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The Effectiveness of Schema Therapy on Dysfunctional Attitudes and Emotional Dysregulation in Patients with Persistent Depressive Disorder

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Abstract: This study was undertaken with the primary objective of assessing the efficacy of schema therapy in addressing dysfunctional attitudes and emotional dysregulation among patients diagnosed with persistent depressive disorder. The research methodology employed in this investigation followed a semi-experimental approach, incorporating a pre-test and post-test design encompassing both experimental and control groups. The study's target population consisted of all individuals diagnosed with persistent depressive disorder who sought treatment at psychology and psychiatry clinics in Tehran in 2022. From this population, a sample of 30 participants was selected using an accessible sampling method and Structured Clinical Interview for DSM Disorders (SCID) was taken from the participants. To gather data and evaluate relevant attributes and conditions, a semi-structured clinical interview demographic form and the second version of the Beck Depression Inventory were administered. Moreover, for the analysis of research hypotheses, statistical methods including the ANCOVA analysis test and paired t-tests were applied through the SPSS-16 statistical software. The findings of this study indicated that schema therapy significantly influenced the levels of dysfunctional attitudes and emotional dysregulation in patients with persistent depressive disorder.

Keywords: Schema therapy, dysfunctional attitudes, emotional dysregulation, persistent depressive disorder

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Introduction

Depressive disorder is one of the most common psychiatric disorders in children and adolescents, impacting individuals' social and psychological growth negatively. Childhood depression can lead to decreased academic progress, weakened interpersonal relationships, and is closely associated with suicidal behaviors (Wagner et al., 2020). The prevalence of depressive episodes among adolescents has gradually increased. Since untreated depression in children and adolescents persists into adulthood and adversely affects the quality of life, screening high-risk groups for depression and early intervention in adolescents with depressive disorders is crucial.

Diagnosing depression is carried out through a medical assessment by a physician based on the individual's clinical symptoms, as there are no objective diagnostic assessments available (Mojtabai, Alfasan, 2016). Research indicates that individuals with ineffective cognitive attitudes are at risk of developing depressive symptoms. Beck's cognitive model identifies inflexible and perfectionistic cognitive criteria used by individuals to judge themselves and others. These attitudes are resistant to

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change and overly rigid, making them ineffective in addressing success or individual and interpersonal factors (Halvorsen, Wang, Waterloo, 2017).

Emotional dysregulation, a form of emotional dysregulation or dysregulation, is also considered a potential factor influencing mood disorders, including depression (Gross, 2015). The general concept of emotional regulation and dysregulation refers to all internal and external processes in an individual responsible for monitoring, evaluating, and modifying emotional responses, especially intense and transient states, to achieve goals (Tampon, 2016).

Human behavior studies show that individuals regulate their emotional responses. In this context, Gross (2016) believes that the difference between a tendency towards emotional response (bias) and the behavior that ultimately emerges from us indicates that we constantly regulate our emotional responses. This regulation can occur automatically or voluntarily, consciously or unconsciously (Mauss, Ochsner, Wilhelm, 2016). Any deficiencies in emotional regulation can make individuals vulnerable to disorders such as depression (Weiss et al., 2009).

Regarding third-wave therapies, which are newer, mention should be made of therapies such as Schema Therapy that have achieved success among psychotherapeutic treatments (Pourmohammadi, Baqeri, 2015). Schema Therapy, a complementary cognitive-behavioral treatment, delves into the deepest cognitive levels and targets early maladaptive schemas, helping patients overcome these patterns by employing cognitive, emotional, behavioral, and interpersonal strategies. The primary goal of treatment is to create psychological awareness and enhance conscious control over patterns, ultimately improving maladaptive patterns and coping styles (Rahbar Karbasdehi, Abolghasemi, Rahbar Karbasdehi, 2018; Rinner et al., 2016).

Schema Therapy is a complementary cognitive-behavioral approach, addressing deficiencies in cognitive-behavioral treatments for cognitive disorders. It has achieved success in reducing the severity of depressive symptoms (Krisoul et al., 2019). Schema Therapy is a unified and innovative treatment based on the expansion of concepts and methods from traditional cognitive-behavioral, attachment, object relations, gestalt, constructivism, and psychoanalytic schools into a therapeutic and conceptual model (Klogg and Yang, 2006). The key concept of this approach is early maladaptive schemas (Semper Goy, Carmen, Anter, Baker, 2013). Cognitive schemas (early maladaptive patterns) are fundamental structures that, like a lens, influence individuals' perception of the world, themselves, and others. In other words, individuals' interpretation, selection, and evaluation of their experiences shape these patterns (Villaseñor, 2016).

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Schema Therapy delves into the deepest cognitive levels, targeting early maladaptive schemas and helping patients overcome these patterns by employing cognitive, experiential, behavioral, and interpersonal strategies. The primary goal of psychotherapy is to create psychological awareness and enhance conscious control over patterns, ultimately improving maladaptive patterns and coping styles (Yang, Closco, Vishar, 2012). Based on this foundation, the present study seeks to answer the question of whether Schema Therapy is effective in addressing ineffective attitudes and emotional dysregulation in patients with persistent depressive disorders.

Material and Methods

The research method of the present study was quasi-experimental with a pre-test and post-test design, including both experimental and control groups. Participants were randomly assigned to the experimental and control groups after selection. Both groups underwent a pre-test before the intervention, and after the intervention, post-tests were conducted for both groups. A follow-up phase was executed three months after the intervention.

Population and Sample: The statistical population of this research included all individuals with persistent depressive disorders visiting psychology and psychiatry clinics in Tehran. Among these individuals, 30 were selected through accessible sampling. Clinical semi-structured interviews using the Structured Clinical Interview for DSM-5 Disorders (SCID) based on the diagnostic and statistical manual of mental disorders, the Beck Depression Inventory-II (BDI-II), the Dysfunctional Attitude Scale, and the Emotion Regulation Questionnaire (ERQ) were employed for data collection and assessment.

Instruments

1. Demographic Information Form: This form gathered personal information about the participants, including age, marital status, education level, duration of marriage, number of children, etc.
2. Semi-Structured Clinical Interview (SCID): SCID, a diagnostic tool based on DSM-5 definitions and criteria, was utilized to diagnose mental disorders. The Persian version of SCID has shown good diagnostic agreement (Sherifi et al., 2004).
3. Beck Depression Inventory-II (BDI-II): This 21-item questionnaire measures the dependent variable of depression on a scale of 0 to 3, with a score range of 0 to 63. It has been validated in Iran with reported reliability (Dabson et al., 2004).

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4. Dysfunctional Attitude Scale: This scale, based on Beck's cognitive model, assesses cognitive structures related to depression, measuring underlying assumptions. It consists of 40 questions, demonstrating good reliability over six weeks (Beck et al., 1983).

5. Emotion Regulation Questionnaire (ERQ): Developed by Gross and John (2003), this questionnaire investigates individual differences in emotion regulation strategies. It includes cognitive reappraisal and expressive suppression, measuring cognitive reevaluation and expressive suppression. The Persian version has been validated and shows good internal consistency and test-retest reliability (Balazoorati et al., 2003).

Table 1. Summary of Schema Therapy sessions

Session	Aim	Content
1	Acquaintance, communication and empathy	Familiarizing the participants and the therapist with each other, explaining the rules and regulations of the therapy period, familiarizing with the schema therapy and its process
2	Getting to know the needs and evolutionary roots of schemas	Formulating problems in the form of schema therapy, getting to know the six categories of primary central needs and the transformational roots of schemas and how they are formed
3	Familiarity with areas and schemas	Familiarity with five domains and eighteen primary maladaptive schemas and their role in persistent depression
4	Getting to know the features of various schemas	Getting to know the characteristics of five domains and eighteen primary maladaptive schemas and their role in persistent depression
5	Familiarity with conditional and unconditional schemas	Determining the conditional and unconditional schemas of depressed people and discussing how they are formed and their effects and consequences
6	Familiarity with the continuation of schemas	Teaching how schemas work, how to maintain and continue them and examine their effects and consequences
7	Familiarity with ineffective coping styles	Familiarity with ineffective coping styles during depression and how to deal with them
8	Getting to know the role of schemas in life	Investigating the role of schemas in marital relationships and highlighting them in life
9	Training to adjust and reduce the effect of ineffective schemas	Teaching how to deal with ineffective schemas and reducing their negative effects by checking the validity of schemas
10	Training to adjust and reduce the effect of ineffective schemas	Learning to deal with dysfunctional schemas through writing letters, preparing educational cards, imaginary conversations and role playing in real life situations.

Results

The results of ANCOVA analysis on the average post-test scores of research variables are presented in Table 2.

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Table 2. The results of ANCOVA analysis

Variable	Source	SS	DF	MS	F	p	Eta
Emotional dysregulation	Pretest	91.06	1	91.6	0.31	0.58	0.01
	Group	8250.07	1	8250.07	28.48	0.001	0.53
	Error	7241.03	25	289.64			
	Group	230.57	1	230.57	4.68	0.04	0.15
	Error	1230.69	25	49.22			
Dysfunctional attitude	Pretest	0.24	1	0.24	0.001	0.97	0.001
	Group	3625.32	1	3625.32	21.39	0.001	0.46
	Error	4237.04	25	169.48			

According to Table 2, schema therapy had an effect on the components of emotional dysregulation and dysfunctional attitude. According to the average of the two groups, the experimental group has obtained a higher average than the control group on the components of emotional dysregulation and dysfunctional attitude of patients with depressive disorder. Therefore, it can be concluded that schema therapy has improved the emotional dysregulation and dysfunctional attitude of patients with depression. Eta square also shows that schema therapy explains 53% of emotional dysregulation and 46% of dysfunctional attitude. In Table 3, the results of Bonferroni's post hoc test for pairwise comparison of the mean of research variables in pre-test, post-test and follow-up are presented.

Table 3. Bonferroni test results for pairwise comparisons of average scores of research variables

Variable	Phase	Mean difference	SD	p
Emotional dysregulation	Pretest-Posttest	33.23	6.22	0.001
	Pretest-Follow up	26.06	4.99	0.001
	Posttest-Follow up	33.52	8.84	0.001
Dysfunctional attitude	Pretest-Posttest	22.03	4.76	0.001
	Pretest-Follow up	14.11	4.4	0.004
	Posttest-Follow up	11.18	7.54	0.15

According to Table 3, the difference between pre-test and post-test and follow-up variables of emotion regulation and emotion regulation is significant (P<0.001). In other words, schema therapy in the post-test stage improved the emotional dysregulation and dysfunctional attitude of patients with depressive disorder, and this change was maintained in the follow-up stage. But the effect of schema therapy on dysfunctional attitude did not continue in the follow-up phase.

Discussion

The results indicate that schema therapy with group intervention has a significant difference ($p < 0.01$). Therefore, it can be said that, based on the obtained averages, schema therapy affects emotional

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dysregulation and dysfunctional attitudes in depressed patients. Consistent with these findings, various studies such as those by Hatami-Sabet, Navabinejad, Khalatbari (2016), Maleki, Nadri, Ashouri, Zahedi (2015), Zarepoosh (2012), Nazari and Ahmadian (2014), Motakalef, Gold, Davis, Sylvia, and Battel (2019), John and Jonathan (2018), Rad et al. (2017), Beck (2016), Segal et al. (2014), Kesler and Olatunji (2012), Saxena, Dube, and Pandey (2011), Halvorsen et al. (2010), Schmidt and Joiner (2004), Wilburn et al. (2002), Schmidt et al. (1995), McGinn et al. (2005), and Yang (1990) align with the above findings.

Schema therapy leads to changes in cognitive, experiential, emotional, and behavioral domains. This approach has been effective by challenging maladaptive schemas and replacing them with more adaptive and healthier thoughts and responses. Improving fundamental and detrimental components such as negative emotions and thoughts, schema therapy appears to contribute to overall improvement in psychological health and, consequently, mental health in individuals. Schema therapy techniques assist patients in reorganizing emotional experiences, exploring new learning, and regulating individual emotions, promoting overall schema improvement.

Given that the emphasis of schema therapy is on emotions and the use of experiential and emotional techniques, it seems that these techniques help individuals become aware of their emotions, accept them, and better regulate their emotions. Emotional techniques aid in reorganizing emotional experiences, learning new skills, regulating individual emotions, and providing a foundation for the proper use of more adaptive emotion regulation strategies. Thus, individuals who participated in the experimental group and received schema therapy have been able to avoid negative emotion regulation strategies by improving emotion regulation skills.

However, it should be noted that the research has some limitations, such as neglecting certain psychological variables (e.g., patient expectations, psychological mindset and insight, concurrent research-related events, patient motivation, research-related stress) and cognitive variables (e.g., economic conditions) that may impact research results. These limitations could jeopardize internal validity. It is recommended that future research pays attention to psychological and cognitive variables to enhance internal validity and, due to the high sample size, either control for or calculate their effects to clarify the pure contribution of the main variables.

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