



Effectiveness of Training to Overcome the Learned Helplessness on Academic Procrastination and Self-efficacy of Adolescent girls

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ARTICLE INFORMATION	ABSTRACT
Article type Original research Pages: 71-80 Corresponding Author's Info Email: m.niknam@khatam.ac.ir	Background and Aim: Low self-efficacy and academic procrastination are common problems for students. One of the methods that are basically based on positive psychology and can be effective in this field is overcoming learned helplessness. The aim of the present study was to investigate the effectiveness of learning to overcome learned helplessness on academic procrastination and self-efficacy of secondary school girls. Methods: The research method was semi-experimental with a pre-test-post-test design with a control group. The statistical population was all the female students of Javad Al-A'meh High School in Baharestan 2, who were studying in the academic year of 2020-21. The research sample consisted of 30 students who were selected by convenience sampling based on the research criteria and were randomly assigned to two experimental(n=15) and control(n=15) groups. The experimental group received 10 sessions of 90 minutes of learning helplessness overcoming intervention (adapted from Shakoer Sefat-Sadighi and Sharifi-Daramdi's package,2020) and the control group remained on the waiting list. The measurement tools were the general self-efficacy questionnaire of Sherer et al. (1982) and the academic procrastination questionnaire of Solomon and Roth Bloom (1984). Results: The results of covariance analysis showed that learning to overcome learned helplessness has a significant effect on reducing academic procrastination and its components ($P>0.05$; $F=27/98$) and increasing students' self-efficacy ($P >0.05$; $F=28/76$). Conclusion: The findings of this study show the effectiveness of learned helplessness training on academic procrastination and self-efficacy. Therefore, it is suggested that psychologists and therapists use this method to improve self-efficacy and reduce academic procrastination.
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Introduction

Students of every society are efficient and future builders of every country. The group that allocates the major part of the planning and budget of each country and their educational progress is very important for their future success and as a result the progress of the country. Today, researchers emphasize the need to pay attention to the predictors of academic success. Therefore, identifying factors affecting students' progress and paying attention to them is a step towards sustainable development (Izanlou et al., 2016). In other words, one of the most important periods of life is the period of education, which affects other aspects of life (Parsakia et al., 2022). In between, there are two factors that have the greatest impact on strengthening and weakening the academic performance of students and can be placed in two opposite poles. The first components that are related to success and academic performance and are in its positive pole, is the feeling of self-efficacy. Self-efficacy is one of the important topics of social cognitive theory, which was first proposed by Bandura. Bandura (1997) defined self-efficacy as people's judgment of their ability to organize and implement certain behaviors in order to achieve desired goals. He defines self-efficacy as a person's perception of his skills and abilities to perform tasks that are needed in special situations. In addition, self-efficacy affects performance when a person has the motivation and necessary skills to complete assignments (Vasil et al., 2011). Based on Bandura's (1997) perspective, self-efficacy beliefs work through the four cognitive, emotional, and motivational processes and motivate students to engage with developmental tasks and adverse academic conditions (Moghadam, 2019). Self-efficacy affects various processes such as homework selection, students' effort and progress. Each person's self-efficacy beliefs change over time and with new experiences, and these changes start from childhood and continue until the end of life. Various factors such as: family, friends, peers, school environment, developmental changes and gender differences affect it (Shank & Pajares, 2002). Studies have shown that self-efficacy has a positive and significant relationship with students' motivation and learning strategy (Pollack and Caesar, 2022), academic adaptation (Abboud et al., 2020) and

learning rate (Malorino, Panisura and Lazar, 2021).

The second component that is related to academic performance and is at its negative pole is academic procrastination. Academic procrastination is one of the types of procrastination that occurs in academic situations. A person suffering from it fails to motivate himself to do activities such as writing assignments, studying for exams, completing school-related projects, and doing homework (Jiao et al., 2011). In various studies, the prevalence of procrastination has been stated as 25-50% and even 80-95% (Steel, 2007). Various factors have been proposed as the cause or antecedents of procrastination, including: Cognitive distortion (Akinsola & Dubem, 2013), fear and anxiety (Akinsola et al., 2007) and learned helplessness (Sorenti et al., 2016) mentioned. In general, students who have a lack of intrinsic motivation are more likely to show the habit of procrastination in school related activities (Wage and Lomash, 2014). Considering the similarities of learned helplessness with some antecedents of procrastination, this hypothesis arises that strategies to overcome learned helplessness can be effective in reducing procrastination.

Studies have shown that academic procrastination has a significant negative relationship with academic tenacity (Abdolhi et al., 2020), self-esteem and motivation to progress (Ayozdian et al., 2011) and academic progress (Rasuli Khorshidi et al., 2019). It has a positive relationship with negative metacognitive beliefs and difficulty in emotion regulation and ambiguity tolerance (Zarei & Khoshoei, 2016) and learned helplessness (Sorenti et al., 2016).

Considering that low self-efficacy and academic procrastination are often mentioned as common problems of students, solutions and interventions should be used to improve self-efficacy and reduce procrastination in students. So far, many educational interventions have been used in the field of students' academic problems. One of the methods that can be useful in this field and has not been considered in research so far is the training to overcome learned helplessness. This intervention approach is fundamentally based on positive psychology. Learned helplessness was first proposed by Martin Seligman. Seligman believes that learned

helplessness caused by uncontrollable events leads to the belief that success and failure are outside of one's efforts. The underlying assumption is that the person feels that his action has little effect on the environment and this situation continues continuously until he suffers from helplessness (Seligman & Csikzentmihalyi, 2014). Learned helplessness represents the most negative state of the concept of self-concept (Haji Arbabi et al., 2011). According to Seligman's theory, when a person is in a situation of numerous social, cultural and educational failures; He will experience the feeling of not being able to control the environmental conditions and he will experience some kind of instability and he is always waiting for failure. As a result of learned helplessness, the student learns that even in situations where he can control the situation, they still get used to that situation and give in. In fact, the person expects that his actions will lead to failure. Therefore, it does nothing to prevent it from happening (Emirian et al., 2017). This generalization of failure from one or more life situations to other situations makes the person succumb to failure in new situations even though they have the possibility of success (Aldawa & Khalil, 2019). In addition, due to the characteristics of helpless people, it can affect academic performance. Helpless students have little confidence in their abilities, attribute their failures to personal incompetence, low intelligence, and poor memory, and do not see the link between commitment and achievement; They attribute their success so far to external factors such as unique circumstances and luck. Therefore, based on this uncontrollable understanding of the consequences, they become passive and procrastinating, and this passivity shows itself mostly in challenging assignments. This problem leads to behaviors such as avoiding school and absenteeism, which negatively affects self-efficacy and academic performance (Sorenti et al., 2016). Helpless students tend to show a decrease in performance after failure. Jarfa and Bekalim (2018) believe that helplessness is negatively correlated with homework persistence.

In general, motivational instability, a wide range of negative emotions from disappointment to depression, stable and pervasive internal attributions, procrastination and vulnerability to life events and poor self-efficacy are factors related to feeling helpless (Bridges, 2010).

Therefore, the training package for overcoming learned helplessness offers solutions based on creating motivation and positive-thinking skills, increasing self-esteem, efficiency and resilience, empowering and repairing cognitive distortions. So far, there has been no research on the effectiveness of the intervention to overcome learned helplessness on academic variables and academic problems. Researches that have investigated the effectiveness of this type of intervention have been conducted on the sample of cancer patients (Shakursefat & Sharifi Daramadi, 2019). Most of the researches have investigated the effectiveness of concepts based on positive psychology on educational variables. Since this intervention model is also based on positive psychology, we can refer to a number of researches that have investigated the effectiveness of this intervention model based on positive psychology. For example, Lorenz, Elgner and Binger (2022) showed that teachings based on positive psychology have an effect on psychological and social well-being and reducing negative emotions of students. The results of Tejado-Gallardo et al.'s research (2020) showed that concepts based on positive psychology have a positive effect on students' distress and well-being, and teaching positive psychology components has a positive effect on students' academic progress.

Suppose the role of learned helplessness in creating academic procrastination and reducing students' self-efficacy and the research gap in the field of applying education to overcome learned helplessness in order to solve academic problems, many of which originate from this feeling of students' helplessness. Therefore, the purpose of the current research is the effectiveness of learning to overcome learned helplessness on the academic procrastination and self-efficacy of female students of the second secondary school, and the question arises whether the learning to overcome learned helplessness has an effect on academic procrastination and self-efficacy of female students?

Method

The research method was semi-experimental with a pre-test and post-test design with a control group. The statistical population in the present study is all the female students of the second secondary school of Javadalaime High School in Baharestan 2, who were studying in the academic year 2020-21. The sample group

consisted of 30 secondary school female students who were selected by available sampling method based on the criteria of the research and randomly replaced in 2 experimental (15 people) and control (15 people) groups. The method of selection was such that due to the problematic conditions of the Corona pandemic, an announcement was first prepared with the cooperation of the school management. After being informed, 54 students declared their readiness and then by conducting an online interview in the WhatsApp space and according to the research criteria, 30 female students were selected as a sample. They were randomly replaced in 2 experimental groups (15 people) and control (15 people) who remained in the research until the end of the implementation. Information related to them has been used in the pre-test and post-test stages to generalize the findings to the statistical population. The criteria for entering the research were: Age 15 to 17 years, obtaining a score above 48 in the academic procrastination questionnaire and a score below 17 in the self-efficacy questionnaire, not receiving psychological treatments and training while conducting the research and willingness to participate in the research; And exit criteria include: Having two absences in training sessions, not accompanying in the assignments related to the training course and not attending the sessions where the research questionnaires are completed.

Materials

1. Introducing the general self-efficacy questionnaire of Scherer et al. (GSES): The general self-efficacy scale was created by Scherer et al. (1982), which has 17 items that are scored on a 5-point Likert scale from 1 to 5. Sherer et al. (1982) believe that this scale

measures three aspects of behavior, including the desire to initiate behavior, continuing efforts to complete behavior, and resistance in facing obstacles. The minimum score in this scale is 17 and the maximum score is 85. A high score indicates a high self-efficacy feeling. In order to determine the validity and reliability of the scale, Scherer et al. (1982) mentioned the reliability calculated through Cronbach's alpha for general self-efficacy as 0.76. Jalali (2011) obtained the validity of the questionnaire on a sample of 41 students using Cronbach's alpha coefficient equal to 0.74 and using the retest method at an interval of two weeks equal to 0.69. In the present study, Cronbach's alpha coefficient for general self-efficacy was 0.85.

2. Academic procrastination questionnaire: This questionnaire was created by Solomon and Roth Bloom in (1984). This scale has 27 items and is scored based on the Likert scale from 1 (never) to 5 (always). 3 components measure preparation for the exam (8 items), preparation for assignments (11 items) and preparation for end-of-semester essays (8 items). Solomon and Rothbloom (1984) obtained reliability by Cronbach's alpha method for the whole scale of 0.79, exam preparation, 0.85 and preparation for term papers 0.89. In the research of Namian and Hossein Chari (2011), the reliability of this scale was reported to be 0.79 using Cronbach's alpha method. The validity of the questionnaire in Jokar and Delavarpour's research (2006) was calculated using the factor analysis method, and the findings indicated the desired validity of the questionnaire. Cronbach's alpha obtained for self-efficacy in the present study was 0.802.

3. Training to overcome learned helplessness: Below table shows a summary of the protocol of the intervention sessions of training to overcome learned helplessness.

Table 1. Training protocol for the intervention of overcoming learned helplessness

Session	Goals	Content
1	Introducing the group and the therapist, stating the goals of the research, and introducing the concept of learned helplessness	introducing the therapist and the structure and goals and rules of the group; determining the time of meetings; Explaining the concept of learned helplessness; Identifying behaviors related to helplessness through members' brainstorming; Teaching the cycle (thinking-feeling-behavior) and giving assignments.
2	Familiarity with	reviewing the contents and reviewing the assignments of the previous

	positive thinking skills	session; Explanation about positivity; Getting to know the concept of speech therapy and its role in directing thoughts and feelings and identifying negative inner speech and training to replace them with positive ones. Explanation of the model (event-belief-consequence) A-B-C.
3	Purposeful behavior	reviewing the contents and reviewing the assignments of the previous session; Emphasis on the position of targeting; Goal setting and goal management training, emphasizing the use of rewards to strengthen targeted behaviors.
4	Time perspective	review the contents and assignments of the previous session; Explanation about the concept of time perspective; explanation about the relationship between psychological structures and people's attitude to time; Description of different time perspectives (positive past; negative past; hedonic state and deterministic state; negative future and sublime future).
5	Correcting the cognitive error of catastrophizing	reviewing the contents and reviewing the assignments of the previous session; Education about catastrophic error; Identifying and expressing catastrophic thoughts in different situations by members.
6	Correcting the cognitive error of overgeneralization	reviewing the contents and reviewing the assignments of the previous session; Education about the cognitive error of overgeneralization; Explaining the relationship between extreme generalization error and negative emotions, identifying and expressing extreme generalizations in different situations by members and expressing emotional states related to them.
7	Correcting the cognitive error of mind reading	reviewing the contents and reviewing the assignments of the previous session; Education about the cognitive error of mind reading; Explaining the relationship between mind reading errors and interpersonal relationship problems, identifying and expressing mind reading errors in different situations by members and expressing feelings related to them, teaching how to verify cases of mind reading errors.
8	Self-esteem and sense of worth, sense of efficacy	reviewing the contents and reviewing the assignments of the previous session; Explaining the concept and benefits of self-esteem and self-efficacy; Explaining strategies to improve self-esteem and self-efficacy and coping strategies (problem solving, social support, reframing, skill acquisition).
9	Stress coping strategies	review the contents and assignments of the previous session; Teaching the concept of dealing with stress and ways to deal with it; Teaching body relaxation and stress relief; training to use inner speech in facing stressful events; Teaching the technique of returning attention; Learning to reframe stressful events.
10	Resilience training and group exercises and post-exam implementation	review the contents and assignments of the previous session; Teaching the concept of resilience and its role in learned helplessness; Answering the questions and doubts of the participants and providing a summary of the meeting topics to the members; Conducting the post-exam and recording scores and thanking the members.

Implementation

The research had two phases: preliminary studies and main investigation. The purpose of the preliminary stage is to acquire skills in the teaching method of overcoming learned helplessness; preparation of training protocol; Preparation of research tools and checking their validity and reliability. In the main review phase, the following items are generally mentioned in order: Selection of the sample group based on the criteria of the research, holding a preliminary meeting and discussing the objectives, the topic of how to implement and the time of the meetings, conducting a pre-test in order to collect data for the experimental and control groups. Then, the implementation of intervention sessions to overcome learned helplessness in the case of the experimental group, and finally, the implementation of the post-test in the case of both experimental groups. It should be noted that the educational protocol for overcoming learned helplessness was developed based on Martin Seligman's positive psychology theory and adapted from

the package prepared by Shakur and Sharifi (2019), and its content validity was again reviewed and confirmed by 5 experts. Therefore, after conducting the pre-test for the experimental and control groups, the intervention package was implemented in 10 sessions of 90 minutes for the experimental group. . During this period, no psychological treatment was provided to the control group. Finally, after completing the training sessions of the experimental group, the two experimental and control groups completed the research questionnaires. Then, according to the research design (pre-test, post-test and control group) and 2 dependent variables, covariance analysis was used to analyze the research hypotheses. In order to comply with ethical considerations to answer the questions, consent was obtained from the participants and the confidentiality of the questionnaire information was discussed.

Results

Table 2 presents the descriptive characteristics of the research variables.

Table 2. Mean and standard deviation of pre- and post-test variables by two groups

Variable	Exp. Group	N	Mean	SD	Control Group	Mean	SD
Efficacy	Pre-test	15	74/1333	1/51736	Pre-test	73/6667	1/85806
	Post-test	15	83/3000	2/6847	Post-test	72/5333	2/06559
Academic procrastination	Pre-test	15	116/6667	0/408250	Pre-test	95/3333	0/723750
	Post-test	15	95/0667	0/697360	Post-test	94/4667	0/953369
Preparing for exams	Pre-test	15	33/9333	1/02846	Pre-test	25/0333	1/38186
	Post-test	15	27/8667	0/972230	Post-test	24/6667	1/29099
Preparing for assignments	Pre-test	15	48/0667	0/95236	Pre-test	33/9685	1/00250
	Post-test	15	38/9333	1/25698	Post-test	32/5589	0/85669
Preparing for term papers	Pre-test	15	35/2366	0/25236	Pre-test	28/11236	0/85639
	Post-test	15	30/2569	0/52336	Post-test	27/35268	0/75253

It shows a look at the research variables in the two test and control groups before and after the test; Self-efficacy in the test group in the pre-test had an average of 13.74, which increased to 30.83 in the post-test; The average of academic procrastination in the pre-test was 116.66, which decreased to 95.06 in the post-test, and it was also observed in the components of

academic procrastination; Procrastination in preparing for exams was 33.93 in the pre-test, which has decreased to 27.86 in the post-test. In procrastination to prepare for homework, the average was 48.06 in the pre-test, which has decreased to 38.93 in the post-test. Finally, procrastination in preparing for the end-

semester essays was the average of 23.35 in the pre-exam, which has decreased to 25.30.

Before examining the data using the analysis of covariance statistical test, the normality of the data distribution was checked and confirmed using the Shapiro-Wilk test ($P < 0.001$). The assumption of homogeneity of variances in the research variables was also confirmed using the

Levene test. The results show that the significance level for all variables is greater than 0.05 ($P < 0.05$), which indicates that the distribution of dependent variables at the levels of groups (intervening variable) is homogeneous and similar; Therefore, the assumptions of the covariance analysis test are valid and can be used to analyze the data.

Table 3. The results of covariance analysis to investigate the effectiveness of learning to overcome learned helplessness on academic procrastination.

Source	Dependent variable	SS	df	MS	F	Sig	Eta ²
Group	Academic procrastination	38/678	1	38/678	27/987	001.0	0/518
Error	Academic procrastination	35/932	26	1/382	-	-	-
Group	Preparation for exams	52/678	1	38/678	33/987	001.0	0/625
Error	Preparation for exams	50/932	26	1/526	-	-	-
Group	(Procrastination) Homework preparation	65/236	1	65/236	26/369	001.0	0/589
Error	(Procrastination) Homework preparation	60/356	26	1/002	-	-	-
Group	Preparation for end-of- semester essays	45/698	1	45/698	33/259	001.0	0/635
Error	Preparation for end-of- semester essays	35/256	26	1/036	-	-	-

According to the results obtained after removing the pre-test effect, learning to overcome learned helplessness has significantly affected academic procrastination and its components ($P < 0.05$).

51.8% of the variance of academic procrastination scores of students is explained by the training to overcome learned helplessness.

Table 4. Results of covariance analysis to investigate the effectiveness of learning to overcome learned helplessness on self-efficacy

Source	Dependent variable	SS	df	MS	F	Sig	Eta ²
Group	Self-efficacy	11/562	1	11/562	28/762	001.0	0/525
Error	Self-efficacy	10/452	26	0/402	-	-	-

According to the results obtained after removing the pre-test effect, learning to overcome learned helplessness has significantly affected self-efficacy ($P < 0.05$). 52.5% of the variance of self-efficacy scores is explained by learning to overcome learned helplessness.

Conclusion

The present study was conducted with the aim of investigating the effectiveness of learning to overcome learned helplessness on academic procrastination and self-efficacy of secondary school female students. The findings showed

that learning to overcome learned helplessness has a significant positive effect on academic procrastination and all its components and self-efficacy.

The results of this hypothesis are in line with the results of Lorenz et al. (2022), Tejado-Gallardo et al. (2020) and Musaibi et al. (2021). In order to explain the possible confirmation of this hypothesis that learning to overcome learned helplessness has an effect on academic procrastination, it can be said that most procrastinating students have a kind of time

wasting and waste time, and they dream and wish instead of doing things. This action causes lack of planning and high levels of inactivity, which has a negative effect on students' academic motivation; The training package for overcoming learned helplessness offers solutions based on creating motivation and positive thinking skills, increasing self-esteem, efficiency, resilience, empowerment and repairing cognitive distortions. Procrastinating students have learned helplessness, had low self-esteem and believed that planning and striving for the future is useless and do not try to change their situation (Abdollahi et al., 2020). Learned helplessness and procrastination are not inherent traits and are acquired; That is, they are formed based on a person's experiences in life, so creating different experiences and correcting cognitive beliefs can be effective in improving procrastination. Therefore, with trainings to overcome learned helplessness that are based on positive psychology, the individual's motivation and belief will be adjusted. With the techniques and skills of positive thinking, purposeful behavior, correction of cognitive errors, sense of worth and efficiency, one's abilities can be increased so that he can guide, monitor and correct the set goals, and as a result, academic procrastination is reduced. Learning to overcome learned helplessness by creating a belief in changing the situation and focusing on the ability to do things plays a role in reducing academic procrastination. When the attitude of the trainees is changed, the feeling of empowerment and break from the mentality of lack of empowerment will be fruitful in them, and by strengthening the will and management of the program, it will increase the motivation and reduce the delay in doing the homework (Rasouli Khorshidi et al., 2018). Students can procrastinate in the classroom due to the pressure of homework or the inappropriate behavior of the teacher or the lack of proper encouragement, or basically in the family environment, they get used to the process of delaying work due to family issues and problems. When they get acquainted with the training to overcome learned helplessness and learn overcoming techniques, they conclude that procrastination is basically a very paralyzing mental-attitudinal condition that can only be reduced by repetition and practice and in a practical way. (Alduwa & Khalil, 2019). People

who are helpless in social settings may be seen as weak by others, and regularly procrastinate, which will reinforce their helplessness (Smith et al., 2021). Training to overcome helplessness is an effective solution to reduce the mentality of being weak and unable to do something.

The findings showed that learning to overcome learned helplessness has a significant positive effect on improving self-efficacy. In explaining this finding, it can be said that self-efficacy affects performance when a person has the motivation and skills necessary to complete assignments. This finding is in line with the findings of Malorino et al. (2021) regarding the effect of self-efficacy on academic performance and learning. Self-efficacy beliefs work through cognitive, emotional and motivational processes and motivate students to engage with developmental tasks and adverse conditions. Moghadam (2019) also confirmed in line with this finding that the activation of cognitive processes is affected by self-efficacy. Since the training package for overcoming learned helplessness is based on motivation, it promotes self-esteem, efficiency, resilience, and repairs cognitive distortions, and as a result, affects the individual's performance and increases self-efficacy. This finding is in line with the findings of Abboud et al. (2020) and Pollock and Caesar (2022). Teaching how to overcome learned helplessness by emphasizing positive thinking skills, purposeful behavior, time perspective, correcting cognitive errors and feeling self-esteem and worth while raising resilience will strengthen self-efficacy beliefs in students; This intervention basically reduces the attitudes of weakness and self-deprecation and, as a result, increases the feeling of being able to do work in students and causes the mentality and attitude of lack of ability or incompetence to do things to decrease and self-efficacy to increase.

The present study had limitations. The limitation of the research sample, which only included secondary school girls; The impossibility of controlling some disturbing variables such as the social and economic status of families; Failure to check the intelligence status and personality characteristics of students; The outbreak of corona disease at the end of the interventions, which limited the possibility of a follow-up study to check the durability of the results, is one of the limitations of the present study. It is necessary for future

researches to consider follow-up studies at intervals of 9 months, 6 months and one year in order to check the durability of the intervention. In order to check the effectiveness of this method with other treatment methods, simultaneous comparison of effectiveness in peer groups is suggested in future studies. Considering the favorable outcome of this intervention, it is recommended that school counselors hold regular meetings with students who have academic procrastination and use the learned helplessness training.

Conflict of Interest

According to the authors, this article has no financial sponsor or conflict of interest.

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