inpatients with bipolar disorder. *Psychiatry research*, 271, 351-359.
- LoGiudice JA and Massaro J (2018) The impact of complementary therapies on psychosocial factors in women undergoing in vitro fertilization (IVF): A systematic literature review. *Applied Nursing Research* 39: 220–228
- Moeenizadeh, M., &Zarif, H. (2017). The efficacy of well-being therapy for depression in infertile women. *International journal of fertility & sterility*, 10(4), 363.

- Mohammadian, S., Asgari, P., Makvandi, B., &Naderi, F. (2021). Effects of Schema Therapy on Anxiety, Cognitive Avoidance, and Resilience in Couples with Conflicts. *Caspian Journal of Health Research*, 6(2), 47-56.
- Namagardi, H. D., Farzad, V., &Nooranipoor, R. (2021). Effectiveness of Affective-Reconstructive Couple Therapy on Marital Conventionalization and Global Distress. *International Journal of Health Studies*, 8(1), 38-43.
- Patel, A., Sharma, P. S. V. N., & Kumar, P. (2020). Psychiatric disorders in women seeking fertility treatments: a clinical investigation in India. *International Journal of Fertility & Sterility*, 14(1), 68.
- Pourshahabadi, F., &Einipour, J. (2020). The Effectiveness of Schema Therapy on Differentiation of Self and Emotional Control among Couples with Marital Maladjustment. *International Journal of Applied Behavioral Sciences*, 7(2), 18-29.
- Rad, N. Y., Toozandehjani, H., &Golmakani, Z. B. (2020). Comparing the effectiveness of schema therapy and compassion-focused therapy on forgiveness and ambiguity tolerance in divorce-seeking women. *Journal of Fundamentals of Mental Health* 22(6):357-367
- Rajabi, G., Khoshnoud, G., Sodani, M., &Khojastehmehr, R. (2020). The effectiveness of affective-reconstructive couple therapy in increasing the trust and marital satisfaction of couples with remarriage. *Iranian Journal of Psychiatry and Clinical Psychology*, 26(1), 114-129.
- Renzi A, Di Trani M, Solano L, Minutolo E, Tambelli R. Success of assisted reproductive technology treatment and couple relationship: A pilot study on the role of romantic attachment. *Health Psychology Open*. January 2020.
- Renzi, A., Di Trani, M., Solano, L., Di Monte, C., &Tambelli, R. (2019, January). Are romantic attachment and couple relational characteristics predictive of assisted reproductive treatment positive outcomes? In *Psychotherapy and Psychosomatics* (Vol. 88, pp. 107-107).
- Rostami, H., Karimisani, P., Fathi, A., &Karimi, A. (2019). The Effectiveness of Group-based Rational Emotional Behavioral Therapy on Family Function, Incompatible Schemas, and Couple Burnout in Couples. *Journal of Health and Care*, 21(3), 192-202.
- Shahhossiani Tajik, S., Sayadi, M., & Taheri, N. (2019). Marital Commitment and Relationship Quality in Fertile Couples and In-fertile. *Horizon Med Sci*, 25(3), 184-97.

- Shreffler, K. M., Greil, A. L., Tiemeyer, S. M., & McQuillan, J. (2020). Is infertility resolution associated with a change in women's well-being? *Human Reproduction*, 35(3), 605-616.
- Snyder, D. K., & Mitchell, A. E. (2008). Affective-reconstructive couple therapy. *Clinical handbook of couple therapy*, 353-382.
- Tanbakouchian, R., Zanganeh, F., & Bayat, M. R. (2021). Compare the Effectiveness of Emotion-Focused and Schema Therapy Approaches on Ambiguity Resilience, and Self-Control of Women with Marital Burnout. *Journal of Research in Behavioural Sciences*, 19(1), 1-12.
- Tao, P., Coates, R., & Maycock, B. (2012). Investigating marital relationship in infertility: a systematic review of quantitative studies. *Journal of reproduction & infertility*, 13(2), 71.
- VahidiFarashah, M., Shafiabadi, A., & KhodabakhshiKoolaei, A. (2022). Effectiveness of positive couple therapy in the empathy and intimacy of infertile couples. *Razavi International Journal of Medicine*, 10(1), 64-70.
- Vazirnia, F., Karimi, J., Goodarzi, K., & Sadeghi, M. (2021). Effects of integrative behavioral couple therapy on infertility self-efficacy, dyadic adjustment, and sexual satisfaction in infertile couples. *Journal of Client-Centered Nursing Care*, 7(1), 43-54.
- Vizheh, M., Pakgozar, M., Rouhi, M., & Veisy, A. (2015). Impact of gender infertility diagnosis on marital relationship in infertile couples: a couple-based study. *Sexuality and Disability*, 33(4), 457-468.
- WHO (World Health Organization) (2020). *Infertility*. <https://www.who.int/news-room/fact-sheets/detail/infertility>
- Young, J. E., & Brown, G. (2005). Young Schema Questionnaire. Short Form, Version 3, from New York: Schema Therapy Institute.