

## Investigating the relationship between self-determination and self-efficacy of high school adolescents in Shiraz

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### Abstract

**Introduction:** Another important factor in the nature of human behavior is self-efficacy beliefs. The present study aimed to investigate its relationship to you and the effectiveness of Shiraz high school adolescents.

**Methods:** The method of the present study was correlational. The statistical population included high school students studying in Shiraz District 4 in the academic year of 2018-2019, from which 120 students (80 girls and 60 boys) were selected by multi-stage cluster sampling. The instrument used in this study was the Nom adolescent autonomy and general self-efficacy questionnaire of Scherer. For data analysis, linear and multiple regression and independent group t-test were used using SPSS software version 21.

**Results:** The results showed that self-efficacy can be predicted through self-determination. The targeting variable is able to predict self-efficacy. Also, there was no significant difference between the mean scores of girls and boys in self-efficacy and self-determination ( $p < 0.5$ ).

**Conclusion:** Based on the findings, people's beliefs and their self-efficacy to perform behavior are the strongest predictors and people with high self-efficacy are not very aroused and stressed in the face of stress and are more likely to succeed.

**Keywords:** self-determination, self-efficacy, high school.

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### Introduction:

One of the important goals and tasks of education is to create the conditions for the all-round growth of the individual and to train healthy, efficient and responsible human beings to play a role in individual and social life. Since students, as the basic pillar of the country's educational system,

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have a special role and position in achieving the goals of the educational system, attention to this segment of society in terms of education, fertility and prosperity of the educational system will cause more and more. Today, one of the most important and main factors in explaining human behaviors is self-efficacy beliefs. Self-efficacy due to intrinsic motivation causes a person to work spontaneously in the environment and achieve his / her efficiency beliefs. Nature, like the invisible teacher, keeps the individual active in order to reveal the different capacities of change in various stages (1). Bandura believes that people's beliefs and self-efficacy are the strongest predictors of behavior, and that people with high self-efficacy are less aroused by stress and feel more relaxed and more likely to succeed (2). In contrast, people with low self-efficacy cannot cope with stress (3).

Self-efficacy in the culture of psychology and psychiatry is defined as a person's beliefs about the ability to cope with different situations, and it means the evaluation of the individual's abilities in order to successfully perform a set of measures necessary to achieve the goal (4). In fact, beliefs of self-efficacy are strong predictors of the achievement of the ultimate goal and are considered as the most important mechanisms of personal agency in order to exercise control (5). Kurt et al. Also believe that self-efficacy beliefs are based on a person's perceptions of his or her individual performance, and therefore self-efficacy is closely related to performance (6). Self-efficacy implicitly refers to people's specific beliefs about their ability to perform certain activities in order to achieve the desired results in a specific area or skillful control of life. Perez states that one of the most important mechanisms for controlling behavior is self-regulation (7). Pajarz considers the importance of self-efficacy beliefs in explaining and predicting actions, influencing emotions and feelings, strengthening self-control, physical and mental health, professional development, effort and perseverance, appropriate response to failure, choosing appropriate strategies and choosing challenging goals (8).

Concept At the beginning of the twentieth century, when American psychology placed itself alongside other academic disciplines, it developed a great deal of interest in itself and its beliefs. At present, attention to oneself as one of the most important and fundamental psychological issues is still increasing. Bandura believes that human beings have a kind of "system of their own" and have the power of self-regulation (2). If by this self-regulating force they can have self-control over their thoughts, feelings and behaviors and play a decisive role in their destiny. Self-determination of personal tendencies and abilities, which facilitates personal identification and pursuit of goals. Reflections on personal inclinations, authority, decision-making, and the capacity to make choices in personal action (those choices that determine one's actions) are valuable for achieving goals. All the main definitions of self-determination have a few things in common, which are "choice of control and freedom," plus they all emphasize action and output. Given that self-determination theory understands the content of people's goals or in other words what are the goals and reasons of people in pursuing goals or why. According to the theory of self-determination, healthy behavior depends on satisfying psychological needs such as autonomy, competence and communication. If needs are met to some extent consistently, people will grow

effectively and function well; However, if these needs are met to some extent, individuals are more likely to experience abnormalities and dysfunction (9).

The importance and necessity of this research is due to the fact that one of the important goals and tasks of education is to create the conditions for the comprehensive development of the individual and to train healthy, efficient and responsible human beings to play a role in individual and social life. Since students, as the basic pillar of the country's educational system, have a special role and position in achieving the goals of the educational system, attention to this segment of society in terms of education, fertility and prosperity of the educational system will cause more and more. . Self-efficacy is very important among psychologists and educators. People with high self-efficacy will persevere even in the face of obstacles and negative consequences. They are able to cope with failures and frustrations and get on better. They see the shortcoming not as an end result but as a temporary setback. These people also approach confidently stressful situations with confidence, and they will be able to control stress before they start acting. In fact, self-employed people are not vulnerable to stress and depression (10). People with high self-efficacy, compared to people with low self-efficacy, choose more challenging tasks that require more effort, choose larger goals, and show greater resilience to those goals, resulting in better performance (11). They show more interest and involvement in doing homework and have a better mood. That is, they experience less anxiety and depression, and generally have better mental health and are more able to cope with stressful and frustrating situations (12). They see problems as challenges, not threats, and actively seek new opportunities. High efficiency reduces the fear of failure, so the weakened trust of these people heals quickly after failure.

One of the variables discussed in this study is self-determination. Self-determination focuses on how social and cultural factors can facilitate or inhibit people's sense of will and initiative and their well-being and quality of performance (9). In their research, Dinger, Yeşil Yurt, and Takach advocated the theory of self-determination and showed that if students' learning environments supported their autonomy, they would feel more competent, involved, and involved in classroom activities and greater academic achievement. If students consider completing homework as a useful tool for achieving their future goals, they will be more motivated and will be more careful and focused while studying and doing homework, and therefore will use self-organizing strategies more effectively (13).

Developing autonomy skills in students with self-efficacy by teachers and parents is of great importance in light of the above. If there is the necessary cooperation between teachers and parents, the effort to promote autonomy will have a greater chance of success. In the absence of autonomy, there will be many problems in their lives and academic performance. Therefore, the need to study the skills of autonomy and self-efficacy in order to help students in the field of education and promotion of these abilities is necessary and the present study is of great importance and necessity. Accordingly, the present study was conducted to investigate the relationship between self-determination and self-efficacy of high school adolescents in Shiraz.

According to the mentioned literature, some of the backgrounds related to this research are as follows: Shojaei, Hossein Khanzadeh, Seyed Nouri and Sharifi showed that the ability to self-

determine individuals without injury is significantly higher than the ability to self-determine individuals with hearing and vision impairment. It is noteworthy that there was no significant difference between the self-determination ability of individuals with hearing and vision impairment. The results of analysis of variance showed that the ability of self-determination of individuals without injury in the subscales of behavioral independence and psychological empowerment was significantly higher than individuals with hearing and vision impairment. Also, no significant differences were observed between individuals with hearing and vision impairments in any of the subscales of self-determination ability. The results of Hassani and Mohammadzadeh research showed that physical education training in an environment supporting autonomy is an educational method that increases satisfaction with the need for students' independence (14).

Mir Heydari and Neyestani stated that beliefs of self-efficacy and satisfaction with education have been able to significantly predict students' academic achievement (15). Hejazi, Khezri Azar and Amani found that the perception of teacher support for autonomy has a direct positive and significant effect on meeting basic needs and thereby indirectly affects self-efficacy. Also, the basic needs of autonomy and competence have a positive and significant direct effect on students' self-efficacy. But the effect of communication on students' self-efficacy was not significant (16). Turgat stated that there are significant interactions between gender and students' academic performance and academic self-efficacy (17). Ajda et al. showed that there is a relationship between general and academic self-efficacy with academic performance and satisfaction with education (18). In studies conducted by Ramdas and Zimmerman on the effectiveness of self-determination on self-efficacy, the results show that students who use self-determination strategies have better self-efficacy and evaluate themselves more positively, resulting in higher learning motivation. Have (19). Lee has shown in his research that there is a significant relationship between academic success and the use of self-learning strategies. Zimmerman in his research showed that students who use self-determined strategies have higher self-efficacy and evaluate themselves more positively, self-efficacy beliefs play a causal role in students' development and use of educational skills and showed that self-efficacy to change the environment is specific and the results are variable. Therefore, considering that it is possible to reduce students' unrealistic and negative evaluations by using special strategies, it can be hoped that students' self-efficacy and success will increase (20). Ryan and Desi showed that people with higher autonomy had more learning activities, more conceptual learning, and more sustainability (9).

**Method:**

The method of the present study is correlational. The statistical population of the present study included high school students studying in the 4th district of Shiraz in the academic year of 1996-97, in which 120 students (80 girls and 60 boys) were selected by multi-stage cluster sampling. The subjects were selected in such a way that first, the first, second and third grades of high school were randomly selected and a grade was selected from each grade and questionnaires were given to the students in groups. In this study, in order to measure self-determination and self-efficacy, two questionnaires of adolescent autonomy named (21) and self-efficacy of Scherer et al. (22) have been used.

A- Nom et al.'s adolescent autonomy questionnaire (21): This questionnaire includes 18 items about the ability to control personal life. It includes the subscales of goal-oriented, functional-oriented and normative. The correlation between the three subscales is from 38% to 49%. In various studies, normative autonomy (60%) and goal-oriented autonomy (71%) have been obtained. In the study of Nom et al. (21), the construct validity of the Nom adolescent autonomy questionnaire was measured and was desirable. In the present study, the reliability of the autonomy questionnaire on a general scale and in the dimensions of purposefulness, functionalism and normality based on Cronbach's alpha coefficient of 0.914, 0.706, 0.749 and 0.731, respectively, have been reported that the results indicate reliability and correlation. Internal is suitable for questions.

B. Scherer et al.'s self-efficacy questionnaire (22): This scale has 17 items. Scherer et al. (22) believe that this scale has three aspects of behavior, including the desire to initiate behavior (questions 1, 4, 14, and 15), and the desire to expand the effort to complete the task (questions 3, 5, 8, 9, and 13). And measures differently in the face of obstacles (questions 2, 6, 7, 10, 11, 12, 16 and 17). The self-efficacy questionnaire is scored on a 5-point scale; the score of each of them is as follows: strongly disagree 1, strongly disagree 2, and have no opinion: 3, agree: 4, strongly agree: 5, so the highest score of this questionnaire is 85, the lowest score is 17 and the average is 51. Questions 2, 4, 5, 6, 7, 10, 11, 12, 14, 16 and 17 are scored in reverse.

The content validity of the questionnaire has been proven in the research of Barati Bakhtiari as well as Malek Shahi et al. (23). In this study, the content validity of the questionnaire was confirmed by 5 professors. The reliability of the questionnaire has been proven in Barati Bakhtiari's research by 79% and also in the research of Malek Shahi et al. 73% (23). In the global study, using Cronbach's alpha, a reliability coefficient of 0.74 was obtained. Therefore, this scale is statistically justifiable. In the present study, the reliability of the self-efficacy questionnaire on a general scale and in the dimensions of desire to initiate behavior, desire to expand the effort to complete the task and different in dealing with obstacles based on Cronbach's alpha coefficient of 0.854, 0.802, 0.783, respectively And 0.719 have been reported that the results indicate the appropriate reliability and internal correlation of the questions (24).

**Results:**

In order to analyze the research data, descriptive statistics such as mean and standard deviation were used and to test the research hypotheses, inferential statistics such as linear and multiple regression and independent group t-test were used.

According to the information obtained from the samples, the descriptive findings are as follows.

Table 1. Mean and standard deviation of research variables in the subjects

Variables	Average	The standard deviation
<b>Efficacy</b>	60.77	9.55
<b>Self-determination</b>	59.40	8.40
<b>Goal-oriented</b>	23.22	4.17
<b>Functional</b>	16.70	2.56
<b>Normative</b>	19.47	3.71

As shown in Table 1 is the average efficacy of  $55/9 \pm 77/60$  and the average self-determination, Goal orientation, performance-oriented and normative order of  $40/8 \pm 40/59$ ,  $17/4 \pm 22/23$ ,  $56/2 \pm 70/16$  and  $3.71 \pm 3.47$ .

Regarding the question of whether self-determination is able to predict self-efficacy in students? Simple regression was used. The results of this study are presented in Table 2.

Table 2. Regression results to predict self-efficacy through self-determination

Prediction variable	Criterion variable	F	P<	R	R <sup>2</sup>	$\beta$	t	P<
<b>The most selfish</b>	Efficacy	41.08	0.0001	0.50	0.25	0.50	6.40	0.0001

As can be seen in Table 2, since the significance level is less than 0.05, self-determination is able to predict self-efficacy in students. The coefficient of determination is 0.25, which indicates that 25% of the changes in students' self-efficacy are related to self-determination.

To examine whether the dimensions of self-determination (goal-oriented, normative and functionalist) are able to predict self-efficacy? Multiple regression is also used, the results of which are presented in Table 3.

Table 3. Simultaneous Multiple Regression Results for Predicting Self-Efficacy through Self-Determined Dimensions

Prediction variable	Criterion variable	F	P<	R	R <sup>2</sup>	$\beta$	t	P<
<b>Goal-oriented</b>	Efficacy	14.06	0.0001	0.51	0.26	0.33	3.46	0.001
<b>Normative</b>						0.12	1.28	N.S
<b>Functional</b>						0.16	1.88	N.S

As shown in Table 3, self-determinant dimensions such as goal orientation, normative and functionalism with 26% variance are able to predict self-efficacy and the goal-oriented variable with beta 0.33 is able to predict self-efficacy.

Also, to examine whether there is a significant difference between the mean scores of girls and boys in self-determination and self-efficacy, the independent t-test was used, the results of which are presented in Table4.

Table 4. Independent t-test to compare self-efficacy and self-determination in girls and boys

Variables	group	Average	The standard deviation	T	Degrees of freedom	P<
Efficacy	Boy	61.75	8.79	0.82	118	N.S
	Girl	60.28	9.92			
Self-determination	Boy	9.33	9.33	0.62	118	N.S
	Girl	59.05	7.93			

As shown in Table 4, there is no significant difference between the mean scores of girls and boys in self-efficacy and self-determination.

Regarding the study of whether there is a significant difference between the mean scores of girls and boys in self-determined dimensions? Independent group t-test was used, the results of which are presented in Table 5

Table 5. Independent t-test to compare self-determined dimensions in girls and boys

Variables	group	Average	The standard deviation	T	Degrees of freedom	P<
<b>Goal-oriented</b>	Boy	23.80	4.28	1.06	118	0.005
	Girl	22.93	4.11			
<b>Normative</b>	Boy	19.90	4.23	0.82	118	N.S
	Girl	19.26	3.43			
<b>Functional</b>	Boy	16.42	2.57	0.85	118	N.S
	Girl	16.85	2.56			

As can be seen in Table 5, there is a significant difference between girls and boys in terms of purposefulness and the average score of boys is higher than girls and there is no significant difference between normative and functional dimensions between girls and boys.



### **Conclusion:**

The purpose of this study was to investigate the degree of self-determination (goal-oriented, normative, and functionalist) by students' self-efficacy. Regarding self-efficacy prediction, according to students' self-determination using linear regression, it was found that self-determination is able to predict self-efficacy in students. This finding is consistent with the findings of Hassani and Mohammadzadeh (14), Mir Heydari and Neyestani (15), Hejazi et al. (16), Turgat (17) and Ramdas and Zimmerman (19). Regarding self-efficacy prediction, considering the dimensions of self-determination (goal-oriented, normative and functional-oriented) using multiple regression, it was found that goal-orientation is able to predict self-efficacy. This finding is consistent with the results of research by Shojaei et al., Hejazi et al. (16), Ajda et al. (18) and Ryan and Desi (9). Regarding the comparison of self-determination and self-efficacy in male and female students using independent t-test, it was found that there was no significant difference between the mean scores of girls and boys in self-efficacy and self-determination. This finding is consistent with the results of research by Hassani and Mohammadzadeh (14), Turgat (17), Ajda et al. (18). Also, in comparison with the self-determination dimensions in male and female students using independent t-test, it was found that there was a significant difference between girls and boys in terms of purposefulness, but no significant difference was observed between normative and functional dimensions between girls and boys. This finding is consistent with the results of research by Shojaei, Ramdas and Zimmerman (20) and Lee.

Considering the results and interpretations of the present study and considering the collectivism and family orientation of most Iranian adolescents compared to adolescents in Western countries and family support of children until late adolescence and after, and on the other hand adolescents' desire to maintain this source of support (family) Not only will the acquisition of Iranian adolescent autonomy not be delayed, but it will also be facilitated. The adolescent spends less time with the parents during this period but still maintains an emotional bond with the parents. She benefits from parental support and is encouraged to develop autonomy. Autonomy (self-determination) for a teenager is the achievement of dreams. Adolescents who score high on self-determination (purposefulness, performance, and normality) and good communication at work (self-efficacy) are often self-satisfied and have good self-confidence. It is clear that a combination of self-determined dimensions in a self-efficacy context is essential for the development of adolescent individual and social characteristics. But in general, a balanced combination of self-efficacy and self-determination is necessary for the adolescent to achieve healthy growth and performance in terms of psychosocial characteristics. Therefore, it can be concluded that self-determination and self-efficacy are two important growth goals. The results of this study and previous studies show that these two have a positive adaptive performance. Often, the teachings of responsible people (parents, teachers, counselors, etc.) regarding adolescents are only in one of two directions. It means teaching individual social abilities and skills. The goal should be to simultaneously stimulate the cognitive, emotional, and behavioral dimensions of self-determination (ability to choose, ability to trust, and ability to act) and self-efficacy (ability to do work, ability to communicate, ability to cooperate). Responsible people, on the other hand, need to think about



identifying the risks of an unbalanced combination of self-efficacy and self-determination, so that they can think of ways to prevent the resulting problems (adolescence, depression, and motivational behavior).

According to the results of the study, it is suggested that in order to evaluate self-determination and self-efficacy, longitudinal research should be conducted to cover the entire adolescence period. It is suggested that in future research, in addition to adolescents, parents should also participate in the research in order to directly determine the self-determination and self-efficacy of their parents. It is also suggested that future research examine the course of self-efficacy and the dimensions of self-determination at a young age (20 to 30 years) in order to compare it with adolescence.

The limitations that this research has faced are: the limitation of conducting this research to District 4 of Shiraz Education, which should be done with caution in extending it to other areas and regions; Bias of some subjects towards the questionnaire questions; Limited research tools to the questionnaire.

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