The effectiveness of compassion-focused therapy on academic procrastination and cognitive-emotional regulation of first-grade high school students

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  Received: 2021/12; Revised: 2022/1; Accepted: 2021/3

Abstract

Procrastination is one of the important issues in the field of planning, education, and academic achievement. Another issue is emotional cognitive regulation, which plays a key role in normal and abnormal educational processes. Psychotherapy techniques can be effective in reducing these disorders. Therefore, this study aimed to evaluate the effectiveness of compassion-focused therapy on academic procrastination and students' emotional cognitive regulation.

It was a quasi-experimental pretest-posttest study with a control group. The statistical population included 40 first-grade high school students in Mashhad who were selected by available sampling and randomly divided into experimental and control groups. In the experimental group, compassion-focused treatment was performed in 10 sessions of 90 minutes. The Garnefsky Cognitive Emotional Regulation Questionnaire and the Procrastination-Student Assessment Scale (PASS) were used. Data were analyzed using multivariate analysis of covariance and SPSS 21 software.

There was a significant difference between the mean scores of procrastination and emotional regulation variables in the experimental and control groups (p <0.05). The effect of this treatment on reducing procrastination was 82% and the increasing emotional regulation score was 51%.

Compassion-focused therapy can reduce procrastination and increase students' cognitive regulation. Therefore, it is suggested that this intervention be used in educational planning.

Keywords: compassion-focused therapy, procrastination, emotional regulation.

Introduction

One of the important issues in the field of planning, education, and academic achievement is paying attention to psychological dimensions. Procrastination means to delay, stop, or postpone the performance of a task{Rosário, 2009 #2912} (1). Steel has found sources of procrastination by 800 BC. Procrastination is a global problem that exists in all cultures and more than 20% of adults experience procrastination in their daily work (2). Procrastination has various manifestations depending on its complexity and emotional and behavioral components; One of them is academic procrastination (3). Procrastination hurts the health and life satisfaction of different groups. Negative consequences of procrastination in educational environments are a range of low academic performance, lower grades and inactive

participation in classes and discussions, low satisfaction with academic performance and failure, low self-esteem, learned helplessness, and general anxiety (4). Ozer et al. showed that procrastination covers about 40 to 95% of educational environments (5). Moreover, a review of research in the field of procrastination shows that procrastination is associated with poor academic performance, lack of punctuality and difficulty in pursuing homework, the insufficient effort for success, anxiety, depression, dependence, fear of failure, job hatred, lack of energy, negative perfectionism, low self-esteem, learned helplessness, and low self-efficacy (6,7).

People with procrastination have problems with cognitive emotion regulation, and this is exactly what is taught in compassion therapy. In

addition, this treatment, emphasizing the change of references, prevents the negative feelings and emotions arising from these conditions of the patient (8). Cognitive emotion regulation refers to cognitive processes that manage emotionally motivating information (9). Anxiety tolerance is defined as the capacity to experience and tolerate negative psychological states. The disorder may be the result of cognitive or physical processes, but it manifests as an emotional state that is often characterized by a desire to act to alleviate the emotional experience (10). Emotional regulation is also known as the category of awareness and perception of emotions, acceptance of emotions, and the ability to control impulsive behaviors and behave following the desired goals to achieve individual goals and situational demands (11). Further, emphasizing the interaction of emotion and cognition, Isard et al. (12) believed that emotional knowledge has a facilitating role in the development of emotional regulation.

So far, several therapies have been performed on students' emotional cognitive regulation and academic procrastination, and each of these methods has been somewhat effective. Among these, one of the psychosocial approaches that are considered by health activists in the field of problems is compassion-focused treatment. The main difference between cognitive self-care education and other psychological methods is the emphasis on cognitive and emotional change in the direction of self-care and self-loving thoughts. Cognitive self-efficacy training originated from the study of people with high self-critical and embarrassing characteristics. Because the purpose of educating people with the disease was to create thoughts of self-care and self-attention in them (13).

Compassion therapy is a type of psychological therapy that improves health and quality of life by increasing the feeling of care and relaxation(1). It is a type of emotion-based strategy that informs clients to regulate their positive and negative emotions and accept them(2). This method consists of three components: kindness to oneself in hardships and stressful experiences instead of self-judgment, human commonalities and the inevitability of suffering and failure instead of isolation, and balanced awareness of one's

feelings and thoughts instead of extreme assimilation(3). With the awareness of the inevitability of suffering and the basis of fear and the adoption of a soothing and compassionate approach to improving self-control during stressful events, compassion therapy creates a loving and receptive attitude towards oneself(4). Compassion-focused therapy emphasizes that people deal with their negative emotions and do not avoid them, and react to their emotional experiences based on compassion, thereby increasing self-control(5). This supportive attitude toward self and others is associated with positive psychological messages such as reducing negative emotions and increasing self-control(6). Also in the concept of compassion, the self-control dimension is of special importance and is defined as experiencing and being affected by the suffering of others in such a way that one considers one's problems and sufferings more tolerable(7).

Therefore, considering the procrastination problems in the field of education and academic achievement of students, as well as the fact that people with procrastination have impaired cognitive emotion regulation, the present study aimed to investigate the effectiveness of compassion therapy-based therapy on procrastination and emotional regulation in high school students.

Materials and Methods

It was a quasi-experimental pre-test and post-test with a control group. The statistical population included 40 high school students of Imam Hassan Mojtaba High School in Mashhad who were selected by cluster sampling. Thus, all junior high school classes were divided into different clusters based on the objectives of the research, and 40 people were randomly selected from them. Finally, through the lottery method, students were divided into experimental (n = 20) and control (n = 20) groups. Inclusion criteria were: female gender, no psychiatric illness, and mental disorders, minimum age of 13, and maximum 15 years. Exclusion criteria also included: lack of interest and cooperation of individuals, not doing the tasks specified in the training process, and having more than two

absences during the sessions. Before starting the intervention, the necessary explanations about the objectives of the research were given to the individuals and after obtaining their informed consent, the individuals entered the project. At the beginning of the study, both groups were pre-tested by the Garnfsky Cognitive Emotional Regulation Questionnaire and the Procrastination-Student Assessment Scale (PASS).

Compassion therapy intervention was performed on the experimental group in 10 sessions of 90 minutes (two sessions per week) in the form of face-to-face sessions with observance of protocols and social distance and the use of personal protective equipment. The control group was on the waiting list during the treatment intervention. After the last treatment session, a post-test was performed in both groups and the data were analyzed based on multivariate analysis of covariance and SPSS software number 16. After the end of the study, compassion therapy training was held in the form of face-to-face sessions for the control group, observing social distance and using personal protective equipment. The content of treatment sessions is reported in Table 1.

Emotion Regulation Questionnaire

Developed by Granefski, it is a 36-item self-report tool. The range of scores is from 1 (rarely) up to 5 (almost always). Each subscale consists of 4 items and the total score is obtained from the sum of the subscales. A score between 36 to 72 indicates poor emotional cognitive regulation, a score between 72 to 108 indicates moderate emotional cognitive regulation and a score above 108 indicates strong emotional cognitive regulation in individuals. The alpha coefficient for the subscales of this questionnaire has been reported by Garanfsky et al. in the range of 0.71 to 0.81 (21). Hassani et al. obtained a 92% reliability of the Persian version of the questionnaire by Cronbach's alpha method(88).

Procrastination Assessment Scale - Student Prescription (PASS)

This scale was developed by Solomon and Rothblum(23) and is called the Academic Procrastination Scale. It has 27 items that examine three components: The first component of exam preparation consists of 8 questions. The second component is preparation for homework and includes 11 items, and the third component is preparation for end-of-term articles and includes 8 items. In the third component, questions related to end-of-term articles are in the form of research assignments and class research. It is intended for Iranian students and this option should be explained to the respondents. The respondents show their agreement with each item by choosing one of the options never (1), rarely (2), most of the time (3), and always (4). Moreover, in this scale, items 2-4-6-11-13-15-16-21-23 and 25 are scored in reverse. In the research, the reliability of the test was 0.86 by Cronbach's alpha method (24). The validity of the questionnaire was calculated using the factor analysis method and the findings showed the optimal validity of the questionnaire (25).

Results and Discussion

The demographic information of the two groups is presented in Table 2. According to the results of the Chi-square test, there was no significant difference between the groups in terms of age, marital status, occupation, and level of education and they were homogeneous (p> 0.05).

The mean and standard deviation of emotion regulation and self-control scores for pre-test and post-test in both experimental and control groups are shown in Table 3. Multivariate analysis of covariance to compare experimental and control groups in dependent variables is also presented in Tables 4 and 5. In this study, multivariate analysis of covariance was used for the inferential analysis of the results. First, the required assumptions were examined. The assumptions of normality of score distribution, the similarity of score variances, and the equality of score covariances were examined. The results of the Kolmogorov-Smirnov test showed that the distribution of communities was normal (p> 0.05). Levene test results for emotion regulation (P = 0.087, F = 3.137) and for self-control (P = 0.356, F = 0.880) showed that the presumption of homogeneity of variance was confirmed in all research variables.

Based on the results of the box test (P = 0.489, F = 0.946, M box = 11.215), the equality of covariances was confirmed. Due to the confirmation of all assumptions, the Mancova method can be used to test the research hypotheses.

As shown in Table 4, the value of Wilkes lambda was significant (p <0.05). This means that there was a significant difference between the experimental and control groups in post-test scores on the emotion regulation and Procrastination variables and the difference was 0.68, i.e. 68% of the individual differences in the variables are related to the differences between the groups.

According to the results of Table 5, by eliminating the effect of pre-test scores, the difference between the mean of post-test scores in emotion regulation and Procrastination variables in the experimental and control groups was significant (p <0.05). The effect of this treatment on increasing the emotion regulation score was 51% and on decreasing the Procrastination score was 34%.

This study examined the effectiveness of compassion therapy on academic procrastination and emotional cognitive regulation of junior high school students. The results showed that compassion-focused therapy is effective in cognitive-emotional regulation of female high school students. In other words, compassion-focused therapy increased the cognitive-emotional regulation of individuals in the experimental group. This finding is in line with the findings of Danson's research (26), Denis and Berker (27), Hides (28), and Kamalinasab and Mohammad Khani (29) who concluded that compassion-based therapy increases emotional cognitive regulation. To explain this research hypothesis, it should be stated that emotional cognitive regulation causes people to moderate negative and positive emotions and better understand the situation and learn how to manage their emotions. Self-compassion training increased the ability to postpone unpleasant feelings and the ability to control emotions wisely, and modifying negative emotions, led to the regulation of positive emotions (30). Trying to be aware of emotion causes people to have better self-awareness and self-control, and to feel less frustrated and self-blaming. Emotion regulation helps people adjust to the environment and allows the person to experience greater emotional balance. (31) Thus, compassion-focused therapy can lead to emotional cohesion, adaptation to new adaptive behaviors, and evaluation of positive and negative emotions and increases emotional order.

The next finding of the study showed the effect of this treatment on students 'procrastination and it reduced the students' procrastination in the experimental group. This result is also consistent with the findings of Foschia (32), Nef (33), Lutens, et al. (34), and Akhundi (35). Compassion leads people to recognize its role in negative events without feeling overwhelmed by negative emotions and acts as a defensive shield against anxiety. Compassion itself is also significantly related to the adaptive functions of procrastination coping strategies (36). In a study conducted by Sirvis (37), it was shown that self-assessment, self-criticism, and self-judgment can lead to procrastination, while the use of psychotherapy methods such as compassion therapy can be appropriate to reduce procrastination. Another study by William et al. (38) on the relationship between compassion for self-motivation and procrastination found that people with high self-compassion were less likely to have anxiety and procrastination than those with self-compassion. Self-compassion itself has a negative relationship with procrastination among students. Therefore, during the studies and the results of this study, compassion-focused therapy is one of the methods to reduce procrastination among students.

One of the limitations of the present study includes: The study was performed only on female subjects, so one should be careful in generalizing the results to both sexes. The sampling method was available, so care should be taken in generalizing the results. The lack of follow-up sessions in this study due to interference with students 'vacations and a large number of questions in the questionnaires led to its length of implementation, which may have

influenced the accuracy of participants' answers, which should be considered in future research.

Table 1. The content of compassionate focused therapy sessions based on Gilbert's treatment plan

Session	content
First session	Primary acquaintance, communication, familiarity with the general concept of self-compassion and empathy, and pre-test (Demographic questionnaire completion and sample collection for blood cortisol and serotonin levels).
second session	Introducing the session objectives, group definition, rhythmic breathing exercise, and characteristics of a group
third session	Empathy training, examining the way members deal with self-criticism or compassion (defining self-criticism and its consequences, defining compassion, Training to understand and make people feel empathetic, and Rejection by the group are one of the biggest fears of individuals in the interview.
fourth Session	What is self-compassion? Its features and skills, how it affects one's mental states, the introduction of three emotional regulation systems, and how they interact. Shaping and creating more and more varied feelings about people's issues to increase their care and attention to their health.
fifth session	Teaching forgiveness training, teaching the concept of awareness, its logic, and how it is practiced, (focusing on breathing and tracking emotions and thoughts and watching them without any reaction)
Sixth Session	Introducing mental imaging and its logic, imaging training, and implementation in the group (color imagination, location, and compassionate characteristics)
Seventh Session	Developing self-compassionate Concepts: wisdom, ability, warmth, and responsibility for generating compassion, training in imaging about self-compassion, training to develop valuable and transcendent emotions to deal effectively with the environment
Eighth Session	Self-centered compassion and identifying different aspects (attention, thinking, feeling, behavior, self-awareness)
Ninth Session	Recalling Compassionate Skills, the role of compassion in guiding thought, thought training responses, and compassionate behavior in the face of criticism
Tenth session	Receiving feedback from team members on the principles taught, reviewing and summarizing past material, and post-test implementation (Evaluation of blood serotonin and cortisol levels).

Table 2. Descriptive statistics of demographic variables

Variable	Variables	Case Percentage	Control Percentage	Value (Chi-Squared)	Sig.
Age	20 to 29 years	%40(6)	%20(3)	0.435	1.386
	30 to 39 years	%26.66(4)	%26.66(5)		
	40 to 49 years	%33.33(5)	%53.33(7)		
Status Marital	Single	%20(3)	%33.33(5)	0.587	0.726
	Married	%29(7)	%26.66(4)		
	Divorce	%33.33 (5)	%40(6)		
Employment type	Employee	%33.33 (5)	%40(6)	0.461	1.382
	Freelance Job	%40(6)	%20(3)		
	Homemaker	%26.66(4)	%40(6)		
Education	Sub-Diploma	%20(4)	%40(6)	0.486	1.304
	Diploma	%40(4)	%33.33 (5)		
	Academic	%40(7)	%26.66(4)		

Table 3. Mean score of emotion regulation and Procrastinationin experimental and control groups

Variables	Group	Pre-test Mean±Std Deviation	Post-test Mean±Std Deviation
Emotional adjustment	Case	67.41±13.02	79.01±6.67
	Control	65.16±5.43	64.96±6.15
Procrastination	Case	63.73±5.73	76.67.± 5.75
	Control	58.36±5.65	58.63±6.82

Table 4. Multivariate analysis of covariance to compare experimental and control groups' independent variables

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Observed Power
Pillai's Trace	0.786	39.647	3.000	21.000	0.001	0.68	1.000
Wilk's Lambda	0.231	39.647	3.000	21.000	0.001	0.68	1.000
Hotelling's Trace	4.769	39.647	3.000	21.000	0.001	0.68	1.000
Roy's Larger Root	4.769	39.647	3.000	21.000	0.001	0.68	1.000

Table 5. Multivariate analysis of covariance to compare the effect of treatment on researc

Depended Variable	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Obser.ved Power
Emotional adjustment	1467.753	1	1467.753	25.354	0.001	0.51	0.946
Procrastination	1145.423	1	1145.423	17.762	0.001	0.34	0.921

Conclusion

The findings of this study showed that compassion-focused therapy can increase cognitive regulation and reduce procrastination in first-grade high school students. Therefore, these psychological methods should be used to prevent the consequences of emotional regulation problems and procrastination of students, as well as to promote the education and academic achievement of these students.

Acknowledgments

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