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Sosyal bilişsel kuram temelli grup psikoeğitim programının lise öğrencilerinin öz-düzenleyici öğrenme becerilerine ve akademik başarılarına etkisi

The effect of social cognitive theory based group psychoeducation program on the self-regulated learning skills and academic achievement of high school students

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ÖZ

Bu çalışmada, lise öğrencilerinin öz-düzenleyici öğrenme becerilerini geliştirmek için sosyal bilişsel kurama dayalı bir grup psikoeğitim programının tasarlanması ve bu programın öğrencilerin öz düzenleyici öğrenme becerileri ve akademik başarıları üzerindeki etkisinin incelenmesi amaçlanmıştır. Araştırma, deney ve kontrol gruplarının ön test, son test ve izleme testi sonuçlarının karşılaştırıldığı yarı deneysel desende tasarlanmış bir çalışmadır. Türkiye'de bir Anadolu Lisesinde öğrenim gören 32 gönüllü öğrenci, deney (n:16) ve kontrol (n:16) gruplarına seçkisiz yöntemle atanmıştır. Araştırma verileri, öğrencilerin kişisel bilgileri ve öz-düzenleyici öğrenme becerileri hakkında bilgi toplamak amacıyla Kişisel Bilgi Formu ve Öz-düzenleyici Öğrenme Becerileri Ölçeği kullanılarak elde edilmiştir. Çalışmada, deney grubundaki öğrencilere sekiz oturumluk bir psikoeğitim programı uygulanırken, kontrol grubundaki katılımcılara herhangi bir müdahale uygulanmamıştır. Psikoeğitim programı kapsamında, deney grubundaki öğrencilere haftada bir gün, 60 dakika süreli oturumlar gerçekleştirilmiştir. Psikoeğitim oturumlarının tamamlanmasının ardından son test yapılmış ve dört ay sonra her iki gruba da izleme testi uygulanmıştır. Araştırma verilerinin analizinde gruplar arası karşılaştırmayı sağlayan varyans analizi (Anova), kovaryans analizi (Ancova), ilişkili ve bağımsız örneklemler için t-testi yöntemleri kullanılmıştır. Çalışma sonucunda deney grubuna uygulanan grup psikoeğitim programının öğrencilerin öz-düzenleyici öğrenme becerilerini geliştirmede etkili olduğu ve bu etkinin izleme testinde de devam ettiği bulunmuştur. Ayrıca psikoeğitim programının öğrencilerin akademik başarılarını artırmada da olumlu etkileri olduğu tespit edilmiştir. Sonuçlar sosyal bilişsel kuram temelli grup psikoeğitim programının lise öğrencilerinin öz düzenleme becerilerini geliştirmede ve akademik başarılarını arttırmada kullanılabileceğini göstermektedir.

*Anahtar Sözcükler***:** öz düzenleme, öğrenme, akademik başarı, psikoeğitim

ABSTRACT

In this study, it was aimed to design a group psychoeducation program based on social cognitive theory to improve the self-regulated learning skills of high school students and to examine the effect of this program on the students' self-regulated learning skills and academic achievement. This research is a quasi-experimental study in which the pre-test, post-test and follow-up test results of the experimental and control groups are compared. A total of 32 volunteer students from an Anatolian High School in Turkey were randomly assigned to the experimental (n:16) or control group (n:16). The research data were obtained with personal information form and Self-regulated Learning Skills Scale. In the study, participants in the experimental group were included in an eight session psychoeducation program, while the control group was not included in any program. A psychoeducational program was applied to the students in the experimental group, with sessions held once a week for 60 minutes. A posttest was conducted following the completion of the group sessions, and a follow-up test was administered four months later to both groups. Analysis of variance (Anova), analysis of covariance (Ancova), t-test for related and independent samples were used to analyse the study data. As a result of the study, it was found that the group psychoeducation programme applied to the experimental group was effective in developing students' self-regulatory learning skills and this effect continued in the follow-up test. It was also found to be effective in increasing academic achievement. The results reveal that a group psychoeducation program based on social cognitive theory can be used to develop high school students' self-regulation skills and increase their academic success.

*Keywords***:** self-regulation, learning, academic achievement, psychoeducation

INTRODUCTION

Changes in social and cultural structure affect many areas of our lives, but also affect the field of education to a great extent. These changing living conditions differentiate the educational needs of students (Güngör, 2017). With the rapid improvement of technology, increasing areas of knowledge and skills bring to the forefront the needs of students to develop their skills of creative and rapid thinking, organising and managing their own learning processes (Jayawardana et al., 2001). To fulfill these requirements, contemporary educational approaches have repositioned the student as the primary focus, making them the center of educational processes. In this system, it is aimed to raise individuals who willingly participate in learning processes, take responsibility for and evaluate their own learning, know their own abilities, trust their potential and use them productively (Gömleksiz & Demiralp, 2012). Efforts are made to move students from being passive recipients of information to active participants who learn to learn and think, plan learning processes, make analyses and make decisions (Lunenberg & Volman, 1999). At the point of achieving this goal, self-regulation skill, in which the individual transfers his/her cognitive processes, abilities and skills to learning processes, directs and evaluates himself/herself, has an important place. The development of self-regulation skills of individuals will contribute to their educational processes and will enable them to become lifelong learners and thus increase their general quality of life (Türkmen, 2004).

In the studies on education, it is noticeable that the factors affecting academic achievement are intensively investigated and many factors are found. In recent years, these studies have focusedon self-regulation skills in which students assume an active, constructive role in learning processes (Ainley & Patrick, 2006). Self-regulation skills greatly affect learning and academic achievement (Zimmerman, 1994). Although there are many ways to evaluate students' academic achievement, especially the examination system is preferred (Özen, 2016). When the academic achievement and failures of students in our country's education system are investigated, Turkey's educational performance is below the OECD average according to the 2018 PISA assessment. Our country ranked 31st in reading, 33rd in mathematics, and 30th in science among 37 OECD member states. Since reading skills are emphasised in PISA, the average scores of countries in reading skills are taken into account in the evaluation and Turkey ranks last among OECD countries (OECD, 2018). In PISA 2022, Turkey ranked 30th in reading skills, 32nd in mathematics and 29th in science (OECD, 2022). In addition to these results, when the numerical data of YKS 2022, the transition exam from secondary education to higher education, which has been administered by ÖSYM (Measurement, Selection and Placement Centre) since 2018, is examined, it is seen that 96 thousand 518 people scored zero points in the Basic Proficiency Test, in which 3 million 8 thousand 287 candidates participated. In this exam, in which 120 questions were asked to the candidates, the average net score of all candidates was 35.93 (ÖSYM, 2022). In the YKS 2023 data, it is seen that 100 thousand 271 candidates scored zero in the Basic Proficiency Test in which 2 million 995 thousand 638 candidates participated. The average net score of the candidates was 37.93 (ÖSYM, 2023). These results suggest that there are problems with academic achievement in Turkey's education system and that students have problems with learning processes. Therefore, it is important to investigate the factors affecting academic achievement and learning.

The concept of self-regulation, which is one of the key processes on students' learning and academic success, was first defined in Bandura’s Social Cognitive Theory (SCT). SCT is a theory that posits that behaviors arise from a dynamic interaction between personal factors, behavioral factors, and environmental factors. According to SCT, self-regulation is not a linear process; rather, it is a circular interplay of continuously interacting components. Self-regulation is the control of individuals over their emotions, thoughts and actions and self-regulation through this control mechanism (Bandura, 1986). In this direction, self-regulation includes competences such as self-efficacy, motivation, self-regulation, self-evaluation and self-monitoring (Zimmerman, 2008). A relatively new concept, self-regulation in learning has placed a spotlight on the

student's role in determining academic success and performance within the classroom and school environment (Çiltaş, 2011). Self-regulation encompasses a learner's ability to independently control their learning by establishing goals, tracking performance, and modifying learning approaches in response to both internal and external influences (Pintrich, 2000). Individuals with high self-regulated learning skills have characteristics such as setting goals, utilizing learning strategies, self-monitoring, organising and taking an active role in their learning processes (Aydın & Demir-Atalay, 2015). Individuals with low self-regulatory learning skills, on the other hand, may see the obstacles in front of their goals as threats, doubt their own abilities, and desire to escape from the education and learning process instead of being motivated for their learning goals (Zat-Çiftçi, 2018). The interest, desire and motivation of these individuals at the point of reaching and achieving the goal decreases. Despite this, if those who start the learning process to achieve their aims fail, their tendency to continue the learning process decreases (Bandura, 1999).

Self-regulated learning helps individuals to know themselves and to be wise and decisive in their approaches to learning (Zimmerman, 1990). Students' self-knowledge can be seen as a process related to metacognitive skills, acquiring knowledge through cognitive skills, motivating themselves and acquiring the ability to effectively manage their environment. Therefore, the self-regulated learning model is explained in four categories: cognitive, metacognitive, resource management and motivational strategies (Pintrich, 1999). Cognitive strategies are related to the cognitive processes and behaviors that students use during their learning experiences to complete a task or achieve a goal on an academic subject (Boekaerts, 1996). Cognitive strategies include sub-strategies of rehearsal, elaboration and organization strategies (Pintrich, 2000). Metacognitive strategies include predicting, planning, monitoring, and evaluating, which help individuals control and regulate their own cognitive processes (Lucangeli and Cornoldi, 1997). Resource management strategies include strategies such as controlling and managing one's time and work environment, effort, peer collaboration, and help-seeking (Pintrich, 1999). However, since it is important to motivate students to apply these strategies, motivation strategies including intrinsic values, self-efficacy and test anxiety (Pintrich and De Groot, 1990) stand as the last dimension of self-regulated learning.

The significance of self-regulated learning in influencing both academic achievement and lifelong learning capabilities has become increasingly apparent in recent studies (Zimmerman, 1994). When the domestic and international literature on self-regulated learning is examined, most of the studies focus on its effect on academic achievement. Research consistently demonstrates a strong correlation between academic achievement and self-regulated learning (Aktan, 2012; Arsal, 2009; Ataş, 2009; Camahalan, 2006; Cazan, 2014; Dikbaş & Hasirci, 2008; Gülay, 2012; Haşlaman & Aşkar, 2007; Rowe & Rafferty, 2013). Self-regulated learning strategies (goal setting, valuing, external goal orientation, repetition, effort, self-reflection, self-efficacy perception, time management and working with others) were found to explain 71% of the success (Haşlaman & Aşkar, 2007).

In the study conducted by Zimmerman and Martinez-Pons (1986; 1988), it was stated that successful students used self-regulation strategies more than unsuccessful students while doing an academic activity and that these strategies explained 93% of the success. Therefore, it is evident that self-regulation is a key determinant of academic success, and students who effectively employ self-regulated learning strategies tend to exhibit higher academic performance (Wolters, 1999). Findings from research on self-regulated learning and mathematics achievement consistently indicate that students' application of self-regulation strategies significantly predicts their math success (Eshel & Kohavi, 2003; Jenkins, 2009; Nota et al., 2004; Üredi & Üredi, 2005; Zimmerman & Martinez-Pons, 1990). It was also concluded that students' use of self-regulation strategies increased their academic motivation (Aktan, 2012; Bembenutty, 2005; Kılıç & Beyazıt, 2019).

Self-regulation skills are indispensable for students to excel academically. Studies in the field of psychology show that self-regulation skill develops at a young age (Raffaelli et al., 2005), but it can also develop at an advanced age through education (Azevedo & Cromley, 2004; Perels et al., 2005; Schmitz & Wiese, 2005). Because, it is very important for high school students who are preparing for university exams, making career planning and setting academic goals to be able to organise their own learning and manage their learning methods and strategies. Given the significance of self-regulatory learning, it is imperative to conduct research aimed at developing these skills in high school students within the learning and teaching context. These studies are projected to positively impact the academic performance and achievements of high schoolers.

This study aims to design and implement a group psychoeducational program grounded in social cognitive theory to enhance the self-regulated learning skills of high school students. This study aims to provide individuals with low self-regulation skills with the ability to independently set goals, select appropriate learning strategies, evaluate their learning processes, and maintain motivation. In this framework, the hypotheses of the research are as follows:

- Hypothesis 1: "There is a significant difference between the posttest mean scores of the experimental and control groups when the pre-test mean scores of the Self-regulated Learning Skills Scale (SRLSS) are controlled."
- Hypothesis 2: "There is no significant difference between the experimental group's Self-regulated Learning Skills Scale posttest scores and follow-up scores."
- Hypothesis 3: "There is no significant difference between the control group's Self-regulated Learning Skills Scale posttest scores and follow-up scores."
- Hypothesis 4: "There is a significant difference between the academic achievement of the students in the experimental and control groups in favour of the experimental group in which Self-Regulated Learning Programme is applied."

METHODOLOGY

Research Model

In order to evaluate the efficacy of the developed Social Cognitive Theory-based Self-Regulated Learning Psychoeducation Program, a quasi experimental design consisting of experimental and control groups, pre-test, post-test and follow-up measurements was used. The design used in the research is shown in Table-1 below.

Table 1
Quasi-Experimental Design

Groups	Pre-test	Group Application	Post-Test	Follow-up Test
Experimental	Self-regulated Learning Skills Scale (SRLSS)	Self-Regulated Learning Programme	SRLSS	SRLSS
Control	SRLSS	-	SRLSS	SRLSS

The "Social Cognitive Theory Based Self-Regulated Learning Psychoeducation Program" was applied to the experimental group. No procedure was applied to the control group during the same period. Pre-test and post-test were applied to both groups participating in the study in two different sessions outside the psychoeducation group work. Four months after the end of the implementation, the SRLSS was re-applied to the both groups as a follow-up measurement.

Study Group

The research sample comprised 212 students (123 female, 89 male) enrolled in grades 10 and 11 at a Turkish Anatolian High School. The average age of the students participating in the study was calculated as 16.1. Ninth and 12th grades were excluded from the research. Since 12th

graders are preparing for university exams and the process of 9th graders adapting to high school is ongoing. To gather demographic data on the volunteer students, a personal information form was administered. The SRLSS was employed to assess their self-regulated learning skills. The validity and reliability of the SRLSS for this study were examined through the data collected from this group.

Students' self-regulated learning scores were ranked from the lowest to the highest score. After this ranking process, 32 students with low self-regulatory learning scores within ± 1 standard deviation of the mean, with the signed consent of their parents and without any ongoing psychiatric disorders were included in the research. Participants were randomly assigned to the experimental and control groups, taking into account their gender, grade level, and classes. As a result, 16 students were assigned to each group. As seen in Table 2, reveals that the experimental group was composed of nine 10th-grade and seven 11th-grade students, while the control group included seven 10th-grade and nine 11th-grade students. There were eight female and eight male students in in both groups. The average age of the groups was 16.5 years.

To minimize interaction effects, participants were selected from different classes. For the experimental group, A and C students from 10th grade and A, C, D students from 11th grade were selected; for the control group, B, D, E students from 10th grade and B students from 11th grade were selected. In addition, while the rules were determined in the first session, the students in the experimental group were informed not to share their knowledge and experiences about this study with their friends outside the group. A one-way ANOVA was conducted to determine if there were significant differences in self-regulatory learning scores between the experimental and control groups. The difference between the groups was found to be not significant [$F_{(1-30)}$=.787; p>.05]. The difference between the mean academic achievement scores of the students in the experimental and control groups was compared by t-test and it was found that the difference between the groups was not significant ($t_{(30)}$=.219, p=.828, p>.05). In this respect, it was assumed that the experimental and control groups were equal groups in terms of self-regulatory learning and academic success level before the procedure.

Table 2
Gender and Grade Levels of Experimental and Control Groups

	10th Grade		11th Grade	
Groups	Female	Male	Female	Male
Experimental (n = 16)	5	4	3	4
Control (n = 16)	4	3	4	5

Development of Psychoeducation Programme

This programme was developed in a course conducted within the scope of a doctoral programme in the discipline of psychological counselling and guidance. The researchers firstly reviewed the relevant literature and reviewed the previously developed programmes on this subject. During the development of the programme, three other psychological counsellors who completed their undergraduate and graduate education and took the doctoral course gave feedback on the programme. Within the framework of these feedbacks, the psychoeducation programme was updated and finalised. In addition, the reason why a psychological counselling or psychotherapy group was not preferred as a group type is that psychoeducation groups try to provide participants with knowledge and skills through a structured content and consist of both educational and therapeutic content (Çivitçi, 2018).

In this context, the general objectives determined for the psychoeducation group work prepared in the form of structured group activities of the programme can be summarised as goal setting, motivation, information about self-regulated learning strategies, time management, managing resources, gaining awareness about their own self-regulation strategies, and developing

planning skills. The content of the psychoeducation study prepared for this purpose is shown in Table 3:

Table 3
The Content of the Group Psychoeducation Programme

Sessions	Goals
Session 1 Acquaintance and Structuring	The session aimed to introduce group members, establish group norms, set group's goals and individual goals, and assess self-regulated learning and student characteristics.
Session 2 Goal Determining	The aim of this session was for the group to realise the importance of goal setting, to determine their goals for academic development, and to realise their resources and strengths to achieve their academic goals.
Session 3 Goal Path	The aim of this session was for the group to realize possible obstacles that may be encountered in reaching their academic goals, to find solutions for the obstacles encountered in reaching their goals, and to understand the importance of taking responsibility in achieving their goals.
Session 4 Motivational Processes	The aim of this session was for the group to realize the importance of self-efficacy belief, goal orientation, value given to the task and intrinsic value in achieving the goal and to determine the sources of motivation for the goal.
Session 5 Self-Regulated Learning Strategies	This session aimed to help the group understand self-regulated learning strategies and evaluate themselves in terms of study habits and learning strategies.
Session 6 Resource Management	This session aimed to analyze the time required for the group to achieve its goals and evaluate resource management strategies (working time, effort, getting help from peer groups, environmental regulations).
Session 7 Planning Skills	This session aimed to plan the group's actions and time towards their academic goals.
Session 8 Conclusion	The purpose of this session is to evaluate program outcomes, discuss the practical application of learned skills, and provide a platform to share feelings and thoughts about the group experience.

Since this programme was developed within the structure of Social Cognitive Theory, methods and techniques that increase self-regulation such as cooperative learning (planning and metacognition are used to perform a task, motivation is high because it is a group work), inquiry learning (students use cognitive and metacognitive strategies), strategy teaching (cognitive strategies, critical thinking strategies, problem solving strategies, constructivist discussions, case studies), use of technology were included in group sessions in the programme implementation (Aydın & Demir, 2014). In addition, techniques such as indirect learning, modelling, direct and indirect reinforcement were included. In addition, homework activities were given from time to time outside the sessions. The literature review and the measurement tool used were effective in determining the session themes. Since self-regulation is a ability that can be improved, it is necessary to reveal the reasons for the failure of students with low achievement and to help these students by setting goals, planning time, developing strategies, self-evaluation, motivating, taking measures to improve their feelings of competence and providing educational environments (Zimmerman, 2002).

Process

During the research, the Social Cognitive Theory-Based Self-Regulated Learning Psychoeducation Programme was applied to the experimental group. The group work was carried out in the guidance service of the school during school hours. The control group did not receive any psychoeducation. The experimental group students were pre-interviewed before the group work, informed about the purpose, duration, rules and content of the programme, and

their consent to participate and parental consent forms were obtained. After the psychoeducation programme, a posttest was applied to the experimental and control groups. Four months after the end of the implementation, the SRLSS was applied to the both groups as a follow-up test.

Data Collection Tools

Self-regulatory learning skills scale (srlss)

The Self-Regulated Learning Scale (SRLSS), developed by Turan (2009), is a 41-item Likert-type instrument designed to assess university students' self-regulated learning skills. The scale's total score ranges from 41 to 205. The results of the Exploratory Factor Analysis conducted within the framework of validity studies showed that the scale had four factors and that these factors explained 47.10% of the variance. The sub-factors of the scale are motivation and mobilisation for learning, planning and goal setting, strategy use and evaluation and dependency in learning. Both total and subscale scores can be calculated. The total score of the scale reflects the overall level of self-regulated learning, while the subscales define the theoretical stages for self-regulated learning. The common variance of the factors varied between 0.293 and 0.632. The first of the factors identified as important in the scale explained 18.36% of the variance, the second explained 11.74%, the third explained 9.13%, the fourth explained 7.87% and the total explained 47.10%. Cronbach's alpha reliability coefficients of the scale were .88 for motivation and mobilisation for learning dimension, .91 for planning and goal setting dimension, .83 for strategy use and evaluation dimension, .76 for dependency in learning dimension and .91 for the whole scale. Cronbach's alpha coefficient is high for the first three dimensions and acceptable for one dimension.

In a study conducted by İlhan-Beyaztaş and Göçer-Şahin (2018), the predictive effect of high school students' strategic learning approaches and self-regulated learning skills on their university entrance score and academic success was investigated. In this study, the Self-Regulated Learning Skills scale developed by Turan (2009) was used to determine the self-regulated learning skills of 4th grade high school students. Four subscales of this scale were used in the study and the scores were found to have a normal distribution. Since the Self-Regulatory Learning Skills Scale is Likert type, the reliability of this scale was calculated with the Cronbach alpha coefficient. Accordingly, the reliability of the subscales varies between .69 and .88. The concurrent validity of the Self-Regulated Learning Scale developed by Eryılmaz and Mammadov (2017) for high school students based on Zimmerman's model was examined with the Self-regulated learning skills scale developed by Turan (2009). Pearson Product Moment Correlation coefficient was found to be a positive and significant relationship with a value of .62.

Since this scale, which was developed for university students, was used on a group of high school students, the validity and reliability properties of the scale were examined for this study. Within the scope of the validity study, confirmatory factor analysis (CFA) was conducted on the data obtained from the sample of 212 people initially reached using the LISREL 8.70 program. The results showed that the structure of the scale was confirmed for high school students [χ^2/sd(1123.68/696)= 1.62 RMSEA= .054, SRMR = .071, CFI= .94, TLI= .93]. The factor loadings of the motivation subscale ranged between .43-.62; the factor loadings of the planning subscale ranged between .44-.73; the factor loadings of the strategy subscale ranged between .26-.64; and the factor loadings of the dependency scale ranged between .21-.75. The internal consistency coefficients of the scale were calculated with Cronbach's alpha coefficient and found to be .75 for motivation and mobilisation for learning subscale, .81 for planning and goal setting subscale, .87 for strategy use and evaluation subscale, .66 for dependency in learning subscale and .88 for the whole scale. In addition, the Spearman Brown reliability coefficient was determined to be .81. Within the framework of the results obtained, the scale was used in the research.

Personal information form

A demographic data form was applied to collect information such as students' gender, age, and grade level.

Data Collection

With the permission of the school administration and teachers, the data collection tools were administered to high school students face-to-face in the classroom environment during one class hour by the researcher by giving explanatory instructions. In the pre-test applications, they were asked to write their names for matching purposes, that the data would be evaluated collectively, that their names would not be deciphered. It was informed that the psychoeducation application would be carried out in their own school environments with students who volunteered to participate and whose parents provided consent were involved.

Data Analysis

The data were analysed with SPSS program. The pre-test, post-test and follow-up data collected from the experimental and control groups using the Self-Regulated Learning Scale were examined with analysis of covariance (ANCOVA) within the framework of the first research hypothesis. In pre-test-post-test control group experimental designs, the most appropriate and preferred statistical analysis method is ANCOVA. The pre-test is controlled as a covariate to understand whether the experimental procedure is effective (Balcı, 1995, 248; Büyüköztürk, 2002). Before proceeding to the analysis process, it was examined whether the data met the presumptions required to apply this technique.

The normality assumption was investigated with the Shapiro-Wilk (S-W) test and it was found that the data obtained from the experimental pretest (S-W= .906; p>0.05), experimental posttest (S-W= .901; p>0.05), control pretest (S-W= .932; p>0.05) and control posttest (S-W= .929; p>0.05) met the normality assumption. Secondly, a one-way ANOVA was utilized to determine if there were differences in self-regulated learning between groups' the pretest scores. No significant difference was found in pretest scores between the experimental and control groups [$F_{(1-30)}$=.787; p>.05]. Thirdly, whether the variables had linear relationships with each other was analysed with a line graph. A linear relationship was observed between the variables. Fourthly, the equality of variances of the groups was analysed by Levene's test and it was found that there was no significant difference in terms of the homogeneity of the variances obtained from the distribution of the groups [$F_{(1-30)}$=.074; p>.05]. Finally, the assumption of equality (homogeneity) of the slope of the regression line was examined. Group and pretest common effect did not create a significant difference [$F_{(1-28)}$=.502; p>.05]. According to these results, it was determined that the data met the required criteria to use covariance analysis. Paired Samples t-test analysis was conducted to test whether there was a difference between the Self-Regulated Learning Scale posttest scores and follow-up test scores of the students in the experimental and control groups, which is the second hypothesis of the research. Finally, to test the research hypothesis related to academic achievement, a two-way repeated measures analysis of variance was conducted to determine if there was a difference between the pre-psychoeducational program first exam average and the post-program second exam average for students in the experimental and control groups.

Research Ethics

In the entire process from the planning to implementation of this research, from the collection of data to the analysis of the data, all the rules specified in the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. None of the actions specified in the second section of the directive, "Actions Contrary to Scientific Research and Publication Ethics", were carried out. Scientific, ethical and citation rules were followed during

the writing process of this study; no falsification was made on the collected data and this study was not sent to any other academic publication environment for evaluation.

Necessary ethical approvals for data collection and program implementation were obtained from the Muğla Provincial Directorate of National Education (permit number: E-70004082-604.02-47144247) and the Muğla Sıtkı Koçman University Social and Human Sciences Ethics Committee (protocol number: 220056, decision number: 42). Also Participants were asked to sign the informed consent form.

Ethics committee permission information

Name of the committee that conducted the ethical evaluation: Muğla Sıtkı Koçman University Social and Human Sciences Research and Publication Ethics Committee

Date of ethical evaluation decision: 06.04.2022

Ethics evaluation document number: 220056, decision number: 42

RESULTS

Descriptive statistics, including means and standard deviations for pretest, posttest, and follow-up SRLSS scores, are presented in Table 4 for both the experimental and control groups.

Table 4

Descriptive Statistics of the SRLSS

Experimental Group						Control Group					
Pre-Test		Post-Test		Follow-up Test		Pre-Test		Post-Test		Follow-up Test	
$\overline{X}$	Std	$\overline{X}$	Std	$\overline{X}$	Std	$\overline{X}$	Std	$\overline{X}$	Std	$\overline{X}$	Std
149.38	9.45	171.6	14.03	168.69	15.8	146.3	10.07	151.88	12.7	142.88	27.1

Table 4 reveals that the mean score of the students in the experimental group in the SRLSS pretest was $\bar{X}$= 149.38, the mean score of the posttest was $\bar{X}$= 171.62 and the mean score of the follow-up test was $\bar{X}$= 168.69. It is seen that the scores of the students in the experimental group from the SRLSS increased in the posttest measurement. The mean pretest score of the students in the control group was $\bar{X}$= 146.31 and the mean posttest score was $\bar{X}$= 151.87. Whether this difference between the scores in the Table is significant or not was analysed by Covariance Analysis.

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The arithmetic means of the posttest scores of the students' SRLSS and the posttest arithmetic mean values corrected according to the pretest scores are given in Table 5.

Table 5

Descriptive Statistics of SRLSS and Adjusted Posttest Arithmetic Means by Groups

Group	N	Arithmetic Mean	Adjusted Arithmetic Mean
Experimental Group	16	171.62	170.74
Control Group	16	151.87	152.76

As indicated in Table 5, the mean posttest scores of the SRLSS are 171.62 for the experimental group and 151.87 for the control group. The posttest mean scores of the students in the experimental group were higher. However, when the pre-test scores of the groups are controlled, it is seen that there are changes in the post-test mean scores. The adjusted arithmetic mean scores of SRLSS were 170.74 for the experimental group and 152.76 for the control group.

The ANCOVA results regarding whether the difference observed between the groups' Self-Regulated Learning adjusted mean scores was significant or not are given in Table 6.

Table 6
ANCOVA Results of Adjusted Posttest Mean Scores of SRLSS According to Groups

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	P	η^2
Pre-Test (controlled variable)	961.304	1	961.304	6,304	0.18*	.179
Group	2518.495	1	2518.495	16.516	.000*	.363
Error	4422.196	29	152.490			
Sum (Adjusted)	8504.000	31				

*p < 0.05

As shown in Table 6, the experimental group significantly outperformed the control group on the adjusted post-test SRLSS scores, as determined by ANCOVA [$F_{(1-29)}$ =16.516; P<0.01]. When the Bonferroni test results were examined to find the source of the difference, it was determined that the self-regulated learning of the experimental group ($\bar{X}$=170.74) was higher than that of the control group ($\bar{X}$=152.76).

According to this result, the first hypothesis of the research was confirmed. After the covariance analysis, the effect size of the group variable was found as η2= .363. When converted to Cohen f^2, this value was found to be .57. When the effect size of variance analysis was analysed in terms of Cohen f values (Low effect = 0.10, Medium effect = 0.25, Large High Effect = 0.40), it was found that the psychoeducation programme had a high effect level (Can 2016). The 36% of the self-regulated learning scores of the students in the exprimental group can be explained by the effectiveness of the experimental process. As a result, it can be said that the rise in the scores of the students who participated in the self-regulated learning psychoeducation programme prepared for high school students occurred depending on the group practices.

Paired Samples t-Test results of the SRLSS post-test and follow-up test scores of the experimental and control groups are shown in Table 7.

Table 7
Paired Samples t-Test Results on SRLSS Posttest and Follow-up Test Scores of Experimental and Control Groups

Group	Measurement	N	$\overline{X}$	S	sd	t	p
Experimental	Post-test	16	171.62	14.03	3.51	1.002	0.33
	Follow-up	16	168.69	15.82	3.96		
Control	Post-test	16	151.88	12.73	3.18	1.308	0.21
	Follow-up	16	142.88	27.10	6.78		

When Table 7 is examined, there was no significant difference between the mean scores of the students in the experimental group in the SRLSS posttest ($\bar{X}_{posttest}$ = 171.62) and the mean scores of the follow-up test ($\bar{X}_{follow\text{-}up}$= 168.69) ($t_{[15]}$=1.002, p>0.05). It is seen that the scores obtained by the students in the experimental group from the SRLSS in the post-test and follow-up test measurements are similar. This shows that the group psycho-education programme applied to the experimental group continued to increase the self-regulated learning of students. As a result, it can be said that the group psychoeducation programme applied to high school students is effective in increasing groups' self-regulated learning and this effect is permanent.

There was no significant difference between the mean posttest score of the SRLSS ($\bar{X}_{posttest}$=151.88) and the mean follow-up test score ($\bar{X}_{follow\text{-}up}$=142.88) of the students in the control group ($t_{[15]}$= 1.308, p>0.05). It is seen that the scores of the students in the control group

in the Self-Regulated Learning Skills Scale posttest and follow-up test measurements are similar. It can be said that this result is due to the fact that no procedure was applied to the control group.

The Effectiveness of Psychoeducation Program on Academic Achievement

Table 8 presents descriptive statistics, standard deviations and including means, for pre-test and post-test academic scores across both experimental and control groups.

Table 8
Pretest-Posttest Academic GPAs of the Participants in the Experimental and Control Groups

Groups	Pre-Test		Post-test	
	$\overline{X}$	Std	$\overline{X}$	Std
Experimental (n=16)	65.60	9.15	69.68	8.5
Control (n=16	64.92	8.42	61.46	10.21

When Table 8 is analysed, the mean pre-test academic scores of the students in the experimental group increased from $\bar{X}$=65.60 to $\bar{X}$=69.68 in the post-test. The mean academic scores of the students in the control group decreased from $\bar{X}$=64.92 in the pre-test to $\bar{X}$=61.46 in the post-test. Whether this difference between the scores was significant or not was analysed using two-factor repeated measures ANOVA and the findings are presented below.

Table 9
Pretest-Posttest ANOVA Results According to Academic Mean Scores

Source of Variance	Sum of Squares	Sd	Mean of Squares	F	η^2
Between Groups	273883,447	1	273883,447	1797.281	.984
Group (Experimental/Control)	316.796	1	316.796	2.079	2.079
Error	4571.631	30	152.388		
In-Group Measurement (Pre/Post-test)	1.559	1	1,559	.119	.004
Group* Measurement	227.369	1	227.369	17.366	.367
Error	392.783	30	13.093		
Total	32898.585	64			

As seen in Table 9, it was found that the joint effect of group and measurement was significant ($F_{(1\text{-}30)}$=17.366; p=.000). Bonferroni test results revealed that the academic success score average of the experimental group ($\bar{X}$=69.68) was higher than that of the control group ($\bar{X}$=61.46). According to this result, the third hypothesis of the study was accepted. It was determined that the effect size of the analysis was at a high level (η2=,367). According to this, it can be said that 37% of the rise observed in the average academic success scores of the experimental group can be explained by the psychoeducation programme. This result reveals that the academic success of the students in the experimental group was higher than the students in the control group. As a result, it shows that the group psychoeducation program was effective in increasing the academic achievement of the students.

DISCUSSION

In this study, it was aimed to design a group psychoeducation program based on social cognitive theory to improve the self-regulated learning skills of high school students and to examine the effect of this program on the students' self-regulated learning skills and academic achievement. The study hypothesized a significant difference in self-regulatory learning and academic success

between experimental and control groups, with the effect on self-regulated learning persisting over time. Results indicate that the program significantly enhanced self-regulated learning, and these gains were maintained over time. At the same time, it was observed that the psychoeducation program was effective in increasing the academic success of the students in the experimental group. Statistical analyses confirmed all hypotheses for both experimental and control groups. Findings from this study corroborate previous research on the positive impact of self-regulatory learning interventions. In this Social Cognitive Theory (SCT) based group study, the focus was on developing self-regulation skills, determining goals and responsibilities, creating awareness of motivation sources, developing self-regulatory learning strategies, developing time management and planning skills, and activities and practices were emphasised to develop these skills. All these factors are thought to be useful in making the psychoeducation programme effective and increasing academic achievement. In addition, it is thought that the homework assignments given at the end of each session provide the opportunity to apply and practice the skills learnt during the sessions in daily life and academic field.

Experimental research on self-regulated learning is characterized by its diversity, with studies employing various approaches and focusing on different age populations. Self-regulation training activities were applied to preschool children and as a result of the application, children's self-regulation skills were positively affected (Darcy et al., 2017; Gümrümkçü Bilgici, 2021; Gündüz, 2020). Self-regulated science teaching practices were found to positively influence the improving of self-regulatory learning ability in primary school students (Çokçalışkan, 2019). The effect of self-regulated writing training on self-regulation skills of secondary school students was examined (Müldür, 2017). A study found that participation in a classroom guidance program correlated with increased academic self-regulation skills and improved academic performance among secondary school students (Ayköse, 2019). A research was managed to investigate the impact of self-regulated learning-based teaching methods on secondary students' self-regulated learning skills, lifelong learning capabilities, and critical thinking abilities (Öz, 2020). Successful results were obtained in group studies aimed at improving self-regulation for high school students (Dünyagüzeli, 2019; Önemli & Yöndem, 2012).

Blended learning based on self-regulation for university students was found to be effective in increasing academic achievement (Cabı & Yalın, 2017). Bembenutty and Zimmerman (2003) developed a self-regulated learning intervention to enhance the learning strategies and motivation of 58 at-risk college students. An intervention designed to enhance self-regulated learning strategies among university students from diverse backgrounds proved successful in both fostering strategy use and boosting motivation, specifically self-efficacy (Rosario et al., 2014). An EMDR-focused intervention was developed to enhance self-regulated learning among university students. The program successfully improved self-regulated learning performance (Zat Çiftçi, 2018). In the experimental study conducted by Kolovelonis, Goudas, Hassandra, and Dermitzaki (2012), self-regulated learning according to social cognitive theory was found to be effective in physical education and teaching approaches.

Based on these experimental studies, when the findings of the research in the literature on the topic are compared with the results of this study, they show parallelism. Unlike other studies, self-regulated learning models of social cognitive theory were taken as a basis in an integrative way. Also this study adopted a comprehensive approach based on social cognitive theory to develop activities aimed at enhancing overall self-regulation ability. Therefore, it can be said that it is a unique, comprehensive and effective psychoeducation programme. To assess the magnitude of the intervention's impact, effect size calculations were performed. The highest effect size value ($\eta 2$=.37) was obtained for academic achievement. This result shows that this psychoeducation programme based on social cognitive theory is related to academic success. The experimental procedure accounted for 36% of the variance in self-regulated learning scores among the experimental group students. It can be said that the improvements in the students

who participated in the self-regulated learning psychoeducation program prepared for high school students were due to group practices. In general, it can be said that the effect size values obtained in this study are at a high level according to Cohen (1992).

The study also revealed a significant improvement in academic achievement among students who participated in the program. A statistically significant increase was observed in the experimental group's average exam scores from the first to the second administration. The reason for this may be that as self-regulation skills develop, individuals manage and control their own learning processes, set goals, monitor themselves, take responsibility, and become active and constructive. Self-regulation has emerged as a central focus in academic achievement research in recent years (Ainley & Patrick, 2006). Self-regulation skills greatly affect academic achievement (Zimmerman, 2008). Numerous studies have confirmed that self-regulatory learning is a important predictor of academic success (Aktan, 2012; Arsal, 2009; Ataş, 2009; Camahalan, 2006; Haşlaman & Aşkar, 2007; Zimmerman & Martinez-Pons, 1988). Therefore, it can be said that self-regulation affects the academic success of students in education and training environment and they show a positive relationship in their lessons by using self-regulated learning methods (Wolters, 1999). Similarly, self-regulated learning methods significantly predict mathematics achievement (Eshel & Kohavi, 2003; Jenkins, 2009; Nota et al., 2004; Üredi & Üredi, 2005; Zimmerman & Martinez Pons, 1990). It was also concluded that students' use of self-regulation strategies increased their academic motivation (Aktan, 2012; Bembenutty, 2005; Kılıç & Beyazıt, 2019).

Self-regulated learning strategies are skills that each student should develop individually to be successful. Students' gaining awareness about these skills and developing these skills can contribute to their better utilisation of the educational process (Önemli & Yöndem, 2012). In addition, students who take control and responsibility for learning by using self-regulatory learning strategies are successful in lifelong learning after their formal education (Uysal, 2021). In this respect, when self-regulation skills are considered to be thinkable, learnable and controllable skills, it is necessary to provide external support in this regard (Çiltaş, 2011). Since it has an important impact on lifelong learning processes, academic achievement and performance, the preparation of such a programme to develop self-regulated learning is seen as an achievement for the national literature. In addition, since the activities developed within the scope of the programme can be used separately, it is thought that they can be included in the preventive guidance programmes implemented by school psychological counsellors in schools and will have a widespread effect. It is expected that the program will provide a broad spectrum of utility and benefit for psychologists, educational professionals, and high schoolers.

Limitations of the Study

When evaluating the outcome of the research, it should not be forgotten that the study has some shortcomings or limitations. The first limitation of this research isn't the generalisability of the data gathered from Anatolian High School. Considering that Anatolian High School students are more focused on learning and academic achievement, it may be thought that they benefit more from this psychoeducation study. The fact that the effectiveness of the programme was not evaluated with students from different high school types such as vocational high school etc. decreases the external validity. Additional limitations of the study were the absence of a placebo group, the exclusion of teachers and parents, and the lack of a concurrent psychoeducational intervention for a control group. The fact that the effectiveness of the programme based on social cognitive theory was not examined by forming a second experimental group and comparing its effect on self-regulation skills and academic achievement with the psychoeducation programme based on another psychological counselling approach was also a limitation.

Based on the research findings, some suggestions were developed in line with the results obtained. In order to generalise the research findings to the general student profile, it may be

recommended to implement the developed programme in different high school types. In this study, only adolescents with problems related to self-regulatory skills were studied. In future studies, it may be recommended to conduct an ecological approach-oriented psychoeducation programme in which families and teachers are included in the process simultaneously. It is seen that social cognitive theory is effective in self-regulation skills and increases academic achievement. However, this research is restricted only to high schoolers. In future studies, it may be recommended to study social cognitive theory with different age groups and different variables. It can be suggested that such programmes should be conducted to develop these skills in special groups such as children of divorced families, children with learning difficulties, etc. Also, it is thought that it would be very effective to conduct studies comparing different models in order to see which self-regulation model is more effective in Turkish culture. Considering that self-regulation skills are very important in lifelong learning processes, it is considered necessary to organise in-service courses for school psychological counsellors and teachers to develop these skills in order to serve as a model for students. The fact that schools include studies to develop self-regulatory learning skills will contribute to both the increase in academic achievement and the formation of a positive school climate.

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As authors, we do not have any statement of support or gratitude regarding the study.

Statement of Contribution Rate

The first author of the study contributed to the planning of the study, data collection, program implementation and analysis processes, and the second author of the study contributed to the literature review, statistical analysis and reporting of the findings.

Declaration of Conflict of Interest

As the authors of the research, we declare that we have no declaration of interest/conflict.

Statement of Publication Ethics

All rules specified within the scope of the "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed throughout the entire process, from planning to implementation of this research, from data collection to data analysis. None of the actions mentioned under the title of "Actions Contrary to Scientific Research and Publication Ethics", which is the second part of the directive, have been carried out.

Scientific, ethical and citation rules were followed during the writing process of this study; There was no tampering with the data collected and this study was not sent to any other academic publication environment for evaluation. Also, participants were asked to sign the informed consent form.

Research ethics committee approval information

Name of the committee that conducted the ethical evaluation: Muğla Sıtkı Koçman University Social and Human Sciences Research and Publication Ethics Committee

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EXTENDED ABSTRACT

Giriş

Eğitim üzerine yapılan çalışmalarda akademik başarıyı etkileyen faktörlerin yoğun bir şekilde araştırıldığı ve birçok etkenin bulunduğu göze çarpmaktadır. Son yıllarda bu çalışmaların odak noktasını öğrencilerin öğrenme süreçlerinde aktif, yapıcı rol üstlendikleri öz-düzenleme becerisi oluşturmaktadır (Ainley & Patrick, 2006). Öz-düzenleme becerisi öğrenmeyi ve akademik başarıyı büyük ölçüde etkilemektedir (Zimmerman, 1994). İlk olarak Bandura'nın Sosyal Bilişsel Kuramı'nda tanımlanan öz düzenleme kavramı, bireyin duyguları, düşünceleri ve davranışları üzerinde kontrolünün olması ve bu kontrol mekanizmasıyla kendini düzenlemesidir (Bandura, 1986). Öğrenmede öz düzenleme ise, sınıf veya okul ortamında öğrencinin başarısı ve performansına odaklanan yönüyle oldukça yeni bir kavramdır (Çiltaş, 2011). Öz-düzenlemeli öğrenme, bireylerin kendi öğrenme hedeflerini belirledikleri, bilişlerini, motivasyonlarını ve davranışlarını düzenledikleri, kendi hedefleri ve çevresindeki içeriksel özellikler tarafından yönlendirildiği ve sınırlandırıldığı aktif ve yapıcı bir süreç olarak tanımlanmaktadır (Pintrich, 2000). Öz-düzenlemeli öğrenme becerisi yüksek olan bireyler; amaçlar belirleme, öğrenme stratejilerini kullanma, kendini izleme, kendi öğrenme süreçlerini düzenleme, öğrenmelerinde aktif rol alma gibi özelliklere sahiptir (Aydın & Demir-Atalay, 2015). Bu becerisi düşük olan bireyler ise hedeflerinin önündeki engelleri tehdit olarak görmekte, kendi yeteneklerinden şüphe etmekte, hedefe ulaşma ve başarma noktasında ilgi, istek ve motivasyonları düşük olmaktadır (Zat Çiftçi, 2018). Dolayısıyla öğrencilerin akademik başarısı üzerinde önemli bir etkisi olan öz-düzenleme becerisinin kazandırılması büyük önem arz etmektedir. Psikoloji alanında yapılan çalışmalar öz-düzenleme becerisinin küçük yaşlarda geliştiğini (Raffaelli ve diğerleri, 2005) göstermekle beraber ileriki yaşlarda da eğitim yoluyla gelişebileceğini göstermektedir (Azevedo & Cromley, 2004; Perels et al., 2005; Schmitz & Wiese, 2005). Bu nedenle üniversite sınavlarına hazırlanan, kariyer planlaması yapan ve akademik hedefler belirleyen lise öğrencilerinin öz-düzenlemeli öğrenme becerisi geliştirmeleri oldukça önemlidir. Bu araştırmanın temel amacı, lise öğrencilerinin öz-düzenlemeli öğrenme becerilerini güçlendirmek için tasarlanan sosyal bilişsel kurama dayalı psikoeğitim programının etkiliğini değerlendirmektir. Bu kapsamda, programın öğrencilerin akademik başarılarına olan etkisi de incelenmiştir. Bu çerçevede araştırmanın hipotezleri şu şekildedir:

- Hipotez 1: "Deney ve kontrol gruplarının Öz-düzenleyici Öğrenme Becerileri Ölçeği ön test ortalama puanları kontrol altına alındığında, son test ortalama puanları arasında anlamlı fark vardır."
- Hipotez 2: "Deney grubunda yer alan öğrencilerin Öz-düzenleyici Öğrenme Becerileri Ölçeği sontest puanları ve izleme testi puanları arasında anlamlı bir fark yoktur."
- Hipotez 3: "Kontrol grubunda yer alan öğrencilerin Öz-düzenleyici Öğrenme Becerileri Ölçeği sontest puanları ve izleme testi puanları arasında anlamlı bir fark yoktur."
- Hipotez 4: "Deney ve kontrol grubundaki öğrencilerin akademik başarıları arasında Öz Düzenleyici Öğrenme Programı uygulanan deney grubu lehine anlamlı bir fark vardır."

Yöntem

Araştırma deney-kontrol gruplu, öntest, sontest, izleme testi ölçümlü yarı deneysel desende tasarlanmıştır. Araştırmanın çalışma grubunu Muğla'daki bir Anadolu Lisesi'nde öğrenim görmekte olan 123'ü kadın, 89'u erkek olan 212 lise öğrencisi oluşturmaktadır. Araştırma verileri, öğrencilerin kişisel bilgileri ve öz-düzenlemeli öğrenme becerileri hakkında bilgi toplamak amacıyla Kişisel Bilgi Formu ve Öz-düzenleyici Öğrenme Becerileri Ölçeği (ÖDÖBÖ) kullanılarak elde edilmiştir.

Öz-düzenlemeli öğrenme becerisi düşük olan 32 gönüllü öğrenci cinsiyet, sınıf düzeyi, şubeleri de dikkate alınarak seçkisiz bir şekilde deney (n:16) ve kontrol (n:16) gruplarına atanmıştır. Deney grubu öğrencileriyle psikoeğitim çalışması öncesinde ön görüşme yapılmış, çalışmanın

amacı, süresi, kuralları ve programın içeriği konusunda bilgilendirme yapılmış, katılım onayları ve veli onam formları alınmıştır. Deney grubundaki öğrencilere, haftada bir saat olmak üzere toplam sekiz oturumluk bir psikoeğitim programı uygulanmıştır. Yapılandırılmış grup etkinlikleri şeklinde hazırlanan psikoeğitim programının genel amaçları; hedef belirleme, motivasyon, öz düzenleyici öğrenme stratejileri hakkında bilgilenme, zaman yönetimi, kaynakları yönetme, kendi öz düzenleme stratejileri ile ilgili farkındalık kazanma, planlama becerisi geliştirme olarak sıralanabilir. Kontrol grubundaki öğrencilere ise herhangi bir müdahalede bulunulmamıştır. Psikoeğitim uygulaması tamamlandıktan hemen sonra deney ve kontrol grubuna sontest, dört ay sonra da izleme testi uygulanmıştır. Araştırma verilerinin analizinde gruplar arası karşılaştırmayı sağlayan varyans analizi (Anova), kovaryans analizi (Ancova), ilişkili ve bağımsız örneklemler için t-testi yöntemleri kullanılmıştır.

Bulgular

Araştırma sonuçları, deney grubuna uygulanan psikoeğitim programının öğrencilerin öz-düzenlemeli öğrenme becerilerini anlamlı ölçüde geliştirdiğini göstermiştir. Bu etkinin, hem programın hemen ardından yapılan son testte hem de dört ay sonra yapılan izleme testinde devam ettiği görülmüştür. Ayrıca, psikoeğitim programının öğrencilerin akademik başarıları üzerinde de olumlu bir etkiye sahip olduğu tespit edilmiştir. Deney grubundaki öğrencilerin akademik başarı puanlarında gözlenen artışın %37'sinin uygulanan psikoeğitim programı ile açıklanabileceği sonucuna ulaşılmıştır.

Tartışma ve Sonuç

Araştırmanın sonucunda ulaşılan bulgular, geliştirilen programın deney grubundaki öğrencilerin öz-düzenlemeli öğrenme becerilerini geliştirmede etkili olduğunu ve bu etkinin izleme ölçümünde de devam ettiğini göstermiştir. Aynı zamanda uygulanan psikoeğitim programının akademik başarıyı da artırdığı sonucuna ulaşılmıştır. Öz düzenleme programı sayesinde öğrencilerin öz-düzenlemeli öğrenme düzeylerinde istatistiksel olarak anlamlı ve kalıcı bir artışın olması alanyazındaki çalışmalar ile tutarlılık göstermektedir (Çokçalışkan, 2019; Darcy et al., 2017; Dünyagüzeli, 2019; Gümrümkçü Bilgici, 2021; Gündüz, 2020; Müldür, 2017; Önemli & Yöndem, 2012; Öz, 2020). Bu deneysel araştırmalardan hareketle ilgili alanyazındaki araştırma bulguları ile bu araştırmanın sonuçları karşılaştırıldığında paralellik göstermektedir. Diğer çalışmalardan farklı olarak sosyal bilişsel kuramın öz düzenleyici öğrenme modelleri bütünleştici bir şekilde temel alınarak öz-düzenleyici öğrenme becelerilerini artırıcı etkinlikler geliştirilmiştir. Bu bakımda özgün, kapsamlı ve etkili bir psikoeğitim programı olduğu söylenebilir. Ayrıca bu programdan elde edilen etki büyüklüğü değerlerinin Cohen'e (1992) göre yüksek düzeyde olduğu söylenebilir.

Bu araştırmada elde edilen bir başka bulgu, psikoeğitim programına katılan lise öğrencilerinin akademik başarıları anlamlı bir şekilde artmıştır. Bunun nedeni öz düzenleme becerileri geliştikçe bireyin kendi öğrenme süreçlerini yönetmesi, kontrol etmesi, hedefler belirlemesi, kendini izlemesi ve sorumluluk alması, aktif ve yapıcı olması olabilir. Benzer şekilde birçok araştırma, öz-düzenlemeli öğrenmenin akademik başarıyı artırdığını ortaya koymuştur (Aktan, 2012; Arsal, 2009; Ataş, 2009; Camahalan, 2006; Cazan, 2014; Dikbaş & Hasırcı, 2008; Gülay, 2012; Haşlaman & Aşkar, 2007; Rowe & Rafferty, 2013; Zimmerman & Martinez-Pons, 1988).

Hayat boyu öğrenme süreçleri, akademik başarı ve performans üzerinde önemli bir etkisi olması nedeniyle öz-düzenlemeli öğrenmeyi geliştirmeye yönelik böyle bir programın oluşturulması ulusal alanyazın için bir kazanım olarak görülmektedir. Programda bir plasebo grubunun olmaması, öğretmenler ve ailelerden oluşan bir grubun olmaması ve farklı bir psikolojik danışma yaklaşımı temel alınarak oluşturulmuş bir psikoeğitim programıyla karşılaştırma yapılmamış olması araştırmanın sınırlılıklarıdır.

Sonraki çalışmalarda eş zamanlı olarak ailelerin ve öğretmenlerin de sürece dahil edildiği ekolojik yaklaşım odaklı bir psikoeğitim programının yürütülmesi önerilebilir. Yine farklı yaş

gruplarıyla ve değişkenlerle sosyal bilişsel kuramın çalışılması önerilebilir. Bu tür bu becerileri geliştirme çalışmalarının boşanmış aile çocukları, özel öğrenme güçlüğü olan vb. özel gruplarda yapılması önerilebilir. Ayrıca Türk kültüründe hangi öz düzenleme modelinin daha etkili olduğunu görebilmek için farklı modellerin karşılaştırıldığı çalışmaların yapılmasının da çok etkili olacağı düşünülmektedir.