

The Effectiveness of Group Schema Therapy on Reducing Rumination Due to Depression

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Abstract

Aim: The purpose of this study was to determine whether group schema therapy can reduce rumination associated with depression. **Method:** The current study was quasi-experimental with a pretest and post-test and a control and test group. A convenient sampling method was used to select 24 participants, who were randomly assigned into two equal groups to ensure that the sample size was adequate. The group schema therapy, lasting 60 minutes, was provided twice a week to the intervention group, while the control group was placed on a waiting list. To collect the data, we used the Beck Depression Inventory (BDI-II), Young Schema Questionnaires, and Nolen-Hoeksema's Analytical Rumination Questionnaire. Univariate and multivariate ANOVAs were interpreted and scored by SPSS-23 statistical software using mean and standard deviation statistics at the descriptive level and ANOVA at the inferential level. **Results:** The participants with depression in the experimental and control groups were significantly different ($p < 0.05$) regarding rumination variables and their components, i.e., Group Schema Therapy reduces rumination associated with depression. **Conclusion:** This study suggests that schema therapy can control depression, which has been spreading worldwide due to the outbreak of Covid19.

Keywords: group schema therapy, depression, Covid19, rumination.

Introduction

Psychotherapists are particularly concerned about depression, one of the most common psychiatric disorders (Hojjati, Hekmatipour, 2016). Depression can manifest as moodiness, social isolation, low self-esteem, trouble concentrating, poor work performance, and abnormal biological functions (e.g., sleep apnea, appetite). Depressed individuals also experience various negative thoughts that are complex, judgmental, disruptive, and unnecessary, leading to mental disorders (Ghanbarpour, Radmehr&Yousefvand, 2017). In other words, negative thoughts directly correlate with depression susceptibility (Islam&Rawal, 2015). As a result, negative metacognitive beliefs and negative thoughts are activated, which leads to rumination or maladaptive coping behaviors. Research has shown that rumination is associated with depressive symptoms, episodes, duration, severity, and prolongation of

depression (Korgenkar & Cooper, 2012). As a coping mechanism, ruminating involves thinking about depression symptoms, causes, and consequences, resulting in negative thoughts and feelings (Hoxima, 2008). Depression is predicted to become one of the most common and costly disorders globally (Spitz, 2010).

When someone has depression, they may benefit from therapies aimed at reducing their depression. Schema therapy (Seursten & Begerclough, 2015) can achieve this goal since it relies on enduring schemas that develop in childhood and adolescence and persist throughout life. In a study by Labstal and Wall (2010), schema therapy aimed to address this issue by treating mental disorders and minimize their relapse rate (Young & Kraske, 2003). Cognitive-behavioral therapy applies a top-down approach, which begins with the level of concern, addresses the underlying assumptions,

and ends with the schema. Schema therapy, however, uses a bottom-up approach, meaning that it directly examines the deepest levels of the schema (Kindins & Berlako, 2013).

In schema therapy, a systematic program can be developed to detect and modify early maladaptive schemas. Classical cognitive-behavioral therapy combines cognitive, behavioral, interpersonal, attachment, and experimental techniques to measure and modify schemas. It uses motivational techniques and introduces the concept of coping styles (Wildler & Vanerwin, 2012). Group schema therapy is essential in several ways while reducing the long waiting time for training. Using a group setting can give therapists more time to use efficiently, while patients can benefit from the same experience, peer modeling, and peer support (Skoz & Samson, 2014).

Previously, Hatamipour and Ashuri (2017) studied the effect of group schema therapy on 40 nurses in Varamin Hospital, Iran, in terms of their depressive symptoms and quality of life. They concluded that group schema therapy reduced depression and improved nurses' quality of life. Using group schema therapy in nurse-training programs is therefore highly recommended. Shirinkar, Namdari, Jamalian, and Abedi (2015) concluded that forgiveness-based group therapy reduced depressive symptoms in women and rumination and that these effects were statistically significant. The results suggest that forgiveness-based group therapy reduces symptoms of depression and rumination. Rezaei, Ghazanfari, and Rezaei (2016) found that the mean scores of depression and rumination in the schema therapy group at follow-up and post-test were higher than those in the control group. According to Rezaei, Ghazanfar, and Rezaei (2016), the mean scores of depression and rumination decreased higher in the schema therapy group. Rezaei, Ghadampour, and Kazemi (2016), titled *The Efficacy of Emotional Schema Therapy on rumination and severity of depression in patients with major depression*, showed that Emotional Schema Therapy reduced the severity of depression in patients, and rumination was significantly reduced at post-test and follow-up.

Research by Balsamo et al. (2015), entitled "The mediating role of early maladaptive schemas in the relationship between depressive and related disorders in adulthood" "showed that

early maladaptive schemas predicted an arousal/inhibition relationship. Mediation continued for females only when males and females were analyzed separately. O'Reilly, Calout, and Padilla (2014) proposed that rumination mediates early maladaptive schemas and depression and anxiety symptoms in adolescents. Rumination does not directly predict tracking, but it predicts depression. However, maladaptive schemas may not predict social anxiety symptoms. Symptoms of social anxiety predicted depression before adolescence when incongruent schemas were present. Previous studies have failed to address rumination. Therefore, the present study was to determine whether group schema therapy eases rumination associated with depression?

Method

The study design was quasi-experimental with a pretest-posttest and a control group. A statistical sample of the population included depression sufferers referred to a counseling service developed in 2019. In order to ensure a sufficient sample size for the intervention study, 24 participants aged between 18 and 60 years were randomly selected by convenience sampling and divided into two groups. While not exhibiting any mental problems in the past six months, which could be due to stressful situations such as divorce and death attacks, they had a range of education levels from diploma to Ph.D. Participants were excluded from the study if they missed over one session, had a mental illness, took certain medications, including antidepressants, and did not cooperate.

Participants were to be recruited after the coordination with the Tehran clinic director. The experimental group received 17 training sessions (twice a week) in 60-minute group schema therapy, while the control group was placed on a waiting list for training. A psychologist led the intervention with a doctorate in clinical psychology. The participants were trained at the Pendar Counseling Center. At the end of each session, they were provided with assignments and feedback, and their groups were screened for depression before and after the intervention.

It should be noted that the research supervisor examined the group schema therapy sessions according to the schema therapy

instruction manual. This was confirmed after a careful examination of the effectiveness of the program.

- 1 introductory and intake session
- 3 familiarization sessions with the program
- 4 sessions of familiarization with mindfulness
- 4 sessions on mindfulness management
- 4 experimental works on mindfulness
- 1 group wrap-up session

Results

The data were analyzed descriptively and inferentially using SPSS version 23: means and standard deviations were used; univariate and multivariate ANOVAs were used at the inferential level. Table 1 presents the means and standard deviations of the regurgitated variable scores for the two experimental and control groups at the pretest and post-test stages. As shown in Table 1, the mean and standard deviation of the rumination scores were 63.20 (8.06) in the pretest phase and 62.73 (9.39) in the control group, respectively; in the post-test phase, the mean and standard deviation were 54.33 (6.54) in the experimental group and 61.87 (9.21) in the control group.

In the inferential statistics section, multivariate analysis of covariance or MANCOVA (MANCOVA) was used to assess the effectiveness of pattern therapy training on rumination in depressed patients. In this analysis, both experimental and control-level group members were included as independent variables. The pre-test of the rumination variable and its components were included as variables. The post-test scores were included in the equation as dependent variables.

Prior to this analysis, the hypotheses associated with this analysis were first examined. A box test was performed to test the parity of the observed covariance matrix of the dependent variable at the level of the independent variable. This test showed that the F-statistics of the dependent variables were not significant due to the same covariance matrix at the independent variable level. According to Table 2, the covariances of the study variables are equal in the box test.

This study found no significant correlation at the 0.05 level ($p>0.05$) among the study variables, and therefore the hypothesis of covariance was confirmed, permitting multivariate analysis of covariance or the use of the MANCOVA test. To determine if the variances of the study variables were equal, the Levin test results were analyzed. As the F-statistic was insignificant in this study, it was concluded that the study variables had equal variances, which Table 3 shows it.

Table1. *The mean and standard deviation of rumination components by group in pre- and post-tests*

Group		Pretest		Posttest	
		Mean	STD	Mean	STD
Contemplation	Control	18.93	3.26	18.47	3.37
	Experimental	18.73	2.40	22.60	2.19
Distraction	Control	19.93	3.51	19.20	3.50
	Experimental	20.05	2.69	15.80	1.74
Cogitation	Control	17.31	3.18	17.47	3.15
	Experimental	17.44	3.76	23.40	5.80
Rumination	Control	62.73	9.39	61.87	9.21
	Experimental	63.20	8.06	54.33	6.54

Table2. *Results of Box Test for Covariates*

Variables	Box Value	F-value	Sig.
Rumination	70.18	3.44	0.06

Table3. *Levin Test for Rumination Variances*

Variables	F	DF1	DF2	Sig.
Contemplation	1.045	1	28	0.315
Distraction	5.525	1	28	0.026

cogitation	2.646	1	28	0.115
Rumination	0.126	1	28	0.725

The above results show that all rumination components have the same variance (05/0 p>), and thus the equality of the variance of the rumination variables and their components is proven. The data were analyzed inferentially based on univariate and multivariate ANOVAs to prove or reject the research hypothesis.

Table4. *Multivariate Analysis of Covariance (MANCOVA) on the Means of Rumination Post-test (Experimental and Control groups)*

Test	Value	F	Hypothesis DF	Error DF	Sig.	Eta square	Statistical Power
<i>Pillais Trace</i>	0.79	8.17	4	18	0.0001	0.79	0.99
<i>Wilks' Lambda</i>	0.20	8.17	4	18	0.0001	0.79	0.99
Hotelling's Trace	3.81	8.17	4	18	0.0001	0.79	0.99
Roy's Largest Root	3.81	8.17	4	18	0.0001	0.79	0.99

As shown in Table 4, the significance levels of all tests by controlling for pretests showed a significant difference between the experimental and control groups of depressed patients on the ruminant variable and its components ($F=8.174$, $p<0.05$); therefore, the research hypothesis was confirmed.

One-way analysis of covariance was used to find differences between the two groups, as shown in Table 5. The results showed that the effect or difference was equal to 0.79; in other words, 79% of the individual differences in the post-test scores of rumination and its components were related to the effect of group schema therapy (group members), where the statistical power was equal to 0.99.

Table 5. *One-way analysis of covariance for the mean scores of the post-regurgitation test and its components for the experimental and control groups in the MANCOVA test versus the pre-test control*

Results	Sum of squares	DF	Squares Mean	F	Sig	Eta	Power	
Rumination	Pretest	3135.31	1	3135.31	120.28	0.000	0.817	1.0
	Group	258.14	1	258.14	9.90	0.004	0.268	0.85
	Error	703.75	21	703.75				

Contemplation	Pretest	151.93	1	151.93	122.83	0.000	0.820	1.0
	Group	19.29	1	19.29	15.59	0.001	0.36	0.96
	Error	33.39	21	33.39				
Distraction	Pretest	11.90	1	11.90	16.43		0.	0.97
	Group	20.90	1	20.90	28.85	0.000	37	0.99
	Error						0.51	
Cogitation	Pretest	19.55	21	19.55		0.000		
	Group	12.74	1	12.74	16.71			0.97
	Error	7.30	1	7.30	9.57		0.38	0.84
		20.59	21	20.59		0.000	0.26	
						0.005		

As shown in Table 5, the research hypothesis was confirmed since there was a significant difference ($p < 0.05$) between the experimental and control groups regarding the rumination variable and its components in depressed patients referred to the counseling center. Comparing the mean values calculated in the control and experimental group, the research showed that schema therapy eased rumination and its components in the experimental group. The effect or difference in rumination was equal to 0.26. In other words, 26% of the difference in post-test rumination scores was related to the effect of group schema therapy (group members).

Discussion

The study's main hypothesis was that rumination, and its components differ significantly between experimental and control groups in depressed patients referred to the counseling center ($p < 0.05$). Thus, the rumination hypothesis and its components were confirmed. Thus, schema therapy reduced rumination and its components in the experimental group when the variables and variables were compared to the control group's mean. The effect or difference in rumination was equal to 0.26. This means that 26% of the

difference in test scores after rumination was due to the effect of schema therapy training. This finding is in line with Rahim Aghaei and colleagues' (2017) and Mohammadnejadi and Rabiee's (2015) conclusions.

The findings suggest that schema therapy elicits changes in cognitive and experimental, emotional, and behavioral contexts. This approach effectively replaces inconsistent schemas and inappropriate responses, challenging them with more appropriate and healthy thoughts and responses. In response to problems such as negative emotions and thoughts, the effectiveness of schema therapy appears to increase the quality of general mental health and the health of an individual. Patients who are undergoing schema therapy improve their schemas by rewiring their emotions, exploring new self-learning possibilities, and relaxing. The most profound cognition occurs outside of conscious awareness (Tito et al., 2015; Sabetfar et al, 2019).

Schema therapy combines cognitive, behavioral, interpersonal, attachment, and experimental approaches to explain these findings. This method utilizes four main techniques: cognitive, behavioral, relational, and experimental. In addition to questioning maladaptive schemas (a major cause of dysfunction and irrational thinking), people are

consumed by buried emotions, such as negative feelings and anger, due to years of unmet spontaneous needs and secure attachments to others. When a child can relax and experience less anxiety and negative ruminating, it can be a valuable indicator of health since they are less likely to experience physical arousal (Panahifar, Yousefi & Amani, 2014).

Conclusion

The present study confirms previous research findings in clinically depressed adults with rumination. This study showed that schema-centered therapy could improve anxiety and depression in individuals with rumination, as found in previous research. Schema-centered therapies may be effective for both individuals and groups diagnosed with depression. Due to the outbreak of Covi19, schema therapy can combat the spread of depression worldwide.

This study also has some limitations, and the most critical limitations of this study are as follows: Since this study was conducted on depressed patients in Tehran; It cannot be generalized to depressed patients in other cultures, age groups, and different cities; This study had limited validity and reliability due to the variety of variables and the large number of questions; In addition, the results of this study cannot be generalized to other communities, including homemakers and the elderly, staff, students, and patients; The researcher's effect of some confounding and annoying variables and the lack of control of some of them should be noticed.

So, this study suggests strategies for further research in this area: Conducting this study with depressed patients from other cities and other cultural backgrounds; Using other measurement scales to study the role and relationship with other variables that influence the schema therapy of depressed patients and compare their results with each other; Implementing this program in other groups in society and comparing their results with those of this study; Reviewing the perspectives and strategies provided by experts and university professors in areas related to the schema therapy; Evaluating the effectiveness of this training concerning other disease therapies interventions.

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