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The Effectiveness of Schema Therapy in the Form of Couple Therapy on Marital Compatibility and Metacognitive Regulation of Couples Referring to Counseling Centers

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Abstract

Purpose: The present study aimed to investigate the effectiveness of schema therapy in the form of couple therapy on marital compatibility and metacognitive regulation of couples referring to counseling centers.
Methods: This is a semi-experimental study with a pre-test, post-test, and control group. The statistical population of the study consisted of couples referring to counseling centers in Tehran. After conducting a pre-test, 30 couples were selected as the sample group and randomly assigned to two experimental groups (15 people) and control groups (15 people). The instruments used in this study were the Metacognitive Beliefs Questionnaire (MCQ-30) and the Modified Marital compatibility Scale. Schema therapy sessions in the form of couple therapy were implemented for 10 sessions of 60 minutes on the experimental group, but no intervention was applied to the control group. Analysis of covariance was used to analyze the data.
Results: The results of data analysis in two stages of test implementation in two experimental and control groups confirmed the effectiveness of schema therapy in the form of couple therapy on Marital compatibility and metacognitive regulation of couples with 0.99 confidence.
Conclusion: Schema therapy in the form of couple therapy can be used to improve marital compatibility and metacognitive regulation of couples and provide desirable results.

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Introduction

Psychological and psychotherapy research has always emphasized the importance of marital compatibility and its various dimensions. Living together is a complex and dynamic process that requires mutual interactions, feelings, and individual beliefs that can have a profound impact on the quality of marital and psychological life of individuals (1). Marital compatibility refers to the ability of couples to maintain a healthy and balanced life together. This concept includes agreement and positive interactions between couples on various life issues, including child rearing, financial issues, social and emotional issues. . Highly adaptable couples are typically able to manage conflict, accept differences, and promote mutual support and emotional connection (2). Marital compatibility is a dynamic process that is influenced by a variety of factors, such as psychological problems, individual experiences, culture, and economic and social conditions. Increasing marital compatibility helps

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couples live a happier and more satisfying life together and prevent major problems such as divorce or separation (3).

Metacognitive regulation is another fundamental concept in psychology that refers to the mental and cognitive processes that a person uses to monitor, evaluate, and direct their thoughts and feelings (4). People with high ability in metacognitive regulation are able to effectively control their emotions and behave appropriately in stressful and critical situations. In marital relationships, the ability to regulate metacognition can help reduce conflict and increase empathy and mutual understanding (5). Metacognition is a higher level of cognitive functioning that can be defined as any type of awareness or cognitive process that refers to awareness or control of any aspect of cognition. In fact, metacognitive knowledge refers to the interaction of beliefs and knowledge stored in memory on an individual's personal performance, task performance, and strategy selection (6). When an individual is subject to and subject to irrational and irrational thoughts and beliefs, he or she will face irrational consequences, in which case the individual will become anxious and have an unhealthy personality. In irrational and metacognitive thinking or beliefs, the individual demands approval from others and has excessive expectations of themselves. In addition, the person experiences a tendency to blame, a reaction to helplessness accompanied by failure, emotional irresponsibility, excessive worry accompanied by anxiety, avoidance of problems, dependence, and helplessness in the face of changes, Often, rumination is one of the problems of people who have metacognitive beliefs (7).

In this regard, psychological interventions, especially in the form of couples therapy, play an important role in improving marital relationships and resolving communication problems. One of the modern therapeutic methods that has received special attention in the field of marital relationship problems is schema therapy. This type of therapy is based on schema theory, which refers to deep and hidden cognitive patterns that people form in their minds from childhood and that affect their relationships and emotions in adulthood (8). This therapy is specifically designed for people who are struggling with psychological and emotional problems caused by negative schemas. In schema therapy, the therapist helps the person identify their negative and maladaptive patterns and change these patterns through cognitive and behavioral methods. Schema therapy, first introduced by Jeffrey Young in the 1990s, refers to the mental and emotional patterns that individuals form during childhood, especially in their early relationships (9). These schemas unconsciously become individual thoughts, feelings, behaviors, and interpersonal relationships, and can lead to significant problems in marital life. Within the framework of couples therapy, schema therapy attempts to identify these damaging patterns and help improve communication and Marital compatibility by changing them. This therapy can help couples identify and modify their maladaptive schemas that cause conflicts and problems in their relationships. The ultimate goal of schema therapy is to improve the quality of marital relationships and improve the emotional and cognitive adjustment of couples (10).

A better and more comprehensive understanding of couples' problems and the provision of treatment solutions based on science and research can greatly help improve the quality of marital and psychological relationships. Factors that affect marital compatibility include difficulties in regulating emotions, incompatible beliefs, and the inability to manage stressful situations. These problems can lead to increased conflict, decreased marital satisfaction, and even separation (11). Schema therapy, especially in the form of couples therapy, is an effective approach to identifying and changing maladaptive schemas and improving the quality of marital communication. Accordingly, the aim of the present study is to investigate the effectiveness of schema therapy in the form of couple therapy on marital compatibility and metacognitive regulation of couples. This study attempts to show whether schema therapy-based interventions can help improve marital compatibility and increase couples' ability to regulate their emotions and thoughts. In addition, this research attempts to provide a better understanding of the relationship between cognitive schemas and metacognitive regulation in marital relationships and to help researchers and therapists design more effective interventions in this field.

In their research, Moradi-Vafa et al. (2023) examined the effectiveness of schema-based couple therapy on couples' marital satisfaction. The statistical population of the study included all couples who had been married for 1 to 5 years and had referred to the Mehrdoostan Counseling Center in Tehran due to marital dissatisfaction. The results showed that couples therapy based on schema therapy is effective in increasing and improving marital satisfaction of couples [12].

Ghasemi and Movahhedi (2022) conducted a study to study the effectiveness of schema therapy on rumination, cognitive fusion, cognitive avoidance, and neurocognitive processing in couples seeking divorce. The results showed that schema therapy reduces rumination, cognitive fusion, and cognitive avoidance, and also increases beta frequency and decreases delta in the FZ region. Based on the results of this study, schema therapy can be used as an effective intervention to

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reduce rumination, cognitive fusion, and cognitive avoidance in couples seeking divorce [13].

Ahmadzadeh Eghdam et al. (2020) studied the effectiveness of couples therapy with a schema therapy approach on marital frustration and commitment in couples. The findings showed that in the pre-test phase, there was no significant difference between the experimental and control groups in terms of marital frustration and marital commitment, but in the post-test phase, there was a significant difference between them in terms of both variables of marital frustration and marital commitment. In other words, couples therapy using schema therapy reduced marital frustration and increased marital commitment and its dimensions in couples. This improvement was maintained at the follow-up stage [14].

Pennequin et al. (2019) showed that the coping strategies of emotional externalization and rational thinking have a significant positive relationship with metacognitive experience, and when faced with a problem, metacognitive experiences help solve daily problems [15].

Materials and methods

The method used in this study is a semi-experimental type with pre-test, post-test and control group. Before implementing the training sessions, the sample group was pre-tested. After randomly assigning the groups to two experimental and control groups, schema therapy sessions in the form of couple therapy were taught to the experimental group in the form of 10 sessions of 60-minute. After completing the training sessions, a post-test was administered immediately, and the pre-test and post-test results in the two groups were compared with each other. The statistical population of this study consisted of couples referring to counseling centers in Tehran. The sampling method in this study is purposive random. The tools used in this study are:

Metacognitive Beliefs Questionnaire (30-MCQ): This questionnaire is a 30-item self-report instrument that measures individuals' beliefs about their thinking. It is designed to measure several metacognitive elements, a trait some of which play a central role in the metacognitive model of psychological disorder. Responses on this scale are calculated on a four-point Likert scale: 1 = I disagree to 4 = I agree very much. These scales have five subscales: 1) positive beliefs about worry, 2) beliefs about uncontrollability and dangerous thoughts, 3) beliefs about cognitive certainty, 4) beliefs about the need to control thoughts, and 5) cognitive awareness. In the research of Wells et al., the range of Cronbach's alpha coefficient for subscales was reported to be 0.72 to 0.93, and its reliability by test-retest method for the total score after a period of 18 to 22 days was 0.75 and for subscales was 0.59 to 0.87 [16].

Revised Dyadic Adjustment Scale: This questionnaire was developed by Busby et al. (1995). The original form of this scale was developed by Spanier (1988) based on Levis and Spanier's theory of marital quality. Fincham and Bradbury (2000) also introduced this questionnaire as a suitable tool for assessing marital quality after presenting their theory of marital quality. This 14-question questionnaire is based on the original 32-question Spanier form, which is scored on a 6-point Likert scale from 0 to 5. This instrument consists of three subscales: "agreement and consensus", "satisfaction", and "cohesion". Confirmatory factor analysis has confirmed the three-factor structure of the questionnaire in the United States and has shown its validity. The reliability of the questionnaire using Cronbach's alpha was reported to be 0.80 to 0.90 in the Hollist and Miller study [17].

After administering the research questionnaires, 30 couples were selected as the sample group and then randomly assigned to two experimental groups (15 people) and control groups (15 people), and schema therapy sessions in the form of couple therapy were conducted for the experimental group.

The study objectives were explained to the couples, and after obtaining their consent to participate in the study, they were given the necessary explanations regarding the time and place of the schema therapy sessions in the form of couple therapy. Then, the therapy sessions were conducted over 10 sessions, each session lasting 60 minutes. Immediately after the sessions, both experimental and control groups were administered a post-test. Finally, the results obtained from the pre-test and post-test were compared.

To analyze the data in the present study, descriptive statistics methods were used, and in the inferential statistics section, the analysis of covariance method was used.

Results

First, information related to descriptive statistics of research variables in pre-test and post-test of two control and experimental groups is presented. First, frequency distribution related to demographic findings is presented.

Table 1. Number of participants in the control and experimental groups

Groups	Pre-test	post-test
Experimental	15	15
Control	15	15
Total	30	30

According to Table 1, the sample size in each of the experimental and control groups was 15 people, and the overall sample size was 30 people.

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Table 2. Mean and standard deviation of Marital compatibility and metacognitive regulation of couples in the two control and experimental groups

Groups	Test	Statistical indicator	Variables	
			Marital compatibility	Metacognitive regulation
Test	Pre-test	Mean	64.71	79.35
		Standard Deviation	11.55	10.79
	Post-test	Average	84.28	98.28
		Adjusted Mean	85.16	99.23
		Standard Deviation	13.39	11.40
Control	Pre-test	Mean	66.80	81.67
		Standard Deviation	9.66	8.01
	Post-test	Mean	70.01	82.45
		Adjusted Mean	68.09	8.36
		Standard Deviation	8.02	7.61

Table 3. Results of univariate analysis of covariance in the context of multivariate analysis of covariance on adjusted scores of marital compatibility and metacognitive regulation variables between the two groups.

Source	Dependent variables	Sum of squares	Degree of freedom	F	Significance level	Effect size	Test power
Marital compatibility pre-test	Marital compatibility	893.81	1	21.32	0.001	0.450	0.991
	Metacognitive regulation	74.11	1	1.26	0.237	0.050	0.210
Metacognitive regulation pre-test	Marital compatibility	0.560	1	0.01	0.914	0.001	0.048
	Metacognitive regulation	956.5	1	18.64	0.001	0.416	0.983
Group	Marital compatibility	2144.70	1	51.36	0.001	0.662	1.00
	Metacognitive regulation	2350.75	1	46.02	0.001	0.663	1.00

The results of Table 2 show that the mean and standard deviation of marital compatibility in the experimental group are 84.28 and 13.39, respectively, and in the control group are 70.10 and 8.02, respectively. As can be seen, the mean of this variable in the post-test of the experimental group was higher than that of the control group.

The mean and standard deviation of the metacognitive regulation variable of couples in the experimental group are 98.28 and 11.40, respectively, and in the control group are 82.45 and 7.61, respectively. As can be seen, the mean of this variable in the post-test of the experimental group was higher than that of the control group.

In order to examine the effect of the independent variable (schema therapy in the form of couple therapy) on the dependent variables (marital compatibility and couples' metacognitive regulation), a multivariate analysis of covariance statistical test was used by neutralizing the variance of the pre-test factor (initial differences between the subjects in the two groups).

Research hypothesis: Schema therapy in the form of couple therapy is effective in increasing marital compatibility and metacognitive regulation of couples referring to counseling centers.

When interpreting the results of univariate analysis of covariance in the context of multivariate analysis of covariance, to prevent committing a type I error, the alpha value is divided by the number of dependent variables and the obtained significance level is compared with this adjusted alpha. Here there are two dependent variables, and the alpha is 0.05 divided by 2, which is equal to 0.025. So the obtained significance level must be less than the adjusted alpha, which is 0.025, to detect a significant difference between the two groups.

According to Table 3, the results of univariate analysis of covariance on the adjusted scores of the Marital compatibility variable with F=51.36 and a significance level of 0.001 show a significant difference between the control and experimental groups ($p<0.025$). Since the adjusted mean of the experimental group (85.16) was higher than the adjusted mean of the control group (68.09), it follows that schema therapy in the form of couple therapy is effective in increasing marital compatibility. Therefore, the null hypothesis is rejected and the research hypothesis is confirmed.

The results of univariate analysis of covariance on the adjusted scores of the couples' metacognitive adjustment variable show a significant difference between the control and experimental groups with F=46.02 and a significance level of 0.001 ($p<0.025$). Since the adjusted mean of the experimental group (99.23) was higher than the adjusted mean of the control group (81.36), it follows that schema therapy in the form of couple therapy is effective in increasing the metacognitive regulation of couples. Therefore, the null

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hypothesis is rejected and the research hypothesis is confirmed.

Discussion

The aim of this study is to investigate the effects of schema therapy in the form of couple therapy on marital compatibility and metacognitive regulation of couples referring to counseling centers. The findings of the study are presented as follows:

Research hypothesis: Schema therapy in the form of couple therapy is effective in increasing metacognitive regulation and marital compatibility of couples referring to counseling centers.

Although several factors play a role in the development and promotion of couples' Marital compatibility and satisfaction, this study studied the effect of schema therapy in the form of couples therapy on couples' Marital compatibility and metacognitive regulation. The results of the multivariate regression analysis proved the effect of schema therapy in the form of couple therapy on metacognitive regulation and marital compatibility in couples. The findings are consistent with the results of research (12) and (14) on the relationship between schema therapy in the form of couple therapy and Marital compatibility of couples. Schema therapy can be used as an effective therapeutic approach to improve the quality of couples' relationships by identifying and correcting dysfunctional beliefs and deep-rooted thought patterns that have been formed in the individual's mind since childhood. By providing a platform for better understanding emotional needs, resolving interpersonal conflicts, and improving communication skills, this method creates the basis for increased marital satisfaction, better adjustment in relationships, and improved mental health for both couples. Since many marital problems are rooted in early maladaptive schemas, targeted intervention on these patterns can have a profound and lasting impact on couples' emotional relationships and psychological functioning (17).

Conclusion

Marital compatibility, as one of the essential components of mental health and life satisfaction, depends on the ability of couples to manage conflicts, solve joint problems, express emotions, and empathize with each other (12). In this study, it was shown that schema therapy played a significant role in improving this component. This is likely due to the following reasons:

Modifying early maladaptive schemas that are often activated in close relationships, especially marital relationships. These schemas may have their roots in childhood experiences (such as rejection, abandonment, distrust, or inferiority/shame) and in marital interactions cause negative perceptions, extreme or avoidant reactions, and ultimately chronic conflicts.

Increased emotional and cognitive self-awareness as a result of the treatment process, which enables couples to express their thoughts and feelings more clearly and communicate better with each other.

Creating a safe space in the relationship by changing dysfunctional behavioral and cognitive patterns, which leads to a sense of emotional security, increased trust, and positive interaction.

These gains lead to improved cooperation, mutual understanding, and overall relationship satisfaction, ultimately increasing marital compatibility. Metacognitive regulation, on the other hand, refers to an individual's ability to monitor, control, and modify thoughts, beliefs, and cognitive processes. In married life, metacognitive regulation plays a key role in managing emotions, interpreting conflict situations, and preventing impulsive reactions. During the therapy process, couples become familiar with their automatic thought patterns, maladaptive coping styles, and cognitive biases. Also, a reduction in dysfunctional beliefs and self-critical thoughts that are usually formed as a result of negative schemas, such as beliefs in inadequacy or constant threat, could be an explanation for this hypothesis.

These cases show that schema therapy not only modifies negative cognitive content, but also enhances upstream cognitive processes (metacognitive), allowing the individual to face psychological and interpersonal issues in a more flexible and efficient manner. Research findings clearly show that schema therapy in the form of couples therapy is an effective tool for improving Marital compatibility and promoting metacognitive regulation. By targeting the cognitive and emotional roots of interpersonal problems, this therapy paves the way for psychological and communicative growth for couples. Therefore, it is suggested that this approach be used more widely in treatment programs for couples with chronic problems or dysfunctional communication patterns.

One limitation of this study is the lack of a follow-up test. In addition, the limited sample size, which makes it difficult to generalize the results of this study, is another limitation of the study. For further research, it is recommended that this educational method be compared with other counseling and therapeutic methods in future research to better clarify its effectiveness compared to other methods.

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Authors contribution

Author conceptualized the study objectives and design.

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