

The Effectiveness of Art Therapy in Reducing Internalizing and Externalizing Problems of Female Adolescents

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Abstract

Objective: The internalizing and externalizing problems relating to childhood and adolescent have always been significant. Because there is special considerations in establishing communication with them and hence, the therapeutic methods for these problems must take into account these considerations. As establishing a therapeutic relationship is an important component of effective counseling, it seems that art therapy may help alleviate these problems. The purpose of this study is to determine the effectiveness of art therapy in reducing internalizing and externalizing problems of adolescent girls (14 – 18 years old).

Method: This is a semi-experimental study carried out in the form of a pre-test/post-test design with control group. The population of this study includes female students of Gole Laleh School of Art in district 3 of Tehran, Iran, out of which 30 students with internalizing problems and 30 individuals with externalizing problems were selected through targeted sampling. Students were randomly assigned to control and experimental groups. Experimental groups participated in 6 painting sessions designed based on Art therapy theories and previous studies. The material used for diagnosis of the problems in posttest and pretest was an Achenbach self-assessment form.

Results: Data were analyzed using a mixed analysis of variance (ANOVA). Our results showed that Art therapy significantly reduced internalizing problems ($F = 17.61, P < 0.001$); however, its effect in reducing externalizing problems was not significant ($F = 3.93, P = 0.06$).

Conclusion: Art therapy as a practical therapeutic method can be used to improve internalizing problems. To reduce externalizing problems, more sessions may be needed. Thus, future studies are required to insure these findings.

Keywords: Art therapy, externalizing, internalizing, painting, psychological problems

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Introduction

The psychological problems of children and adolescents are considered as ways to identify underlying reasons of many disorders in adulthood. So, many researchers are interested in studying these problems. In some studies, the number of children and adolescents with severe problems requiring treatment is estimated about 15% to 22%. Furthermore, a 20-year follow up study has shown that most children and adolescents suffering from psychological problems turn into adults with psychological disorders in future.¹

One of the frequently used dimensional categories for behavioral disorders of children and adolescents is classifying them in groups of internalizing and externalizing behavioral problems.² The internalizing problems include three symptoms scales of anxiety/depression, withdrawal/depression and somatoform disorders. Reason behind this naming is that it includes internal problems.³ On the other hand; the externalizing problems include two symptoms of rule-breaking and aggressive behaviors. The underlying reason behind the name of this syndrome is that it includes conflict with others.³

The therapeutic interventions for internalizing and externalizing problems are mainly consisted of prevention programs, as well as different medicinal therapeutic and psychological treatments.⁴

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The prevention programs are performed to prevent the emergence and aggregation of internalizing and externalizing problems. Prevention programs are mainly pursued in schools and child day-care centers.⁵ However, in more acute and advanced cases, drug therapy can also be used for mitigation of severe and uncontrollable symptoms of internalizing and externalizing problems of children and adolescents.⁵

Among various methods of psychotherapy, psychoanalytical approaches have a special place in treatment of internalizing and externalizing psychological problems of children and adolescents. Because these approaches provide the appropriate conditions for mental refinement and expression of feelings, concerns, problems, and emotions. One of these psychoanalytical therapies is Art therapy; the treatment and healing of mental and psychological problems using art media in which the clients can reveal what they have inside.⁶⁻⁸ Art therapy is the therapeutic use of art making, within a professional relationship. Art therapy combines traditional psychotherapeutic theories with the nonverbal, creative self-expression.⁹ Every art that can create a bridge between inner and outer experiences of the person have therapeutic basis. This therapeutic approach leads the clients to perform new activities and enhances their experiences.¹⁰ Therefore, various art therapies including theatre, music, dance, movement, and painting are increasingly used in therapeutic environments.¹¹⁻¹⁶ Among different methods of Art therapy, painting techniques have been greatly considered by researchers as a potential method to demonstrate an individual's inner feelings and emotions.¹⁷ Art therapy provides an individual with opportunities through which they can freely express their feelings, affections, needs, and even knowledge.¹⁸

Previous studies have shown that individuals with the experience of mental trauma can benefit from painting by achieving a feeling of security toward unpleasant memories of a traumatic event. The emotions and thoughts are influenced by conflicts, fears and desires and painting allows clients to express them in a symbolic way.¹⁹ Art making, within the context of the therapeutic relationship, provides a safe, nonverbal means expressing difficult emotions, allowing individuals to confront, work through, and eventually integrate aspects of the illness experience that may have previously seemed unspeakable. Art therapy further offers individuals opportunities to regain a sense of personal agency, to explore existential concerns, and to reconnect to the physical body.²⁰

Although painting has a long history in human life,²¹ in the field of psychology it has been noticed since the early twentieth century. For example, an artistic book based on the paintings of mental patients in an asylum²² was published in 1922. Moreover, psychoanalysts began to analyze the neurotic behaviors of adults using free painting. This newly established branch rapidly found its place as an essential parameter in the effort of psychologists such that in 1958, Kramer used painting to treat the emotional disorders in children.²³

Recent studies have also demonstrated that Art therapy is a practical technique for multiple purposes including testing, diagnosis, and treatment.²⁴⁻²⁶ A local study, for instance, was carried out with the aim of increasing the creativity of secondary school students and decreasing their anger intensity.²⁷ He concluded that Art therapy (painting techniques) has been effective in reducing internalizing and externalizing angers. In another study, Mohtasham investigated the effect of painting in reduction of emotional problems of hearing-impaired children using an experimental research design. Art therapy has been an ongoing facet of some educational intervention programs for several decades.²⁸ According to Kim and recent documents,²⁹ art therapy has been globalized as a topic of discussion at the American Art Therapy Association.

Overall, various art therapy methods, especially painting provide a fine context for emotional release and help with improving mental disorders. The emotional component is one of the main dimensions of different kinds of psychological problems of children and adolescents (internalizing and externalizing). Children and adolescents might face difficulties in communicating with therapists due to their age, as well as cognitive and emotional features. Art therapy techniques can improve communication due to its simple language without using unnecessary jargon. Thus, the main purpose of this research is whether Art therapy (painting techniques) can be effective in reducing the internalizing and externalizing psychological problems of female adolescent students attending Art schools.

Materials and Methods

Procedure

This study applies a semi-experimental research design using a pretest-posttest with the control group. The procedure consists of two separate tests performed in parallel, each having a control and experimental group. The first test was performed on individuals with internalizing problems and the second one on individuals with externalizing problems.

Population, Sample and Sampling method

The population of this study includes all female adolescent stu-

dents (14 – 18 years old) who were attending an art schools in district 3 in Tehran, Iran between from 2013 to 2014. Using targeted sampling, 30 students with internalizing problems were selected and randomly assigned into experimental and control groups. Similarly, 30 students with externalizing problems were chosen and randomly assigned to experimental and control groups. The selection process was based on students' scores in the Achenbach System of Empirically Based Assessment (ASEBA) considering test cut points (+2 standard deviations from the mean for internalizing problems and +1.3 standard deviations from the mean for externalizing problems). To ensure adequacy of sample size, the necessary number of subjects for this study was calculated using G-Power software that is used frequently in medical and behavioral studies. The input parameters entered into the software were effect size of 0.25, α error probability of 0.05, $1-\beta$ error probability of 0.95, as well as the correlation between repeated measures of 0.75. Using these parameters, resulted in a total sample size of 30 subjects that is similar to the sample size obtained based on previous criteria. Randomization of subject assignment into experimental and control group accomplished by subjects names alphabetical sequence. The main entry criteria to the final sample for internalizing groups (experimental and control) was gaining a score equal or above +2 standard deviations in internalizing problems while having a score below +1.3 standard deviations in externalizing problems. The main entry criteria for externalizing groups (experimental and control) was gaining a score equal or above +1.3 standard deviations in externalizing problems while having a score below +2 standard deviations in internalizing problems. Test scores of subjects who missed 3 or more session, had health related problems, and provided incomplete pre and post tests, were excluded from the final analyses.

Measures

The history of artistic interest and activities scale

To control for the confounding effects of having a history of artistic activities and interest on Art therapy subjects were asked: a) How much have you been engaged in artistic activities? b) How much are you interested in such activities? The subjects' responses were measured on a scale of 1 (very low) to 5 (very much).

Achenbach System of Empirically Based Assessment (ASEBA)

To evaluate internalizing and externalizing problems, Achenbach System of Empirically Based Assessment (ASEBA) was used.³ This self assessment questionnaire for adolescents includes 112 items and is normalized for 11 to 18 year-old individuals. The questions have been designed to evaluate emotional behavioral problems, social problems and desired social behaviors. The empirically based symptom scales include anxiety/depression, withdrawal/depression, somatoform complaints, rule-breaking and aggressive behaviors. The first three cases constitute internalizing problems and the last two constitute externalizing problems. The test scores range between 0 – 2. 0 = it does not apply to me; 1 = it is somehow and occasionally true for me; and 2 = it is completely and often true for me. Minimum and maximum scores for internalizing problems are 0 to 62, and for externalizing problems are 0 to 64. These scores were turned into T scores using a T-table. The clinical range for internalizing problems is T scores above 69 and for externalizing problems is T scores above 63. The internal consistency coefficient for most empirically based symptom

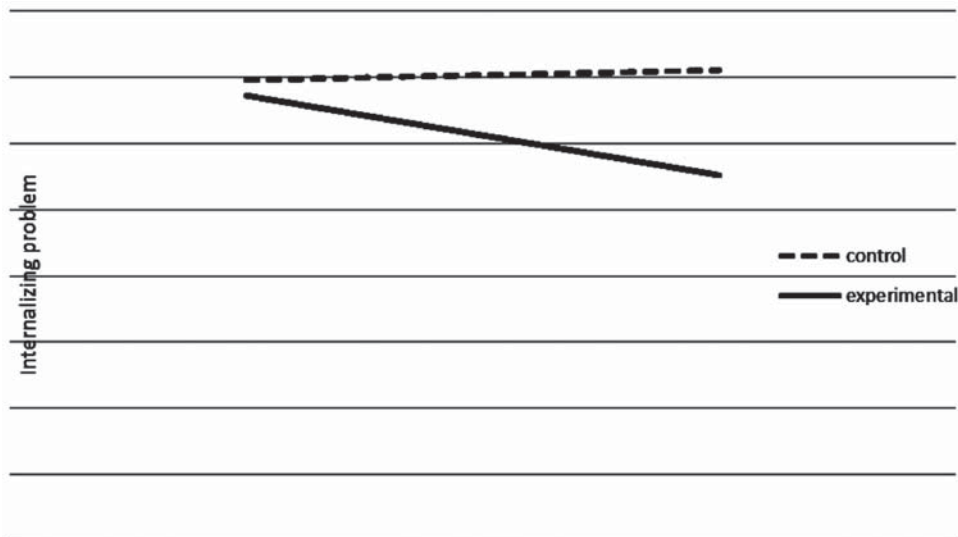


Figure 1. The interactive effect of group and evaluation time on the internalizing problems

scales has been reported as satisfactory and desired such that their Cronbach Alpha is above 0.6. The test-retest validity of Achenbach scales, including the Youth Self-Report (YSR) have been assessed with time interval of 5 to 8 weeks and all correlation coefficients between first and second tests were significant ($P < 0.05$). Furthermore, the study of construct validity has shown that Pearson correlation coefficients between empirically based scales are all statistically significant ($P < 0.01$).³⁰

Intervention package of Art therapy

Art therapy intervention in the experimental group to reduce psychological problems included six painting sessions. Multiple resources were applied to organize this package.^{22-27,31} The required materials in all sessions include cardboard and acrylic paint for drawing and painting. Using this package, which consists of six 1.5-hour sessions, the therapist interacted with subjects for the first 15 minutes of each session and explained the session plan. According to the plan, subjects had 45 minutes to one hour to draw. At the end, based on the session plan subjects had 15 minutes to talk with the therapist and other members about works, feelings, interests and events.

The topic of each session was as follows, first session: warm-up activities using painting and coloring; second session: learning about art media; third session: general topics; fourth session: first childhood memory, family relations; as well as fifth session: the directed mental image, visualization, dream and meditation; sixth session: anger releasing.

Procedures

All subjects did not attend in one session and the number of individuals in different classes varied from 3 to 15. The sessions were generally held in the volume and maquette or publishing workshop where there was a better space for painters. The time of classes was set in tune with teachers from 8 (when the school started) to 14 (when the school closed). At the end of Art therapy interventions of experimental groups, Achenbach System of Empirically Based Assessment was re-implemented as posttest on the subjects of control and experimental groups.

Results

Due to the drop out of subjects through sessions and in the post-test phase, the number of valid data for analysis in the internalizing group included 14 subjects in the experimental group and 13 subjects in the control group (one subject omitted from analysis because of disappearing in 3 art therapy sessions and two subjects were exited from analysis because their questionnaires in post-test were imperfect). The age means of control and experimental groups in internalizing group were 16.35 and 16.23, respectively. The independent t -test showed no significant differences between them ($t_{(25)} = -0.27, P = 0.78$). The age of experimental and control groups for internalizing and externalizing problems was 16.46 and 16.41, respectively. The independent t -test showed no significant differences ($t_{(23)} = -0.01, P = 0.92$).

In the internalizing group, the mean regarding the history of artistic activities for the experimental and the control groups was 3.35 and 3.553, respectively, which were not significant ($t_{(25)} = 0.34, P = 0.73$). Also, the mean regarding the interest in artistic activities for the experimental and control groups was 3.92 and 3.71, respectively, which were not significant ($t_{(25)} = 0.55, P = 0.58$). In the externalizing group, the mean for the history of artistic activities for the experimental and the control groups was 2.84 and 3.25, respectively, which were not significant ($t_{(23)} = 1, P = 0.33$). Also, the mean for the interest in artistic activities was 3.58 and 4.23, respectively, which were not significant ($t_{(25)} = 0.55, P = 0.58$). Table 1 includes total subjects' scores in pre-test and post-test for internalizing and externalizing problems.

To answer the research question about internalizing and externalizing problems, two separate analyses were performed. There was a between group, independent variable (experimental and control groups) and a within group, independent variable (evaluation in pretest and in posttest) in this study, which had stratified scales. The level of measurement of dependent variable (the rate of internalizing problems- the rate of externalizing problems), however, was interval. Therefore, mixed Anova was used for analyzing data. The result of the first analysis for the internalizing problems is presented in Table 2. In addition, before performing the analysis, the hypotheses of analysis (The Sphericity Assump-

Table1. The mean and standard deviation of the scores of internalizing and externalizing problems in pretest and posttest in terms of control and experimental groups

Group	Pretest		Posttest		Total	
	Mean	SD	Mean	SD	Mean	SD
Internalizing						
Experimental	33.57	4.65	27.57	3.75	30.57	3.6
Control	34.77	2.35	35.53	5.34	35.15	3.64
Total	34.14	3.7	31.4	6.05	32.77	4.24
Externalizing						
Experimental	31	6.6	26.53	8.2	28.76	6.67
Control	29.41	4.85	30.25	8.9	29.83	6.31
Total	30.24	5.76	28.32	8.57	29.28	6.4

Table2. The results of mixed ANOVA for investigation of the effect of Art therapy on the internalizing problems

Source	SS	df	MS	F	Sig.	Eta coefficient
Between group						
Group	283.1	1	283.1	10.8	0.005	0.3
Error	655.24	25	26.21			
Within group						
Evaluation time	92.21	1	92.21	10.52	0.005	0.29
Group* Evaluation time	154.44	1	154.44	17.61	0.001	0.41
Error	219.5	25	8.76			

Table3. The results of mixed ANOVA to evaluate the effect of Art therapy on externalizing problems

Source	SS	df	MS	F	Sig.	Eta coefficient
Between group						
Group	14.13	1	14.13	0.16	0.68	0.007
Error	1946.95	23	84.65			
Within group						
Evaluation time	41.07	1	41.7	1.84	0.18	0.07
Evaluation time*group	87.47	1	87.47	3.93	0.06	0.14
Error	511.45	23	22.23			

tion and Homogeneity of error variance) were controlled. Due to the fact that between group variable has two levels, the Sphericity of the data is automatically met and there was no need to perform the Mauchly's test. The results of Leven test also showed that error variance values between groups in pretest and posttest were equal (for pretest, $F_{(1,25)} = 3.28, P = 0.08$ and for posttest, $F_{(1,25)} = 1.77, P = 0.19$).

The results of mixed analysis of variance (ANOVA) show that the interactive effect of group and evaluation time on internalizing problems was significant in 0.001. This means that although there was no significant difference between pretest and posttest in internalizing problems in control group, in the experimental group, the scores of posttest were significantly lower than the scores of pretest (Figure1).

Concerning the performed analyses, it can be concluded that Art therapy can effectively reduce internalizing problems of female adolescent students of Art schools.

The result of the second analysis for externalizing problems is presented in Table 3. Before performing the analysis, the hypotheses of analysis (The Sphericity Assumption and Homogeneity of error variance) were controlled. Because of the within group variable, which has 2 levels, the Sphericity Assumption was met and there was no need to perform the Mauchly's test. The results

of Leven test also showed that the values of error variance between groups were equal in pretest and posttest (for pretest: $F_{(1,25)} = 3.28, P = 0.08$ and for posttest: $F_{(1,25)} = 1.77, P = 0.19$).

The results of the analysis show that the interactive effect of group and evaluation time on externalizing problems is not significant, however the *P*-value is very close to significant level. The significance level of 0.06 and effect size of 0.14 determines that lack of significance is probably due to the low power of test or the issues related to using independent variable. Thus, it can be concluded that there is not enough evidence for effectiveness of Art therapy in the reduction of externalizing problems of female adolescent students in Art schools.

Discussion

According to our data, there was a significant decrease in internalizing problems of the test group as a result of six Art therapy sessions. However, the reduction of externalizing problems was not significant.

The review of previous studies in which the effect of Art therapy on multiple problems has been investigated shows that the results of the present study are compatible with some studies and incompatible with others. For example, Huges-Brand studied a group of

14 to 18 year- old Juvenile offenders and concluded that the adolescents who received Art therapy reported lower social-family issues,³² had lower symptoms of depression, anxiety and obsessive-compulsive behaviors, as well as a better relationship with their parents. Similarly, in the present study, the depression and anxiety decreased as subgroups of internalizing problems. This is also similar with the result of a new research on 222 children.²⁵ Dabaq and Khajeh Pour also studied the effect of Art therapy in reduction of depression, anger and anxiety in girls who were victims of sexual abuse. Their study had a semi-experimental pretest-posttest research design and concluded that this intervention is effective in the reduction of depression, anger and anxiety in these individuals.²⁷ Since anxiety and depression are the subgroups of internalizing problems the results of the present study are consistent with the above mentioned study on the reduction of internalizing problems. However, since anger is the subgroup of externalizing problems, the results of present study are inconsistent with that study in the reduction of externalizing problems. There is an important limitation to the present study, which can limit the generalization of its finding. This had to do with our study, which was consisted of some artistically oriented population, so the effect of the art therapy intervention may have been exaggerated. Therefore, the generalization of findings should take this limitation into account. Moreover, it is noteworthy that some researches on art therapy, have had samples with different characteristics, which could influence findings. For example, breast cancer patients,¹² older adults, war veterans and prison inmates.³³

In other research by Esmaelian and Hasanvand, who investigated the effect of Art therapy in the reduction of internalizing and externalizing behaviors of mentally retarded children in 12 sessions using the same scale to evaluate the problems,³⁴ it was concluded that considerable reduction happened in aggressive behaviors, bawling and disobeying the parents. This result is inconsistent with the findings of the present study in terms of externalizing problems. It seems that the difference between research samples and the higher number of Art therapy sessions explain this inconsistency.

Regarding insignificant effects of Art therapy on externalizing problems, it can be said that this effect was observed, although it was not statistically significant. This could be due to insufficient number of therapy sessions, especially since the adolescents with externalizing problems need more time to communicate with the therapist. Consistent with this speculation, research indicates more sessions of art therapy can yield to significant reduction of externalizing problems such as anger and disobeying behaviors. These studies have had at least 12 sessions of art therapy for reducing externalizing problems.^{27,34} Larger number of therapy sessions could improved relationship between the therapist and the participants, therefore, yield better results. However, individuals in our study attended the sessions reluctantly and hence the required therapeutic relationship between the therapist and clients was rarely and barely established. Indeed, consistent with these observations, some recent works have shown that art therapy with samples with externalizing problems has two major challenges: first, these people often present the therapist with several dilemmas, such as how to respond when faced with symbolic or direct expressions of aggression, and how to establish a treatment relationship when clients arouse strong emotions in the therapist. Second, when working in educational settings (like this study), art therapists often question whether they should strive to integrate

themselves into the school and, if so, what should be their role with teachers and parents?³⁵

In addition, it seems that the therapeutic package used in this study is more suitable for adolescents with internalizing problems since its emphasis is mainly on the expression of emotions and impulses, which is the exact problem of these adolescents. But, the problem of adolescents with externalizing behavior is mostly about managing these emotions rather than their expression. Thus, future studies are recommended to improve this intervention based on regulation and control of the emotions and evaluation of its effectiveness on externalizing problems.

Another important limitation of this study is that the sample was limited to girls. Since the internalizing and externalizing problems have different distribution in both genders, it is recommended that future studies consider this issue. Another limitation had to do with the study sample that was an artistically oriented one, which could yield exaggerated effects and limit generalization of our findings.

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