

Investigating the Effectiveness of Treatment based on Acceptance and Commitment on Aggression, Psychological Flexibility and Self Efficacy in Deciding the Career Path of Teenagers

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Abstract

Introduction: Adolescence is a risky period in terms of choosing a job and the future, because all the main characteristics of personality and career interests and desires, work values and choosing a career path are formed in this period. Therefore, this research was conducted with the aim of investigating the effectiveness of Steven Hayes' acceptance and commitment therapy, emphasizing the approaches of awareness, acceptance, commitment, and behavior change on aggression, cognitive flexibility, and self-efficacy in career decision making.

Methods: The research method was semi-experimental with a pre-test-post-test design with a control group. The research population included all teenage girls in Yazd city who were studying in the second secondary level in the academic year 1401-1402, and from these, 2 groups of 15 people were selected by cluster sampling method and randomly divided into two intervention groups and a control group. They were divided and responded to Bass and Perry aggression questionnaire, psychological flexibility questionnaire by Hayes and Betz and Taylor self-efficacy questionnaire in two pre-test and post-test stages. The subjects of the experimental group were trained in acceptance and commitment-based therapy in a group (in the form of training and skills) for 1 session of 60 minutes per week for 2 months, but no training was given to the control group during this period. The data were statistically analyzed using multivariate and univariate analysis of covariance with a significance level of $p < 0.05$ and using SPSS version 23 software.

Findings: The survey results showed; the treatment based on acceptance and commitment was not effective on aggression, psychological flexibility, but it was effective on the self-efficacy of career path decision-making with a significance level of less than 1%, but it was effective compared to the control group ($P \leq 0.01$).

Conclusion: Therefore, treatment based on acceptance and commitment has been effective on students' mental health and decision-making due to the nature of skills training.

Keywords: Acceptance and Commitment, Aggression, Psychological Flexibility, Self-efficacy, Adolescence

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Introduction:

The structural and psychological changes that occur during puberty for teenagers and students are considered a fundamental developmental crisis (1). Aggression is a negative state of mind with cognitive defects and deviations and incompatible behaviors, and also refers to overt behavior, both physical and verbal, that leads to harming another person, object, or system (2) Robertson et al. (3) introduce aggression as one of the most important problems of adolescence in all cultures and define it as a readiness to express anger. Aggression is expressed in different ways; sometimes it is swallowed in the form of anger and sometimes it is directed at external people and objects (4).

Because at the same time as the cognitive changes, the adolescent goes through puberty and the hormonal and physiological changes caused by it, the possibility of aggression increases in him (5), while aggression can have many negative consequences, including a negative mental image in among peers and teachers, rejection by peers, academic failure, drug use, family relationship problems and delinquency for teenagers (6). Lead to an increase in mental health problems in adolescents. Needs are known as internal and psychological food, which are necessary for psychological development and durability, and the well-being and coherence of adolescents' lives (7).

In addition, the physiological reactions caused by aggression is an important predictive factor in the occurrence of cardiovascular diseases in the future (8). Also, the aggressive behaviors of adolescents in different cultures are closely related to antisocial behaviors in adulthood (9). With aggression, a person loses the opportunity to learn the necessary skills to effectively deal with various events and provides the basis for the continuation of aggression and the problems caused by it (10).

One of the factors that can prevent anger from turning into aggression is psychological flexibility. In fact, according to this view, anger and judgment are our fleeting emotions that come and go like the clouds in the sky or the changing seasons, and can be prevented from turning into ineffective aggression with mindfulness, acceptance, fault, and focus on values. 3). the results of Hayes et al.'s research (11) show that the reason for showing prejudice and aggression to others stems from three things: the relative inability to adopt the perspective of others, the inability to feel the pain of others, and the inability to be emotionally open. Increasing psychological flexibility can affect all three factors.

Psychological flexibility refers to the ability to contact the moment of life and change or stabilize behavior, behavior that is in line with the individual's values according to the situation (12), the processes of achieving psychological flexibility from the six principles of help. They take it so that people can be flexible Adaptability: cognitive breakdown, acceptance, contact with the present moment, self-observation, values and committed action (13) adaptive behavioral patterns according to environmental changes and the ability to change its cognitive set, the main part of adaptation is derived from psychological flexibility. (14), psychological flexibility can adapt a person's thoughts and behavior in response to changes in environmental conditions. Accordingly, psychological flexibility is associated with psychological well-being and vulnerability in a wide range of discomforts, including depression, anxiety, and mental disorders. It happens, it has a relationship (15).

One of the possible factors causing aggression in teenagers is the many pressures they have to bear in the way of choosing their future field of study and career. In fact, being

a human being is hard and being a teenager is not easier than that (16). In fact, the teenage period is the time to make big decisions such as choosing a field of study, which can affect the career future and a large part of a person's life, therefore, the self-efficacy of deciding the career path is one of the most important concerns of this age period because the beginning of the career path People and the basis of their future career choices are formed at this age. People's work is one of the main reasons for tension in their lives (17). For each person, a job is considered as a social identity forming factor, a source of providing life needs and forming social relations (16).

Making a suitable career decision is important for job seekers. By making a career decision, in addition to choosing a job, a person also chooses a special lifestyle and consciously or unconsciously chooses things such as position, the need to continue education, the skill of spending free time, and his work environment (18). In reality, career decision-making is a set of operations that a person, while determining a job, undertakes to reach the implementation stage by performing the necessary behaviors and benefiting from his choice (19). Self-efficacy in career path decision-making means the degree of a person's belief that he can succeed in fully performing the necessary tasks of career path decision-making (20).

Various therapeutic approaches have been used to treat and manage aggression, among which third wave behavioral treatments have been among the most successful. One of the third wave behavioral therapies that is increasingly popular around the world is acceptance and commitment therapy. Treatment based on acceptance and commitment is one of the treatments of the third wave of behavioral therapy that Steven Hayes, a professor at the University of Nevada and his colleagues introduced in the beginning of the eighties, and is known by the abbreviation of acceptance and commitment. The aim of this approach is to help clients to create a rich, complete and meaningful life, so that people know their values and goals and know how they want to be in life (13).

Acceptance and commitment therapy focuses on self-acceptance, awareness and observation. The underlying principles of acceptance and commitment therapy include accepting or willing to experience pain or other disturbing events without trying to control them; Value-based action or commitment combined with the desire to act as meaningful personal goals precedes the elimination of unwanted experiences (11). This therapy, focusing on exposure-based exercises and self-awareness, seeks to help clients achieve a valuable life. 21). The main goal of acceptance and commitment is to strengthen psychological flexibility in people so that they are able to choose between different options (22), in the process of acceptance and commitment therapy, the treatment seekers are helped to instead of trying to change and modify their attitude to experience life, problematic thoughts and emotions in a different way (23), because in this therapeutic approach it is believed that any action to control adverse mental experiences is ineffective (24). According to the available findings, acceptance and commitment therapy is effective in reducing injuries and psychological problems such as anxiety and depression, increasing flexibility and resilience, improving the level of mental health and well-being, and self-help behaviors (25), Therefore, this research was conducted with the aim of investigating the effectiveness of the treatment based on

acceptance and commitment on aggression, psychological flexibility and self-efficacy in career decision making.

Research Method:

The research method was semi-experimental with a pre-test-post-test design with a control group. The research population included all teenage girls who were students of the second grade of high schools in the two districts of Yazd city, who were studying in the academic year of 1401-1402, and from these, 2 groups of 15 people were selected by cluster sampling and randomly in the experimental group and The control group was divided and responded to Bass and Perry's (1978) aggression questionnaire, Hayes' (2000) psychological flexibility questionnaire, and Betz and Taylor's (1983) career decision self-efficacy questionnaire in two phases, pre-test and post-test.

Subjects of the experimental group were trained in Acceptance and Commitment Therapy (by the first author, who is a school counselor and has a certificate of specialized supervision of Acceptance and Commitment Therapy) in a group (in the form of training and skills), for 2 months, 1 session of 60 minutes per week were placed, but no training was given to the control group during this time.

The entry criteria were: 1. Second year high school students; 2. Female students; 3. Students of Yazd city; 4. Not receiving psychological treatment at the same time with the aim of treating aggression disorder and the exclusion criteria were: students who were absent in more than 2 consecutive sessions and 3 irregular sessions.

The research tools were: (1) Bass and Perry Aggression Questionnaire: The new version of the aggression questionnaire, whose previous version was called hostility questionnaire, was revised by Bass and Perry in 1992. This questionnaire is a self-report instrument that includes 29 items and four subscales, which are physical aggression (PA), verbal aggression (VA), anger (A) and hostility (H). Subjects responded to each statement on a 5-point scale from: completely like me (5), somewhat like me (4), neither like me nor not like me (3), somewhat not like me (2), not very similar to me (1). The two statements 9 and 16 are scored inversely. The total score for aggression is obtained by summing the scores of the subscales. The total score for aggression is obtained by summing the scores of the subscales. Bass and Perry have reported the internal consistency coefficient of this questionnaire as 0.89 and its reliability using the test-retest method as 0.80 (26). Cronbach's alpha coefficient for this questionnaire was reported by Samani as 0.78 (27). Also, the high correlation of the factors with the total score of the questionnaire, the weak correlation of the factors with each other and the alpha coefficient values all indicate the adequacy and efficiency of this questionnaire for the use of researchers, specialists and psychologists in Iran. Hossein Khanzadeh and his colleagues (28) used Cronbach's alpha and halving methods during research among students to determine the reliability of this questionnaire, and the coefficients obtained for the entire questionnaire were 0.89 and 0.90, respectively, which indicates a favorable reliability coefficient.

2) Acceptance and Action Questionnaire by Bund and colleagues: It was compiled to measure experimental/psychological inflexibility, especially in relation to experimental avoidance and the tendency to engage in action despite unwanted thoughts and feelings, and it has 7 questions. The questions of this questionnaire measure the unwillingness to

experience unwanted thoughts and feelings (I am afraid of my feelings), the inability to be in the present and move towards inner values (painful memories deprive me of a satisfying life). The questions of this questionnaire are rated based on the amount of agreement in a 7-point Likert scale (never 1 to always 7). Higher scores in this scale indicate lower psychological flexibility and higher experiential avoidance. The test-retest reliability of this questionnaire has been obtained by Bund and colleagues; its internal consistency is 0.84 (29). Cronbach's alpha coefficient for this questionnaire was reported by Safarzai et al. to be 0.59 (30).

3) Self-efficacy scale for deciding career path: this scale was compiled by Taylor and Betts in 1983, this questionnaire evaluates five competences in the field of career choice based on the Crites (1961) model. Therefore, the questions of this questionnaire are in these areas: 1) proper self-evaluation, 2) gathering job information, 3) choosing a goal, 4) planning for the future 5) solving the problem. The questionnaire is on a four-point scale from no self-confidence to complete self-confidence. The number of questions in this test is 25 questions. In 1983, Taylor and Betts calculated a reliability of 0.97 for this scale using Cronbach's alpha (31).). Cronbach's alpha coefficient for this questionnaire has been reported as 0.78 (32).

4) Treatment protocol based on acceptance and commitment: This protocol was developed in 1986 during 8 sessions by Hayes (11) and it is a mixture of 4 attention approaches, awareness, acceptance, commitment and behavior change, and its overall goal is to finally achieve flexibility. It is psychological in such a way that there is no need to remove or destroy the bad feeling, but despite the presence of this feeling, the person moves towards the behavior based on the thought value (11). The first experimental group was subjected to treatment based on acceptance and commitment; the content of which sessions are presented in Table No. 1.

Table 1. Summary of content of therapy sessions based on acceptance and commitment

meetings	The content of the meetings
Briefing	Implementation of pre-test, evaluation of research participants, diagnostic interview and regulation of derma.
First	Getting to know the therapeutic concepts of acceptance and commitment, creating insight in participants towards the problem and challenging control
Second	Education of creative despair and familiarization with the list of discomforts and problems that the client has tried to get rid of
Third	Creating acceptance and mindfulness by letting go of trying to control and creating a cognitive fault and reviewing the previous session and assignments
Fourth	Teaching value-oriented life and selecting and reviewing previous meetings and assignments
the fifth	Evaluation of goals and actions, specification of values, goals and actions and their obstacles

the sixth	Re-examining values, goals and actions and familiarity and engagement with passion and commitment
the seventh	Identifying and removing obstacles to committed action, summarizing and implementing post-examination
Eighth	Evaluation of research participants, diagnostic interview and regulation of treatment and implementation of pre-test

The data were statistically analyzed using multivariate and univariate analysis of covariance with a significance level of $p < 0.05$ and using SPSS version 23 software.

Findings:

The purpose of the present study is to compare the effectiveness of acceptance and commitment therapy on aggression, psychological flexibility and self-efficacy of the career path in high school female students in Yazd city.

Table 2. Descriptive statistics of dependent variables

	groups	M	SD	number
aggression	Experimental	91.33	13.526	15
	control	72.25	19.413	16
Psychological flexibility	Experimental	78.73	14.978	15
	control	74.88	11.002	16
career path self-efficacy	Experimental	67.00	12.610	15
	control	72.25	12.223	16

Table 3. Multivariate test

Effect	amount of level	F	sig	square of the parabola	observed power
Pillai effect	0.4232	3.485	0.004	0.211	0.931
Landay Wilkes	0.593	3.779	0.002	0.230	0.950
by Hotlings	0.659	4.062	0.001	0.248	0.964
The largest zinc root	0.615	7.992	0.000	0.381	0.984

According to the values of the significance level and the eta square of the contribution in Table No. 3, it is possible to interpret the therapeutic approaches as a significant influencing factor in the dependent variables. The squared values of eta are the reason for the third of the variance that is related to the factor variable. The general rule is that if this value is greater than 0.14 or 14%, it indicates that the effect size is large.

Table 4. Covariance analysis of variables

Source	dependent variable	df	average of squares	f	sig	square of the parabola	observed power
group	aggression	2	426.607	6.879	0.003	0.256	0.902
	Psychological flexibility	2	16.454	0.243	0.785	0.012	0.086
	Job self-efficacy	2	110.695	5.115	0.011	0.204	0.793
Source	aggression	40	76.016				
	Psychological flexibility	40	67.661				
	Job self-efficacy	40	21.640				

You can see the results of the significance test of the factor or agent in the summarized table 4. Considering the significance level of less than 0.05 for aggression and job self-efficacy variable and high observed power and eta square greater than 0.14 for these two variables, our intervention has a significant effect on aggression and job self-efficacy variables.

Now, in order to compare groups two by two and to compare the effectiveness of these three treatments, Benferroni test is used in Table No. 5.

Table 5. Comparison of means for post-test aggression variable

dependent variable	(J) Group	Average difference (I-J)	standard error	sig	95% confidence interval for the difference in means	
					lower limit	upper limit
aggression	Experimental	-0.070	3.171	1.00	-7.995	7.855
	Control	-11.524	3.796	0.013	-21.011	-2.037
	Experimental	11.524	3.796	0.013	2.037	21.011
	Control	11.454	3.243	0.003	3.351	19.557

From the results of Table No. 5 in the control row, the comparison of treatment methods with the control group, which did not use any treatment method, was made and its significant difference according to the significance level of 0.013 for the treatment method of acceptance and commitment has a significant effect. This treatment method compares with the control group in the variable of aggression.

Table 6. Comparison of means for psychological flexibility variable

dependent variable	(J) Group	Average difference (I-J)	standard error	sig	95% confidence interval for the difference in means	
					lower limit	upper limit
Psychological flexibility	Experimental	-1.004	3.313	1.000	-9.282	7.274
	Control	1.333	3.965	1.000	8.576	11.242
	Experimental	-1.333	3.965	1.000	-11.242	8.576
	Control	-2.337	3.387	1.000	-10.801	6.127

As it is clear from the results of table number 6, no significant difference can be seen in the variable of psychological flexibility between the average of the control group and the treatment approach in this variable. Therefore, the effect of treatment intervention was not significant.

Table 7. Comparison of means for the variable of job self-efficacy

dependent variable	(J) Group	Average difference (I-J)	standard error	sig	95% confidence interval for the difference in means	
					lower limit	upper limit
Job self-efficacy	Experimental	-2.957	1.873	0.367	-7.639	1.724
	Control	3.033	2.243	0.552	-2.571	8.637
	Experimental	-3.033	2.243	0.552	-8.637	2.571
	Control	-5.990	1.916	0.010	-10.777	-1.203

The results of Table No. 7 show the only significant difference between the intervention approach and the control group in the occupational self-efficacy variable with a significance level of 0.01, which is less than 0.05. This significant mean difference of 5.990 is in favor of the approach of the intervention group compared to the control group.

Discussion and Conclusion:

The survey results showed; the treatment based on acceptance and commitment was not effective on aggression, psychological flexibility, but it was effective on the self-efficacy of career path decision-making with a significance level of less than 1%, but it was effective compared to the control group.

In fact, acceptance and commitment therapy have been effective on aggression in second year high school students. These findings are in line with the results of Robert, Ogundaba, Ajokpaniyo, and Fajonyomi (33), Mohadi Rad, Ebrahimi, Sahibi (23), Chegani, Ebrahimi, Sahibi (24).

In explaining this conclusion, it can be said that the treatment and treatment of the secondary school's aggression has been effective in reducing the aggression of the secondary school students, with the two more high -incomes in the fields. It has been the case that can be lifted and lifted up have continuity over time (11). In both treatments, secondary school students learned that despite environmental, family, academic and social problems and issues, they still have a significant level of choice and free will. In both cases, they learned to stop trying to control things that are not in their control and focus on actions and choices that are in their control. Finally, there has been a process of smart plan or intelligent planning to change the conditions in both approaches (34).

In other words, in both approaches, we emphasize on the discussion of values and the meaning of life. In the present research, the students in the selection theory group have become familiar with the concept of the ideal world, and by examining and memorizing people, beliefs, relationships and other matters which are meaningful and valuable for

them, they learned the necessity of anger management to prevent harmful behaviors for these elements of the desirable world, and in the acceptance and commitment group, they are one of the six sides of the psychological flexibility hexagon of the values section.

In explaining the effectiveness of group therapy based on acceptance and commitment on psychological flexibility, it can be said that psychological flexibility is a deep and complex and multi-dimensional concept that requires an acceptable period of time and specific environmental conditions for its formation or increase. This intervention has been carried out for two months and was implemented in a situation where high school students were preparing for the end-of-year exams and did not have the necessary concentration for sufficient practice and reviewing the material. It seems that in the three-month follow-up that will be done in the coming months and after the exams, we can expect changes in each of the two experimental groups.

In fact, according to neuroscience research, changing the prefrontal parts of the brain, which are responsible for mindfulness, reasoning, and attention to spiritual matters, is similar to physical therapy for an injured body part, which requires sufficient time. Therefore, for the effectiveness of these approaches, including the change of self-evaluation with the WDEP process, as well as the process of anchoring and paying attention to values and performing effective actions in the approach of acceptance and commitment, people may experience failure many times before achieving success.

Also, the treatment based on acceptance and commitment had an effect on the self-efficacy of deciding the career path of second year high school students and this effect has been different. So far, no research has been done that examines the effectiveness of group therapy based on acceptance and group commitment on the self-efficacy of choosing a career path, but this research is in line with the research of Abbaszadeh et al. Is. In explaining this result, it can be said that the reason that both acceptance and commitment therapy have been effective on the self-efficacy of career path decision-making is the increase in the sense of self-efficacy and self-esteem that people observe in themselves by learning positive approaches. In fact, in both of these approaches, people learn that they can set a vision for themselves and set goals based on that vision and move in line with those visions and goals with intelligent planning.

In fact, considering the fact that the sample group of this research was not adults of legal age who can easily form new relationships with work and family groups, but rather teenagers whose important people in their lives are their parents and officials. They are their school. Therefore, by learning the theory of choosing and implementing treatment based on acceptance and commitment, their relationships with these people have increased and improved, and they have been able to achieve a higher level of mental health and peace, and ultimately self-efficacy and achieve higher levels of career path self-efficacy.

Research limitations:

This research, like other researches, has limitations, among which we can mention the age limit and the city of Yazd, and in addition, due to the chemical attacks on girls' schools, during the interventions, I had to hold two meetings in cyberspace and also, the

possibility of receiving a follow-up of this event may be the result of effective interventions.

Research Application:

This research has been conducted on teenage girls who have an identity crisis, and in line with that, they have problems in making decisions about their career paths, so the results of this research are published in Kara schools.

Acknowledgements:

This article is taken from the treatise. Obtaining ethical permits and code of ethics IR.IAU.YAZD.REC.1402.006 Obtaining informed consent from all participants in the study, explaining the implementation method and purpose of the research and answering the participants' questions were among the ethical considerations in this research observed

Conflict of interest

No conflicts of interest are declared by the authors.

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