

# Investigating the Effect of Schema Therapy on Emotional Confusion in Divorced Nurses

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## Abstract

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**Purpose:** This study aimed to investigate the effect of schema therapy on emotional confusion in divorced nurses.

**Methods:** The present study is a quasi-experimental, pre-test-post-test study with two groups selected, including a control group and an experimental group. The statistical population of the study consisted of divorced nurses in Isfahan city, and the sample size was selected using simple random sampling method, including 40 nurses (20 nurses in the experimental group and 20 nurses in the control group). A researcher-made questionnaire derived from the General Health Questionnaire was used as a data collection tool for the study. Covariance analysis and multivariate analysis of variance were used to analyze the data.

**Results:** The findings of the study show that schema therapy significantly reduced emotional confusion in divorced nurses in the post-test phase. Schema therapy reduces disorders in the components of emotional confusion in divorced nurses (physical symptoms, anxiety and insomnia, as well as disorder in social functioning).

**Conclusion:** Through schema therapy, the subjects can gain greater awareness of their behaviors, thoughts, and problems, and pay attention to targeted programs based on cognition and thinking, as well as directing their behavior, in order to regulate and manage their thoughts and abilities in order to reduce emotional confusion.

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## Introduction

Work life is an integral part of the lives of most people in society. If an individual encounters problems in their work or family life, the consequences will not only affect the individual, but also affect organizations and society at large (1). People with low tolerance for emotional distress experience intense emotional confusion and are required to try to relieve it, while they are unable to focus on another issue. Therefore, reduced tolerance for emotional distress leads to maladaptive responses to stress (2). Confusion refers to the ability of a person to perceive a situation without wanting it to change, as well as to observe thoughts and actions that

the person does not seek to suppress or control (3). Emotional confusion is an unpleasant physical state that has specific psychological or behavioral manifestations that are usually associated with significant distress and disruption of biological, social, psychological, genetic, physical, and chemical functioning (4). The criteria for measuring mental disorders are usually deviations from the normal state. Emotional distress is broadly defined as a state of emotional distress characterized by symptoms of depression (e.g., loss of interest, sadness, hopelessness) and anxiety (e.g., restlessness, feelings of tension). It is also associated with other physical

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symptoms such as insomnia, headaches, and lack of energy, and impaired sleep quality (5).

Schema therapy is one of the models designed to treat psychological disorders. Schema therapy has been discussed as a psychological treatment with great emphasis on childhood experiences and personality pathology (6). Based on studies, it seems obvious that there is a relationship between early childhood experiences and the development of early maladaptive schemas. These schemas constitute one of the main factors in the hereditary-stress susceptibility model of mental disorders (7). Schema therapy combines the principles and foundations of cognitive-behavioral, attachment, Gestalt, structuralism, and psychoanalysis into a valuable therapeutic model (8). Schemas are deep and pervasive patterns or themes consisting of memories, emotions, cognitions, and bodily sensations, formed during childhood and adolescence, and used as templates for processing subsequent experiences (9).

Primary schemas are beliefs that individuals have about themselves, others, and the environment, and typically stem from the unsatisfaction of primary needs, especially emotional needs, during childhood (10). In this model, an attempt is made to address the primary maladaptive schema, which is assumed to be the basis of the disorder, through cognitive, behavioral, emotional, and interpersonal strategies and therapeutic intervention. Since schemas serve as a framework for information processing and determine individuals' emotional reactions to life situations and interpersonal relationships, they are said to be related to quality of life (11). As a result, schema therapy is important in that by recognizing these factors, ways can be suggested to further stabilize the lives of individuals, especially divorced individuals. Accordingly, the present study examines the effectiveness of schema therapy on emotional confusion in divorced nurses and the following hypotheses are put forward:

1- Schema therapy reduces emotional confusion in divorced nurses.

2- Schema therapy reduces the components of emotional confusion in divorced nurses (physical symptoms, anxiety and insomnia, as well as impaired social functioning).

Mahdian and Pourfaraj (2024) in their study examined the effectiveness of schema therapy on the quality of marital relationships and psychological distress of couples. In the experimental group, the mean and standard deviation of the marital relationship quality score in the pre-test and post-test were  $32.13 \pm 1.12$  and  $36.60 \pm 1.45$ , respectively ( $p < 0.001$ ), and the psychological distress score was  $42.13 \pm 1.18$  and  $39.13 \pm 0.83$ , respectively. Schema therapy seems to be effective on the quality of marital relationships and psychological distress of couples referring to counseling

centers. It is suggested that it be used as a useful intervention in improving the quality of marital relationships and psychological distress (12).

Monjezi et al. (2024) conducted a study to investigate the effect of group counseling based on schema therapy on reducing psychological distress in divorced adolescents. The findings showed that schema therapy produced a significant reduction in depression, anxiety, and stress, and these results remained stable at a two-month follow-up. Based on the results, it seems that in schema therapy, individuals became aware of the role of schemas in causing depression, anxiety, and stress, and the use of appropriate coping techniques and styles was able to reduce psychological problems; therefore, it is suggested that schema therapy be used to solve mood problems (13).

Rahmani Moghaddam et al. (2023) conducted a study to investigate the effectiveness of emotional schema therapy on distress tolerance and emotional regulation in physically disabled people in Mashhad. The results of analysis of variance with repeated measures showed that there was a significant difference between distress tolerance and emotional regulation scores in the experimental and control groups in the post-test phase. It is concluded that emotional schema therapy was effective on the variables of distress tolerance and emotional regulation. The results indicate that emotional schema therapy can be effective in increasing distress tolerance and improving emotional regulation (14).

Priemer et al. (2015) reported that self-help schema therapy reduced psychological distress and early maladaptive schemas including inadequate self-control in the general population (15).

## Methods

This research is a semi-experimental, pre-test-post-test study with two groups selected: a control group and an experimental group. The statistical population of the study consists of retired nurses in Isfahan. In this study, the sample size included 40 nurses from the aforementioned community (20 nurses in the experimental group and 20 nurses in the control group), and simple random sampling was used to select them. The data collection tools used in the research are:

Researcher-made questionnaire derived from the General Health Questionnaire: Goldberg (1972) introduced this questionnaire as a "screening questionnaire" based on a self-report method that is used in clinical settings with the aim of tracking those with a mental disorder. In order to evaluate the validity of the Persian version of the General Health Questionnaire, Palahang (2005) estimated its validity at 91% using a test-retest method with an interval of 7 to 10 days on a group of 80 people, which is significant at

the one-thousandth error level. The validity of this questionnaire was obtained by internal consistency (Cronbach's alpha) for the scales of somatic symptoms 0.85, anxiety and insomnia 0.78, social dysfunction 0.79, and the entire questionnaire 0.85 (16). The reliability of the questionnaire in this study was obtained by Cronbach's alpha 0.73.

In this study, the experimental group underwent 8 sessions of schema therapy. The level of emotional

confusion was measured before and after the treatment sessions; while the control group did not receive any intervention. Descriptive statistics, analysis of covariance, and multivariate analysis of variance were used to analyze the data.

## Results

Table 1 presents the descriptive results of the study.

**Table 1.** Mean and standard deviation of emotional confusion scores of divorced nurses in the pre-test and post-test stages

Variable	Stage	Statistical index	Mean	Standard deviation	Number
			Group		
Emotional confusion	Pre-test	Experiment	40.33	11.59	20
		Control	38.53	14.66	20
	Post-test	Experiment	30.78	12.74	20
		Control	37.28	14.63	20
Physical symptoms	Pre-test	Experiment	25.78	5.75	20
		Control	24.29	5.96	20
	Post-test	Experiment	19.62	6.57	20
		Control	22.79	6.23	20
Anxiety and insomnia	Pre-test	Experiment	6.83	3.25	20
		Control	3.23	4.56	20
	Post-test	Experiment	4.48	3.59	20
		Control	6.32	4.51	20
Disorder in social functioning	Pre-test	Experiment	5.57	3.37	20
		Control	5.69	4.54	20
	Post-test	Experiment	3.98	2.87	20
		Control	5.99	4.31	20

**Table 2.** Results of one-way analysis of covariance (ANCOVA) on the mean post-test scores of the subjects in the two groups with pre-test control.

Source of changes	Sum of squares	Degree of freedom	Mean squares	F	p-level of significance	$\eta^2$ squared	Statistical power
Pre-test	7109.58	1	7109.58	370.55	<0.001	0.78	1.00
Group	485.04	1	485.04	20.95	<0.001	0.39	0.987
Error	829.00	36	22.39				

As can be seen, in the pre-test there is not much difference in the average scores of the control and experimental groups, while in the post-test, there is a difference between the average scores of the two groups. In examining the variable components, a

significant difference is also observed in the average post-test scores of the control and experimental groups.

As can be seen, schema therapy is effective on emotional confusion in divorced nurses. Comparison of mean scores indicates that emotional confusion in the experimental group has decreased significantly.

**Table 3.** Results of multivariate analysis of variance (MANCOVA) on the mean post-test scores of emotional confusion components of divorced nurses in the experimental and control groups, with pre-test control.

Test Name	Amount	DF of Hypothesis	Df of error	F	Significance level of (P)	$\eta^2$ squared	Statistical power
Pillai,s trace	0.463	3	33	9.09	<0.001	0.47	0.99
Wilks Lambda Test	0.557	3	33	9.09	<0.001	0.47	0.99
Hotelling trace	0.837	3	33	9.09	<0.001	0.47	0.99
Roy,s Largest Root	0.838	3	33	9.09	<0.001	0.47	0.99

As can be seen in Table 3, by controlling for the pre-test, the significance levels of all tests indicate that there is a significant difference between the nurses in the experimental and control groups in terms of at least one

of the dependent variables (components of emotional confusion in divorced nurses). Therefore, the second hypothesis of the present study is also confirmed. The effectiveness or difference rate is 0.47, meaning that 47

percent of individual differences in the emotional confusion post-test scores of divorced nurses are related to the effectiveness of schema therapy. The statistical

power is 0.99, meaning that if this study is repeated 100 times, the null hypothesis may be falsely confirmed only once.

**Table 4.** Results of one-way analysis of covariance (MANCOVA) on the post-test mean scores of emotional confusion components of divorced nurses in the experimental and control groups, with pre-test control.

Page 4 of 5

Variable	Source of changes	Sum of squares	Degree of freedom	Mean squares	F	p-level of significance	$\eta^2$ squared	Statistical power
Physical symptoms	Pre-test	1042.02	1	1042.02	83.34	<0.001	0.72	1.00
	Group	119.13	1	119.13	9.72	<0.003	0.24	0.87
	Error	448.03	34	11.57				
Anxiety and insomnia	Pre-test	363.20	1	356.20	209.87	<0.001	0.87	1.00
	Group	25.36	1	25.36	13.43	<0.001	0.32	0.97
	Error	60.65	34	1.85				
Disorder in social functioning	Pre-test	389.64	1	389.64	199.46	<0.001	0.87	1.00
	Group	38.43	1	38.43	19.32	<0.001	0.38	0.99
	Error	69.60	34	1.69				

As can be seen in Table 4, there is a significant difference between the nurses in the experimental and control groups in terms of physical symptoms after pre-test control ( $F=9.72$ ,  $p<0.003$ ). Therefore, Hypothesis 2 is confirmed. The effect size or difference is 0.24, meaning that 24 percent of the individual differences in post-test scores for somatic symptoms are related to the effectiveness of schema therapy. The statistical power is 0.87, meaning that if this study is repeated 100 times, only 13 times could the null hypothesis be falsely confirmed.

Also, with the pre-test control, there is a significant difference between the nurses of the experimental and control groups in terms of anxiety and insomnia ( $F=13.42$  and  $p<0.001$ ). As a result, hypothesis 2 is confirmed. The effectiveness rate is 0.32, meaning that 32 percent of the individual differences in anxiety and insomnia post-test scores are related to the effectiveness of schema therapy. The statistical power is 0.97, meaning that if this study is repeated 100 times, the null hypothesis could be falsely confirmed only 3 times.

With pre-test control, a significant difference was observed between the nurses in the experimental and control groups in terms of social functioning impairment ( $p<0.001$ , 19.32). Therefore, hypothesis 2 is confirmed. The effectiveness rate is 0.38, meaning that 38 percent of the individual differences in the post-test scores of social dysfunctions are related to the effectiveness of schema therapy. The statistical power is 0.99, meaning that if this study is repeated 100 times, only 1 time could the null hypothesis be falsely confirmed.

## Discussion

The aim of the present study was to investigate the effect of schema therapy on emotional confusion in divorced nurses. The findings of the study are presented as follows:

According to the results obtained, schema therapy reduces emotional confusion in divorced nurses. The comparison of mean scores shows that the level of emotional confusion in the experimental group has decreased significantly. Therefore, the first hypothesis of the study is confirmed.

By controlling for the pre-test, the significance levels of all tests indicate that there is a significant difference between the nurses in the experimental and control groups in terms of at least one of the dependent variables (components of emotional confusion in divorced nurses) (8). Therefore, the second hypothesis of the present study is also confirmed. So that 24% of individual differences in post-test scores of physical symptoms are related to the effectiveness of schema therapy. Also, 32% of individual differences in post-test scores of anxiety and insomnia are related to the effectiveness of schema therapy. 38% of individual differences in post-test scores of social dysfunction are related to the effectiveness of schema therapy.

## Conclusion

The cause of people's confusion is mainly unpleasant thoughts that affect their emotions and behaviors in the form of cognitive errors. The characteristic of healthy personalities is that they can identify these ineffective thoughts and deal with them. Schema therapy, by providing techniques, helps nurses discover their inherent talent for change and, by receiving internal motivation, reduces unbalanced beliefs resulting from negative and relatively uncontrollable thoughts and images (11). Through schema therapy, the subjects can gain greater awareness of their behaviors, thoughts, and problems, and pay attention to targeted programs based on cognition and thinking, as well as directing their behavior, to organize and manage their thoughts and abilities. Accordingly, this therapeutic approach will be

effective in reducing emotional confusion in divorced nurses (7).

In order to conduct future research, it is suggested to compare schema therapy with another intervention approach in reducing emotional confusion in divorced nurses. Among the limitations of the study, we can mention the problems of cooperation with the statistical population. Also, the limited statistical population to divorced nurses in Isfahan city makes generalization of the results cautious. Accordingly, it is suggested that a similar study be conducted in other communities to ensure generalization of the results.

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The research data and literature have not been copied from any worksauthor upon reasonable request.