

Comparing the Effectiveness of schema therapy training and acceptance and commitment therapy in the attachment of gifted adolescents

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Background: Attachment style is recognized as the early experiences of childhood with parents and the type of emotional relationship of the child with his/her parents.

Objective: The present study aimed to compare the effectiveness of schema therapy training and acceptance and commitment therapy on the attachment of gifted adolescents.

Methods: This quasi-experimental research was conducted based on a pretest-posttest control group design and follow-up period. The statistical population of the present study included all gifted students who studied in the academic year of 2019-20. Among this population, 60 cases were selected by stratified random sampling method and randomly assigned to three groups that were matched for age and IQ. Experimental groups received initial inconsistent schema training and commitment and acceptance in 10 sessions, while the control group did not receive any training. All three groups were assessed before and after the training sessions, as well as follow-up using the Armsden and Greenberg Parental Attachment Questionnaire (1987). Data were analyzed in SPSS software (version 22) using the repeated measure analysis of variance.

Results: Based on the results, there was a significant difference between the effectiveness of acceptance and commitment therapy and schema therapy in attachment to parents ($P < 0.01$). Moreover, it was found that schema therapy was more effective than acceptance and commitment therapy ($P < 0.01$).

Conclusion: Based on the results, it can be concluded that schema therapy and acceptance and commitment were effective in attachment to parents; nonetheless, they did not exert any considerable impact on peer attachment in gifted adolescents.

Keyword: Adolescent, Schema therapy, Gifted, Child

Introduction

Attachment style is one of the major factors affecting the behavior of people in the early experiences of childhood with parents and the type of emotional relationship between a child and his/her parents. It has been recently considered by psychologists and researchers as an emotional bond between a growing child and his/her mother that begins at birth; nonetheless, its effect is not limited to childhood and encompasses all life, even aging time (1).

Each group of parents treats their children differently based on their personality type and psychological characteristics. This diversity in parents' educational and behavioral methods leads to the formation of three attachment styles, including secure, insecure avoidant, and insecure ambivalent/resistant (2). It can be stated that the caregiver-child relationship is the most important issue that has been considered and emphasized by psychologists in the development of human personality (3). Attachment is composed of an organized pattern of behavior that maintains emotional bonds, remains lifelong, and is activated to maintain and regulate the child's closeness to certain people in his/her

life (4).

Attachment is generally a bilateral and stable relationship between caregiver and child, and both of them contribute to the quality of these relationships (5). Previous studies have demonstrated that attachment affects components, such as emotion control and regulation, self-efficacy in interpersonal relationships, depression, anxiety, and mental health (6). In this regard, Bowlby believes that attachment has relative stability over time so that the next relationship with peers is very important in healthy growth and provision of mental health (7).

Schemas are profound and inclusive patterns or themes composed of memories, emotions, cognitions, and physical emotions in childhood or adolescence. They are extremely inefficient, about themselves and others, and persist throughout life (8). Some of these schemas which are mostly the result of difficult experiences in childhood might be at the core of personality disorders, milder cognitive problems, and many chronic disorders. Therefore, this treatment method is considered an organizing factor that is crucial for understanding one's experiences throughout life. Some of these schemas,

especially those formed as a result of unpleasant experiences in childhood, are likely to be at the core of an individual's communication disorders and problems (9).

These schemas are formed in childhood due to a lack of satisfaction with basic emotional needs. Human beings have five basic needs: 1) secure attachment to others, 2) self-government, adequacy, and identity, 3) freedom to express healthy needs and emotions, 4) spontaneity and recreation, and 5) realistic limitations and self-control. Attachment to the parent or caregiver is an emotional need that promotes an individual's independence. People are motivated to establish a dynamic balance between familiarity (internalizing new information based on previous structures) and freshness (changing cognitive structures tailored to new information), and schemas prevent the balance of this issue (10).

Acceptance and commitment therapy as one of the relatively new methods is based on communication system theory, and its clinical efficiency has been confirmed. Unlike other treatment methods that put an emphasis on the reduction and control of symptoms, focuses on increasing acceptance of negative reactions (e.g. thoughts, emotions, and body sensitivities) in favor of interfering with meaningful activities that are not directly able to change them (11). It also focuses on six central processes that contribute to one's flexibility, including acceptance, communication with the present, self-as-context, values, and committed action (12). As stated above, attachment and its effect on adulthood in-person interactions and the formation of disorders has become one of the main and most extensive subjects of research today (13). Moreover, adolescence is defined as the period of transition from childhood to adulthood. Regarding the challenges of this period, the adolescent is placed in the interstitial domain of childhood and adulthood while struggling with the pressures and expectations of both age periods (14). Various studies have investigated the role and importance of attachment in mental health, identity transformation, and other personality variables.

Objectives

The present study aimed to compare the effectiveness of schema therapy training and acceptance and commitment therapy in the attachment of gifted adolescents.

Materials and Methods

This quasi-experimental research was conducted based on a pretest-posttest control group design and follow-up period. The statistical population of the study included all gifted students who were studying in talent development centers in the first and second high schools of Kerman in 2010-2019. The sample size was calculated at 36 cases based on the effect size of 0.25, alpha of 0.05, and the test power of 0.80. The participants were selected via stratified random sampling from two districts of Kerman where there was

a talented school in each district. Thereafter, they were assigned to three groups (n=12 in each group) by the purposeful sampling method.

The inclusion criteria entailed the age range of 16-17 years and IQ of 110-130 based on the Wechsler intelligence test. On the other hand, the exclusion criteria were the absence in more than three sessions. In adherence to ethical considerations, participation in this research was completely optional. Before the commencement of the research project, participants became familiar with the specifications of the plan and its regulations. People's attitudes and beliefs were respected. Moreover, the members of the experimental and control groups were allowed to withdraw from the study at any stage. In addition, the members of the control group could, if they were interested, receive the intervention performed for the experimental group in similar treatment sessions. All documents, questionnaires, and confidential records were only available to the executors. Informed written consent was obtained from all volunteers.

This article was extracted from the Ph.D. dissertation of the first author of the article with the ethical code of IR.IAU.SRB.REC.1398.218 from the Islamic Azad University, Science and Research Branch. In this study, peer-to-peer was used to compare the groups that were matched for age (16-17 years) and IQ (110-130). In accordance with ethical considerations, the research objectives were explained, parents and educators were informed, and students' satisfaction was obtained to participate in this study. In the first stage, effective communication was made with gifted adolescents.

Students were purposefully placed in three groups, one intervention group received schema therapy, another group received acceptance and commitment therapy, and the third group received no intervention. One of the two experimental groups received 10 weekly 45-min sessions of early maladaptive schema training, and the other group received 10 weekly 45-min sessions of acceptance and commitment therapy. The control group was only in the normal course of school education. An emotional self-regulation questionnaire was administered before, after, and two months after training sessions in all three groups. According to ethical considerations, after the completion of the study, this educational program was also implemented on the control group.

Parent-peer attachment questionnaire: This questionnaire was developed by Armsden and Greenberg (15) to assess the quality of attachment of adolescents to their mother, father, and peers. This questionnaire initially consisted of only two parts: attachment to parents and peers. Later, these researchers divided the attachment to parents into two parts: attachment to mother and father. As a result, the new version includes three parts of attachment to mother, father, and peer. The peer section of this questionnaire has a total score for the assessment of attachment, as well as three subscales of trust, communication, and

alienation from peers. The higher scores obtained in these subscales are indicative of more immune relationships. The items in this questionnaire are rated based on a 5-point Likert scale ranging from 1=almost always to 5= almost never, and negatively worded items should be reverse scored. The internal consistency coefficients of 0.91, 0.87, and 0.72 have been reported for subscales of trust, communication, and alienation in

the peer scale (15). Moreover, its reliability was reported to be 0.86 in the three-week retest method on a sample of 27 subjects aged 18-20 years for attachment to peers (this questionnaire has high concurrent validity, and items in the depression and loneliness scale demonstrated a negative correlation) (16). The reliability of this questionnaire for the whole scale was obtained at 0.79 by Cronbach's alpha method.

Table 1. Program and content of educational sessions developed schema therapy

Session	Content
First	Communication and initial evaluation, introducing researcher and members, reviewing goals, focusing on life history, starting homework education
Second	Teaching about schemas and coping styles, familiarity with schemas and early maladaptive mentality, explaining coping styles
Third	Cognitive strategies, logic presentation of cognitive techniques, the new definition of schema-threatening evidence
Fourth	Cognitive techniques, evaluation of advantages and disadvantages, as well as coping styles and responses, training on the compilation and construction of educational cards
Fifth	Emotional techniques, strengthening emotional awareness, validating emotions, as well as identifying problematic schemas and emotional mentalities
Sixth	Empirical strategies, logic presentation of empirical techniques and strategies, mental imagery, the relevance of past mental images to the present
Seventh	Emotional experience labeling and differentiation of emotions from each other, acceptance of normalizing emotion experience and conversation of mentalities
Eighth	Behavioral pattern-breaking, reviewing the assignments of the previous session and getting feedback from the members, providing the logic of behavioral techniques, increasing motivation for changing behavior, and presenting tasks.
Ninth	Behavioral techniques, reviewing the assignments of past sessions and getting feedback, making important life changes, and at the end of the assignment presentation.
Tenth	Collecting past materials, reviewing the assignments of the previous session, collecting and concluding the final post-test, and termination of the sessions.

Table 2- Program and content of educational sessions developed treatment based on acceptance and commitment

Session	Content
First	First, a therapeutic relationship was established with the therapists, and then the treatment contract was closed.
Second and third	The purpose of this training session is to control the problem, not the solution. At this stage, this awareness was reinforced by the therapists that emotional control strategies are responsible for a large part of their problems.

Fourth and fifth	The purpose of this session was acceptance and willingness training as an alternative to experience control.
Sixth	Cognitive fault training was discussed.
Seventh	The meeting itself will be taught as context.
Eighth	In this meeting, the goal was to stipulate values.
Ninth	The meeting taught a larger mood.
Tenth	In this session, the assignments of the previous session were examined and the learnings of the previous sessions were gathered and the questions of adolescents were discussed.

Data were analyzed in SPSS software (version 22) using descriptive statistics methods, such as mean (standard deviation) and frequency distribution table, as well as inferential statistics of repeated measures analysis of variance.

The mean (standard deviation) age scores of participants were reported as 16.3 (2.4), 16.7 (2.7), and 16.2 (2.8) years in the acceptance and commitment therapy, schema therapy, and control groups, respectively. The results of the analysis of variance indicated that there was no significant difference between the mean age of

Results

Table 3- Descriptive indicators of research variables

Group		n	Pretest		Post-test		Follow-up	
			M	SD	M	SD	M	SD
Attachment to mother	Control	12	56.42	11.46	62.75	10.85	63.75	10.43
	Schema therapy	12	61.67	9.78	93.75	10.52	94.25	11.14
	ACT	12	60.75	9.96	72.83	6.63	73.83	6.78
Attachment to the father	Control	12	65.67	8.15	65.69	8.15	66.83	8.58
	Schema therapy	12	63.17	9.25	95.50	6.72	94.75	7.09
	ACT	12	66.08	6.86	81.67	11.66	83.58	11.85
Attachment to peer	Control	12	67.58	7.44	69.33	16.50	71.42	15.73
	Schema therapy	12	70.42	18.05	83.25	13.22	85.42	15.17
	ACT	12	66.67	13.67	74.25	5.67	75.25	5.83

Table 3 represents descriptive indicators of the mean and standard deviation of research variables by the group. The results demonstrate that the research groups did not differ significantly in pre-test scores. Nonetheless, there is a difference between the mean scores of post-test and follow-up tests. Now, the significance of this difference is investigated.

For the target test, repeated measurement analysis with the mixed design was employed since pre-test, post-test, and follow-up test were examined in three groups. To test the assumption of similarity of variance-covariance matrices, the box test was used, and the test results were not significant ($P > 0.05$). In other words, the variance-covariance matrix is homogeneous, and the desired assumption is established. The results of this test

pointed out that since the significance level obtained in all three situations is greater than $P < 0.05$, the two groups have no significant difference in variance; therefore, this assumption was observed for the test.

Table 4- Results of variance analysis for the within-subject factor of research variables and its interaction with a group

Variables	Source	SS	Df	MS	F	P	Eta
Attachment to mother	Time	7154	2	3577	81.57	0.001	0.71
	Time*Group	2863.33	4	715.83	16.32	0.001	0.49
	Error	2894	66	43.84			
Attachment to father	Time	6435.35	2	3217.67	92.44	0.001	0.73
	Time*Group	3960.64	4	990.16	28.44	0.001	0.63
	Error	2297.33	66	34.80			
Attachment to peers	Time	1694.13	2	847.06	11.23	0.001	0.25
	Time*Group	500.53	4	125.13	1.65	0.17	0.09
	Error	4977.33	66	75.41			

As illustrated in Table 4, the three-level (pre-test, post-test, and follow-up test) within-subject factor of attachment to mother, attachment to father, peer attachment is significant. Furthermore, the interaction among attachment to mother, group, and father is significant; nonetheless, the interaction between attachment to peer and group results is not significant. Therefore, it can be concluded that the interaction between attachment to peer and group is not significant. Consequently, it can be argued that schema therapy and acceptance and commitment do not affect the attachment to peer in sharp-witted adolescents and only affect the attachment to parents.

Discussion

The current study aimed to compare the effectiveness of schema therapy training and acceptance and commitment therapy in the attachment of gifted adolescents. As evidenced by the obtained results, schema therapy and acceptance and commitment do not affect the attachment to peers in sharp-witted adolescents and only affect the attachment to parents. This finding is in line with those reported by Mohammadi et.al (17), Hill et.al (18), Wetherell et.al (19), Narimani et.al (20).

This result can be justified on the ground that attachment styles (specific patterns of expectations, emotions, and individual behaviors) are rooted in the first two years of life and the individual's primary communication experiences with their parents or

caregivers. Sufficient stability and appropriate attachment style in infancy would be manifested in later stages of life and subsequent relationships, especially with significant people (6). Numerous studies in this field have emphasized the role of parents' behavior in the formation of communication and emotional problems of children. A child who is deprived of stability, understanding, and love in his/her primary environment fails to satisfy his/her needs. Moreover, parents' excessive attention to a child's welfare increases the likelihood of the formation of inefficient schemas, which leads to communication problems in children. According to Young's theory, early maladaptive schemas are caused by interaction with maladaptive parents and childhood traumas. When nuclear needs, such as secure attachment, self-support, freedom of expression, needs, and emotions are not met, early incompatible schemas are developed. The schema therapy with an emphasis on interpersonal relationships of the patient from childhood to present and considering psychological themes in the long term can cause the loss of maladaptive schemas, attachment styles, as well as the reduction of neuroticism symptoms and adjustment problems (21).

Furthermore, acceptance and commitment therapy focuses on helping people to engage in valuable practices. It seems that clients choose a set of behavioral goals that are more important and valuable to them. The improvement of interpersonal relationships, education, self-care, and parent-child relationship can be some

examples of these values. The purpose of this treatment approach is to involve a person in important actions which he/she avoids despite their significance. The identification and correction of important issues to inform them of these values and act accordingly is an important component of this goal. Based on the aforementioned issues, educating children to identify values and act committedly based on them reduces the rate of attachment problems in children (20).

Among the notable limitations of the present research, we can refer to the fact that the students did not exhibit some behaviors, such as aggression and impulsivity in the group session. As a result, they bottled up their emotions and did not express problems in public. The self-report nature of the used questionnaire was another limitation of the present study. Based on the obtained results, it can be suggested that these two interventions be considered in individual counseling and educational sessions held on adolescents' behavioral problems, as well as their interpersonal relationships and parental education.

Conclusion

It can be concluded that schema therapy and acceptance and commitment were effective in attachment to parents; nonetheless, they did not exert any considerable impact on peer attachment in gifted adolescents.

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