Razavi Int J Med. 2021; 9(1):e1012 doi:10.30483/rijm.2021.254157.1012

**Published online 2021 March 30** **Original Article**

# Effectiveness of Schema Therapy in Social Anxiety, Rumination, and Psychological Well-Being among Depressed Patients Referred to Health Centers in Abadan, Iran

**Ahmadreza Varmazyar[1], Behnam Makvandi[2*], Naser Seraj Khorrami[3]**

[1] Department of Health Psychology, Khorramshahr- Persian Gulf International Branch, Islamic Azad University, Khorramshahr, Iran

[2] Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran

[3] Department of Psychology, Dezful Branch, Islamic Azad University, Dezful, Iran

[*] ***Corresponding authors:*** Behnam Makvandi, Department of Psychology, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran. E-mail: B.makvandi@iauahvaz.ac.ir, Fax; +989165487964

**Received** 2020 July 15; **Accepted** 2020 December 02.

**Abstract**

**Background**: Depression syndrome includes many symptoms and can have a negative impact on a patient's life. This study aimed to investigate the effectiveness of schema therapy in social anxiety, rumination, and psychological well-being among depressed patients.
**Methods**: This semi-experimental study was conducted based on a pretest-posttest control group design and follow-up. The statistical population of this study included all patients with depression referred to Health Centers in Abadan, Iran, during 2019. In this study, 30 patients with depression who were willing to participate in the study were selected using the convenient sampling method and randomly assigned to experimental and control groups of 15 cases per group. The experimental group underwent schema therapy in 10 sessions of 90 minutes; however, the control group received no treatment. The data were collected using the Beck Depression Inventory, Social Anxiety Inventory, Ruminative Response Scale, and Psychological Well-Being Questionnaire. The obtained data were then analyzed in SPSS software (version 23) through repeated measure analysis of variance.
**Results**: The results showed that schema therapy was effective in rumination (P=0.034), social anxiety (P=0.004), and psychological well-being (P=0.022) among the depressed patients.
**Conclusion**: It can be concluded that schema therapy was effective in rumination, social anxiety, and psychological well-being among depressed patients.

*Keywords*: Anxiety, Depression, Schema therapy

## 1. Introduction

Depression syndrome includes many symptoms that can have a negative impact on the patient's life. This disorder is identified by depressed mood, decreased interest and pleasure, irritability, and sleep disorders (1). Depression is one of the most common psychiatric diagnoses, the growing trend of which has created a major problem for mental health. By 2020, depression is predicted to be the second leading cause of disability after ischemic heart disease (2). Depression is a debilitating disorder, and its prevalence over life reaches up to 12.7% and 21% in males and females, respectively (3).

In Iran, the prevalence rates of mild, moderate, and severe depression among specific populations were estimated at 39.1%, 25.4%, and 14.8%, respectively, which is high, compared to global statistics (4). Moreover, epidemiological studies show that depressive disorder is one of the costliest diseases in the workforce. Patients with depression are approximately 27 times more likely to be exposed to disabilities, compared to healthy people. Therefore, the severity of its impact on society increases over time; accordingly, more attention should be paid to this syndrome (5).

Since depression is debilitating and often chronic and recurrent, it is important to identify risk factors and intervene early (6). In recent years, rumination has been increasingly considered an important component in depression (7). Rumination is distinguishable from other cognitive processes and events, such as negative automatic thoughts, self-focused attention, personal self-awareness, and worry (8). This problem is defined as resistant and recurrent thoughts that bypass a common

subject. Involuntarily, these thoughts enter consciousness and divert attention from the current topics and objectives (9). Many studies indicate the close relationship between rumination thoughts and different types of emotional disorders (10). However, the relationship between rumination thoughts and depression has been an important starting point for addressing the concept of rumination (11).

Social anxiety is one of the most common psychiatric disorders. This type of anxiety is an obvious and constant fear of social or functional situations and comes from the belief that one will behave embarrassingly or humiliatingly in these situations (12). Social anxiety is the fear of situations and interaction with others, which automatically leads to feelings of self-awareness, judgment, evaluation, and criticism. In other words, social anxiety is the fear and anxiety of previous assessments and negative judgments by others that lead to feelings of shame, inferiority, depression, and inadequacy (13).

Well-being is one of the modern psychological constructs of the last century, which includes two words of well (i.e., good and desirable) and being (i.e., existence) (14). Well-being is a quality of life and despite extensive efforts to explain and define this concept, there has been little agreement among authors regarding the provision of a clear definition (15). However, Rayan and Deci (16) proposed the accepted definition of well-being as experiencing the optimal performance. That is, a person who lives well feels satisfied, acts purposefully in relation to the environment, and seeks to flourish his or her capabilities. Psychological well-being refers to a person's perception of psychological balance in life. Furthermore, psychological well-being and life satisfaction have emotional and cognitive components. People with high psychological well-being experience more emotions that are positive and are more optimistic about problems. On the other hand, people with low psychological well-being assess their life situations unfavorably and experience the most negative emotions, such as anxiety, depression, and anger (17).

Young's schema therapy is one of the new methods in the treatment of characterologically difficult patients. Schema therapy is an integrated and new treatment developed by Jung et al. and is mainly based on the development of concepts and traditional cognitive-behavioral therapy methods. In fact, this approach is a supplement to cognitive-behavioral therapy since it has faced problems in the treatment of cognitive personality diseases; accordingly, schema therapy tries to fill this void (18).

The role of childhood in chronic depression is of great importance so that some forms of chronic depression are considered "developmental" origins. On the other hand, the schema therapy approach is based on early maladaptive schemas (19), which includes constant beliefs and patterns that have been created since childhood and adolescence and continue through adulthood. These beliefs show a lot of resistance to change, and one looks at the surrounding world through these beliefs. Therefore, it seems that the schema therapy approach with an emphasis on maladaptive schemas of childhood and adolescents can be useful in the treatment of chronic depression.

The results of studies on depression show that early maladaptive schemas are one of the most important predictors of depression severity during the treatment period after nine years of follow-up (20). With this background in mind, this study aimed to investigate the effectiveness of schema therapy in social anxiety, rumination, and psychological well-being among depressed patients.

## 2. Methods

This semi-experimental study was conducted based on a pretest-posttest control group design and follow-up. The statistical population of this study included all patients with depression referred to the Health Centers in Abadan, Iran, during 2019. In total, 30 patients with depression who were willing to participate in the study were selected and randomly assigned to the experimental and control groups of 15 cases per group. They were then requested to complete the research questionnaires at the pretest and posttest stages. The inclusion criteria were: 1) a minimum level of reading and writing literacy, 2) referral to the comprehensive health centers in Abadan, Iran, 3) resident of Abadan, 4) hearing ability within normal limits, and 5) willingness to attend the treatment sessions. On the other hand, the patients with mental disorders requiring immediate treatment, a history of psychiatric medication consumption, and severe physical disability, as well as those who left the natural course of treatment and were unwilling to continue the study, were excluded from the research procedure.

Regarding the ethical considerations, the research objectives and procedures were explained to all individuals in written form, and they were informed of the right to leave the study at any time. Moreover, all participants were assured of anonymity and confidentiality in this study.

### Beck Depression Inventory:

Beck Depression Inventory (BDI-II) is a revised form of the BDI, which was developed using the depression severity questionnaire (21). The revised form of the Beck Depression Inventory is more consistent with the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (IV-DSM), compared to the initial form. In

addition, the second edition of this questionnaire covers all the elements of depression based on the cognitive theory of depression.

Similar to the first edition, this 21-item questionnaire is rated based on a 4-point Likert scale indicating the severity of the depression symptoms among respondents. Each item is scored within the range of 0-3, and the total score of the questionnaire ranges from 0 to 63. The BDI-II did not include the four domains determined in the previous edition; however, other subscales were added to the newly devised questionnaire. Beck et al. (21) reported the internal consistency of this scale from 0.73 to 0.92 (mean: 0.86). Moreover, the alpha coefficient values of the patient and non-patient groups were obtained at 0.86 and 0.81, respectively.

**Social Anxiety Questionnaire:**

This questionnaire was prepared by Connor et al. for the first time to assess social anxiety. This 17-item self-assessment scale consists of three sub-scales of fear, avoidance substances, and physiological discomfort substances. It should be noted that the scores of each scale can be calculated separately (22).

**Ruminative Response Scale:**

Nolen Hoxma and Marv (1991) developed a self-administered questionnaire that evaluated four different types of negative mood reactions. The ruminative response scale (RRS) was originally developed as a subordinate scale of the response style questionnaire and distraction responses scale. This 22-item scale is rated on a 4-point Likert from 1=never to 4=most of the time (23). Based on the empirical evidence, the RRS obtained high internal reliability. Moreover, the Cronbach's alpha coefficient of this scale ranged from 0.88 to 0.92. Furthermore, the test-retest correlation of RRS was estimated at 0.67 in several studies. The internal consistency of this scale was obtained at 0.88 using Cronbach's alpha coefficient.

**Psychological Well-being Questionnaire:**

The short form of the Ryff Psychological Well-being Scale includes 18 items, of which six subscales measure self-acceptance, positive relationships with others, autonomy, mastery of the environment, purposeful life, and individual growth. The overall score of psychological well-being can be obtained by summing up these components. The participants were asked to rate the items on a 6-point Likert scale from completely agree to disagree to indicate

**Table 1.** Summary of the schema therapy training sessions

| Sessions | Contents |
|---|---|
| **First session** | Explaining the schema model in a simple and clear language; Explaining the ways the early maladaptive schemas were formed, followed by developmental roots and their areas, schema functions, styles, and maladaptive coping responses. |
| **Second session** | Teaching schemas; Conceptualizing the problems of the patients based on the schema-based approach and collecting all the information obtained during the assessment; Identifying disturbed areas of the schema of patients; Investigating the objective evidence; Confirming and rejecting the schemas based on the evidence of the patient's past and current life |
| **Third session** | Teaching two cognitive schema therapy techniques, including tests of schema validation and a new definition of supporting evidence; |
| **Fourth session** | Teaching and practicing two other cognitive techniques; Evaluating the advantages and disadvantages of coping styles of the patients; Making contacts between the different aspects of schema and healthy aspects and learning the responses of the healthy aspects by the patient |
| **Fifth session** | Teaching techniques to provide training cards of the schemas; Writing schema registration form during daily life |
| **Sixth session** | Offering rationale for using the experimental techniques, mental imagery, mental image conceptualization in the form of an imaginary dialogue; Strengthening the concept of the healthy adult in patient's mind; Identifying unsatisfied emotional needs; Fighting against the schema in an emotional level |
| **Seventh session** | Creating opportunities for patients to communicate with parents and identify their needs unsatisfied by parents; Helping the patient to express the blocked emotions induced by the traumatic event; Providing the patient support |
| **Eighth session** | Finding new ways to communicate and giving up the avoidance and excessive compensatory coping style; Providing a comprehensive list of the problematic behaviors; Determining the change priorities; Identifying the therapeutic targets |
| **Ninth session** | Introducing the mental imagery of the problematic situations and dealing with the most problematic behaviors; Practicing the healthy behaviors through imagery; Playing roles and performing tasks related to the new behavioral patterns; Reviewing the advantages and disadvantages of the healthy and unhealthy behaviors. |
| **Tenth session** | Overcoming barriers of the behavioral changes, summary, and conclusion |

**Table 2.** Frequency distribution and comparison of demographic characteristics of the experimental and control groups

| Variables | | Schema therapy | Control | P-value |
|---|---|---|---|---|
| Gender | Female | 12 (80) | 4 (26.7) | 0.33 |
| | Male | 3 (20) | 11 (73.3) | |
| Marital Status | Single | 0 (0) | 1 (6.7) | 1.00 |
| | Married | 15 (100) | 14 (93.3) | |
| Age (year) | 20 to 30 | 5 (33.3) | 0 (0) | 0.43 |
| | 31-40 | 4 (26.7) | 10 (66.7) | |
| | 41-50 | 6 (40) | 5 (33.3) | |

**Table 3.** Mean±SD scores of research variables in the experimental and control groups

| Variable | Group | Pretest | | Posttest | | Follow-up | |
|---|---|---|---|---|---|---|---|
| | | M | SD | M | SD | M | SD |
| Social anxiety | Schema therapy | 32.33 | 9.23 | 22.73 | 6.27 | 21.33 | 6.54 |
| | Control | 31.73 | 8.49 | 31.20 | 8.26 | 30.80 | 7.20 |
| Rumination | Schema therapy | 37 | 3.81 | 31.66 | 3.95 | 31.93 | 3.96 |
| | Control | 37.60 | 4.13 | 37.26 | 4 | 37.46 | 3.96 |
| Psychological well-being | Schema therapy | 58 | 6.36 | 67.40 | 6 | 66.40 | 5.94 |
| | Control | 60 | 4.59 | 60.53 | 4.70 | 60.46 | 4.77 |

the extent they agree with each expression. The total score shows the level of psychological well-being of the individuals. The concurrent validity of this scale has been confirmed using valid depression, anxiety, and stress questionnaires. Cronbach's alpha coefficient of the total items was determined at 0.71 (24). The experimental group (group schema therapy) was asked to participate in 10 weekly sessions for two and a half months. It should be noted that each session lasted 90 min.

The data were analyzed in SPSS software (version 23) through descriptive (mean±SD) and inferential statistics (repeated measure ANOVA). The homogeneity of variances and normality of the data distribution was investigated using Leven's test and Shapiro-Wilk test, respectively. Furthermore, the Mbox test and Mauchly sphericality test were used in this study.

## 3. Results

The descriptive results obtained from this study were represented as mean±SD, number, (frequency), and percentage (Table 2).

Before the administration of the repeated measure ANOVA, the results of Mbox and Levene's tests were evaluated to observe the assumptions. Since the Mbox test showed no significance in any of the variables, the homogeneity of variance-covariance matrices was not rejected in this study. Moreover, the lack of a significant difference in any of the variables according to Levene's test showed that the assumption of parity of inter-group variances was not rejected. Finally, the results of Mauchly's sphericity test revealed the significance of the research variables, and therefore the assumption of variance parity within-subjects (assuming sphericity) was not observed in this study. Therefore, the Geisser Greenhouse test was used to investigate the results of the univariate test for intra-group effects and interactions. Additionally, the Geisser Greenhouse test with a value of 0.21 ($P>0.001$) showed a significant difference between the experimental and control groups regarding the effectiveness of schema therapy in social anxiety, rumination, and psychological well-being at the significant level of 0.05.

According to the results of Table 4, the analysis of variance of social anxiety showed a significant difference with the effect of time ($P<0.001$) and group ($P<0.001$). Moreover, the size of the effect of a group intervention for social anxiety was obtained at 0.26. Analysis of variance of rumination variable for the effect of time ($P<0.001$) and group ($P<0.001$) was also significant, and the effect size of a group intervention for rumination was estimated at 0.18. Furthermore, the analysis of variance of psychological well-being variable for the effect of time ($P<0.001$) and group ($P<0.001$) was significant, and the size of the effect of a group intervention for psychological well-being was determined at 0.17. In other words, there was a significant difference between the experimental and control groups during the research stages, indicating the effect of the intervention. Bonferroni posture test was also utilized to investigate the differences in measurement times, which was presented in Table 4.

As can be observed in Table 5, the experimental group obtained lower scores in social anxiety at the posttest, compared to the pretest ($P<0.001$). The results also showed a significant difference between follow-up and pretest stages in terms of social anxiety scores ($P<0.001$);

**Table 4.** Analysis of repeated measures to investigate the effect of time and group on social anxiety, rumination, and psychological well-being

| Variable | Variable Source | Effect source | F | P-value | Eta |
|---|---|---|---|---|---|
| Social anxiety | Within-subject | Time | 160.63 | 0.001 | 0.85 |
| | | Time*Group | 111.36 | 0.001 | 0.79 |
| | Between subject | Group | 9.99 | 0.004 | 0.26 |
| Rumination | Within-subject | Time | 155.08 | 0.001 | 0.84 |
| | | Time*Group | 123.79 | 0.001 | 0.81 |
| | Between subject | Group | 100.38 | 0.034 | 0.18 |
| Psychological well-being | Within-subject | Time | 124.71 | 0.001 | 0.81 |
| | | Time*Group | 71.43 | 0.001 | 0.71 |
| | Between subject | Group | 5.87 | 0.022 | 0.17 |

**Table 5.** Results of Bonferroni posttest for the paired comparison of mean measurement times of the variables

| Variable | Steps | | Mean difference | Estimation Criteria Error | P-value |
|---|---|---|---|---|---|
| Social anxiety | Pretest | Posttest | -4.46 | 1.11 | 0.001 |
| | | Follow-up | -3.33 | 1.11 | 0.001 |
| | Post-test | Follow-up | 1.13 | 0.59 | 0.105 |
| Rumination | Pretest | Posttest | -2.26 | 0.51 | 0.001 |
| | | Follow-up | -1.93 | 0.51 | 0.001 |
| | Post-test | Follow-up | 0.33 | 0.53 | 0.804 |
| Psychological well-being | Pretest | Posttest | -2.26 | 0.51 | 0.001 |
| | | Follow-up | -1.93 | 0.51 | 0.001 |
| | Post-test | Follow-up | 0.33 | 0.53 | 0.804 |

however, there was no significant difference between posttest and follow-up in this regard. Furthermore, the results revealed that the experimental group obtained lower scores in rumination at the posttest, compared to the pretest (P<0.001). Moreover, there was a significant difference between pretest and follow-up stages in terms of the rumination scores (P<0.001). The results also showed higher scores of psychological well-being obtained by the experimental group at the posttest, compared to the pretest (P>0.001). In addition, a significant difference was found between follow-up and pretest stages in terms of psychological well-being (P>0.001); however, there was no significant difference between posttest and follow-up in this regard. The results indicated that the effectiveness of schema therapy in the follow-up stage was persistent for all three variables of social anxiety, rumination, and psychological well-being.

## 4. Discussion

This study aimed to investigate the effectiveness of group schema therapy in social anxiety, rumination, and psychological well-being among depressed patients. Accordingly, the results showed the remarkable effect of group schema therapy on social anxiety, rumination, and psychological well-being in depressed patients. These findings were in line with the results of the studies conducted by Rezaei et al. (25), Taylor et al. (26), and Thimm et al. (27).

Regarding the effectiveness of schema therapy in the social anxiety of depressed patients, it can be stated that patients with social anxiety in social situations predict heinous consequences in terms of their loss, status, and rejection (18). Schemas always cause bias in human interpretation of events, and these biases appear as misunderstandings, distorted attitudes, false assumptions, as well as unrealistic goals and expectations. Moreover, the human tendency to cognitive harmony causes situations to be misreported in such a way that the schemas are strengthened so that it emphasizes the way that the schema-compatible sedans ignore or undervalue the data they have with the schema (19).

Schema therapy helps the therapist to define the chronic and profound problems of patients more accurately and understandably organize them. In this model, the footprints of schemas are followed by an emphasis on interpersonal relationships of the patients from childhood to the present. The patients can highlight their early maladaptive schemas as inconsistent after the utilization of this scheme. Consequently, they become more motivated to get rid of the problems since they are aware of the existence of early maladaptive schemas. Schemas are assumptions or infrastructural laws that control one's

thoughts and behaviors and have evolved throughout the years of one's life. These assumptions include the content of schemas and all aspects of one's life whether consciously or unconsciously. Furthermore, schemas create the meaning and structure that one gives to the world. They have been formed during the individual's transformation period, which means that they process and filter them in parallel with the person's information about the surrounding environment (20).

Early maladaptive schemas are self-harming emotional and cognitive patterns that are formed at the beginning of the development in one's mind and are repeated in the course of life. Regarding the limitations in this study, one can refer to the lack of several types of research on the effectiveness of this approach in social anxiety and types of aggression. On the other hand, there was no therapist in this study to conduct the training sessions.

Schema therapy takes into account psychological themes that are the characteristics of people with depression and cognitive problems. These themes are known as the primary inefficient schemas that include pervasive and profound matters that are composed of memories, emotions, and physical emotions formed in childhood or adolescence and persist in the course of life and relationship with others. The patients are extremely inefficient in this regard and fight for their survival. Even though they know that schema results in their discomfort, they feel comfortable with it, and this leads them to conclude that their schema is correct.

These schemas are fixed cognitive structures that are embedded in the recovery period. These potential structures are activated by stressful life events to achieve a network. The organized intensity of the stored information presents a largely undesirable person, which accelerates the incidence of the disorder (21).

Considering the effectiveness of schema therapy in the rumination of depressed patients, it can be said that schema therapy improves rumination in depressed patients. Schemas always cause misunderstandings, distorted attitudes, false assumptions, and unrealistic expectations. Based on the studies, it can be concluded that schema therapy training and the utilization of the cognitive and emotional techniques can change early maladaptive schemas and improve rumination by draining emotions and improving negative emotions.

In general, it seems that schema therapy is a comprehensive approach, and perhaps the reason for its superiority over the cognitive approach is its emphasis on different therapeutic approaches during treatment with clients, including behavioral, cognitive, experimental, and relationship therapy approaches. As stated in this approach, the change in the awareness of emotions is emphasized moment by moment, and patients with an experimental approach can communicate with their parents and show their negative emotions in this regard.

In the meantime, the therapist enters and defends the vulnerable child and creates a kind of empathy in him/her, and helps the clients through the utilization of a healthy adult pattern. Moreover, s/he communicates with the affected child and creates a dialogue between them and help depressed patients remember the events that are associated with this feeling in the present and deal with it using a healthy perspective.

It can also be stated that schema therapy helps the therapist define chronic and deeper problems and organize them in an understandable way (22). People can observe their early maladaptive schemas as inconsistent; therefore, they become more motivated to get rid of the problems. As a result, based on the findings in this study, schema therapy can improve rumination in patients with depression.

Regarding the effect of schema therapy on the psychological well-being of depressed patients, it can be stated that schema therapy is an integrated and new treatment mainly based on the development of traditional cognitive-behavioral concepts and methods. Schema therapy deals with the deepest level of cognition and targets maladaptive schemas, and helps people overcome these schemas using cognitive, emotional, behavioral, and interpersonal strategies. The primary goal of this psychotherapy model is to create psychological awareness and increase informed control over schemas. Moreover, its ultimate goal is to improve schemas, thereby enhancing the psychological well-being of depressed patients (23). Several pieces of evidence show that although schema therapy is originally an individually-regulated concept, the presence of group factors facilitates the activation of schema therapy techniques, which has important compensatory effects on the central schemas, such as rejection and cuts, social isolation, mistrust, and emotional deprivation (24).

The possibility of real exposure and linking the primary experiences with the present schema processes can be increased in a supportive environment due to the creation of close relationships and interactions among the members of the group. On the other hand, the self-efficacy sense of risk-taking is also strengthened among the members for new behaviors by increasing the opportunities for successful learning. Accordingly, the members of the group learn to express empathy and meet the emotional needs instead of withdrawing from their emotions. According to the results of schema therapy, self-care in a group (28) can improve the psychological well-being of depressed patients.

This study was conducted only on the population of

depressed patients in the comprehensive health centers in Abadan, Iran. Accordingly, cautions should be regarded in generalizing the results to other regions and cities. It is suggested that further studies be conducted on another population group, and the results are evaluated and compared with the results of this study. Furthermore, future studies are recommended to use a specialist as a therapist and educator to reduce the likelihood of bias in the study. Considering the effect of schema therapy on social anxiety, rumination, and psychological well-being in patients with depression, it is suggested that psychologists use acceptance and commitment training extensively.

## 5. Conclusion

It can be concluded that schema therapy was effective in rumination, social anxiety, and psychological well-being among depressed patients.

## Funding

This study received no specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Authors' contributions

Conceptualization [Ahmad Reza Varmzyar]; Methodology [Behnam Makvandi]; Investigation [Naser Seraj Khorrami]; Writing the Original Draft [Ahmad Reza Varmzyar]; Writing the Review and Editing, [all author]; Funding Acquisition, [all authors]; Resources, [all authors]; Supervision, [Behnam Makvandi].

## Conflict of interest

The authors declare that they have no conflict of interests.

## Acknowledgments

The authors would like to appreciate the participants who greatly cooperated in conducting this study.

## References

1. Abbasi M, Aghighi A, Porzoor P, Dehqan M. Comparison of early maladaptive schemas and psychological well-being in women undergoing cosmetic surgery and normal women. Journal of Research and Health. 2017 Apr 10;7(3):841-9.
2. Ashoori J. Comparing the effectiveness of meta-cognitive therapy and schema therapy on decrease symptoms of anxiety and depression in nursing and midwifery students. Journal of Arak University of Medical Sciences. 2015 May 10;18(2):50-61.
3. Bach B, Lockwood G, Young JE. A new look at the schema therapy model: organization and role of early maladaptive schemas. Cognitive behaviour therapy. 2018 Jul 4;47(4):328-49.
4. Balsamo M, Carlucci L, Sergi MR, Murdock KK, Saggino A. The mediating role of early maladaptive schemas in the relation between co-rumination and depression in young adults. PloS one. 2015 Oct 21;10(10):e0140177.
5. Bamelis LL, Evers SM, Spinhoven P, Arntz A. Results of a multicenter randomized controlled trial of the clinical effectiveness of schema therapy for personality disorders. American Journal of Psychiatry. 2014 Mar;171(3):305-22.
6. Carter JD, McIntosh VV, Jordan J, Porter RJ, Frampton CM, Joyce PR. Psychotherapy for depression: a randomized clinical trial comparing schema therapy and cognitive behavior therapy. Journal of affective disorders. 2013 Nov 1;151(2):500-5.
7. Fassbinder E, Schweiger U, Martius D, Brand-de Wilde O, Arntz A. Emotion regulation in schema therapy and dialectical behavior therapy. Frontiers in psychology. 2016 Sep 14;7:1373.
8. Ghaderi F, Kalantari M, Mehrabi H. Effectiveness of group schema therapy on early maladaptive schemas modification and reduce of social anxiety disorder symptoms. Clinical Psychology Studies. 2016 Nov 21;6(24):1-28.
9. Gheisari M. The effectiveness of schema therapy integrated with neurological rehabilitation methods to improve executive functions in patients with chronic depression. Health Science Journal. 2016;10(4):1.
10. Gojani PJ, Masjedi M, Khaleghipour S, Behzadi E. Effects of the schema therapy and mindfulness on the maladaptive schemas hold by the psoriasis patients with the psychopathology symptoms. Advanced biomedical research. 2017;6.
11. Halvorsen M, Wang CE, Eisemann M. Dysfunctional attitudes and early maladaptive schemas as predictors of depression: A 9-year follow-up study. Cognitive Therapy and Research. 2010 Aug 1;34(4):368-79.
12. Hashemi R, Darvishzadeh K. Effectiveness of group schema therapy in reducing the symptoms of major depression in a sample of women. Asian Soc Sci. 2016;12:232-8.
13. Hawke LD, Provencher MD, Parikh SV. Schema therapy for bipolar disorder: A conceptual model and future directions. Journal of Affective Disorders. 2013 May 15;148(1):118-22.
14. Hemmati Sabet V, Rohani Shahrestani N, Ahmadpanah M. The effectiveness of schema therapy in reducing aggression and social anxiety in adolescents of Hamedan City aged 17 to 18 years. Shenakht journal of psychology & psychiatry. 2016 Aug 10;3(2):82-93.
15. Khaleghi M, Leahy RL, Akbari E, Mohammadkhani S, Hasani J, Tayyebi A. Emotional schema therapy for

generalized anxiety disorder: a single-subject design. International Journal of Cognitive Therapy. 2017 Dec;10(4):269-82.
16. Leahy RL. Emotional schema therapy. Guilford Publications; 2015 Apr 6. 2018.
17. Schaap GM, Chakhssi F, Westerhof GJ. Inpatient schema therapy for nonresponsive patients with personality pathology: Changes in symptomatic distress, schemas, schema modes, coping styles, experienced parenting styles, and mental well-being. Psychotherapy. 2016 Dec;53(4):402.
18. Maleki Z, Naderi I, Ashoori J, Zahedi O. The effect of schema therapy on reducing symptoms of anxiety and depression in nursing and midwifery students. The Journal of Medical Education and Development. 2015 Jun 10;10(1):47-56.
19. Mohammad Nezhady B, Rabiei M. The effect of schema therapy on quality of life and psychological well-being in divorced women. Journal of Police Medicine. 2015 Dec 10;4(3):179-90.
20. Mouchan R, Bahmani B, Askari A. The Effectiveness of Schema Therapy on Reducing Symptoms of Emotional Breakdown. Health Sciences. 2016 Jan 1;5(9S):1-1.
21. Pourzabih S, Meschi F, Bahredar M. Effectiveness of schema therapy on quality of life and psychological well-being of women heads of households. International Journal of Medical Research & Health Sciences. 2016;5(11):697-700.
22. Quirk SW, Wier D, Martin SM, Christian A. The influence of parental rejection on the development of maladaptive schemas, rumination, and motivations for self-injury. Journal of psychopathology and Behavioral Assessment. 2015 Jun 1;37(2):283-95.
23. Renner F, Lobbestael J, Peeters F, Arntz A, Huibers M. Early maladaptive schemas in depressed patients: Stability and relation with depressive symptoms over the course of treatment. Journal of affective disorders. 2012 Feb 1;136(3):581-90.
24. Renner F, Arntz A, Peeters FP, Lobbestael J, Huibers MJ. Schema therapy for chronic depression: Results of a multiple single case series. Journal of behavior therapy and experimental psychiatry. 2016 Jun 1;51:66-73.
25. Rezaei M, Ghadampur E, Kazemi R. Effectiveness of emotional schema therapy on rumination and severity of depression in patients with major depressive disorder. Journal of Clinical Psychology. 7(4):45-59
26. Taylor CD, Bee P, Haddock G. Does schema therapy change schemas and symptoms? A systematic review across mental health disorders. Psychology and Psychotherapy: Theory, Research and Practice. 2017 Sep;90(3):456-79.
27. Thimm JC. Relationships between early maladaptive schemas, mindfulness, self-compassion, and psychological distress. International Journal of Psychology and Psychological Therapy. 2017;17(1):3-17.
28. Farrell JM, Shaw IA, Webber MA. A schema-focused approach to group psychotherapy for outpatients with borderline personality disorder: a randomized controlled trial. Journal of behavior therapy and experimental psychiatry. 2009 Jun 1;40(2):317-28.