



Research Paper

The Effectiveness of Gross Emotional Regulation Training Package on Procrastination of Female Students of University of Birjand

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Abstract

Aim: The present study was conducted to investigate the effectiveness of Gross emotional regulation education package on female students' procrastination. The study population included all students of University of Birjand in the academic year 2017-18, and the sample included 30 female students who scored high in the Schwarzer and Diehl procrastination scale (2000) and the Gratz and Roemer (2004) difficulties in emotion regulation scale (DERS), and were placed in trial and control groups. The study method was quasi-experimental with pre-test and post-test design, a control group, and follow-up. Emotion regulation was taught using Gross emotion regulation training package. Students' post-test score reduced in the procrastination and difficulty in regulating emotion, which suggests effectiveness of training. According to the results, emotion regulation training reduces procrastination and facilitates emotion regulation by reducing the difficulties in regulating emotions.

Keywords: *Emotion, Emotion Regulation, Procrastination, Students*

Introduction

Procrastination or postponement of tasks is a psychological and behavioral attribute that is commonplace among students, and entails detrimental consequences, from poor academic achievement to dropping out. Many factors affect academic procrastination. For example, students' higher mindfulness reduces their procrastination (Schutte & Pozo de Bolger, 2020). One of the most important variables in procrastination is emotion regulation, which refers to strategies used to reduce, strengthen, or maintain emotional experiences (Arabi, Moghadam & Sahebalzamani, 2020). Emotion regulation strategies are cognitive responses to emotion-eliciting events that attempt to moderate the intensity or type of emotional experience or the event itself (Garnefski et al., 2007, quoted by Imani, Alkhalil and Shokri, 2018).

One of the most outstanding theories in emotion regulation is Gross (2007) process model. Gross believes that each stage of the emotion generation process potentially has a regulation purpose, and emotion regulation skills can be used in different parts of the process (Hassani and Shahmoradifar, 2016). According to a review of theoretical principles and research background, emotion regulation training can reduce procrastination. Although many studies have been separately conducted on these two variables, we did not find any studies investigating the effect of emotion regulation on procrastination in students. Gross process model is among the most outstanding theories in emotion regulation, however, no study has yet been conducted on emotion regulation training based on this model and its effect on students' procrastination. Thus, the present study aims to find an answer to the question whether teaching emotion regulation skills based on Gross model can reduce students' procrastination".

Methodology

The study method is quasi-experimental with pre-test and post-test design, a control group, and one follow-up stage. The study population included students of University of Birjand in academic year 2017-18, and the sample included 30 female students who scored high in the Schwarzer and Diehl procrastination scale (2000) and the Gratz and Roemer (2004) difficulties in emotion regulation scale (DERS), and were assigned to trial and control groups. Shahni Yeilagh et al. (2007) reported that relevant professors and experts confirmed the validity of Schwarzer and Diehl procrastination scale (2000). Given low number of questions, reliability of this scale was considered favorable with Cronbach's $\alpha > 0.50$. Validity and reliability of DERS were confirmed by Gratz and Roemer (2004) with Cronbach's α of 0.93, and test-retest reliability of 0.88. In a study, the concurrent criterion

validity of the questionnaire with Beck’s Depression Inventory and the Multidimensional Pain Scale was confirmed. Bahadori, Khosroshahi and Habibi Kaliber (2017) confirmed the reliability of the questionnaire with Cronbach’s alpha of 0.89. The members of trial and control groups were matched in terms of age, major, and academic year. Gender was controlled by selecting samples from female students. Emotion regulation was taught using the emotion regulation training package based on Gross model. The trial group received eight 60-minute sessions of emotion regulation training. Their posttest was given after the intervention and retest in the follow-up stage (six weeks later). Next, data were analyzed using repeated measures ANOVA.

Results

Once normal distribution of variables was ensured and the hypothesis of homogeneity of variances was confirmed, the study hypothesis was assessed using repeated measures ANOVA, and since significant results were observed, Bonferroni’s *post hoc* test was used.

The first hypothesis was “Gross emotion regulation training reduces female students’ procrastination”. The results of ANOVA of the above hypothesis are presented in Table 1.

Table 1: The results of repeated measures ANOVA of procrastination

Source of changes	Sum of squares	Degree of freedom	Mean squares	F	Significance level (P)	Effect size
Time (intragroup)	1240.87	2	620.43	186.93	<0.0001	0.87
Group (intergroup)	810	1	810	74.51	<0.0001	0.73
Time * group	423.27	2	211.63	63.76	<0.0001	0.65

Irrespective of the groups, significant differences were observed in procrastination scores among pretest, posttest and follow-up stages. The significant effect of the group on the scores indicates a significant difference between trial and control groups in terms of the mean scores of procrastination, which means that emotion regulation training reduced female students’ procrastination. Moreover, time and group also had a significant mutual effect, which shows that the mean scores of procrastination on different occasions vary according to the group’s varying levels. Given that the mutual effect of time and group was significant, repeated measures ANOVA was also performed for procrastination. The results showed significant differences in procrastination scores among pretest, posttest and follow-up stages in each group ($P < 0.0001$).

The repeated measures ANOVA was also performed to assess the second hypothesis: “Teaching emotion regulation reduces students’ difficulties in emotion regulation” (Table 2). Since the sphericity assumption did not hold, the corrected ANOVA using Greenhouse-Geiser test was used, since it is more conservative in determining differences between groups.

Table 2: The results of repeated measures ANOVA of emotion regulation

Source of changes	Sum of squares	Degree of freedom	Mean squares	F	Significance level (P)	Effect size
Time (intragroup)	13201.489	1.267	10421.233	131.685	<0.0001	0.82
Group (intergroup)	19477.511	1	19477.511	69.630	<0.0001	0.71
Time * group	8675.489	1.267	6848.416	86.538	<0.0001	0.76

Irrespective of the groups, there were significant differences in emotion regulation scores among pretest, posttest and follow-up stages. There is a significant difference between the two groups in terms of emotion regulation mean scores, such that the mean score of emotion regulation was significantly lower in the trial group compared to the control. Moreover, the mutual effect of time and group was also significant, which shows that the mean scores of emotion regulation on different occasions vary according to the group’s varying levels.

Since the mutual effect of time and group was significant, repeated measures ANOVA of emotion regulation was also performed. The results showed significant differences in emotion regulation scores among pretest, posttest and follow-up stages in each group ($P < 0.0001$).

Discussion and conclusion

Emotion regulation training reduces procrastination in students. People with emotion regulation capability are able to express their emotions well, and when they experience an inappropriate and severe emotion, they can manage it in the right manner (Logan et al., 2018; Grancell et al., 2016, and Eckert et al., 2016).

The study limitations included use of female students of University of Birjand as samples. It is recommended that similar studies be conducted on both sexes. Furthermore, different interventional and treatment programs should be used to treat different domains of procrastination, for example, the educational-psychological program of secure attachment style by Yildiz and Iskender (2019), which has been effective in reducing students' procrastination, and the educational system planners should pay more attention to this phenomenon and take measures to reduce it.

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