

Effectiveness of Psychodrama on the Body Image of Senior High Female Students in Tehran, District 15

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ABSTRACT

Introduction: In this study the effect of psychodrama on body image of female students at secondary school has been examined.

Method: In this quasi experimental study, all the female students at secondary school who were studying at high school in academic year 2016-2017 in Tehran were selected as a statistical society. Among the high schools in Tehran's 15th district, one school was selected by Purposive sampling method. They were examined by the Multidimensional Body-Self Relationships Questionnaire (MBSRQ). 24 female students were randomly selected and assigned to experimental and control groups. Then, 8 sessions of 1.5 hours of psychodrama were performed for the experimental group, but the control group did not receive any intervention. In addition to descriptive statistics, Multivariate analysis of covariance were performed to evaluate the effectiveness of the psychodrama on the body image of students and the SPSS-25 software was used for all the analyses ($p < 0.05$).

Results: In this analysis, the second-year high school student participants were adolescent girls with an average age of 14.34 years. The results the study showed The Mean \pm SD of physical satisfaction component had more change from pre-test (25.08 ± 3.65) to post-test (32.50 ± 4.85). Moreover, The Mean \pm SD of the body image increased from pre-test (144.50 ± 12.33) to post-test (16.165 ± 12.96).

Conclusion: Psychodrama had remarkable improvement on body image of female students who were selected in this research

Keywords: Psychodrama, Body image, Adolescents

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Introduction

Adolescence is a stage of transition from childhood to adulthood, which is accompanied by rapid and unexpected experiences in the psychological, physical, cognitive, and social aspects of one's life. Adolescents often experience pubertal changes at the time of transition, during which there is an increased risk of dropout, behavioral and motivational problems, and school mismatch (1). In addition to life stresses, a wide range of other concepts such as beliefs, values, ideals, and commitment are important at this stage. In these conditions, the psychological and social adjustment of the individual is strongly affected by the stability of self-concept and self-image (2). Significant physical and social changes characteristic of this period can lead to the creation of a negative image of the body (3).

The results of previous research showed that behavioral disorders and anxiety about body deformity in adolescents are directly related to their body image, and statistically, this is more common in adolescent girls(4) This concept determines the relationship with friends, social activities and self-esteem in adolescents and young people(5). Negative body image in adolescents is also associated with low self-esteem, changes in eating habits such as diets, or taking medications and dietary supplements to control weight (6). This concept is associated with depression and anxiety, and provides the basis for eating disorders and suicidal thoughts(7) Mental health is also one of the concepts related to body image in female adolescents(8). Considering the above mentioned cases and the importance of positive body image formation during adolescence, which can be an important factor in preventing from various psychological disorders in adolescence and adulthood, psychological interventions are necessary(9), which can be provided individually or in groups. Psychodrama is a kind of group therapy which combines psychotherapy and social skills, shows psychological problems, includes improvised scenes in which the members are not actors, there is no predetermined text, and each person plays his private life(10)

The psychodrama approach provides an environment in which members discover their emotional and mental state, and have an exceptional opportunity to relive their own experiences.(11) The psychodrama approach uses mental imagery, imagination, physical actions, and group dynamics. It is a combination of art, play therapy, emotional sensitivity, and explicit thinking that facilitates the release of trapped emotions, offering new and more effective behaviors and ways of opening up. Undiscovered helps resolve conflict as well as understanding one's own form (12) Moreno, the founder of psychodrama, sees language not as the only way to communicate with the world, but also as a perfect way to connect and eliminate worries. Psychodrama is a group method for behavior modification which is relationship-oriented. Moreno believes that if the client knows that the release of inner thoughts and unspoken emotions in any form will be tolerated by the therapist, he/she will willingly display them and feel calm (13). In this case, psychodrama helps to develop the treasury of individual maps and related behavioral skills and, by encouraging spontaneous references to the present, here and now, leads them to respond appropriately to new situations or the old ones (14) In this way, the authorities role play their conflicts instead of talking about them. In other words, the person, without previous practice, plays his/her role and releases his/her emotions such as anger, sadness, and joy. In order to achieve these goals, the psychoanalyst uses various tools and techniques such as me, directing, stage, imitation, role inversion, mirror, monologue, realization, and other techniques.

Numerous studies have been conducted regarding psychodrama's effectiveness on various topics with respect to mental health. For example, the effectiveness of this approach can increase empathy and reduce social anxiety (15), decrease emotional and cognitive fear of school and increase participation and cooperation in school to overcome the school fear (16), reduce anxiety symptoms, increase the quality of life, and improve

social functioning in patients with panic disorders (17), reduce the severity of symptoms in patients with depression (18), and clinical symptoms, and improve the quality of life in students with psychological problems (19), increase conflict resolution skills (20), reduce symptoms associated with bulimia and anorexia (21), increase emotional self-awareness in adolescent girls with psychological distress (22), reduce social anxiety and increase self-esteem and psychological well-being of students with social anxiety disorder (23), reduce depression and its symptoms in patients recovering from addiction (24). With a review of the theoretical background and research conducted in this field, and given that the girls are more concerned about their bodies based on their socialization and gender stereotypes, they can be encouraged to look at their physical changes more positively during puberty.

On the other hand, by reviewing the researches, it can be seen that the effectiveness of the psychodrama approach on the body image of adolescent girls in the country has not been investigated. Therefore, considering the importance of building a positive body image in adolescents, which can prevent from psychological damage in adolescence and adulthood, this study was aimed to evaluate the effect of psychodrama on body image of adolescent girls. Therefore, the main question of the present study was whether or not psychodrama had an effect on negative body image in adolescent girls.

Method

In this quasi-experimental study, all the senior high female students from 2016-2017 in Tehran were considered as the statistical population. Among the high schools in Tehran in district 15, one school was selected by convenience sampling method. There were 160 senior high students in this school. They were evaluated by the Multidimensional Body-Self Relationships Questionnaire (MBSRQ). The results indicated that the score of 90 students was less than the two-third of the total score of the questionnaire. Out of 90 people, 24 were randomly selected and assigned to

experimental and control groups. Finally, 24 participants were randomly assigned to experimental and control groups from among those who fulfilled the study's eligibility requirements. Then, 8 psychodrama sessions of 1.5 hours, were provided for the experimental group, but the control group did not receive any intervention. The socio-demographic questionnaire and (MBSRQ) were completed in the interviews. After administering the questionnaire (multidimensional body-self relationship) out of 160 students, 90 scored less than two-thirds of the total score of the questionnaire (less than 180). Of those, 24 who met the inclusion criteria were randomly assigned to two groups of 12, experimental and control.

Inclusion criteria included: not participating in individual group therapy sessions, or psychological training classes 6 months before the research, not having severe and chronic mental and physical disorders, consent to participate, and commitment to attend the group sessions.

Exclusion criteria included: missing two sessions of training, incomplete questionnaire, and dissatisfaction with participation in the study.

After calculating the scores of pre-test and Post-test in the 2 groups, At the descriptive level, mean and standard deviation and Multivariate analysis of covariance were performed to evaluate the effectiveness of the psychodrama on the body image of students and the SPSS-25 software was used for all the analyses (Table 1) ($p < 0.05$).

Multidimensional Body-Self Relations Questionnaire- Appearance Scales (MBSRQ-AS 34). The MBSRQ-AS is composed of five scales with good psychometric properties: (a) appearance evaluation with 6 items, which assesses beliefs and feelings of satisfaction or dissatisfaction with one's appearance (b), appearance orientation with 12 items, assesses the extent of one's cognitive-behavioral investment in one's appearance (c), overweight preoccupation with four items, assesses fat anxiety, consciousness, dieting and dietary restraint (d), self-classified weight with two items, assesses how one perceives one's weight status, from very underweight to very overweight, and (e) body

areas satisfaction, with nine items, assesses satisfaction or dissatisfaction with specific body areas and physical attributes (i.e., face, hair, lower torso, mid torso, upper torso, muscle tone, weight, height, overall appearance) (5). Each item is scored on a 5-point scale and evaluated agreement (from 1: “definitely disagree” to 5: “Definitely agree”), frequency (from 1: “never” to 5: “very often”), or satisfaction (from 1: “very dissatisfied” to 5: “very satisfied”). For items related to self-classified weight, participants used the scale from 1: “very underweight” to 5: “very overweight”. In Iran Cronbach’s alpha coefficient for total scale was 0.83 (25). In this study, Cronbach’s alpha and total subscales of face evaluation, face orientation, fitness assessment,

fitness orientation, mental weight and physical satisfaction, were respectively obtained as 0.73, 0.76, 0.77, 0.84, 0.80, 0.73, 0.95.

Description of the Content and Structure

To conduct this research, first, the structure and design of the psychodrama sessions were decided (13). The schedule was determined based on the objectives of the session, its timing, and duties and activities of the therapist and the participants. Thus, the members of the experimental psycho-experimental group were examined in 8 sessions of one and a half hour with an emphasis on improving body image. The control group was not intervened and only pre-test and post-test were performed on them.

Table 1. Content and Treatment Sessions

Schedule of psychoanalytic sessions

Session 1: Getting to know the leader and group members. Introducing and describing the group's goals. Specifying the structure of meetings and explaining the rules to the group members.

Session 2: Familiarity of members with the psychological structure of drama, role-play and techniques of monologue, pair work, helper and mirror

Session 3: Introducing the members to the body image, discussing their feelings towards their body image and addressing the problem presented by the first person

Session 4: Discussing the formation of body image and addressing the problem presented by the first person

Session 5: The variables and factors influencing the body image and addressing the problem presented by the first person

Session 6: Puberty and adolescence and its effects on body image, and addressing the problem presented by the first person

Session 7: Awareness of the body image and accepting it as it is

Session 8: Closing session of the group, examining the feelings and experiences of the members

Statistical Analysis

Mean and standard deviation indices were used to describe the research variables, and then to determine the significance of the differences, independent t-tests were used to compare the pre-test groups and also to compare the post-test groups. Before performing the statistical analysis, the assumptions of normality, homogeneity of variance and Homoscedasticity were examined, all of which indicated the establishment of the assumptions. Since there were two experimental and control groups in the present study and we were looking to compare the post-test scores of the variables after

controlling the effect of the pre-test variables (as covariates), multivariate analysis of covariance (MANCOVA) and univariate analysis of covariance (ANCOVA) was used. All the assumptions of the analysis of covariance model were examined step by step according to the Tutorial article (25).

Results

In this analysis, the second-year high school student participants were adolescent girls with mean (SD) of age was (14.34 ± 1.15) years. As can be seen in Table 2, body image scores have significantly changed.

Table 2. Descriptive Characteristics of Pre-test and Post-test Scores by the Control Group (n = 12)

| Test | Variable | Groups | | Mean ±SD | t test for Pre-test comparison | t test for Post-test comparison |
|--|--------------------|--------------|----------------|-------------|--------------------------------|---------------------------------|
| Multidimensional body-self relationships | Face evaluation | experimental | Pre-test | 19.83±4.50 | p=0.654 | p=0.005** |
| | | | Post-test | 26.16± 6.53 | | |
| | | control | Pre-test | 19.08 ±3.50 | | |
| | | | Post-test | 19.58±3.08 | | |
| | Face orientation | experimental | Pre-test | 46.83±6.67 | p=0.952 | p=0.646 |
| | | | Post-test | 46.91±7.16 | | |
| | | control | Pre-test | 46.66 ±6.65 | | |
| | | | Post-test | 45.66 ±5.94 | | |
| | Fitness evaluation | experimental | Pre-test | 8.91 ±2.90 | p=0.999 | p=0.122 |
| | | | Post-test | 11.00± 2.92 | | |
| | | control | Pre-test | 8.91±2.15 | | |
| | | | Post-test | 9.25± 2.37 | | |
| Fitness orientation | experimental | Pre-test | 36.75±6.79 | p=0.751 | p=0.011* | |
| | | Post-test | 41.83 ±5.55 | | | |
| | control | Pre-test | 35.91± 5.85 | | | |
| | | Post-test | 35.58± 5.43 | | | |
| Mental weight | experimental | Pre-test | 7.08 ±2.02 | p=0.477 | p=0.246 | |
| | | Post-test | 6.75 ±1.86 | | | |
| | control | Pre-test | 6.41± 2.46 | | | |
| | | Post-test | 5.83 ±1.89 | | | |
| Physical satisfaction | experimental | Pre-test | 25.08± 3.65 | p=0.485 | p<0.001** | |
| | | Post-test | 32.50 ±4.85 | | | |
| | control | Pre-test | 26.16± 3.80 | | | |
| | | Post-test | 26.00±3.56 | | | |
| Body image | experimental | Pre-test | 144.50 ±12.33 | p=0.806 | p<0.001** | |
| | | Post-test | 16.165 ± 12.96 | | | |
| | control | Pre-test | 143.16±13.90 | | | |
| | | Post-test | 141.91±13.24 | | | |

Table 2 describes the scores of the body image and the fear of negative evaluation in participants. As can be seen, the scores of the experimental group increased after applying the independent variable. There was an increase in

the mean ±SD of physical satisfaction from pre-test (25.08± 3.65) to post-test (32.50 ±4.85). Moreover, the mean ±SD of the body image increased from pre-test (144.50 ±12.33) to post-test (16.165 ± 12.96).

Table 3. Levene's Test Results to Examine the Homogeneity of Variance in the Scores of Experimental and Control Groups

| Test | Variable | F | DF1 | DF2 | P |
|--|-----------------------|-------|-----|-----|------|
| Multidimensional body-self relationships | Face evaluation | 0.961 | 1 | 22 | 0.55 |
| | Face orientation | 0.062 | 1 | 22 | 0.75 |
| | Fitness evaluation | 2.775 | 1 | 22 | 0.60 |
| | Fitness orientation | 0.123 | 1 | 22 | 0.39 |
| | Mental weight | 0.602 | 1 | 22 | 0.87 |
| | Physical satisfaction | 2.162 | 1 | 22 | 0.74 |
| | Body image | 0.147 | 1 | 22 | 0.54 |

The results of the Levene's test in table 3 showed that there was no significant difference between the variance of the scores of the experimental and control groups in all the variables

studied in this study. This means that the variance of all variables in the two groups was the same. Therefore, it can be said that the variance of the scores was homogeneous.

Table 4. Summary of the Analysis of Covariance for the Effectiveness of Psychodrama on Variables.

| Variables | Source | Type III Sum of The Squares | Df | Mean Square | F | P | Eta |
|-----------------------|----------|-----------------------------|----|-------------|--------|----------|------|
| Face evaluation | pre-test | 1679.93 | 1 | 1679.93 | 16.79 | <0.001** | 0.97 |
| | group | 2992.30 | 1 | 2992.30 | 29.91 | <0.001** | 0.99 |
| | error | 2100.64 | 21 | 100.03 | | | |
| Face orientation | pre-test | 70.28 | 1 | 70.28 | 2.92 | 0.10 | 0.37 |
| | group | 232.28 | 1 | 232.28 | 9.67 | <0.001** | 0.84 |
| | error | 504.30 | 21 | 24.01 | | | |
| Fitness evaluation | pre-test | 5050.46 | 1 | 5050.46 | 3.68 | <0.001** | 0.99 |
| | group | 7.66 | 1 | 7.66 | 0.35 | 0.55 | 0.08 |
| | error | 448.11 | 21 | 21.33 | | | |
| Fitness orientation | pre-test | 79.97 | 1 | 79.97 | 22.01 | <0.001** | 0.99 |
| | group | 18.37 | 1 | 18.37 | 5.05 | 0.03* | 0.57 |
| | error | 76.27 | 21 | 3.63 | | | |
| Body image | pre-test | 273.65 | 1 | 273.65 | 14.69 | <0.001** | 0.95 |
| | group | 199.97 | 1 | 199.97 | 10.74 | <0.001** | 0.87 |
| | error | 391.02 | 21 | 18.62 | | | |
| Mental weight | pre-test | 66.26 | 1 | 66.26 | 119.39 | <0.001** | 1 |
| | group | 0.95 | 1 | 0.95 | 1.71 | 0.20 | 0.24 |
| | error | 11.65 | 21 | 0.55 | | | |
| Physical satisfaction | pre-test | 1679.93 | 1 | 1679.93 | 29.07 | <0.001** | 0.99 |
| | group | 2992.30 | 1 | 2992.30 | 40.76 | <0.001** | 1 |
| | error | 167.34 | 21 | 7.96 | | | |

P<0.01 ** P< 0.05

The results of the analysis of covariance in table 4 showed that there was a significant difference between the mean scores of the control and experimental groups regarding the body image variable ($P < 0.01$, $F = 29.914$). Test's power of 0.843 showed that psychodrama is effective in improving the female students' evaluation of their appearance. As a result, in table 4, it can be said that psychoanalysis was not effective in improving

the orientation of female students. The results of the analysis of covariance in table 4 showed that there was a significant difference between the mean scores of the control and experimental groups with regard to the fitness assessment component ($P < 0.05$, $F = 5,059$). The test's power of 1 also showed that psychodrama was effective in improving the physical satisfaction of female students.

Table 5. Estimated Marginal Means and Standard Error after Adjusting the Effect of Covariate Variables

| | Variables | Group | Mean | Std Error |
|--|-----------------------|--------------|--------|-----------|
| Multidimensional Body-self relationships | Face Evaluation | experimental | 25.73 | 1.42 |
| | | control | 20.02 | 1.42 |
| | Face Orientation | experimental | 47.13 | 1.40 |
| | | control | 45.45 | 1.40 |
| | Fitness Evaluation | experimental | 11.22 | 0.59 |
| | | control | 9.03 | 0.59 |
| | Fitness Orientation | experimental | 41.63 | 1.39 |
| | | control | 35.78 | 1.39 |
| | Mental Weight | experimental | 6.46 | 0.24 |
| | | control | 6.13 | 0.24 |
| | Physical Satisfaction | Experimental | 32.80 | 0.73 |
| | | Control | 25.70 | 0.73 |
| | Body Image | Experimental | 164.72 | 2.89 |
| | | Control | 142.36 | 2.89 |

According to tables 4 and 5, it can be seen that after correcting the effect of covariate variables, there was a significant difference between the experimental and control groups in terms of face evaluation, face orientation, fitness orientation, physical satisfaction and body image, so that the experimental group had a higher score in these variables.

Discussion

As the results showed, psychodrama can be significantly effective in improving the body image of female adolescents. Consistent with the results of the present study, Rudokaite and Indriuniene in their study showed that psychoanalysis had a significant effect on reducing emotional expression of school fear in adolescents, and also those in the experimental group to adapt to school fear through different approaches compared to the control group. In this regard, students' level of participation and cooperation increased in school and group (16). Davidson in a theoretical review considered psychodrama to be effective in creating or increasing a positive body image in adolescent girls. Also, the results of the research by Şimşek et al. showed psychodrama has been effective in increasing empathy in adolescents, and on the other hand, in reducing their social anxiety (15). Sevi et al. found that after a one-year course of group therapy based on psychodrama on students

suffering from mental health problems, this approach could be effective in improving the quality of the students' life and reducing clinical symptoms (19). Likewise, Psychodrama can easily be applied to treat body image dissatisfaction in adolescent girls by encouraging them to have a good body image. Psychodrama can be useful for adolescent girls who have a negative relationship with their bodies, indicating the need to externalize information which is often processed solely by verbal expression. Accompanied by the leader, the client's inner story is physically expressed in a secure, contained manner. The ability to communicate with abstract as well as concrete parts of one's self will contribute to a more compassionate relationship with the body and its perceived deficiencies.

Numerous studies have shown that the effects of psychotherapy can be experienced by people of all ages, but the efficacy of this treatment in teenagers has been reported to be very high because it gives them an opportunity to regulate their emotions to Correctly Evacuate (15, 19). Psychodrama contributes to the incorporation of processes related to thought, enthusiasm, and visualization through the development of spontaneity and creativity. Through reflecting on a specific situation about the students' personal behavioral responses, their belief system about

themselves, others, and the environment in which they live, adolescents may gain insight into their feelings and the effects of their behavioral and emotional responses in that situation. After gaining such insight, students have the chance to consider and observe more effective solutions in practice (25).

The results of Boroumandian et al. showed that group therapy through interactive and psychodrama methods had a significant effect on increasing emotional self-awareness and its components, including emotional differentiation, emotional verbal sharing, and physical awareness of emotion in females' adolescents with psychological distress (22). The results of Felsman et al. were also in line with the results of the present study, and showed that psychodrama increased self-esteem and psychological well-being, and reduced social anxiety in 15 students in the experimental group who were exposed to 10 two-hour sessions of treatment (23).

In explaining these results, it can be said that, as Moreno believed, in performing psychodrama, the authorities should be allowed to release their hidden thoughts, emotions, and motives by playing a role. He claimed if the client knew that discharge and expression of emotions and motivations in any form would be accepted by the therapist, he /she would express them willingly (130), and this is the characteristic of a psychodrama which can help clients to accept themselves and improve their body image by making it possible to release emotions in the right way and the therapist's tolerance of adolescent's feelings and thoughts. On the other hand, psychodrama allows people to express their repressed and hidden negative emotions by playing a role, and it is obvious that expressing these negative emotions and inner feelings can improve self-esteem, self-acceptance, and body image. Visual role-play in this approach can create emotional and physical integration, and projective role-play facilitates the expression of emotions. Integration and externalization play an important role in the process of improving mental disorders (22). Therefore, it can be concluded that the externalization of repressed emotions and

creating psychological integration is effective in improving body image.

On the other hand, there is a significant relationship between self-esteem and body image(13) The results of the study by Fernández-Bustos et al. showed that psychodrama of role-playing has increased self-esteem in adolescent girls, which reveals that with increasing self-esteem, body image also improves(17). According to the findings of this study, it can be concluded that psychodrama can greatly help to improve the physical image of adolescent girls by mental refinement, discharge of repressed emotions, and increase of spontaneity and self-esteem (17). Psychodrama seems to have the ability to develop and reinforce a positive body image regarding the six main constructs. As shown by the authors, the positive body image consists of body appreciation, body acceptance and affection, a broad conceptualization of attractiveness, involvement in adaptive appearance, inner positivity, and knowledge filtering in a body-protective matter (26).

By fostering a healthy body image, psychodrama can be easily applied to the treatment of dissatisfaction with body image in teenage girls. The group process could provide a platform for all members to receive counseling, whether or not they are the main focus of the story in the psychodrama performance phase through the "spectator catharsis" process (28).

Among the limitations of this study was the lack of international and domestic research as well as the limitation of Persian capital in the field of psychoanalysis. Monitoring of independent variable outcomes was not carried out due to time constraints, and not being able to regulate all troubling influences, including personality and educational differences between the samples. However, the variables such as age, gender, educational level, and a number of samples .The limited time of students regarding their studies led to eight psychoanalytic sessions instead of ten. The study's failure to monitor demographic and intervention factors were among the most significant limitations. However, the most

significant strength of this study was its effectiveness in treating young girls with body image disorders.

Conclusion

The results of this study showed that psychodrama was effective in improving the female students' evaluation of their appearance ($P < 0.01$). Moreover, psychodrama was effective in improving the girls' satisfaction with their physical attributes ($P < 0.05$). Researchers are also recommended to evaluate this procedure in male adolescents or in conjunction with other therapeutic methods, to determine its efficacy.

Ethical Approval

The Ethics Committee of Science and Research in University of Tehran, approved the present study with the following number: Coded IR.SRUT.REC. 2657098/99.

Conflicts of interest

None to declare.

Authors contribution

Study concept and design, Methodology, Investigation, SA; writing-original, SA & FK; writing-review and Editing, SA,FK,MZ; Supervision, MZ. All authors read and approved the final manuscript.

References

1. Gopnik A, O'Grady S, Lucas CG, et al. Changes in cognitive flexibility and hypothesis search across human life history from childhood to adolescence to adulthood. *Proceedings of the National Academy of Sciences*. 2017;114(30):7892-9.
2. Thoits PA. Self, identity, stress, and mental health. *Handbook of the sociology of mental health*: Springer; 2013. p. 357-77.
3. Northrup C. *Women's bodies, women's wisdom: Creating physical and emotional health and healing*: Hay House, Inc; 2020.
4. Izydorczyk B, Sitnik-Warchulska K. Sociocultural appearance standards and risk factors for eating disorders in adolescents and women of various ages. *Frontiers in psychology*. 2018;9:429.
5. Alebachew F, Ashagrie M. The Body-Image concept analysis of youth and adolescent. *American Journal of Biomedical and Life Sciences*. 2017;5(6):130-4.
6. Voelker DK, Reel JJ, Greenleaf C. Weight status and body image perceptions in adolescents: current perspectives. *Adolescent health, medicine and therapeutics*. 2015;6:149.
7. Al-Mosaiwi M, Johnstone T. In an absolute state: Elevated use of absolutist words is a marker specific to anxiety, depression, and suicidal ideation. *Clinical Psychological Science*. 2018;6(4):529-42.
8. Kircaburun K, Griffiths MD, Billieux J. Childhood emotional maltreatment and problematic social media use among adolescents: The mediating role of body image dissatisfaction. *International Journal of Mental Health and Addiction*. 2020;18(6):1536-47.
9. Fernández-Bustos JG, Infantes-Paniagua Á, Cuevas R, et al. Effect of physical activity on self-concept: theoretical model on the mediation of body image and physical self-concept in adolescents. *Frontiers in psychology*. 2019;10:1537.
10. McVea CS, Gow K, Lowe R. Corrective interpersonal experience in psychodrama group therapy: A comprehensive process analysis of significant therapeutic events. *Psychotherapy Research*. 2011;21(4):416-29.
11. Giacomucci S, Stone A. Being in two places at once: Renegotiating traumatic experience through the surplus reality of psychodrama. *Social Work with Groups*. 2019;42(3):184-96.
12. Green EJ, Drewes AA. *Integrating expressive arts and play therapy with children and adolescents*: John Wiley & Sons; 2013.
13. Treadwell T. JL Moreno: The Origins of the Group Encounter Movement and the Forerunner of Web-Based Social Network Media Revolution. *The Journal of Psychodrama, Sociometry, and Group Psychotherapy*. 2016;64(1):51-62.
14. Yaniv D. Trust the process: a new scientific outlook on psychodramatic spontaneity training. *Frontiers in psychology*. 2018;9:2083.

15. Şimşek G, Yalçınkaya EY, Ardiç E, et al. The effect of psychodrama on the empathy and social anxiety level in adolescents. *Turkish Journal of Child and Adolescent Mental Health*. 2020;27(2):96-101.
16. Rudokaite D, Indriuniene V. Effectiveness of psychodrama for mitigating school fears among senior secondary school students. *Zeitschrift für Psychodrama und Soziometrie*. 2019;18(2):369-85.
17. Tarashoeva G, Marinova-Djambazova P, Kojuharov H. Effectiveness of psychodrama therapy in patients with panic disorders: Final results. *International Journal of Psychotherapy*. 2017;21(2):55-66.
18. Erbay LG, Reyhani İ, Ünal S, et al. Does psychodrama affect perceived stress, anxiety-depression scores and saliva cortisol in patients with depression? *Psychiatry investigation*. 2018;15(10):970.
19. Sevi OM, Ger M, Kaya F,. The effect of psychodrama sessions on psychotic symptoms, depression, quality of life, and sociometric measures in patients with chronic schizophrenia. *The Arts in Psychotherapy*. 2020;71:101719.
20. Fennig S, Brunstein Klomek A, Shahar B, et al. Inpatient treatment has no impact on the core thoughts and perceptions in adolescents with anorexia nervosa. *Early intervention in psychiatry*. 2017;11(3):200-7.
21. Yoluk İŞ, Togay A, Şimşek BK. The effectiveness of psychodrama on social skills and life satisfaction of disadvantaged early-adolescents. *Zeitschrift für Psychodrama und Soziometrie*. 2020;19(1):7-19.
22. Boroomandian N, Mohammadi N, Rahimi Taghanaki C. Comparing the Effectiveness of Group Therapy by “Interaction and Psychodrama” on Emotional Awareness of Adolescent Girls with Psychological Distress. *Journal of Psychological Achievements*. 2020;27(1):1-22.
23. Felsman P, Seifert CM, Himle JA. The use of improvisational theater training to reduce social anxiety in adolescents. *The Arts in Psychotherapy*. 2019;63:111-7.
24. Giacomucci S, Marquit J. The effectiveness of trauma-focused psychodrama in the treatment of PTSD in inpatient substance abuse treatment. *Frontiers in Psychology*. 2020;11:896.
25. Khammar A, Yarahmadi M, Madadzadeh F. What is analysis of covariance (ANCOVA) and how to correctly report its results in medical research? *Iran J Public Health*. 2018.
26. Sundgot-Borgen C, Friberg O, Kolle E, et al. The healthy body image (HBI) intervention: Effects of a school-based cluster-randomized controlled trial with 12-months follow-up. *Body Image*. 2019;29:122-31.
27. Tylka TL, Iannantuono AC. Perceiving beauty in all women: Psychometric evaluation of the Broad Conceptualization of Beauty Scale. *Body Image*. 2016;17:67-81.
28. Sharifi-Heris Z, Amiri Farahani L, Hasanpoor-Azghadi SB. A review study of diaper rash dermatitis treatments. *Journal of Client-Centered Nursing Care*. 2018;4(1):1-12.