

Comparison of the Effectiveness of Gestalt Group Therapy and Psychodrama Therapy on Cognitive Flexibility of Female Para-Medical Students with Social Anxiety Disorder

Masoumeh Zare¹, Shahrokh Makvand Hosseini^{2,*}, Parviz Sabahi²

¹Department of Psychology, Semnan Branch, Islamic Azad University, Semnan, Iran

²Department of Clinical Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan, Iran

* **Corresponding author:** Shahrokh Makvand Hosseini. Department of Clinical Psychology, Faculty of Psychology and Educational Sciences, Semnan University, Semnan. Email: shmakvand@semnan.ac.ir

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Abstract

Background: Social anxiety has long been related to reduced cognitive flexibility, and this feature is seen as a factor of social anxiety disorder.

Objectives: The present study aimed to compare cognitive flexibility among patients with social anxiety disorder with two methods of Gestalt therapy and psychodrama among female para-medical students at Tehran University of Medical Sciences, Tehran, Iran, in 2020-2021.

Methods: This quasi-experimental study uses a before-and-after design that includes two experimental groups, one control group, and a follow-up period. The statistical population of this study consisted of female para-medical students from the Iranian Medical University, Tehran, Iran, in the second semester of the 2020-2021 academic year. A total of 75 individuals were selected through purposive sampling and were randomly assigned into two test groups and one control group (n=25 per group). An acceptance and behavioral questionnaire (AAQ-2) was administered. Group 1 received Gestalt group therapy, Group 2 was treated with the psychodrama therapy group, and the control group received no treatment. Eight sessions lasting 1.5 h were planned for each intervention. Multivariate analysis of covariance was performed to analyze the collected data using SPSS software (version 24).

Results: The obtained results revealed a varying average scores for the cognitive flexibility component before, immediately after, and later after the test in the pre-test, post-test, and follow-up periods ($P < 0.05$). Moreover, the mean scores of emotional experience avoidance and life control were not significantly different between the two groups in the pre-test, post-test, and follow-up stages.

Conclusion: Based on the results of the present study, it can be concluded that psychodrama therapy is a multidimensional therapy that affects not only individuals and their emotions but also the environment and the relationship between them. Therefore, these aspects significantly improve the overall health level of the population.

Keywords: Cognitive flexibility, Gestalt group therapy, Psychodrama therapy, Social anxiety disorder

1. Background

Many people experience social anxiety disorder, a psychological condition, (1) which is the third most common psychiatric disorder after major depressive disorder and alcohol-related disorders, which is characterized by a persistent and intense fear of negative evaluation in one or more social or interactive situations (2). Anxiety disorders are identified as the most common psychiatric disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (3). Global prevalence estimates include a 12-month prevalence of 2.4% and a lifetime prevalence of approximately 4% (4). People affected by anxiety disorders experience acute anxiety or fear of specific social situations (5), which can affect social relationships, academic performance, work productivity, and overall quality of life (6,7). In addition, anxiety disorders are characterized by early onset and can become chronic if left untreated. Patients suffering from anxiety disorders are at an increased risk for comorbid disorders, particularly major depression and substance abuse (8). People who have a lot of social anxiety feel nervous, shy, or not at ease in many different social situations (2). Establishing and maintaining friendships and

integrating into society becomes challenging, leading to a deterioration in the quality of life and potential emotional distress, including feelings of isolation, sadness, and thoughts of self-harm (9). Studies indicate that cognitive flexibility has an impact on the relationship between anxiety and impulsivity (10). In addition, cognitive flexibility has been investigated in anxiety disorders and related problems (11, 12).

Cognitive flexibility means adapting one's thinking and behavior in response to changes in environmental conditions (13). In other words, cognitive flexibility refers to a person's awareness of the existence of other options in a specific situation and the desire to be flexible and adapt to the environment (14). It is thought that cognitive flexibility reflects the lack of awareness of options when unexpected situations occur and the inability to adapt to such challenges. The lower the level of cognitive flexibility, the higher the level of anxiety (15). For people who have a high level of flexibility, changing conditions is considered a positive challenge because they accept new conditions and choose the best solution to adapt to their conditions and growth (16). Research has shown that cognitive flexibility is effective in situations, career, and academic progress of students (17). In the case of a lack of cognitive flexibility, a person suffers from

problems such as depression, anxiety, rumination, worry, and inability to plan long-term goals (18). Since cognitive flexibility is related to mental health, it is important to target clinical interventions to increase flexibility (16). In terms of etiology, the factor that helps maintain social anxiety disorder is a cognitive bias toward others. Attention, focus, understanding, and interpretation that a person has in a potential interaction are among these biases (19). This disorder is among the most common disorders, which can cause significant costs for mental health treatment centers if left untreated. It seems important to explore other methods other than drug treatment to improve the mentioned variables in these people. There are various treatment methods, including psychodrama. Psychodrama is an approach to therapy through drama. Through theatrical techniques, patients and therapy seekers can discover and resolve underlying emotional and behavioral concerns (20). The basic hypothesis in this therapeutic approach is that acting helps individuals to deal with their problems and express their emotions, bring their deep conflict to the level of awareness, and finally face them in their environment and the group face is effective in improving social people living with anxiety, the researcher should investigate their claim (21). Many studies have proven that this approach works well. For instance, the stress caused by COVID-19 was reduced in students with autism disorder (11). Similarly, people with anxiety disorder experienced less depression (22-23). Additionally, a 19-year-old high school student's fear of math was reduced (24), which helped a 10-year-old boy with social anxiety feel less anxious in social situations (20).

Moreover, Gestalt therapy is a type of psychotherapy that emphasizes the people's experiences in the present and therapeutic relationships and the environment in which they live, and the main goal is to achieve awareness. This awareness includes knowing the environment and themselves and accepting the ability to establish it in communication (23). By gaining awareness, people can face and accept the denied parts of their mind and fully experience them; thereby becoming integrated and complete and moving in a specific direction (24). The effectiveness of this approach has been proven in various studies. For example, Gestalt group therapy increases university students' awareness and supports their development (25), which positively affects social anxiety (26).

2. Objectives

Based on the information provided, it is known that social anxiety is a common condition that causes significant distress for those who have it. The lack of cognitive flexibility contributes to the development of social anxiety. In the current research, we attempted to improve cognitive flexibility by finding the right

methods. It is also expected that the results of the present study to be a strategy for consultants and pave the way for future research.

3. Methods

This semi-experimental study used a before and after trial design with two experimental groups, a control group, and a follow-up period. The statistical population of this study included female medical students from the Iranian Medical University in Tehran during the second semester of the 2020-2021 academic year. A total of 21 participants were estimated using G* Power software. The groups were compared using t-tests, considering factors such as the magnitude of the effect, the likelihood of committing an error (at a significance level of 0.05), and the effectiveness of the tests (0.8). However, more subjects were selected to account for the population decline. Therefore, 75 paramedical students from the Iranian Medical University were randomly selected and divided into two groups for testing and randomly placed into another group with no changes (25 people per group). Criteria for entry into the study included that participants were not undergoing psychotherapy, were not taking medication for at least one year prior to study initiation, and gave consent to participate in the study (written informed consent was obtained). Moreover, they were female students with chronic and co-occurring chronic conditions, disorders with social anxiety, minimum age of 18 years and maximum age of 45 years. Exclusion criteria included participants who were required to take medication throughout the duration of the study, those who did not complete the questionnaires, and individuals who missed multiple sessions. To conduct this study, we first received a letter of referral for data collection from Semnan Azad University, Semnan, Iran, which was submitted to the Vice-Chancellor of Research of the Iranian Medical University and the referral of the Iranian Medical University, followed by the Social Unrest along with the following questionnaire. Prior to their agreement to participate in the study, participants were presented with the divided parts of the survey on social anxiety disorder. After each individual agreed to participate in the study, written informed consent was obtained, and the study results were announced to be reported anonymously. In addition, the same treatment process was followed for three months by informing control group participants of their need for treatment at the end of the research project.

A total of 75 subjects were randomly selected, divided into two experimental groups, and assigned into the control group (25 subjects in each group). Subsequently, preliminary tests were carried out for all three groups. Participants completed the second edition Acceptance and Behavior Questionnaire

(AAQ-2) before applying the experimental variables, with Group 1 receiving Gestalt group therapy (27) (Table 1) and Group 2 receiving psychodrama. The treatment group (28) (Table 2) and the control group received no treatment. Both interventions consisted of 8 sessions per week, each session lasting 1.5 h. In the third phase, at the end of the treatment, follow-up tests were carried out in the experimental and control groups. A re-examination took place two months later. Data analysis was only performed on 61 patients (17 in the Gestalt group and 19 in the psychodrama group) since eight in the Gestalt group and six in

the psychodrama group did not participate. Data from the questionnaires of this study were collected before and after the test and analyzed in two descriptive and inferential sections (Multivariate Analysis of Covariance Tests (MANCOVA)) using SPSS software (version 24). Prior to implementation, mixed ANOVA assumptions “tests for observation independence, normality of distribution of dependent variables, homogeneity of variance, and sphericity” were tested across groups and A P-value of more than 0.05 was considered statistically significant. The CONSORT diagram is shown in Figure 1.

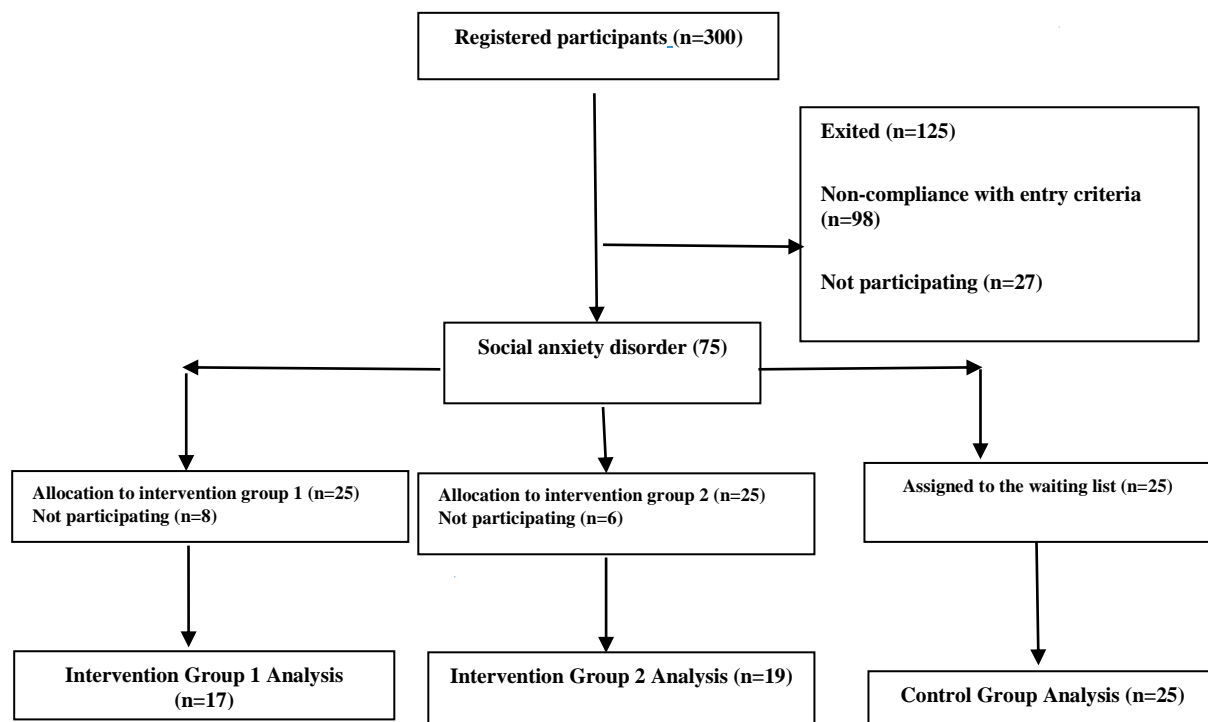


Figure 1. Flow diagram of the study

Leibovitz Antisocial Anxiety Disorder Questionnaire (LSAS)

This questionnaire consists of 24 items, of which 13 are related to performance anxiety and the remaining 11 are related to anxiety in social situations. Individuals must respond to inquiries regarding their level of anxiety and fear (29). The survey gives an overall score divided into low (24-32 points), medium (32-64 points), and high (64 points and above). This scale indicates retest reliability ($r=0.83$), good internal consistency (Cronbach's alpha 0.95), very good internal consistency (alpha 0.81 to 0.92), and acceptable confidence in convergence (29). Cronbach's alpha on tests is given as 0.95 on a performance anxiety scale of 0.82 and 0.91 for avoidance behavior (29). Furthermore, the reliability and reproducibility of this questionnaire and its subscales ranged from $r=0.76$ to -0.84 in the Iranian sample, and its internal consistency (Cronbach's

alpha) was recorded between 73 and 93, as well as the convergent validity of this and other indicators is higher acceptable for social anxiety ($r=0.46$, -0.94) (30). Cronbach's alpha for this survey was 0.74.

Acceptance and Action Questionnaire (AAQ-II)

Bond et al. created the second version of this questionnaire. The revised version of the original AAQ-I questionnaire contains merely 10 items (31). This survey measures a concept that relates to having different experiences, being open-minded and accepting, avoiding negative thoughts and feelings, and being able to adapt to changes in life. Higher scores on this survey mean that a person has more psychological flexibility. The scoring is determined using a scale from 1 (strongly disagree) to 7 (strongly agree). The main psychometric characteristics are as follows: the results of 2,816 participants during six samples showed that this tool has good validity and

reliability, the average alpha coefficient is 0.84 (0.88-0.78), and the retest reliability is three and 12

months apart (32). The reliability score for this questionnaire in this study was 0.72.

Table 1. Gestalt Therapy Session Overview

Meeting	
First	Learn about the people in the group and their leader. Understand the principles and rules for working together in Gestalt therapy. Also, hear about the leader's thoughts on social anxiety.
Second & third	Introduce the concept of consciousness and encourage participants to be present. People were then taught to focus on and describe their physical sensations and emotions. Each participant explained their body sensations, emotions, and their turning technique. Hotspots, taking responsibility, evaluating work in progress, and expressing personal feelings for all participants were introduced and implemented.
Fourth & fifth	Review past issues using hyperbole techniques to take responsibility. Use this technique to address personality poles and identify factors that lead to social anxiety.
Sixth & seventh	In these meetings, we solved the problems of the group members. Then, we used a method called reversal to show people what it's like to have social anxiety. We also used something called the hot seat fan to express the feelings and emotions that come with social anxiety. I have made. In this task, participants were asked to use the reversal technique, identifying and writing down the negative aspects and then doing them in reverse order. In Session 7, we asked them to think about what topics they would like to discuss in the next group.
Eighth session	At this meeting, after the participants completed their assignments, the leader and group members summarized their comments and the work done in the group and finally, the group members conducted the post-tests.

Table 2. Overview of a Psychodrama Therapy Session

Meeting	
First	We begin by detailing our approach to psychodrama, introducing group rules and intimacy, the need for trust and secrecy within the group, introducing participants to ball-throwing techniques, and using mirror fans. Then ask participants to comment and suggest solutions.
Second	Warm-up phase, footwork phase: demonstration of negative memories, use of reverse role play technique, and mirror fans.
Third	Use non-dominant writing techniques during the warm-up phase. Use reverse role-playing techniques to observe yourself through the eyes of others and acquire new attitudes. It also uses self-talk and mirror-mirror techniques to increase self-awareness, ultimately making it difficult for participants to provide feedback.
Fourth	In the execution phase, as a successful person, you use the methods of future prediction and the methods of self-talk to become more aware of your thoughts.
Fifth	To prepare for using the Magic Shop Techniques, use Self-Realization Techniques to help people understand their goals and ask members for feedback.
Sixth	The process begins with a warm-up where storytelling techniques are used. Then, participants act out scary situations to make them feel fearful. They also use a mirror technique during this phase. Finally, participants are involved in discussing and giving feedback on their experiences.
Seventh	The first phase uses a commercial advertising approach, while the second phase uses the box of hope approach and allows participants to share their opinions.
Eighth	The Magic Shop Technique warm-up during the execution phase consists of applying self-actualization techniques to help people achieve their ideals and then asking members for feedback.

4.Result

The results in (Table 3) indicate that the three groups have similar numbers when it comes to age, education level, and marital status. The Chi-square test results also show that the differences between the three groups for age, education level, and marital status variables are not significant ($P>0.05$).

The sphericity assumption of the covariance test was not confirmed ($P>0.05$). For a more accurate approximation, the Greenhouse-Geisser criterion was used to control life (Mauchly's $W=0.46$; $P=0.001$), and lack of sphericity assumptions to avoid emotional experiences (Mauchly's $W=0.001$) is used; $P=0.45$ calculated value= 0.001).

Table 3. Demographic features of the two experimental groups and the control group

	Demographic information	Gestalt therapy	Psychodrama therapy	Control	χ^2	sig
Age	18 to 27 years	5	5	8	0.24	0.98
	28 to 37 years	8	10	12		
	38 to 45 years	4	4	5		
Grade	Masters	4	3	5	1.30	0.86
	senior	10	14	15		
	P.H.D	3	2	5		
Marital status	Single	5	6	10	0.60	0.74
	married	12	13	15		

Based on (Table 4), the mean values in the Gestalt Therapy and psychodrama groups changed in both areas in the post-test period compared to before the test. According to the information

gathered in a chart, Gestalt group therapy and Psychodrama therapy help improve people's ability to think in different ways if they have social anxiety.

Table 4. Results of the mean in the Gestalt therapy group and the psychodrama therapy group in the post-test stage

Group	Variable	Indicator	Pre-test	Post-test	Follow up
Gestalt group therapy	Avoiding emotional experiences	Mean	21.06	27.88	28.12
		SD	4.07	3.50	3.28
Psychodrama therapy	Avoiding emotional experiences	Mean	20.95	26.63	28.11
		SD	4.01	3.83	3.68
Control	Avoiding emotional experiences	Mean	22.16	20.80	22.72
		SD	4.24	6.14	7.68
Gestalt group therapy	Control over life	Mean	10.29	14.88	14.41
		SD	2.11	2.39	2.60
Psychodrama therapy	Control over life	Mean	11.68	14.16	13.74
		SD	3.16	2.12	2.66
Control	Control over life	Mean	11.32	11.12	12.12
		SD	2.69	3.92	3.99

(Table 5) shows that, for intragroup factors, the F value calculated for the effects of the periods (pre-test, post-test, and follow-up) is significant at the threshold of 0.05. Therefore, there was a significant difference between the mean scores of the pre-test, post-test, and follow-up of the cognitive flexibility component in the three stages of treatment periods. To investigate the difference between the mean of the processing steps, Bonferroni's follow-up test was

calculated. The results showed a significant difference between the cognitive flexibility component scores in the pre-test, post-test, and follow-up periods ($P < 0.05$).

In addition, no significant difference was observed between the cognitive flexibility component scores in the post-test period compared with the next period; therefore, the cognitive flexibility component scores at the follow-up did not change significantly ($P < 0.05$).

Table 5. Mixed variance analysis test of scores of cognitive flexibility components with Greenhouse-Geisser criterion

Control over life		Statistical index	SS	df	MS	F	Sig	Eta
Cognitive flexibility	Avoiding emotional experiences	Agents	37.1368	1.29	1062.30	64.50	0.001	0.57
		Within-group	28.21	1.29	16.52	1.00	0.34	0.02
		Interactive	44.61	1.00	61.44	2.50	0.12	0.05
	Control over life	Between groups	37.357	1.30	275.08	40.80	0.001	0.46
		Within-group	48.25	1.30	19.61	2.91	0.08	0.06
		Interactive	94.2	1.00	2.94	0.32	0.58	0.01

5. Discussion

This study aimed to compare the components of cognitive flexibility in patients with social anxiety disorder with psychodrama and Gestalt therapy in female medical students from the Iranian University of Medical Sciences. According to the results and comparison between the two groups of Gestalt therapy and psychodrama, there were significant differences in the components of cognitive flexibility. The results of the study confirmed the effectiveness of Gestalt therapy in several ways in this study: in almost all cases, there was a change in the indicators of the variables, which was clinically significant. Statistically significant results obtained in the study show that Gestalt therapy can be a suitable alternative to other effective approaches (26). By checking the research background, no study was found that exactly matches the findings of this research. Therefore, to compare and contrast the studies and explain the findings, we tried to cite studies that were conducted even in a similar field to this research (26). A study found that the Gestalt method can be useful for children and adolescents in many areas. These include expressing emotions, resolving conflicts, connecting with a therapist, feeling good, confident, and communicating well. It can also reduce

feelings of sadness, anxiety, and trauma symptoms in children and their parents (33).

The effectiveness of Gestalt therapy is not limited to anxiety and depression disorders and the disorders that have been mentioned. Therefore, in a study conducted by Mokriyala et al., the use of the Gestalt therapy approach alone and in combination with cognitive behavioral therapy has been effective in reducing the intensity of pain and increasing the hope of women with breast cancer (34). Considering that people with social anxiety disorders have negative and catastrophic evaluations and interpretations of physical feelings, it leads to a quick trigger for anxiety, which in turn increases anxious feelings. Therefore, it can be concluded that a person's assessment of a stressful situation plays a decisive role in its subsequent consequences. When people with social anxiety are exposed to social situations, their physiological arousal increases (35). In these people, facing scary and scary stimuli leads to an anxiety reaction, such as panic, interruption, short breathing, and heart palpitations (36, 37), which these people interpret as a sign of danger or anxiety. Interpretation bias in people with a social anxiety disorder is more than in normal people, and cognitive estimation and

executive functions in people with social anxiety disorder are defective compared to healthy people. Therefore, therapeutic approaches that emphasize the centrality of flexibility in such cognitive biases can be fruitful to help these people. It seems that according to the basics of Gestalt therapy and the components of cognitive flexibility, this approach can significantly increase cognitive flexibility. One of the most used techniques in Gestalt therapy is using the empty chair fan. "Empty Chair" is the most famous Gestalt technique for experiential experimentation. This technique is a way to reveal things in consciousness, to examine opposite polarities and internal projections. This technique expresses the experience of the references and becomes a way to identify and re-acquire the neglected features. The empty chair is also a great way to look for interpersonal dynamics and try to test new behavior (26).

The approach of psychodrama has also been confirmed in different research. Limited number of studies were found that examine the exact components and variables of this research. For example, Hamidi and Hasanpour Khademi showed that the experimental group had a significant decrease in social anxiety and interpersonal sensitivity scores after the end of the sessions compared to the control group (38). When people switch roles, they have to think about and understand how the other person thinks, and then they get to see themselves being acted by someone else. Trying to see things from someone else's perspective can help fix how you see yourself. Because of this bigger change in how we see things, role reversal can be a better way to learn than role-playing. Based on this idea, a recent small study looked at how psychodrama therapy can help patients with social anxiety disorder by changing their negative thoughts and perceptions (39). In explaining these results, it can be said that psychodrama therapy improves people's social skills (expressing themselves, expressing positive and negative emotions, etc.) using drama techniques. Practicing these adaptive behaviors in the psychodrama process can improve students' social skills; it effectively reduces the negative cases of social interactions and thus reducing students' anxiety (22). This statistical cohort included only female paramedical students from the Iranian Medical University in Tehran. Therefore, care must be taken when transferring research results to students in other cities. Analysts prescribed encourage consideration of other tests to generalize us comes about. It is suggested for future considerations to combine interventional and subjective information collection strategies to permit a more detailed examination of patients with social anxiety disorder.

6. Conclusion

Based on the findings of this research, it can be

concluded that psychodrama therapy is a multidimensional therapy that affects not only the individuals and their emotions but also their environment and interpersonal relationships, and by influencing all these dimensions significantly improves the overall level of a person's health. By recognizing and controlling their emotions in interpersonal situations and better application of this learning in increasing social skills and establishing better relationships, people can get more compatibility with different situations and roles. During the sessions, the type of cooperation and willingness of the participants in the treatment was not completely the same, and some participants withdrew from the sessions, which is one of the limitations of the research. In this research, only questionnaires were used to collect information, and due to operational limitations, interviews were not used to collect research data. It is suggested that in future research, the effectiveness of Gestalt therapy and psychodrama approaches along with other new couple therapy approaches (e.g., story therapy, solution-oriented, and behavioral-eclectic approaches) on cognitive flexibility be investigated. It is recommended that the interventional methods of the present study should be combined with qualitative data collection methods and provide a basis for a deeper examination of patients suffering from social anxiety.

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The Research Ethics Committee of the Islamic Azad University, Semnan Branch, has approved this study (ethical code: IR.IAU.SEMNAN.REC.1401.009).

Conflicts of interest

The authors have declared no conflicts of interest.

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