



ORIGINAL RESEARCH ARTICLE

The Effect of Teaching Social Problem-Solving Skills on Academic Resilience and Self-Control of Fifth-Grade Students in Shiraz

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ABSTRACT

Purpose: The purpose of this research was to the effect of teaching social problem-solving skills on academic resilience and self-control of fifth-grade students in Shiraz city.

Method: Therefore, in terms of its purpose, it is considered applied research; Because this research was conducted based on the data obtained from a certain statistical population of the fifth-grade students of primary school in Shiraz city and the results obtained in it can help the decision making of school administrators and that is why it is under applied research. On the other hand, in the current research, a field approach and questionnaire distribution among the members of the statistical sample is used to collect data. From the relevant formulas, the number of samples in each group was calculated to be 22; Therefore, out of 44 people participating in the study, 22 people from the control group and 22 people from the experimental group were separated in order to prevent the exchange of information. In order to analyze the hypotheses, the analysis of the covariance method was used.

Finding: Based on the obtained results, problem solving skills training has had a significant effect on academic resilience in the post-test results of fifth grade students' resilience variable. Also, teaching problem solving skills has had a significant effect on students' self-control in the post-test results of the fifth grade students' self-control variable.

Conclusion: A student with effective social skills establishes positive relationships with the teacher and classmates and creates an environment conducive to learning. ©authors

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1. Introduction

Experts and thinkers of educational psychology believe that many students encounter problematic social and educational situations in the classroom, home and community during their studies, which can lead to their academic failure in school and cause problems in their future life (Dabaghi, Hashemi & Ashkzari, 2019). There can be many variables in these situations that affect the academic performance of students and lead to their academic failure. Among these, the variable of academic resilience is particularly important (Rudd, Meissel & Meyer, 2022).

Observing students in different environments always brings to mind the question of whether children can benefit from education and academic achievements. Can they cope with the basic challenges of the school? And why some of them, unlike other children, have special flexibility to deal with stressful factors? The answer to these questions refers to a relatively new concept called "resilience" (Ye et al., 2021). Resilience belongs to normal concepts and structures considered by positive psychology and indicates successful adaptation despite challenges and threats (Dabaghi et al., 2019).

Academic resilience, the learner's flexibility in facing problems, stress and challenging educational characteristics and conditions, leads to achieving success and improving academic performance. In other words, resilient students are more motivated, appear more successful in the educational course, and achieve more success than other students; And in these learners, the probability of failure is less (Ye, Streholt & Blomeke, 2022).

Behavioral interventions are often used to solve behavioral problems; however, teaching students how to adapt socially requires changing their thinking to some extent (Talsma et al., 2018). Knowing how to change thinking is essential for changing behavior. Often times, the inability to adapt to social situations affects the way students understand and interact and leads to problematic social interactions and weak social relationships (Pourqorban Gourabi, Babakhani and Kashani, 2022).

Based on the evidence provided, problem solving training by parents and educators has been effective in reducing unacceptable behaviors and improving social behaviors among children, reducing aggression, increasing self-control ability, paying attention to educational performance, improving children's cognitive and educational skills, and correcting unacceptable children's behaviors. On the other hand, teaching self-control strategies is one of the appropriate methods to increase resilience, psychological well-being and emotional regulation in students (Shorrocks et al., 2021). The human capacity to exercise self-control is arguably one of the most powerful abilities and beneficial adaptations in the human psyche (Sandoval-Hernández et al., 2012). People will have the healthiest conditions when they can create a favorable harmony and adaptation between themselves and their environment, and this adaptation can basically be improved by changing oneself to adapt to the surrounding environment (Garcia-grispo et al., 2019). In addition, it provides the ability of self-control to avoid anti-social impulses and to be in tune with the needs of a group's life, which is one of the signs of a civilized life (Kamali Zarch and Arian, 2019).

On the other hand, teaching self-control strategies is one of the appropriate methods to increase resilience in students. Resilience is the capacity to bounce back from sustained and ongoing difficulty and the ability to repair oneself (Martin et al., 2008). This human capacity can make him pass through unfortunate events victoriously and improve his social, academic and professional competence despite being exposed to extreme tensions. Also, the use of social problem solving training can help manage critical needs, express and resolve conflicts, increase social and communication skills, and increase self-efficacy, self-management, and impulsivity. Teaching social problem solving to people who have problems in self-control is an effective way to manage their problems. Teaching social problem solving increases people's self-efficacy. Also, failure in response inhibition creates problems in problem solving, and ineffective social problem solving methods can increase risky behaviors; Therefore, based on

the stated issues, this research considering the fifth grade students of Shiraz city, what is the effect of teaching social problem solving skills on students' academic resilience and self-control?

2. Literature Review

One of the most successful intervention programs in school to prevent and reduce students' behavioral problems is teaching how to solve social problems (Agasisti et al., 2018). Social problem solving is a variable of social cognition; and is a cognitive-behavioral process in which people try to identify and discover adaptive and efficient solutions to problematic situations they encounter in everyday life. In this definition, social problem solving is considered as a purposeful, intentional, conscious activity and also as an intentional cognitive outcome (Cheung et al., 2014).

Students with behavioral problems in limited educational environments have fewer opportunities to discover the interpersonal nature of social relationships. In addition, these students are often impulsive when responding, may not be aware of their own and others' feelings and perspectives, struggle to identify problematic situations, and lack social competence (Kalaycıoğlu, 2015). Such characteristics often create negative feelings in others (teachers, peers, friends, and administrators) and lead to alienation, few intimate relationships, and a limited social network. All of these things are interconnected and ultimately become an obstacle to create opportunities for students' scientific, social and emotional learning (Birrell et al., 2019).

Masten (2007), stated that flexibility is not an inherent capability, but rather an acquired one. Despite the risk factors, despite the appropriate protective factors, it will be achievable in the lives of resilient people. Protective factors moderate the effects of adverse conditions on growth and its consequences and encourage the adoption of positive solutions. Garmezy (1985) has classified protective factors into three groups: a) individual factors, b) family factors and c) factors at the community level. A review of the previous literature on this principle has shown that among the protective factors at the individual level that seem to have a special place in resilience functions, active problem solving skills and the way students deal with adverse situations and stressful situations can be mentioned (Nabawi, Rozbahani and Gooderzi, 2021).

Problem-solving skills belong to those skills that help people to be more effective when facing problems and pave the way to find solutions to problems and increase their resilience and tolerance. Effective problem-solving skills are related to good personal adjustment. Thinking skills such as problem solving play an essential role in academic progress; And it seems that paying attention to thinking skills is necessary in academic progress (Makram, Taklawi and Kazemi, 2021).

Hashemzadeh et al. (2022) presented a research titled the effectiveness of mindfulness training on academic resilience and sense of belonging to school of female students of the first year of secondary school. The research was a semi-experimental type with a pre-test-post-test design and a control group with a follow-up period. The results showed that mindfulness training has significantly increased the academic resilience and sense of belonging to the school of the students in the experimental group compared to the control group. Also, this effect remained stable in the follow-up phase. Conclusion: From the above findings, it can be concluded that mindfulness training, by increasing students' awareness of the present, led to an increase in academic resilience and a sense of belonging to the school. It is necessary to repeat the research with more samples in different regions.

Pourqorban Gardabi et al. (2021) presented a research entitled the effect of social problem solving skills training on academic performance and internalized and externalized behavioral emotional problems of primary school students. The present study was conducted with the aim of determining the effect of teaching social problem solving skills on academic performance and emotional and behavioral problems of primary school students. The result of the data analysis showed that there is a significant difference between the experimental group and the

control group in the mean emotional behavioral problems and academic performance. Also, the effect of time was significant and the pairwise comparison showed that there was a significant difference between the scores of individuals in the three variables of internalized and externalized problems and academic performance in the pre-test and post-test stages, but the difference in scores in the post-test and follow-up stages was not significant; Therefore, teaching social problem solving skills improved academic performance and reduced emotional and behavioral problems.

Makram et al. (2021) presented a research titled comparing the effectiveness of social-emotional skills training and social problem solving training on the social competence of single-parent female students in the second year of high school. Research has shown that teaching social problem solving increases social competence in adolescence and adulthood. The results of this research showed that social-emotional skills training and social problem solving were effective in increasing the social competence of single-parent female students. On the other hand, there was no significant difference in the effectiveness of social-emotional skills training and social problem solving in the variable of social competence.

Zare and Ghorbani (2021) presented a research titled investigating the effect of risk perception, self-efficacy and social problem solving on helping behaviors with regard to the mediating role of social intelligence. The results of the indirect coefficients in the path analysis showed that social intelligence cannot play a mediating role in the relationship between the three variables of risk perception, self-efficacy and social problem solving with helping behaviors and only the direct coefficients of risk perception, self-efficacy and social problem solving with helping behaviors.

Kamali Zarch and Arian (2019) presented a research titled determining the effectiveness of teaching social problem solving and critical thinking on students' academic self-efficacy. The results of the research showed that teaching social problem solving and critical thinking increased self-efficacy in sixth grade male students.

Ye et al. (2022) presented a research titled academic resilience: basic norms and validity of definitions. Regarding the validity of these differences and how they affect the composition of students, academic resilience showed that the classification strongly depends on the applied threshold. When a fixed background threshold was applied, classification was likely to be influenced by a country's development status. This could lead to an overestimation of the proportion of academically resilient students in some countries while underestimation in others. Furthermore, compared to using a social or economic capital indicator, using a cultural capital indicator may lead to a lower share of disadvantaged students classified as academically resilient. The composition of academic resilience students by gender and language varies significantly depending on which human capital indicator or thresholds reflecting it are applied. The basic social characteristics to be deduced from such different results vary greatly depending on specific conceptualizations and operationalizations. Finally, our study using PISA 2015 data from three countries representing different cultures and performance levels showed that a stronger sense of belonging to a school significantly increased the odds of being classified as academically resilient in Peru.

Rud et al. (2022) presented a study entitled "Research on the measurement of academic resilience in New Zealand using large-scale international assessment data." The findings highlight the strengths and limitations of using large-scale international assessment data to study academic resilience, particularly in the New Zealand context. Furthermore, this study shows that methodological decisions of researchers have important effects on the conclusions reached about academic resilience.

Gulluhan (2022), a research entitled Social problem solving activities in life skills lesson: Do elementary school students have problems solving everyday life problems? presented It was observed that the qualitative data supported the quantitative data. Based on quantitative data, after receiving social problem-solving instruction, students developed skills in generating alternative solutions, choosing an appropriate solution, and estimating the outcomes of the

chosen solution. Navabi et al. (2021) presented a research titled the effectiveness of problem solving skills training on psychological toughness and cognitive emotion regulation strategies in high school students. The results showed that teaching problem solving skills affects psychological toughness and cognitive emotion regulation strategies of teenagers.

Dabaghi et al. (2019) presented a research entitled the effect of teaching social problem solving skills on the educational resilience of working children. The post-test was done for both groups. To investigate the effect of problem solving training on academic resilience, multivariate covariance analysis was used. The results showed that social problem solving training affects learners' problem-based bias and providence.

Children without social skills are more likely to be rejected by their peers. Based on the predictive power of relationships with peers, it seems that in a part of the social system such as school, if there are social problems in the child, weaker social skills are formed as a strategy in the child. In early childhood in preschool, if the child interacts with his peers, over time this relationship will become a friendship, otherwise, the lack of social skills will cause an unfavorable relationship with his peers, such as rejection and victimization. With this in mind, formal social skills training for all children, and especially children with social behavior disabilities, is critical. Teaching problem-solving skills had a positive and significant effect on the emergence of positive, resilient and coping behaviors. Inspired by the mentioned article, but with a different and experimental method, the study of teaching social problem solving skills on academic resilience and self-control of fifth grade students in Shiraz city has been investigated.

The main hypothesis

Teaching social problem solving skills has a significant effect on academic resilience and self-control of fifth grade students in Shiraz.

Sub-hypotheses

Teaching problem solving skills has a significant effect on academic resilience.

Teaching problem solving skills has a significant effect on students' self-control.

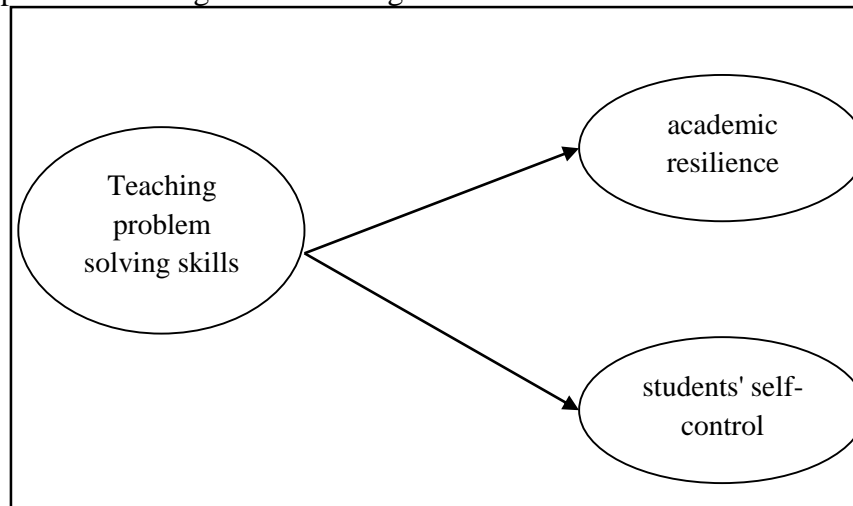


Figure 1. Conceptual research model adapted from Ye et al. (2022)

3. Method

The purpose of this research is the effect of teaching social problem solving skills on the academic resilience and self-control of fifth grade students in Shiraz, so it is considered an applied research in terms of its purpose; Because this research was conducted based on the data obtained from a certain statistical population of the fifth grade students of primary school in Shiraz city and the results obtained in it can help the decision making of school administrators and that is why it is under applied research. On the other hand, in the current research, a field approach and questionnaire distribution among the members of the statistical sample is used to collect data. The ultimate goal of this research is to extract results from the sample that are generalizable by following the correct methodology and using scientific approaches. Based on

this, the main approach of this research can be considered inductive. In terms of nature and method, it is a descriptive research of a survey type, which is carried out cross-sectionally in terms of time; This means that the data used in this research to test the hypotheses was obtained in a certain period of time (the second half of 2022).

In this research, the quasi-experimental method of pre-test and post-test with the control group is used, because it is not possible to control or manipulate the variables completely. The research method used is semi-experimental in the form of a control group design using pre-test and post-test. The said design has an experimental group and a control group, which are pre-tested. Then the experimental group is influenced by the educational method. Finally, the test is done.

The sample size required for the study in each group was calculated by using the formula of comparing two averages so that with 95% confidence and 80% test power, if the average difference in these two groups is ten points or more, it becomes statistically significant. From the relevant formulas, the number of samples in each group was calculated to be 22; Therefore, out of 44 people participating in the study, 22 people from the control group and 22 people from the experimental group will be separated in order to prevent the exchange of information. The criteria for entering the study of the selected people will be satisfaction and interest in the study, complete response to the questionnaire, participation in training sessions and continued cooperation.

Training of social problem solving skills: In this research, the training of social problem solving skills model of Disorilla and Goldfried (1971) is held in 8 training sessions for fifth graders.

Academic resilience: In order to operationalize academic resilience, Samuels (2004) questionnaire, which has 40 questions, was used.

Self-control: In order to operationalize self-control, the questionnaire of Tanji and Shodi (1992) which has 36 questions was used.

According to the scale and score of the questions, the data was entered into SPSS software version 23 and two types of statistical methods were used to analyze the data:

A- Descriptive statistics: including calculation of mean, standard deviation.

B- Inferential statistics: Chi-square test will be used to determine the relationship between variables. Also, in order to compare the mean score of resilience and self-control before the social problem solving skills training intervention in both groups, analysis of covariance test was used. Considering the main purpose of the study, which is to determine the effect of teaching social problem solving skills on resilience and self-control, and other purposes, analysis of covariance was conducted in two groups to compare the mean before and after the intervention.

4. Findings

In this part, the effect of teaching social problem solving skills on academic resilience and self-control of fifth grade students in Shiraz city has been investigated. For this purpose, 44 people were randomly selected by stratified sampling method and collected information using questionnaires and laboratory research. After collecting the data, descriptive statistics and inferential statistics (Kolmogorov Smirnov test and analysis of covariance test) were used using SPSS software.

Hypothesis 0-1- Teaching problem solving skills has no significant effect on academic resilience.

Hypothesis 1-1- Teaching problem solving skills has a significant effect on academic resilience.

In order to check the normality of the statistical distribution, the Kolmogorov-Smirnov test was used.

Table 1. Checking the normality of the data, Kolmogorov-Smirnov test

Variables	Kolmogorov-Smirnov statistic	P value
academic resilience (pre-test)	0.165	0.168
academic resilience (post-test)	0.171	0.2

According to Table 1 and the use of the Kolmogorov-Smirnov test in the reasoning variable of the fifth grade students (before and after the test), it has been investigated that the probability value is greater than the significance level of 0.05. The null hypothesis in the Kolmogorov-Smirnov test is that the data follows a normal distribution, and the opposite hypothesis is that the data does not follow a normal distribution. According to the probability value and the non-rejection of the null hypothesis, the data distribution is assumed to be in accordance with the normal distribution. be made That is, the desired sample has a normal distribution.

In order to study problem solving skills training on academic resilience in the experimental group compared to the control group, analysis of covariance (ANCOVA) was used. In this analysis, the academic resilience pre-test score is considered as a control or covariance variable, the results of this analysis can be seen in Table 2.

Table 2. The results of the equality of variances test

	Levene	Df1	Df2	(p-value)
Post test	1.486	1	43	0.452

According to the above table, it can be seen that the probability value of Levene's test equal to 0.452 is more than 0.05, it can be said that the variance of reasoning of the fifth grade students has homogeneity. Therefore, the assumption of equal variance of students' academic resilience is confirmed. So the results of covariance analysis can be used to check this hypothesis.

Table 3. Results of covariance analysis after the academic resilience test of students in two experimental and control groups

Variable	sum of squares	df	F	(p-value)
Width from the origin	36.634	1	3469.11	0.000
pre-exam	71.742	1	6793.670	0.000
Grouping	0.203	43	19.213	0.000
error	0.011	44		
Total	73.511			

According to Table 3, the probability value for the grouping variable is equal to 0.010, and it is smaller than the significance level of 0.05, and the value of the F statistic (19.213) is significant. That is, there is a difference in the average of the two groups in the post-test. It can be said that teaching problem solving skills has had a significant impact on academic resilience in the post-test results of fifth grade students' resilience variable.

Table 4. The results (average) of pre-test and post-test of resilience of students in two experimental and control groups.

		#	avetage
experiment	Students' resilience pre-test	22	33.74
	After the resilience test of students	22	45.11
control	Students' resilience pre-test	22	27.36
	After the resilience test of students	22	29.13

As can be seen in Table 4, the average endurance of experimental group students has increased significantly from 33.74 to 45.11. But the average resilience of students in the control

group has not changed much. This means that the interventions of teaching problem solving skills on academic resilience have had a significant impact on students' resilience and have increased students' resilience in the post-test stage

Hypothesis 0-2- Teaching problem solving skills has no significant effect on students' self-control.

Hypothesis 2-1- Teaching problem solving skills has a significant effect on students' self-control.

In order to check the normality of the statistical distribution, the Kolmogorov-Smirnov test was used.

Table 5. Checking the normality of the data, Kolmogorov-Smirnov test

Variables	Kolmogorov-Smirnov statistic	P value
Self-control of students (pre-test)	0.194	0.132
Self-control of students (post-test)	0.198	0.175

According to table 5 and the use of the Kolmogorov-Smirnov test in the self-control variable of the students (before and after the test), it has been investigated that the probability value is greater than the significance level of 0.05. The null hypothesis in the Kolmogorov-Smirnov test is that the data follows a normal distribution, and the opposite hypothesis is that the data does not follow a normal distribution. According to the probability value and the non-rejection of the null hypothesis, the data distribution is assumed to be in accordance with the normal distribution. be made That is, the desired sample has a normal distribution.

In order to study the teaching of problem solving skills on the self-control of experimental group students compared to the control group, analysis of covariance (ANCOVA) was used. In this analysis, the pre-test score of students' self-control is considered as a control or covariance variable, the results of this analysis can be seen in Table 6.

Table 6. The results of the equality of variances test

	Levene	Df1	Df2	(p-value)
Post test	0.235	1	43	0.128

According to the above table, it can be seen that the probability value of Levene's test equal to 0.128 is more than 0.05, it can be said that the variance of students' self-control has homogeneity. Therefore, the assumption of equality of perceived sensitivity variance is confirmed. So the results of covariance analysis can be used to check this hypothesis.

Table 7. The results of covariance analysis after the self-control test of students in two experimental and control groups

Variable	sum of squares	df	F	(p-value)
Width from the origin	601.783	1	2814.926	0.000
pre-exam	586.842	1	5490.069	0.000
Grouping	1.644	43	15.384	0.000
error	2.459	44		
Total	22977.167			

According to Table 7, the probability value for the grouping variable is equal to 0.010, and it is smaller than the significance level of 0.05, and the value of the F statistic (15.384) is a significant value. That is, there is a difference in the average of the two groups in the post-test. It can be said that teaching problem solving skills has had a significant effect on the post-test results of students' self-control variable.

Table 8. Results (average) of pre-test and post-test of self-control of students in two experimental and control groups

		#	average
experiment	Students' self-control pre-test	22	26.17
	After the self-control test of students	22	39.38
control	Students' self-control pre-test	22	28.19
	After the self-control test of students	22	29.10

As can be seen in Table 8, the average self-control of experimental group students has increased significantly from 26.17 to 39.38. But the average self-control of students in the control group has not changed much. This means that teaching problem-solving skills has had a significant impact on students' self-control and has increased students' self-control in the post-test phase.

5. Discussion

The purpose of this research was the effect of teaching social problem solving skills on academic resilience and self-control of fifth grade students in Shiraz city. Therefore, in terms of its purpose, it is considered an applied research; Because this research was conducted based on the data obtained from a certain statistical population of the fifth grade students of primary school in Shiraz city and the results obtained in it can help the decision making of school administrators and that is why it is under applied research. On the other hand, in the current research, a field approach and questionnaire distribution among the members of the statistical sample is used to collect data. From the relevant formulas, the number of samples in each group was calculated to be 22; therefore, out of 44 people participating in the study, 22 people from the control group and 22 people from the experimental group were separated in order to prevent the exchange of information. In order to analyze the hypotheses, the analysis of covariance method was used. Based on the obtained results, problem solving skills training has had a significant effect on academic resilience in the post-test results of fifth grade students' resilience variable. Also, teaching problem solving skills has had a significant effect on students' self-control in the post-test results of the fifth grade students' self-control variable.

Dabaghi et al. (2019) showed that teaching life skills increases students' flexibility. Rud et al. (2022) showed that academic resilience achieves academic success despite adversity and is therefore an important concept for promoting equality in education. However, our understanding of how and why rates of academic resilience differ across contexts is currently limited by changes in the ways the construct has been operationalized in quantitative research. Similarly, comparing the strength of protective factors that promote academic resilience is hindered by different approaches to measuring academic resilience. This methodological diversity has complicated efforts to reconcile disparate findings on academic resilience. Gulluhan (2022), showed that students retain these skills four months after the training program. Students are more interested in solving social problems, can solve problems clearly, and by relating them to the topic, generally enjoy the problem-solving process and produce various creative outputs. It is believed that the results obtained from this study will guide educational practices involving activities based on social problem solving.

6. Conclusion

Sudden and extensive changes in all aspects of children's lives create a sensitive phase that will naturally lead to problems and inconsistencies. Therefore, considering the importance of this period and the methods of dealing with these problems, providing the necessary information and knowledge to teenagers and acquiring the necessary skills to deal with the problems caused by these changes is considered very important and sensitive. Among the factors that can weaken stress is paying attention to expectations of self-efficacy, which is considered one of the most important determining factors for student participation, persistence and success. While using

the wrong strategy in facing stressors can increase problems, using correct coping strategies can lead to positive results.

Most students have problems and deficits in social skills. This may make these students less accepted by mainstream peers. Therefore, these students need to be taught social skills in an organized way. Research shows that teaching social problem-solving skills has good predictive effects in self-knowledge, self-control and increasing resilience strategies. A lack of social skills can impair the ability to establish and maintain a satisfying relationship with friends, and a lack of friends or intimacy is associated with low self-esteem.

A student with effective social skills establishes positive relationships with the teacher and classmates and creates an environment conducive to learning. Social skills are the skills through which people can participate in interpersonal interactions and the communication process, that is, the process in which people share their information, thoughts and feelings through verbal and non-verbal exchange.

Based on the obtained results, it is suggested that the teaching of social problem solving skills should be added to the students' lessons in the form of main courses. Also, administrators should provide the necessary infrastructure to increase students' self-control and resilience.

Declaration of Competing Interest

The author declares that he has no competing financial interests or known personal relationships that would influence the report presented in this article.

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