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# The Effectiveness of Schema Therapy on Emotional Inhibition and Response to Stress in Young Girls with Symptoms of Generalized Anxiety Disorder

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## ABSTRACT

**Objective**: The objective of the study was to examine the efficacy of schema therapy in addressing emotional inhibition and response to stress among young individuals diagnosed with generalized anxiety disorder.

**Methods**: This research employed a semi-experimental design with a pre-test-post-test structure, including a control group. The statistical population for this study consisted of all young girls seeking assistance at the Afaq counseling center in 2022 due to psychological issues. Participants were randomly divided into two groups, with each group containing 15 individuals (15 in the control group and 15 in the experimental group). Data collection was conducted using the Affective Control Scale (Williams et al., 1997) and the Stress Response Inventory developed by Koh et al. (2001).

**Results**: The findings of the research demonstrated that schema-based therapy has a positive impact on emotional inhibition and response to stress in young girls with GAD ($P < 0.05$).

**Conclusions**: The results generally indicate that schema therapy has the capacity to assist individuals in producing more suitable reactions to stressful situations and managing their emotional state through the modification of their cognitive processes and interpretation of events.

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## Introduction

Research conducted by Rehman and Shahnawaz (2021) reveals that individuals with symptoms of generalized anxiety disorder exhibit distinct responses to stressful situations in their dreams compared to individuals without anxiety disorders. These responses can be characterized as unrealistic reactions to stress, thereby necessitating further investigation into the stress response within this particular group. Stress, defined as pressure or any stimulus that induces tension in humans, is inversely related to both physical and mental health. Moreover, stress can give rise to various adverse effects such as headaches, insomnia, a weakened immune system, mood swings, and diminished concentration (Amani Shurbariki, 2016). According to process-oriented conceptual models in the field of stress research, the concept of biological-psychological reactivity to stress, or individual differences in response to stressful situations, is a key component of the quantitative pattern of variability in vulnerability to stress-related factors (Lewisen et al., 2017). The response to perceived stress represents a quality that underlies individual differences in both physiological and psychological reactions to stress (Amani Shurbariki, 2016). In simpler terms, the response to perceived stress can be regarded as a trait that defines relatively stable individual differences in the way people respond to stressful experiences, remaining relatively constant and stable over time. Furthermore, research indicates that individuals with symptoms of generalized anxiety disorder encounter difficulties in regulating their emotions, which in turn has a reciprocal relationship with their stress response (Claire et al., 2020). Consequently, it becomes imperative to examine emotional regulation within this group. Emotions serve as a crucial and intrinsic aspect of human life, to the extent that it becomes challenging to fathom a life devoid of emotions. The characteristics and fluctuations of emotions, as well as the ability to convey and comprehend the emotions of others, play a pivotal role in the development and organization of one's personality, moral progression, social interactions, and the formation of identity and self-concept (Hoffman, et al., 2019). All individuals experience emotions throughout their lives, and it is completely natural to exhibit varying emotions in response to different situations. However, the presence of extreme negative emotions and affective states is not only atypical but also counterproductive, as they can have detrimental and harmful effects (Hossein Zaei, 2014). Excessive expression of emotions contributes to disharmony, aggression, anger, hatred, and anxiety, which, when left uncontrolled, severely jeopardizes the mental and emotional well-being of individuals (Respondek, et al., 2017).

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Rather than suppressing emotions altogether, it would be more beneficial to mitigate the impact of emotional reactions, thereby affording individuals ample opportunities for making sound decisions, exercising foresight, and fostering creativity (Qaedi, 2015.(

Other researchers have confirmed that people with symptoms of generalized anxiety disorder have developed unreasonable thoughts that are spontaneous or repetitive and cause harassment and disturb the mental peace of this group. Repetitive thinking is also necessary in this research. Repetitive thinking or mental rumination is defined as resistant and recurring thoughts that revolve around a common topic; These thoughts enter consciousness in an involuntary way and divert attention from the desired topics and current goals (Baranik, et al., 2017). According to the theory of Martin and Tisser (1996), repetitive thinking is a general term to refer to various types of repetitive thoughts, and also a whole category of thoughts that tend to be reversible (Fuchs and Tang, 2017). Nalen-Hoeksma ( 1993) defines mental rumination as a reference of repeated and recurring thoughts about depression symptoms and the meaning of these symptoms and the possible outcome of these symptoms (Dehghani, 2012). According to Nalan-Hoksma, repetitive thinking is a characteristic state and stability. On the other hand, Labamirski's definition of mental rumination is similar to Nalen-Hoeksma's definition. He considers mental rumination to be a way to deal with negative moods, the main feature of which is self-focus. Also, from his point of view, repetitive thinking is an ineffective coping method, the use of which has various side effects, such as reducing the ability to solve problems and creating negative thoughts (Shushtari, et al., 2015.(

According to the above explanations, it was found that generalized anxiety disorder is a disorder that has symptoms and there are also variables (response to stress, emotional inhibition, repetitive thinking) that cause the exacerbation and continuation of the symptoms of this disorder, but what seems more important is the design of interventions that are effective on the mediating variables of generalized anxiety disorder, and in this way, the symptoms of this anxiety can be reduced to a certain extent and help affected people to enjoy life more and be less disturbed and Anxiety is involved. Among the interventions whose effectiveness has been proven in various researches (Soleimani, 2018; Mohammadi, 2016; Javanmardi, 2016; Keshavarz, 2015; Tyler, B. and Hadok, 2017), but less used for research variables, is treatment It is based on schema. Schemas, assumptions or underlying laws are the ones that control a person's thoughts and behaviors and

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have evolved over the years of a person's life (Mousavi Asal and Mousavi Sadat, 2013). The content of schemas includes all aspects of a person's life, whether consciously or unconsciously, and creates the meaning and structure that a person is born with (Arnetz and Jacob, 2017). In other words, schemas are considered as dysfunctional fundamental beliefs that are activated by an attack (Pugh, 2015). Typically, the basic goals in schema therapy are to identify primary maladaptive schemas, validate maladaptive emotional needs, and change beliefs. ineffective and incompatible schemas for better performance, changing life patterns and incompatible coping styles and providing an environment for learning adaptive skills (Zareposh, 2018). Researchers consider the core of early maladaptive schemas to be entitlement, emotional deprivation, and deficiency, which underlies a wide range of problems for people who become anxious for no reason (Lahey, 2015.( In line with the above explanations, the present study was formed with the aim of answering the question whether schema-based therapy can be effective on emotional inhibition and response to stress in young girls with symptoms of generalized anxiety disorder.

## Materials and Methods

The current research employed a semi-experimental pre-test and post-test design with a control group. The statistical population consisted of all the female individuals who sought assistance at the Afaq counseling center in Shiraz during the period of 2023 due to psychological issues. The study sample included 30 young women, aged between 18 and 30 years, who sought help at Afaq Shiraz Counseling Center and were diagnosed with symptoms of generalized anxiety disorder by the center's psychologist. The participants were randomly assigned to two groups: a control group of 15 individuals and an experimental group of 15 individuals. The inclusion criteria for the sample were: being a female between the ages of 18 and 30, having a diagnosis of generalized anxiety disorder from the center's psychologist, and willingness to cooperate with the researcher. The exclusion criteria were: absence from more than 2 educational sessions, presence of acute mental disorders other than generalized anxiety disorder, and addiction to alcohol and drugs. Furthermore, the training sessions should not cause any disturbances.

### Instruments

**Affective Control Scale:** The questionnaire used to measure the inhibition of emotions is Affective Control Scale (ACS). ACS was developed by Williams et al. (1997) and was translated into Farsi by Jafar Anisi (2009). This scale consists of four subscales: anger, depressed mood,

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anxiety, and positive affect, and it serves as a tool to assess individuals' control over their emotions. The internal validity and test-retest reliability for the total scores of the scale were reported as 0.94 and 0.78, respectively. The internal validity and test-retest reliability for the anger subscale were 0.72 and 0.73, for the depressed mood subscale were 0.91 and 0.76, for the anxiety subscale were 0.89 and 0.77, and for the positive affect subscale were 0.84 and 0.66, respectively. The questionnaire is self-administered, and respondents rate their agreement with the statements on a seven-point scale ranging from "strongly disagree" (score 1) to "strongly agree" (score 7). The numbers corresponding to the statements on the scale are as follows: Anger: 1, 8, 11, 16, 28, 30, 34, 39 Depressed mood: 3, 4, 13, 19, 25, 27, 29, 37 Anxiety: 5, 7, 9, 15, 17, 20, 21, 24, 26, 33, 35, 38, 40 Positive emotion: 2, 6, 10, 12, 14, 18, 22, 23, 31, 32, 36, 41, 42. The responses for statements 4, 9, 12, 16, 17, 18, 21, 22, 27, 30, 31, and 38 are scored on a separate sheet. In this scoring system, a score of 7 indicates strong disagreement, while a score of 1 indicates strong agreement. In this research, the researcher used content validity to obtain the validity of the test. In measuring content validity, a replication test was given to a number of professors and education experts and their opinions were collected and the results showed that there is a collective agreement on it. Farshad (2015) also used Cronbach's alpha coefficient to determine the reliability of this questionnaire and the results showed that the overall reliability of the test was 0.94 and for each of its four components the reliability values were 0.713 respectively. 0.79, 0.743 and 0.787 were obtained.

**Stress Response Inventory:** The stress response inventory was developed by Koh et al. in 2001 with the purpose of investigating the various dimensions of stress, including emotional, physical, cognitive, and behavioral aspects. This assessment is a self-report measure, requiring individuals to rate their experience of each symptom using a Likert scale ranging from none (0) to completely (4). Consisting of 39 items, the stress response questionnaire encompasses 7 subscales: tension (6 items), aggression (4 items), anger (6 items), depression (8 items), fatigue (5 items), failure (7 items), and physical activity (3 items). To calculate the overall score for each scale, the scores of the corresponding subscales are summed. The reliability of this questionnaire was evaluated using Cronbach's alpha coefficient, yielding a value of 0.215. Test-retest reliability after a three-week interval was also assessed, involving a sample size of 62. To establish the differential validity of the test, measures such as sensitivity, specificity, and positive predictive value were calculated

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using a cut-off point of 82, while the convergent validity was examined through correlations with the total assessment scale, perceived stress questionnaire, and CS-90. SRI demonstrated significant associations with all 7 subscales and the total score, indicating its validity. Psychometric properties were evaluated in terms of reliability (Cronbach's alpha coefficient) and validity (correlation with general evaluation scales of recent stress, perceived stress questionnaire, and SCL R-90). Again, significant correlations were observed between the stress response questionnaire and the various measures. Furthermore, the differential validity was assessed, with sensitivity, specificity, and positive predictive value being calculated using a cut-off point of 82. The sensitivity was found to be 57%, specificity was 74%, and positive predictive value was 71%. In addition, comparison between the normal and patient control groups revealed significantly higher scores in the patient group (Koh et al., 2001).

**Research implementation method**

The research was conducted by visiting the Afaq Consulting Center after obtaining written permission from the university and securing approval from the authorities. The researcher selected the study sample and distributed the questionnaires among them for data collection (pre-test). Subsequently, intervention based on schema therapy was provided, and after the completion of the training, the questionnaires were administered again to the sample group. The collected data were analyzed using SPSS software (version 26) and subjected to multivariate analysis of covariance.

**Intervention program:** The educational-therapeutic protocol consisted of 8 sessions and each session lasted 90 minutes and was held once a week.

**Table 1**. Summary of schema therapy sessions (Yang et al., 2003)

| Session | Content |
|---|---|
| 1 | Communicating and empathizing, how primary maladaptive schemas are formed, schema functions and maladaptive coping styles - teaching abandonment/instability schema, expressing the signs and symptoms of this schema, characteristics of people who fall into this schema, methods of treating abandonment schema stability/instability, presenting the task to each member of the group to present the signs that indicate that they have this schema and to implement the methods of dealing with it that they have learned, and to discuss it in the next meeting. |
| 2 | Evaluating the initial situation of the group, conceptualizing the subject's problem according to the schema-based approach - providing feedback on the task presented and hearing the opinions of the group members - getting to know the schema of mistrust - misbehavior - expressing the characteristics and signs of people in whom this schema is active - providing practice And the task of the group members includes identifying the symptoms of this schema - completing the questions related to this schema and providing feedback in the next meeting. |

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| | |
|---|---|
| 3 | Acquaintance and understanding of schema therapy concepts and how to use it, its developmental roots and areas - hearing feedback from group members regarding mistrust schema - misbehavior and the exercises done - familiarizing group members with emotional deprivation schema, expressing the characteristics and signs of people in whom this schema is active Presenting the task of identifying the symptoms of this schema in each member of the group and performing the exercises provided for the purpose of treatment. |
| 4 | Accurate and scientific learning of primary maladaptive schemas, listening to group members' points of view about the schema of emotional deprivation, checking their views on the exercises provided, familiarizing group members with the schema of defect/shame, expressing the symptoms and signs of people who fall into this schema. The reason for the formation of this schema is to present a task to the group members regarding the schema of defect/shame |
| 5 | Getting to know the areas of primary maladaptive schemas and their diagnosis, identifying the disturbed areas of the relevant schema, hearing the feedback of the group members regarding the defect/defect/same schema and the exercises, familiarizing the group members with the schema of social isolation, expressing the symptoms and signs of the people who are in this schema. The receivers and the reason for the formation of this schema, presenting the task to the group members about the schema of social isolation |
| 6 | Recognizing ineffective coping responses with personal experiences, writing a schema registration form during daily life and when the schemas are triggered - receiving feedback from the group members regarding the exercise presented around the social isolation schema, teaching the dependence/incompetence schema and introducing this schema to the group members, expressing The signs and symptoms that each of these group members face and provide the task to the group members about the dependency/incompetence schema. |
| 7 | Recognizing and diagnosing maladaptive personality schemas, creating an opportunity to identify feelings towards parents and helping them release their blocked emotions - receiving feedback from group members regarding the exercise presented around dependency/incompetence schema, teaching failure schema and introducing this schema to group members, expressing symptoms And the symptoms that each member of the group is facing and giving the task to the members of the group about the failure schema |
| 8 | Modifying schemas and inefficient coping styles, finding new ways to communicate and giving up coping styles, avoiding giving in and extreme coercion - replacing healthy and efficient behaviors instead of maladaptive behaviors, mental imaging of problematic situations, and practicing healthy image behaviors creating, performing roles and doing related tasks, reviewing the advantages and disadvantages of behaviors - listening to the points of view of group members, checking the signs and symptoms of the schemas taught, evaluating the effectiveness of schema therapy, overcoming obstacles to changing behavior, summarizing and drawing conclusions - doing the post-test and Appreciation of the participants |

## Results

The mean and standard deviation of the pre-test and post-test scores of emotional inhibition and response to stress in the two experimental and control groups are presented in Tables 2 and 3.

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Table 2. Statistical description of emotional inhibition scores in pretest and posttest of experimental and control groups

| Group | Variable | Pretest | | Posttest | |
|---|---|---|---|---|---|
| | | Mean | SD | Mean | Sd |
| **Control** | Anger | 27.93 | 4.61 | 28.03 | 4.73 |
| | Depressed mood | 25.53 | 3.13 | 25.89 | 3.25 |
| | Positive emotion | 50.86 | 2.79 | 50.97 | 2.55 |
| | Anxiety control | 48.93 | 3.83 | 48.74 | 3.89 |
| | Total | 153.25 | 14.36 | 153.63 | 14.42 |
| **Experimental** | Anger | 28.90 | 4.35 | 33.66 | 3.99 |
| | Depressed mood | 25.05 | 3.11 | 29.20 | 2.87 |
| | Positive emotion | 51.80 | 2.99 | 59.33 | 2.30 |
| | Anxiety control | 49.66 | 3.73 | 52.54 | 3.01 |
| | **Total** | **155.41** | **14.18** | **174.73** | **12.16** |

In Table 2, the descriptive statistics related to the mean and standard deviation of the emotional inhibition scores separately for the experimental and control groups are shown in two stages of measurement (pre-test and post-test). As can be seen, in the control group, the average scores in the pre-test and post-test phases do not show much change. While in the experimental group, we see a greater increase in scores in the post-test than in the pre-test.

**Table 3**. Statistical description of stress response scores in pretest and posttest of experimental and control groups

| Group | Variable | Pretest | | Posttest | |
|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD |
| Control | Anger-aggression | 7.23 | 1.92 | 7.86 | 1.36 |
| | Tension | 8.13 | 1.21 | 8.38 | 1.35 |
| | Frustration | 8.51 | 1.69 | 8.93 | 1.32 |
| | Depression | 16.18 | 1.91 | 15.13 | 1.91 |
| | Fatigue-somatization | 10.99 | 1.39 | 10.63 | 1.45 |
| | Total | 51.31 | 7.92 | 50.99 | 6.23 |
| Experimental | Anger-aggression | 8.13 | 1.82 | 6.39 | 1.14 |
| | Tension | 8.15 | 1.15 | 6.67 | 1.41 |
| | Frustration | 8 | 1.22 | 7.01 | 1.10 |
| | Depression | 15.37 | 1.74 | 11.19 | 1 |
| | Fatigue-somatization | 11.02 | 1.39 | 8.70 | 1.51 |
| | Total | 50.67 | 8.32 | 39.96 | 7.01 |

In Table 3, the descriptive statistics related to the mean and standard deviation of the stress response variable scores separately for the experimental and control groups are shown in two

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stages of measurement (pre-test and post-test). As can be seen, the average scores of the control group in the post-test compared to the pre-test do not show much difference. While in the experimental group, we see a greater drop in scores in the post-test compared to the pre-test.

Multivariate Analysis of Covariance (MANCOVA) was used to investigate the effectiveness of schema-based therapy on emotional inhibition and its dimensions (anger, depressed mood, anxiety, and positive affect) in young people with generalized anxiety disorder. The results of this test are given in table 4.

**Table 4**. The result of homogeneity of covariance matrix (Box-M) of emotional inhibition

| Box's M | F | DF1 | DF2 | p |
|---|---|---|---|---|
| **6.69** | 0.94 | 5 | 5790.30 | 0.63 |

As can be seen in Table 4-, the significance level of the Box's M test is equal to 0.637. Since this value is greater than the significance level (0.05) required to reject the null hypothesis, our null hypothesis of homogeneity of the covariance matrix is confirmed.

**Table 5**. Results of the Kolmogorov-Smirnov test to check the normality of the distribution of scores of emotional inhibition

| Variable | Pretest | | Posttest | |
|---|---|---|---|---|
| | Z | P | Z | P |
| Anger | 0.150 | 0.88 | 0.13 | 0.83 |
| Depression | 0.11 | 0.86 | 0.10 | 0.90 |
| positive affect | 0.09 | 094 | 0.14 | 059 |
| Anxiety | 0.12 | 0.74 | 0.02 | 0.92 |
| Emotion inhibition | 0.11 | 0.73 | 0.03 | 0.79 |

Table 5 shows the results of the Kolmogorov-Smirnov test to check the normality of the distribution of pre-test and post-test scores. Based on the results listed in the table, the significance level of the calculated statistics for all variables is greater than 0.05, so the assumption of normality of the distribution of scores is accepted.

**Table 6**. The result of Levine's test to check the homogeneity of variances

| Variable | F | DF1 | DF2 | P |
|---|---|---|---|---|
| Anger | 0.88 | 1 | 28 | **0.39** |
| Depression | 0.004 | 1 | 28 | **0.88** |
| positive affect | 2.66 | 1 | 28 | **0.16** |
| Anxiety | 1.01 | 1 | 28 | **0.18** |
| Emotion inhibition | 0.98 | 1 | 28 | **0.51** |

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As shown in Table 6, the results of Levin's test are not significant in any of the variables. Therefore, our null hypothesis based on the homogeneity of the variance of the variables is confirmed.

**Table 7**. Results of multivariate covariance analysis of schema therapy training on emotional inhibition

| Effect | Test | Value | F | DF1 | DF2 | P | Effect size | Power |
|---|---|---|---|---|---|---|---|---|
| Group | Pillai's trace | 0.69 | 48.25 | 5 | 31 | 0.001 | 0.53 | 0.56 |
| | Wilks' lambda | 0.69 | 48.25 | 5 | 31 | 0.001 | 0.53 | 0.56 |
| | Hotelling's trace | 9.71 | 48.25 | 5 | 31 | 0.001 | 0.53 | 0.56 |
| | Roy's largest root | 9.71 | 48.25 | 5 | 31 | 0.001 | 0.53 | 0.56 |

As can be seen, the significance level of all four relevant multivariate statistics, namely Pillai's effect, Wilks's lambda, Hotelling's trace and the Roy's largest root, is equal to 0.001 ($p<0.05$), it was also observed that the coefficient of effect All four multivariate statistics are equal to 0.53. In this way, the statistical null hypothesis was rejected and it was determined that there was a significant difference between the two groups in the scores for comparing the overall scores. Therefore, to determine the effect of the post-test, an inter-group comparison test was used in the MANCOVA, the information of which is presented in table 8.

**Table 8**. The results of the intergroup comparison test to compare the experimental and control groups in the post-test

| Variable | SS | DF | MS | F | P | Effect size |
|---|---|---|---|---|---|---|
| Anger | 921.31 | 1 | 921.31 | 51.42 | 0.001 | 0.56 |
| Depression | 625.33 | 1 | 325.33 | 48.29 | 0.001 | 0.52 |
| positive affect | 416.78 | 1 | 416.78 | 59.32 | 0.001 | 0.58 |
| Anxiety | 293.71 | 1 | 293.71 | 41.46 | 0.001 | 0.48 |
| Emotion inhibition | 1428.14 | 4 | 1428.14 | 48.25 | 0.001 | 0.53 |

The findings of the analysis of covariance in Table 8 indicate that the observed difference between the average overall score and all dimensions of emotional inhibition in the post-test phase was significant ($P<0.05$). Therefore, schema-based treatment training in the post-test phase of the experimental group had a significant effect on the overall scores and dimensions of the dependent variable of the research in youth with generalized anxiety disorder symptoms; Therefore, the hypothesis of the research about the effect of schema-based treatment on the emotion inhibition, anger, depressed mood, positive emotion and anxiety is confirmed.

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In order to investigate the effectiveness of schema-based therapy on the response to stress and its dimensions (anger-aggression, tension, frustration, depression, fatigue-somatization) in young people with symptoms of generalized anxiety disorder, the multivariate analysis of covariance (MANCOVA) test used.

**Table 9**. The result of homogeneity of covariance matrix (Box-M) of response to stress

| Box's M | F | DF1 | DF2 | p |
|---|---|---|---|---|
| 5.35 | 0.89 | 6 | 4697.51 | 0.51 |

As can be seen in Table 9, the significance level of the box test is equal to 0.510. Since this value is greater than the significance level (0.05) required to reject the null hypothesis, our null hypothesis of homogeneity of the covariance matrix is confirmed.

**Table 10**. Results of the Kolmogorov-Smirnov test to check the normality of the distribution of scores of response to stress

| Variable | Pretest | | Posttest | |
|---|---|---|---|---|
| | Z | P | Z | P |
| Anger-aggression | 0.21 | 0.59 | 0.20 | 0.59 |
| Tension | 0.15 | 0.58 | 0.13 | 0.71 |
| Frustration | 0.10 | 0.63 | 0.14 | 0.63 |
| Depression | 0.12 | 0.55 | 0.53 | 0.58 |
| Fatigue-somatization | 0.38 | 0.69 | 0.41 | 0.64 |
| Response to stress | 0.45 | 0.71 | 0.92 | 0.49 |

Table 10 shows the results of the Kolmogorov-Smirnov test to check the normality of the distribution of pre-test and post-test scores. Based on the results listed in the table, the significance level of the calculated statistics for all variables is greater than 0.05, so the assumption of normality of the distribution of scores is accepted.

**Table 11**. The result of Levine's test to check the homogeneity of variances of response to stress

| Variable | F | DF1 | DF2 | P |
|---|---|---|---|---|
| Anger-aggression | 0.68 | 1 | 28 | 0.41 |
| Tension | 0.74 | 1 | 28 | 0.64 |
| Frustration | 0.51 | 1 | 28 | 0.50 |
| Depression | 0.29 | 1 | 28 | 0.48 |
| Fatigue-somatization | 0.12 | 1 | 28 | 0.19 |
| Response to stress | 0.99 | 1 | 28 | 0.72 |

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As shown in Table 11, the results of Levin's test are not significant in any of the variables. Therefore, our null hypothesis based on the homogeneity of the variance of the variables is confirmed.

**Table 12**. Results of multivariate covariance analysis of schema therapy training on response to stress

| Effect | Test | Value | F | DF1 | DF2 | P | Effect size | Power |
|---|---|---|---|---|---|---|---|---|
| Group | Pillai's trace | 0.69 | 26.91 | 6 | 28 | 0.001 | 0.54 | 0.69 |
| | Wilks' lambda | 0.69 | 26.91 | 6 | 28 | 0.001 | 0.54 | 0.69 |
| | Hotelling's trace | 3.52 | 26.91 | 6 | 28 | 0.001 | 0.54 | 0.69 |
| | Roy's largest root | 3.52 | 26.91 | 6 | 28 | 0.001 | 0.54 | 0.69 |

As can be seen, the significance level of all four relevant multivariate statistics, namely Pillai's trace, Wilks's lambda, Hotelling's trace and the Roy's largest root, is equal to 0.001 ($p<0.05$), it was also observed that the coefficient of effect All four multivariate statistics is equal to 0.53. In this way, the statistical null hypothesis was rejected and it was determined that there was a significant difference between the two groups in the scores for comparing the overall scores. Therefore, to determine the effect of the post-test, an inter-group comparison test in MANCOVA was used. The information of which is presented in table 13.

**Table 13**. The results of the intergroup comparison test to compare the experimental and control groups in the post-test

| Variable | SS | DF | MS | F | P | Effect size |
|---|---|---|---|---|---|---|
| Anger-aggression | 54.62 | 1 | 54.62 | 41.41 | 0.001 | 0.58 |
| Tension | 625.33 | 1 | 625.33 | 48.29 | 0.001 | 0.52 |
| Frustration | 416.78 | 1 | 416.78 | 59.32 | 0.001 | 0.58 |
| Depression | 293.71 | 1 | 293.71 | 41.46 | 0.001 | 0.48 |
| Fatigue-somatization | 613.89 | 1 | 613.89 | 38.88 | 0.001 | 0.53 |
| Response to stress | 1428.14 | 1 | 1428.14 | 48.25 | 0.001 | 0.54 |

In Table 13, the results of the inter-subject effects test are shown to compare the response to stress in the experimental and control groups at the post-test stage. According to the results presented in the table 13, the F value obtained for all variables is significant at the 0.05 level ($p<05$). Therefore, the statistical null hypothesis is rejected and the negative hypothesis is confirmed. Considering the lower average scores of the experimental group in the post-test, it can be concluded that schema-based treatment on the response to stress and its dimensions (anger-aggression, tension, frustration,

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depression, fatigue-somatization) in young people with symptoms of generalized anxiety disorder have been effective.

## Discussion

The aim of the present study was the effectiveness of schema-based therapy on emotional inhibition and response to stress in young girls with generalized anxiety disorder. The results showed that schema-based therapy had a significant effect on emotional inhibition and response to stress in young girls. In relation to the significant effect of schema-based therapy on emotional inhibition and its dimensions in young girls with symptoms of generalized anxiety disorder, research investigations showed that this finding is partially consistent with the results of Khodabandelu (2015) and Tyler et al. (2017).

It can be posited that schema-based therapy has a significant impact on emotional inhibition and its various dimensions in young girls exhibiting symptoms of generalized anxiety disorder. This therapeutic approach takes into account the modification of root schemas, including those that impede emotional control. Schemas such as incompetence, abandonment, defects, and shame fall into this category. Many clients perceive their ability to manage and regulate their emotions as lacking, thereby struggling to effectively navigate their emotional reactions. Cognitive reconstruction and the replacement of destructive schemas with constructive ones are the focal points of this treatment process. By diminishing the influence of schemas and instilling positive thoughts and beliefs, individuals are given the opportunity to constructively manage their emotions in the real world. The therapist, once confident in the members' ability and motivation to manage their inner emotions, creates situations that elicit emotional responses during therapy sessions. In these situations, members first gain insight into their internal emotions and subsequently determine how to express and manage them. The pause in emotions expression during these exercises allows for reflection and rationalization, leading to the most suitable and optimal reactions. Gradually, this process reduces the utilization of destructive emotional impulses, such as anger, sadness, and excessive worry, while enhancing the experience of positive emotions. As members realize their capacity to experience positive emotions and manage their emotions even in stressful situations, their perseverance and motivation to continue the recovery process greatly increases. As a result,

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the emotional management ability of this group improves significantly in normal and anxiety-inducing situations, thereby facilitating and expediting their emotional growth, particularly in terms of their emotional dimension.

Regarding the significant effect of schema-based therapy on the response to stress and its dimensions in young girls with symptoms of generalized anxiety disorder, research investigations showed that this finding is partially consistent with the result of Morvaridi (2015).

In elucidating the noteworthy impact of schema-based therapy on the response to stress and its dimensions in young girls exhibiting symptoms of generalized anxiety disorder, it can be posited that the schema approach places considerable emphasis on the type of reaction to stressful circumstances. This approach is therapeutically oriented. Within this framework, the fundamental factor in the emergence of detrimental reactions to both natural and stressful situations lie in the rootedness of certain schemas. The principal methodology employed in this approach to dismantle these deleterious schemas is cognitive reconstruction, which involves the substitution of strategies that facilitate the realization of goals, such as visualization and positive self-talk. Throughout the course of this therapeutic process, the therapist assessed the members' reaction types to stressful situations. Among the most prevalent reactions were tension, aggression, anger, depression, fatigue, and failure. These reactions and their deleterious effects were thoroughly elucidated for the members during the process of dialogue. This elucidation greatly bolstered their motivation to address these thoughts. The therapist, in collaboration with the members themselves, concentrated on the thoughts that served as the precursor to these reactions and endeavored to weaken them as an objective, relying on the tactic of cognitive reconstruction. The reduction in the intensity and permeation of these thoughts in individuals, coupled with their replacement by more realistic thoughts and beliefs, constituted a factor that ameliorated individuals' reaction types to stressful situations. Moreover, the utilization of imagery and positive self-talk in stressful situations had the capacity to enhance the members' ability to manage their cognitive system, as well as their emotional reactions in stressful situations, and thereby alleviate tension. The internal faculties of individuals play a consequential role in this regard.

The outcomes of this research indicated that schema-based therapy yields a significant impact on emotional inhibition and stress response in young girls who exhibit symptoms of generalized

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anxiety disorder. However, it is worth noting that a limitation of this research lies in its exclusive focus on girls, neglecting the consideration of boys. Furthermore, it is essential to recognize that this study was conducted solely in Shiraz, thus posing limitations on the generalizability of the findings to other cities. To address these limitations, future research should explore the efficacy of this approach on boys, while also investigating various age groups. Additionally, active counseling centers at the community level are encouraged to incorporate schema-based therapy to enhance emotional inhibition and stress response in individuals with generalized anxiety disorder and other anxiety disorders. By employing this approach to ameliorate these negative symptoms, the severity of anxiety disorders within this population can be mitigated, leading to enhanced performance in various aspects of life, particularly in the social domain.

### Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

### Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

### Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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### Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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