Original Article

Aggression in Juvenile Delinquents and Mental Rehabilitation Group Therapy Based on Acceptance and Commitment

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Objectives: The most common problem that delinquent children and juveniles deal with at every moment is the lack of sufficient control over their aggression. Accordingly, the aim of this study is to investigate the effects of mental rehabilitation group therapy based on acceptance and commitment on decreasing aggression in juvenile delinquents.

Methods: This study employed a quasi-experimental method with a pretest-post-test design and a 2-month follow-up with both the experimental and the control group. To conduct this study, 30 cases of delinquent juveniles were selected by the Buss and Perry Aggression Questionnaire, and randomly assigned to two experimental and control groups. The Experimental group received 8 sessions of acceptance and commitment group therapy.

Results: Results were analyzed using ANOVA, and showed that the experimental group demonstrated a significant reduction in aggression and its aspects (physical aggression, verbal aggression, anger and hostility) compared with the control group. This difference was also maintained in the follow-up phase ($P< 0.001$).

Discussion: The results showed that acceptance and commitment group therapy can effectively reduce overall aggression and its dimension (physical aggression, verbal aggression, anger and hostility), and that the results last to the follow-up phase.

Keywords: mental rehabilitation, aggression, juvenile delinquents, acceptance and commitment therapy (ACT)

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Introduction

In the present era, the issue of delinquent children and adolescents is certainly a very difficult and uncomfortable issue, and it attracts the attention of many experts, including psychologists, sociologists and criminologists. They are often trying to answer the question, "Why do some children and young people participate in a range of crimes, including violent and anti-social crimes?" and also thinking about how to deal with them (1). If the adolescents' crimes lead to intentional or unintentional damage to other people, then they are considered violent. The most common problem that delinquent children and adolescents face and deal with at every moment is a lack of sufficient control over their aggression (2). Reviewing the data and statistics also indicates that in recent decades, anger and aggression have increased. Much empirical evidence has shown the damaging effects of anger in human relations (3). In America, homicide is the second leading cause of death between the ages of 15 and 24, and about half of children referred to psychological centers are aggressive (4). Many other arrests are made which relate to crimes (assaults and harm, intimidation, unintentional murder, threats and knife) committed by individuals under the age of 24. According to the latest statistics available, 42% of forensic examinations related to injuries are caused by conflict – 76.2% of which are young and teenage boys (5). Uncontrolled aggression causes social, occupational,

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educational, mental and physical health problems in adolescents and can predict alcohol and drug use, smoking, poor educational consistency, academic failure, depression, delinquency and other disorders in adolescents (6,7).

Aggression is one of the major issues and problems related to puberty. It is one of the major reasons for adolescents being referred to counseling and psychotherapy (8). Interventions focused on the family, along with multi-system therapies are the most successful treatments currently available (9,10), while the efficacy of pharmacotherapy in controlling aggression has not yet been confirmed with sufficient evidence (11). Cognitive-behavioral treatments indicated a short-term efficacy, but the training of these techniques was not generalizable (12), so it takes more time and resources from families and other parties involved in the treatment process. These limitations highlight the necessity of designing and applying new interventions. A cognitive-behavioral intervention is one of the approaches that is used to reduce aggression (13). Acceptance and Commitment Therapy is a type of intervention which can be classified as the third generation of cognitive-behavioral interventions. Confined studies have been conducted (Eifert and Forsyth, Zarling and Saavedra's studies) to evaluate the effectiveness of these treatments on anger and aggression. Acceptance and Commitment Therapy offers a new and different theory on anger and life (14-16). This treatment has two main objectives: 1) approval and adoption of attitudes and undesirable thoughts and feelings that disappointed people inherit. 2) A commitment to action that is associated with an individual's values (14). When people accept feelings of fury and thoughts that lead to anger, they will be calming down. That acceptance increases their ability to respond. Efforts to reduce feelings of anger through a behavioral reaction to the pressures of life can limit the environment people have for their choices. By approving feelings of anger and sadness (through accepting such annoyances in connection with aggression), the individual avoids any involvement with aggression, and instead tries to turn it into the kind of behavior that gives them more space to move and live. Their behavioral options are different from the old ones they are accustomed to. If people want to know whether they are dealing with their anger and sadness effectively, they must be patient and not run away from it, so that they can freely focus on the life they want to have (17).

Another important part of this treatment is the emphasis on the values which are important for individuals, and which they have the ability to perform and modify. Values are used as the indicator for assessing and evaluating activities that are beneficial or non-beneficial. People without these values do not exhibit correct behavior. For example, aggressive behavior has become a habit for some people. They must try to understand the values and actions which are necessary in order to change. If they do not respect those values, their behavior will not change (15). Given that adolescents are experiencing a particular stage at a Juvenile Correctional Center, they may look over the mistakes of the past or worry about the future choices the role of a victim offers them. Acceptance and Commitment Therapy can help them understand the process of negative cognition, give them an awareness of time, and finally help them deal with their problems by accepting them according to their true values. For these reasons, acceptance and commitment therapy as a new and effective method of behavior therapy can reduce aggression, as well as aiding other methods of teenage problem solution, especially in those who have been arrested, or accused of issues such as delinquency. Accordingly, the present question is whether mental rehabilitation based on acceptance and commitment group therapy can lead to a reduction in aggression in delinquent juveniles.

Methods

This study employed a quasi-experimental method with a pretest-post-test design and a 2-month follow-up with both the experimental and control groups. The studied population was fully comprised of Juvenile Delinquents living in Tehran Juvenile Correctional Center. With regard to the sampling in this study, the subjects were chosen purposefully (30 people who had high scores on the Aggression Questionnaire (AQ) were selected), and the participants were then randomly assigned to test and control groups. By the end of the study, the number of subjects remaining was 27 adolescents at the post-test stage and 25 in the follow-up. The questionnaire used in the study was the Aggression Questionnaire (AQ), which was created in 1992 by Buss and Perry. This questionnaire has 29 questions that assess four aspects of aggression (physical aggression, verbal aggression, anger and hostility). The three components classified are the motor or tool (verbal and physical aggression), emotional (anger) and cognitive (hostility) (18). The results of an evaluation showed that the internal

consistency of the questionnaire is above 0.89. The narrative forms of this questionnaire have been reported as evaluating physical aggression with a 0.80 consistency, verbal with 0.76, anger with 0.72 and hostility with 0.72 (19). The reliability and validity of the questionnaire was also examined, in that the test-retest reliability coefficient and was estimated for the scales of the questionnaire, and varied from 0.61 to 0.74. Cronbach's alpha for the scale factors is fulfilled in the range of 0.71 to 0.82, and the index alpha for the whole questionnaire was 0.89. To check the validity of the method, convergent validity coefficients ranged between agents between 0.38 and 0.60. Also, the correlation of each factor to the total scale was high, with a minimum and maximum of 0.68 and 0.81 respectively (20).

Therapy consisted of eight sessions; each session lasted for 90 minutes. The session content has been developed with the use of various studies (21,22). This study was a descriptive analysis of data from the mean and standard deviation and inferred statistics. A covariance analysis was used to compare the groups, in order to remove any pre-test effect.

Results

The analysis indicated no significant difference in the pre-test mean of the two groups, but the post-test mean score of the experimental group (70.10) was significantly lower than the post-test mean in the control group (111.66). The ANOVA test revealed that this treatment significantly decreased the mean scores on the subscales of aggression and thus has helped the experimental group. These results also persisted in a follow-up test. Table (1) shows the post-test aggression scores of the experimental group compared to their pre-test score. All the components of aggression show reductions. In the control group, there was not much change between pre-test and post-test components. These results were also sustained at the follow-up.

Table 1. Mean and standard deviation of the experimental and control groups of aggressive components in pre-test, post-test and follow-up

Group			Components			
			Physical aggression	Verbal aggression	Anger	Hostility
Experimental	Pre test	15	35.80 ± 3.72	18.93 ± 2.31	26.20 ± 1.65	32.13 ± 2.55
	Post test	13	25.23 ± 2.38	11.30 ± 2.26	16.00 ± 2.08	22.76 ± 1.48
	Follow up	12	27.91 ± 2.60	13.50 ± 1.93	14.33 ± 2.26	25.75 ± 2.30
Control	Pre test	15	34.00 ± 4.76	18.33 ± 2.31	25.00 ± 2.47	30.33 ± 2.87
	Post test	14	33.42 ± 3.71	18.71 ± 2.39	26.00 ± 2.14	30.14 ± 3.54
	Follow up	13	36.30 ± 4.02	18.84 ± 3.05	25.53 ± 2.47	31.23 ± 2.81

As table (2) shows, the difference between aggression levels in the post-test scores in both the experimental and control group was significant (0.001). In other words, an acceptance and commitment approach reduced the aggressive behavior of delinquent adolescents at the post-test stage. The size of the effect in the post-test phase was (0.52). This statistical significance shows that the sample size was sufficient to test this hypothesis.

Table 2. Results of covariance analysis comparing post-test scores of the experimental group and control group on aggression and its components

Source of changes	Sum of squares	Degree of freedom	Mean square	F	Sig	Etha square	Statistical power
Aggression pre test	64.97	1	64.97	98.60	0.21	0.26	0.43
Group	3451.520	1	3451.520	337.15	0.001	0.52	0.92
Error	930.77	23	40.46				
Total	209714.00	27					

Components of aggression	Sum of squares	Degree of freedom	Mean of square	F	Sig	Etha square	Statistical power
Physical aggression	1181.50	1	1181.50	197.04	0.001	0.47	0.91
Verbal aggression	1576.28	1	1576.28	188.24	0.002	0.45	0.88
anger	611.48	1	611.48	105.91	0.032	0.37	0.90
Hostility	1146.89	1	1146.89	168.99	0.002	0.46	0.93

Discussion

The aim of the present study was to investigate the process of mental rehabilitation, using acceptance and commitment group therapy to decrease the aggression of juvenile delinquents in Tehran Juvenile Correctional Center. The findings of this study showed that acceptance and commitment based therapy reduces aggression in the experimental group more than the control group. The results were the same after a two-month follow-up. According to the results, the first hypothesis about the effectiveness of this treatment in reducing aggression was approved. The present results are consistent with earlier researches (14-16). In explaining the overall effectiveness of acceptance and commitment therapy, we can highlight the severe behavioral restrictions seen in the behavioral psychopathology principle in this approach (ACT). The goal of treatment was not only to reduce symptoms, but also to increase psychological and behavioral flexibility in areas where behavior is limited. Psychological flexibility means fostering increased awareness and acceptance of alternative behaviors, thoughts and feelings by learning to touch, learning evaluation and participating in the liberation of the mind and behavior that is consistent with individual values (14). Conversely, aggression is often selected due to the limited options for responding to difficult situations and problems that aggressive delinquent adolescents are faced with. Perspective-limited treatment (ACT) can become a cornerstone of juvenile psychotherapy, helping aggressive teens be more flexible and have more available options for their behavior based on their values. Results obtained confirmed the second hypothesis: “the effectiveness of this treatment on reducing physical and verbal aggression”. Zarling’s study showed that acceptance and commitment therapy can reduce physical and verbal aggression in women (15). This is a part of the motor or instrumental dimension of aggression. It concluded that physical aggression often happens in the form of inflicting damage and harm on other people in order to achieve a demand. Examples of physical aggression include hitting, pushing, kicking, beating or threatening. It also includes verbal aggression, which threatens the health and welfare of others, as well as verbally insulting others, such as telling somebody “swearing is vulgar and offensive”. Mental aggression, physical aggression and verbal aggression can represent similar problems, ones which can be motivated by revenge (23). One of the most important parts of Acceptance and Commitment Therapy, however, is a commitment to values which demonstrate that the individual's personal and social changes can be beneficial. This process decreases aggression, while providing a motivation to release one’s anger in a constructive way. Hence a patient can find meaning in suffering and emotional changes, while cognition of aggressive behavior is given a high priority.

The third hypothesis regarding the efficacy of this treatment in reducing anger was also approved, according to the results. Savadra’s study showed that this treatment will reduce anger in individuals with substance abuse (16). Eifert and Forsythe also showed that this treatment caused anger reduction (14). The emotional aspect of aggression is one of the factors and conditions of physiological arousal, one which prepares the inner organism. The next task is the procurement and preparation of aggressive behavior. Aggression is a natural reaction to pain, anger, frustration, injustice, profanity and infidelity. However, anger can lead to sorrow as well as causing attitudes and behaviors which interfere with important interpersonal relationships. Anger is not necessarily harmful, because it happens too fast. Anger is problematic and harmful when it remains with the feelings caused by it and results in angry behavior (24). Acceptance and commitment therapy helps people recognize the connection, and realize that anger can sometimes be non-painful. People can thus calmly and peacefully experience anger as an effect, without suffering any negative reaction and remaining free from mental concerns, emotional consequences and preconceptions. Understanding this issue releases them from the feelings that anger aggregates, and helps them focus their attention and energy on important choices (17).

The fourth hypothesis (the efficacy of this treatment in reducing hostility) was approved according to the results .This dimension of aggression is cognitive. Bass believes that an attitude of hostility and often cynicism is seen in mistrust of others and a negative assessment of what is expressed (25). In explaining this hypothesis, the effect of this treatment solely on hostility has not been studied in a separate study, since the different components of aggression have been considered as a whole in previous studies. However, it can be explained based on the research literature. Therapy (ACT) as a behavioral intervention helps people live more in the present moment instead of in their thoughts, feelings and experiences of uncomfortable memories that will focus on important

values and goals. With the help of (ACT), people can accept thoughts and feelings instead of avoiding the personal knowledge of the various options. They can then select a more appropriate, practical action, and not merely avoid thoughts, feelings, memories or desires, and indeed not be disturbed by any imposed mental construction (17).

Conclusion

The results showed that acceptance and commitment group therapy can effectively reduce overall aggression and its dimensions (physical aggression, verbal aggression, anger and hostility) and that the results last into the follow-up phase. Like any other research, some limitations should be considered. Firstly, the major limitation of this study was the poor background of research in this new field. Secondly, data collection was based on a self-reporting tool (questionnaire), and this one-dimensional data gathering may be a source of bias in the data collection process. More accurate and mixed methodologies of research seem to be necessary; therefore, to measure aggression in future studies. Third, the study was limited to male delinquent adolescents; therefore the results of the present study cannot be generalized to non-delinquent and female adolescents. It is recommended that the effectiveness of this method over other behavioral problems in adolescents will be examined in future studies alongside other treatments. The results of the study can be used in social environments such as schools, workplaces and Juvenile Correctional centers that have high interpersonal relationships.

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