journal of
Adolescent and Youth Psychological Studies
www.jayps.iranmehr.ac.ir

Summer (September) 2023, Volume 4, Issue 6, 56-65

Designing an academic self-regulatory model based on basic psychological needs and family communication model mediated by positive adolescent development and Academic Aspiration

Shahriar. Abdolmaleki[1], Zabih. Pirani*[2] & Firozeh. Zanganeh[3]

1. PhD student of Educational Psychology Department, Arak Branch, Islamic Azad University, Arak, Iran
2. ***Corresponding Author:** Assistant Professor, Department of Psychology, Arak Branch, Islamic Azad University, Arak, Iran
3. Assistant Professor, Department of Psychology, Arak Branch, Islamic Azad University, Arak, Iran

ARTICLE INFORMATION

Article type
Original research
Pages: 56-65

Corresponding Author's Info
Email:
z-pirani@iau-arak.ac.ir

Article history:
Received: 2023/03/18
Revised: 2023/05/10
Accepted: 2023/05/22
Published online: 2023/08/27

Keywords:
academic self-regulation, family communication pattern, academic aspiration, positive adolescent development.

ABSTRACT

Background and Aim: Many factors are involved in the academic success of students, and academic self-regulation is one of them. Academic self-regulation can be an influencing variable on academic progress and prevention of academic failure, and it has been the focus of many researchers in recent years. Therefore, this research was conducted with the aim of examining the fit of the academic self-regulation model based on the basic psychological needs and the family communication model with the mediation of positive adolescent development and academic passion. **Methods:** This study was a descriptive correlational study. The statistical population included male high school male students in the city who were selected by cluster sampling from 420 students and with the standard scale of satisfying basic psychological needs Ganyeh (2003), revised questionnaire of communication patterns of Koerner and Fitzpatrick family (2002), self-administered questionnaire. Savari and Arabzadeh (2013), Goldoff et al. (2014) Adolescent Positive Development Questionnaire and Shuffle et al.'s (2002) Academic Achievement Questionnaire were evaluated. Data were analyzed using Smart PLS3 statistical software. **Results:** The findings indicated that the positive development of adolescence and academic aspiration play a mediating role between academic self-regulation based on basic psychological needs and family communication pattern (P <0.0). Endogenous variables could explain 77% of the variance of academic self-regulation. **Conclusion:** Based on the results, it can be concluded that the relationship between academic self-regulatory variable and psychological variables and family factors is not direct and factors such academic aspiration and positive adolescent development can play a role.

How to Cite This Article:
Abdolmaleki, S., Pirani, Z., & Zanganeh, F. (2023). Designing an academic self-regulatory model based on basic psychological needs and family communication model mediated by positive adolescent development and Academic Aspiration. *jayps*, 4(6): 56-65.

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

Introduction

Students play an important role in the future administration of the country. The importance of this role is that students are not only the main part of future specialists in various fields of any country, but the growth and development of each country depends on the level of human capital capabilities of that country (Abdollahi, Darbani, and Parsakia, 2022). In the personal dimension, the student's personality is being formed during the course of study, and academic difficulties along with the experience of failure and success can leave lasting effects on the self-confidence and personality of students. Therefore, academic success is worthy of attention (Chang et al., 2017). In this connection, academic self-regulation as a variable affecting academic progress and prevention of academic failure has been the focus of many researchers in recent years (Hadvin et al., 2018).

Zimmerman and Chunk (2000) defined self-regulation as the process of keeping thoughts, behaviors and emotions active to achieve goals. Self-regulated people are considered to be those who choose goals for themselves, choose appropriate learning strategies, maintain their motivation, monitor themselves and evaluate their progress (Savari & Nissi, 2013). Academic self-regulation is influenced by many individual, environmental, family and academic factors. In the current research, some of these factors have been discussed.

Variables related to learning, which included academic self-regulation, are affected by multiple external and internal factors. Family is one of the most important environmental factors affecting the functioning of each individual. Family has a significant impact on students' academic performance (Rezaee Dehghan et al., 2018). Many family functions take place through family communication patterns (Jones, Body, & Koerner, 2017). In terms of family, it can be said that the family factor has many functions, and accordingly, it has an effect on children's performance in various areas, including their academic functions (Rezaee Dehghan et al., 2018). Ritchie and Fitzpatrick (1990) have proposed two dimensions of communication pattern in the theory of family communication pattern in the form of dialogue orientation and conformity orientation. Families with high communication orientation provide high social support for family members and the possibility of open dialogue in these families is available for its members. On the other hand, families with a high conformity orientation emphasize the conformity of members with their parents (Ritchie & Fitzpatrick, 1990).

Among the developmental factors, the positive transformation of adolescence is a concept that is related to the successes of adolescence. The five key characteristics in youth development include competence, trust, communication, care and character. Together, these five characteristics enable the adolescent to successfully step into adulthood. When these five characteristics exist in a person, the person is known as an example of a person who has achieved positive transformation and can be considered a developed person (Lerner & Stenberg, 2004).

One of the motivational approaches that has attracted a lot of attention in recent years is the self-determination theory. This theory was proposed by Deci and Ryan, who, by separating external and internal motivation, introduced three basic psychological needs under the headings of need for self-following, need for a sense of sufficiency (competency) and need for communication; They considered satisfying these needs essential for optimal performance in any field (Mahmoudi et al., 2017); The need for self-regulation includes having a sense of choice in initiating, maintaining, and regulating activities. Self-following happens when people feel that they are the cause of their behavior; That is, they feel confident in their choices and are able to perform optimally. Competence is the need to be effective in interacting with the environment, which expresses the desire to use talents and skills in doing work, pursue optimal challenges and master them. Connection or belonging is the need to establish bonds and emotional attachments with others, and this need expresses the desire to be involved in intimate relationships. Communication is an important motivational construct, because when interpersonal relationships support people's need for connection or belonging, people perform tasks better, become more resilient to stress, and have fewer psychological problems (Hossein Abad et al., 2019); This study has focused on the design of academic self-regulation model based on basic psychological needs and family communication model with the mediation of positive adolescent development and academic passion.

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

Various researches have been conducted in the field of the relationship of variables, some of these researches are mentioned; In their study, Pisheh and Ghahari (2019) investigated the relationship between family performance and students' academic motivation and showed that there is a significant relationship between the level of academic motivation and family performance. Salchi and Ismail Shahna (2018) investigated the role of psychological needs and family functioning and self-regulation in predicting depression and the results showed that basic psychological needs have an indirect effect on depression and self-regulation and are related to family functioning. Jones, Bodi and Koerner (2017) investigated the relationship between family communication patterns and personal message evaluation with emotional self-regulation strategies and their results showed that there is a significant positive relationship between emotional self-regulation strategies and family communication patterns. With the increase of self-regulation scores, the scores of family communication pattern also increased.

According to the theory of self-determination, if the basic psychological needs of learners are met in the educational environment, the skills related to their academic performance will also increase. These needs are defined as the necessary motivation to help actively engage with the environment, develop skills and healthy growth (Bashart, 2016) and the positive development of adolescence is one of the variables that has been less addressed in the field of education, while it has a direct relationship with academic progress. (Moradi, 2019). Academic self-regulation means the active involvement of students in their personal, behavioral, motivational and cognitive learning efforts in order to achieve important and valuable academic goals (Alipour Getiri et al., 2020). Kaufman considers self-regulated learning to be the intentional and conscious effort of the learner to organize and organize complex learning activities. He considers self-regulation learning to have three basic components, which are the use of cognitive, metacognitive strategies, and motivational beliefs (Ahmadi et al., 2019). Self-regulation strategies allow students to plan, organize, and self-review in more task-oriented ways to complete homework and daily activities. Through self-regulation, students can be aware of the usefulness of specific strategies for efficient problem solving and effective learning (Panhagui, 2019). Self-determination theory explains the differences in terms of types of motivation resulting from the interaction between the nature of people's internal activity and social environments that are either supportive or opposing (Ismaili, 2019).

Academic passion as a sense of belonging and a person's tendency to participate in class activities is one of the important outcomes of school, along with school situations (Ansari & Malekiha, 2018). Academic passion can include participation in extracurricular activities such as sports, music, theater and community work organized by the school. Academic passion is also an engagement in learning school tasks (Leung et al., 2010). The positive development of adolescence is a program based on which, during a continuous and regular process, positive outcomes are provided for adolescents by providing the opportunities, communication and support necessary for indicators of competence, personality, care, confidence, communication and participation (Kurran & Wegsler, 2017).

Considering the fact that the students of each country are considered as its cultural and spiritual assets; Examining the situation and challenges of students in different dimensions, especially in academic and psychological levels, will play a significant role in improving the situation of this class. The general goal of the education system can be considered to be better recognition of students' talents and interests and to create a favorable environment to guide them to the appropriate educational paths, in this way, one should pay attention to the problems and issues that may arise for each student; Therefore, researchers believe that knowing the damage of this group will be effective in their growth and health. In the studies conducted, no research was found that directly investigated the relationship between the dimensions of family communication patterns and the satisfaction of basic psychological needs, taking into account the mediating role of academic passion and positive adolescent development with academic self-regulation; Therefore, the current research tried to answer the question whether the academic self-regulation model based on the basic psychological needs and the family

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

communication model is suitable for mediating the positive development of adolescence and academic passion?

Method

The current research was of applied purpose and in terms of methodology, it was quasi-experimental with a pre-test-post-test design, a control group and a two-month follow-up. The statistical population of the research included all the women suffering from multiple sclerosis (MS) in Kermanshah during 2019-2020 who had referred to the Imam Reza Educational-Therapeutic Center. In this research, in order to select the research sample, first the research questionnaires were distributed (according to the observance of all health principles in the face of the corona virus disease); Then, 45 people were selected from among the patients who met the entry criteria with the available and targeted sampling method; They were randomly assigned in three groups (schematic therapy=experiment group #1, cognitive behavioral therapy=experiment group #2 and control group). After the determination and random placement of the test and control groups, therapeutic interventions were applied to the test groups each in the form of two sessions per week and each session lasted for 1.5 hours (90 minutes); A week after the completion of the treatment sessions, the experimental and control groups were given a post-test. The content of group psychotherapy sessions was implemented in an organized manner, and finally, the entire treatment program in each of the two treatment methods consisted of a pre-session, 8 treatment sessions and a follow-up session.

Materials

1. Academic passion questionnaire. The academic passion questionnaire was designed and compiled by Shafli et al. in (2002) in order to measure the academic passion of students. This questionnaire has 17 questions and includes 3 components of strength, self-dedication, and attraction, and measures academic passion based on a five-point Likert scale. The reliability and validity of the questionnaire have been investigated in the study of Ghadampour and his colleagues (2017). To check the validity of the questionnaire, the method of confirmatory factor analysis using the principal components method was used, and to check the reliability of the questionnaire, Cronbach's alpha coefficient was used. The results of the factor analysis showed that three factors are confirmed by rotating the factors with the oblimin method. Also, the results of parallel analysis were done to accurately identify the factors, and the results of this analysis also confirmed these three factors. The reliability coefficient of this questionnaire in the present study was 0.89.

2. Positive evolution of teenagers Checklist. This checklist was prepared by Gadov et al. (2014). It consists of 17 questions. It has five components: competence (questions 1-2-3); trust (questions 4-6-7); communication (questions 14-15-16-17); mood (questions 5-8-9-10); Care (questions 11-12-13). Its subscales are graded using the Likert method. Cronbach's alpha coefficient and test-retest reliability coefficient in the whole sample were obtained from 0.74 to 0.83, respectively. The reliability coefficient of this questionnaire in the present study was 0.81.

3. Academic self-regulation questionnaire. Academic self-regulation questionnaire was created by Sawari and Arabzadeh (2012) in order to measure the variable of academic self-regulation and it has 30 questions and six factors. All the items have a direct scoring, i.e. never: 1, rarely: 2, sometimes: 3, usually: 4, most of the time: 5 and always 6. The score range of this questionnaire will be between 30 and 180. The higher the score obtained from this questionnaire, the higher the academic self-regulation and vice versa. Cronbach's alpha equal to 0.87 was obtained (Savari & Arabzadeh, 2013). The reliability coefficient of this questionnaire in the present study was 0.81.

4. Basic psychological needs satisfaction questionnaire. This 21-question scale was developed by Ganie in 2003 based on the work of Deci and Ryan (1985). The three subscales of this questionnaire include the need for self-adherence, the need for competence, and the need for communication. The minimum possible score is 21 and the maximum is 147. A score between 21 and 42 indicates that the satisfaction of basic needs is low in a person. A score between 42 and 105 indicates that the satisfaction of basic needs is average. A score higher than 105 indicates that the satisfaction of the basic needs in the person is high. Wei et al. (2005) confirmed the content and form validity of this questionnaire. They reported its reliability using Cronbach's alpha method as 0.90 for the entire questionnaire and for the subscales of self-following, competence and need for communication as 0.68, 0.75 and 0.85 respectively. The reliability coefficient of this questionnaire in the present study was 0.86.

5. Revised scale of family communication patterns. The 26-item family communication patterns scale was designed by Koerner and Fitzpatrick in 2002. This questionnaire questions the subject in a 5-level range. A score of 4 is equivalent to completely agree and a score of zero is equivalent to completely disagree. The first 15 items are related to the dialogue orientation dimension and the next 11 items are related to the conformity orientation. Each subject gets two scores from this tool. A higher score in each scale means that the subject perceives more dialogue orientation or harmony in his family. Koerner and Fitzpatrick (2002) reported its reliability using Cronbach's alpha method for the entire questionnaire as 0.99 and for the conversation orientation subscales, conformity as 0.73 and 0.93, respectively. Also, Kooroshnia (2006) has reported

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

its reliability for the total score of the questionnaire and its subscales in the range of 0.81 to 0.87. Also, the validity of this questionnaire was evaluated by measuring the correlation of the score of each dimension with the total score of the scale and reported it as favorable. The reliability coefficient of this questionnaire was 0.95 for listening dimension and 0.96 for conformity dimension.

Implementation

First, among the four urban areas, District 3 was selected by lottery. Through the information available on the website, a list of second-level secondary schools in this area was prepared, which included 7 boys' schools in this level. Then the necessary permits were prepared and communication was made with the school authorities. The researcher communicated with the participants through communication with the groups that students and parents were members of in their social networks. The objectives of the study were explained in these networks and the participants were asked to complete the questionnaires if they wished. In the first selected school, 214 people completed the questionnaire, and in the second selected school, the researcher continued the study until reaching the quorum of 420 people. After the number of questionnaires were completed, data analysis was done and a report was prepared. The collected data were analyzed by SPSS-20 and Smart-PLS3 statistical software. Mean and standard deviation were used to describe the data. Using Smart PLS software, the third version was evaluated to check the reliability and validity of the questionnaires. Second-order confirmatory factor analysis was used to check the validity of the questionnaires. Therefore, if the researcher encounters values less than 0.40 after calculating the factor loadings between the structure and its indicators, he should modify those indicators (questionnaire questions) or remove them from his research model (Davari & Rezazadeh, 2013). In this research, the minimum value of the factor load was determined to be 0.40.

Results

The average age of the studied population was 16 and a half years. Regarding the field of study, 177 people (0.42) were in experimental field, 210 people (0.50) in humanities and 33 people (0.8) in mathematics field. Also, there were 181 (0.43) 10th graders, 192 (0.46) 11th graders, and 47 (0.11) 12th graders. Table 1 describes the variables. The variables were described using mean and standard deviation statistics.

Table 1. Description of main variables

Variable		Mean	SD
Family communication patterns	Orientation of conversation	28.37	7.86
	Alignment orientation	26.75	7.70
Positive evolution	Competency	7.55	2.61
	Trust	10.87	4.17
	Relationship	12.26	3.31
	Mood	12.05	3.32
	Care	9.06	2.90
	Total	53.31	12.57
Academic passion	Strength	15.32	4.55
	Self dedication	15.07	4.61
	Attraction	15.27	4.04
	Total	45.70	11.37
Psychological needs	Self-following	14.98	4.31
	Merit	16.03	4.56
	Relationship	15.49	4.94
	Total score	46.50	11.87
Academic self-regulation	Memory	14.74	4.50
	Ask for help	14.32	4.51
	Targeting	7.13	2.10
	Self assessment	14.66	4.31
	Responsibility	14.03	4.54
	Regulation	15.44	4.61
	Total	80.37	17.54

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

Based on the contents of the above table, the overall average score of negative emotions among women with MS at the beginning of the research (i.e. the pre-test stage) was 45.07, which is lower than the average. Among the groups, the highest emotion score was observed in the control group with an average of 46.47. By conducting interventions in the test groups, in the post-test stage, the score of negative emotions for the first intervention group, i.e., schema therapy, reached 36.47, and for the second group (cognitive-behavioral therapy), it decreased to 37. The scores of this variable remained stable in the follow-up phase compared to the post-test phase in almost all groups. In other words, the scores of the follow-up phase were equal to the post-test phase. Also, the score of the depression component in the pre-test stage was equal to 14.78, which reached 12.93 in the post-test stage and 13.11 in the follow-up stage. This finding shows that the level of the depression component in the post-test and follow-up stages has decreased compared to the pre-test stage. This situation is also true in the two components of anxiety and stress, and the level of these two components has also decreased in the post-test and follow-up stages compared to the pre-test stage. The level of all three components in the follow-up stage compared to the post-test stage has increased slightly, and the significance level of these changes should be checked through a suitable statistical test.

Table 2. Correlation results between main variables

	1	2	3	4	5	6
1- Academic self-regulation	-					
2- Psychological needs	0/71**	-				
3- Academic passion	0/79**	0/70**	-			
4- Positive evulation	0/66**	0/81**	0/76**	-	-	
5- Conversation	0/64**	0/54**	0/80**	0/57**	-	
6- Alignment	0/65**	0/49**	0/70**	0/50**	0/45**	-

The conceptual model of the research was tested using the structural equation modeling technique by the Partial Least Squares (PLS) method. The software used is Smart PLS. In the following, the research model is presented in the mode of significance or t value and in the mode of standardized coefficients.

Table 3. Fit model index

Variable	R^2	Q^2	Result	GOF
Positive evulation	0/81	0/56	Excellent fit	0/37
Academic Passion	0/85	0/63	Excellent fit	
Academic self-regulation	0/77	0/39	Excellent fit	

The results of Table 3 show that exogenous variables have had a significant effect on academic self-regulation and mediating variables. Based on this, the exogenous variables of the model have been able to explain 77% of the variance of the academic self-regulation variable and 81 and 85% of the variance of the variable of positive adolescent development and academic passion. The index of padding or redundancy is to check the ability of the structural model in predicting by ignoring method. When the value of this index is greater than zero, the observed values are well reconstructed and the model has the ability to predict. In this research, this index is equal to 0.871 for the academic vitality variable, 0.584 for the happiness variable, and 0.196 for the meaning of life variable. Also, the most important model fit index in the partial least squares technique is the goodness of fit index. Three values of 0.01, 0.25, and 0.36 are considered as weak, medium, and strong values for GOF. Considering that the GOF value for the current model is 0.37, the model used in this research has a strong goodness of fit. Based on this, it can be said that the educational self-

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

regulation model based on the basic psychological needs and the family communication pattern with the mediation of the positive development of adolescence and academic passion has a good fit and the main hypothesis is confirmed.

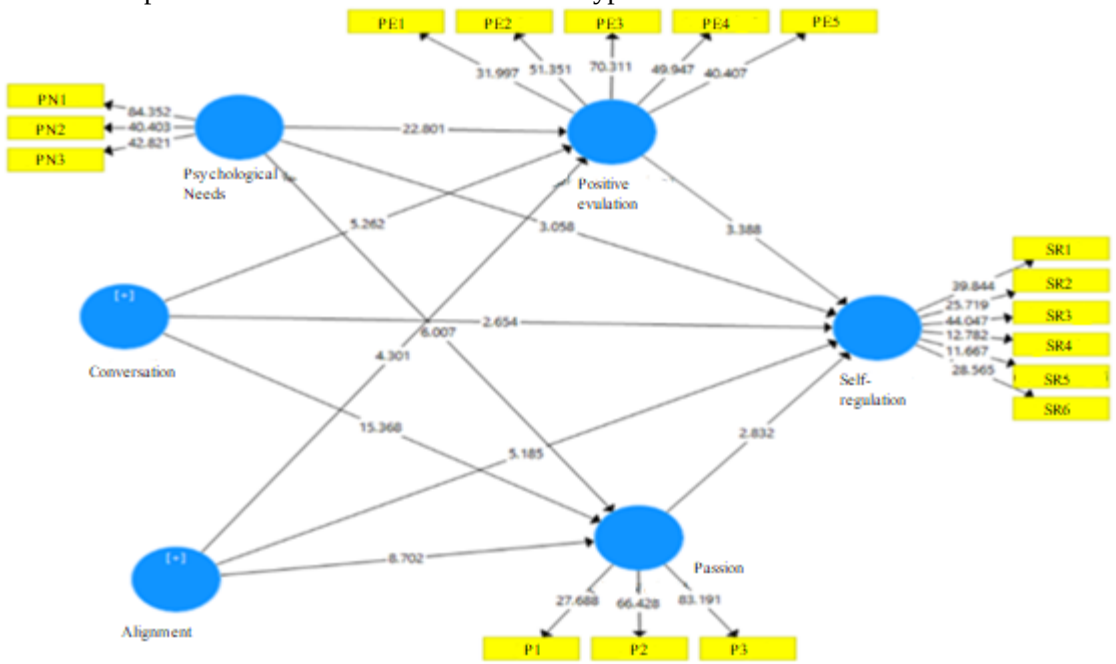

Figure 1. Structural equation model in the significant state (t-value)

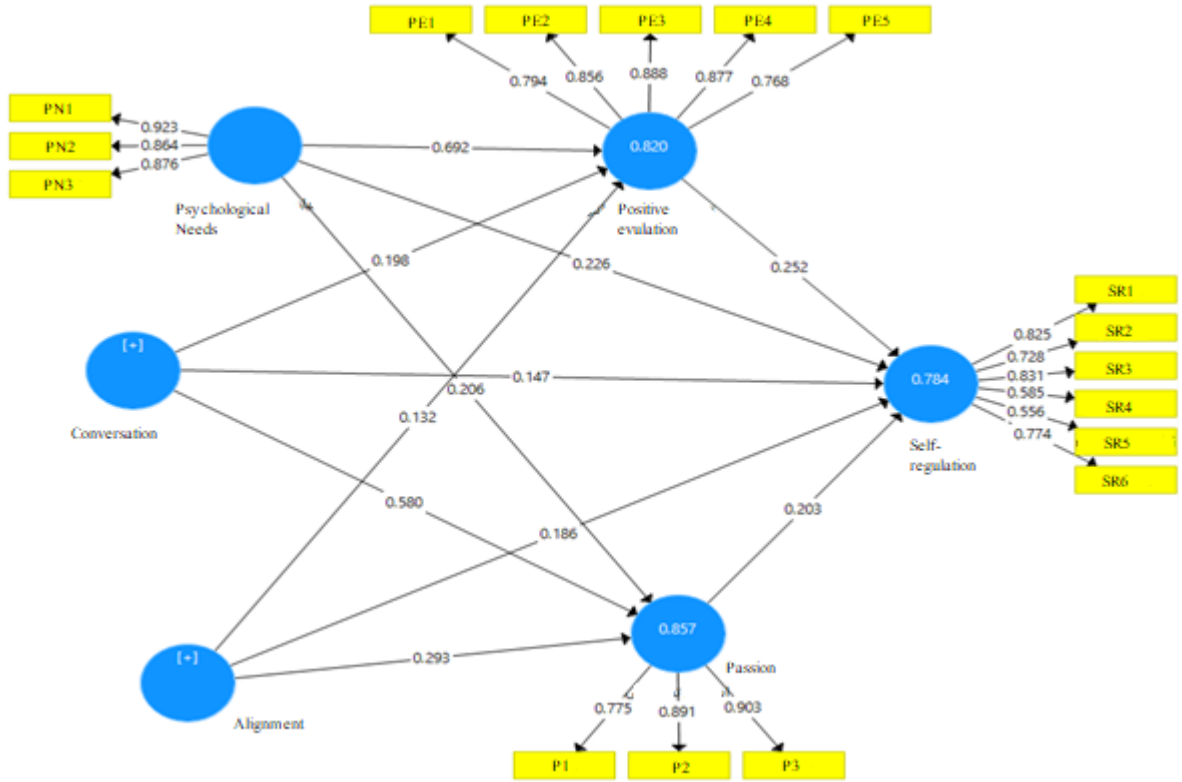

Figure 2. Structural equation model in the case of standard coefficients

The relationships of the variables are examined in the form of a model and presented in Figures 1 and 2. In the following, all the effects related to all the different routes are considered in the model and the standard coefficients of the routes along with their significance levels are presented in Tables 4 and 5.

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

Table 4. Self-regulation explanatory coefficients based on basic needs and family communication pattern with the mediation of positive evolution			
Direct path	Beta	t	p
Psychological needs to positive transformation	0/69	22/80	0/001
Psychological needs to self-regulation	0/22	3/05	0/01
Conversation to positive transformation	0/20	5/26	0/01
Dialogue to self-regulation	0/15	2/65	0/01
Consistency to positive transformation	0/13	4/30	0/001
Alignment to self-regulation	0/18	5/18	0/001
Positive transformation to self-regulation	0/25	3/38	0/001
Indirect path	Beta	t	p
Psychological needs to positive transformation to self-regulation	0/17	3/87	0/01
Dialogue to positive transformation to self-regulation	0/06	3/23	0/01
Alignment to positive transformation to self-regulation	0/04	1/98	0/04

The analysis of the data obtained from the standard coefficients of the model in Table 4 shows that the direct effects of fundamental needs and conformity and dialogue on positive development and self-regulation are significant, and the direct effect of positive development on self-regulation is also significant ($p<0.01$). The indirect effect of psychological needs through positive transformation on self-regulation is significant ($\beta = 0.01$, $p<0.17$). The indirect effect of listening through positive transformation on self-regulation ($p<0.01$, $\beta=0.06$) is also significant. The indirect effect of conformity through positive transformation on self-regulation is significant ($\beta=0.04$, $p<0.05$). The results show that the mediating role of positive transformation between basic needs and communication pattern with self-regulation is significant and the first sub-hypothesis is confirmed.

Table 5. Self-regulation explanatory coefficients based on basic needs and family communication pattern with the mediation of academic passion			
Direct path	Beta	t	p
Psychological needs to Academic passion	0/20	6/01	0/001
Conversation to academic passion	0/58	15/36	0/001
Alignment to academic passion	0/29	8/70	0/001
Academic passion to self-regulation	0/20	2/83	0/001
Indirect path	Beta	t	p
Psychological needs to academic passion to self-regulation	0/04	2/01	0/03
Conversation to academic passion to self-regulation	0/12	6/32	0/01
Alignmentto academic passion to self-regulation	0/06	3/11	0/01

The analysis of the data obtained from the standard coefficients of the model in Table 5 shows that the direct effects of basic needs and conformity and communication on academic passion and self-regulation are significant, and the direct effect of academic passion on self-regulation is also significant ($p<0.01$). The indirect effect of psychological needs through academic passion on self-regulation is significant ($\beta = 0.05$, $p < 0.17$). The indirect effect of communication and listening through academic passion on self-regulation ($\beta=0.08$, $p<0.01$) is also significant. The indirect effect of conformity through academic passion on self-regulation is significant ($\beta = 0.04$, $p < 0.01$). The results show that the mediating role of academic passion between basic needs and communication pattern with self-regulation is significant and the second sub-hypothesis is confirmed.

Conclusion

This research was conducted with the aim of examining the fit of the academic self-regulation model based on the basic

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

psychological needs and the family communication model with the mediation of positive adolescent development and academic passion. The findings showed that students whose families support self-control have higher competence, intrinsic motivation and academic performance and more creativity compared to students who live in controlling families. The results of this research are consistent with the results of some studies such as Pisheh and Qahari (2019), Salchi and Esmailshahna (2018) and Jones et al. (2017). In the explanation of this finding, it can be said that according to the value expectation theory, the more the learner expects to do a task well, the more valuable he considers that task, the better his performance in that task will be. It affects his effort, persistence and persistence to do the homework that he chooses. People who have the ability to talk and listen in the family and have a good harmony and adaptability with the environment, in addition to showing better effort in regulating their emotions, behavior and academic performance. They show more passion and motivation for academic progress because they receive appropriate encouragement and suggestions in the family and their skills are confirmed, which makes them expect more value from their efforts (Chang et al., 2017).

The results showed that satisfying the dimension of competence among the dimensions of basic psychological needs can positively and meaningfully predict academic self-regulation. This means that a student whose competence needs are met in the classroom has a higher academic self-regulation. Self-regulated learners have a higher sense of competence than learners who are not self-regulated, which increases effort and motivation and makes more use of cognitive and metacognitive skills for learning. Satisfying the need for competence improves the student's belief in his ability to influence the environment, thus creating a high sense of academic self-efficacy in them (Daniel, 2015). On the other hand, academic self-efficacy facilitates the use of effective learning strategies and successful experiences in academic activities. Addressing psychological needs plays an effective role in improving the level of internal motivation for effort and more tendency to learn, one of the facilitating factors for satisfying the need for communication. Fulfilling the need to communicate with others can strengthen students' social network and through this network they can share and express their ideas, opinions and feelings and solve problems more effectively (Fernandez-Rao et al., 2017).

According to the results of this research, passion had a mediating role between research variables and academic self-regulation. Based on this finding, it is suggested to consider the effect of mediating variables of academic passion in designing interventions and improving the educational situation. The relationship between academic self-regulation and the satisfaction of psychological needs means that teachers can increase academic self-regulation and ultimately success in students by creating a suitable educational environment, and better results are obtained by simultaneously paying attention to the satisfaction of basic psychological needs; Therefore, it is suggested that in educational programs and academic and academic activities, the satisfaction of students' self-directedness, competence and communication needs should be taken into consideration. Based on the obtained results, it is suggested that in the educational systems, teachers should give more freedom and discretion to students in doing homework and academic tasks. Also, teachers can increase the possibility of increasing positive adolescent development in students by providing opportunities to choose different subjects and different learning conditions.

Conflict of Interest

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

References

Abdollahi, M., Darbani, S. A., & Parsakia, K. (2022). Structural equations the effect of logical-critical thinking style with academic achievement with the mediating role of action control in high school students. Journal of Assessment and Research in Applied Counseling, 4(3), 26-31.

Ansong, D. Eisensmith, S. R. Okumu, M. & Chowa, G. A. (2019). The importance of self-efficacy and educational aspirations for academic achievement in resource-limited countries: Evidence from Ghana. Journal of adolescence, 70, 13-23.

Ahmadi., G, Ozayi, N., Godarzi, M. (2019). The Role of Self-Regulatory Learning Strategies, Student Conflict and Hope to Student in Student Advancement Forecasting. Educ Strategy Med Sci, 12 (5), 19-28. (In Persian)

[DOR: 20.1001.1.28212525.1402.4.6.6.6]

Bakhshi, M., Ahanchian, M R. A. (2013). Proposed Model to Predict Academic Achievement: The Role of Critical Thinking and Self-regulated Learning Strategies. Iranian Journal of Medical Education, 13 (2), 153-163. (In Persian)

Chung, J. M. Hutteman, R. van Aken, M. A. & Denissen, J. J. (2017). High, low, and in between: Self-esteem development from middle childhood to young adulthood. Journal of Research in Personality, 70, 122-133.

Dehghanizadeh, M. H., Hossein Chari, M. (2011). academic vitality and perception of family communication pattern; The mediating role of self-efficacy. Journal of Teaching and Learning Studies, 4(2), 21-47. (In Persian)

Daniela, P. (2015). The relationship between self-regulation, motivation and performance at secondary school students. Procedia-Social and Behavioral Sciences, 191, 2549-2553.

Dou, D., & Shek, D. T. (2021). Concurrent and Longitudinal Relationships between Positive Youth Development Attributes and Adolescent Internet Addiction Symptoms in Chinese Mainland High School Students. International Journal of Environmental Research and Public Health, 18(4), 1937.

Evarson, D. L., Polanin, J. R., & Low, S. K. (2015). Teacher and staff perceptions of schoolenvironment as predictors of student aggression, victimization, and willingness tointervene in bullying situations. School Psychology Quarterly, 29(3), 287-305.

Fernandez-Rio, J., Cecchini, J. A., Méndez-Gimenez, A., Mendez-Alonso, D., & Prieto, J. A. (2017). Self-regulation, cooperative learning, and academic self-efficacy: Interactions to prevent school failure. Frontiers in psychology, 8, 22

Ghasemi, M., Farahani, M. T., Abdullahi, M. H. (2018). Factorial structure and presentation of a model for positive youth transformation in Iranian teenagers. Psychology, 23(2), 114-133. (In Persian)

Gomez-Baya, D. Tomé, G. Reis, M. & Gaspar de Matos, M. (2020). Long-term self-regulation moderates the role of internal resources for resilience in positive youth development in Portugal. The Journal of Genetic Psychology, 181(2-3), 127-149.

Hosseinabad, N., Najafi, M., & Rezaee, A. (2019). Effect of educating positive youth development program on psychological well -being factors among adolescents. Clinical Psychology Studies, 9(35), 223-239. (In Persian)

Koresh Nia, M., Latifian, M. (2011). Investigating the relationship between the cultural values of the society and the critical thinking tendencies of students by mediating the dimensions of family and professor communication patterns. Journal of Teaching and Learning Studies, 3(2), 103-134. (In Persian)

Kim, M. H., Min, S., Ahn, J. S., An, C., & Lee, J. (2019). Association between high adolescent smartphone use and academic impairment, conflicts with family members or friends, and suicide attempts. PloS one, 14(7), e0219831.

Lerner, J. V. (2010). The relationship between life satisfaction, risk-taking behaviors, and youth violence. Journal of Interpersonal Violence, 20,11,18-95.

Leung, C. H., Chen, S. X., & Lam, B. C. (2010). Where there's a will, there's a way: The mediating effect of academic aspiration between beliefs and academic outcomes. Journal of Psychology in Chinese Societies, 11(1), 53-66.

Mahmoudi, S. N. (2019). Providing a model for assessing the role of mediating the teacher-student communication quality in the relationship between academic self-regulation, school culture and academic eagerness with creative thinking in high school students. Thinking and Children, 10(1), 237-259. (In Persian)

Moradi, K., Asadzadeh, H., Karami, A., & Najafi, M. (2019). Modeling the academic achievements based on academic emotions and academic engagement with the mediating role of positive development youth. Educational Psychology, 15(51), 147-173. (In Persian)

Moradi, K., Asadzadeh, H., Karmi, A., Najafi, M. (2017). Psychometric characteristics of positive adolescent development inventory. Evolutionary Psychology: Iranian Psychologists, 14(55), 315-327. (In Persian)

Punhagui, G. C. (2019). Using Problem-Solving as a Method for the Development of Self-Regulation of Learning with Adolescents: An Experience Report. In Metacognition in Learning. IntechOpen.

Sevari, K., & Arabzade, S. (2013). Construction and measurement of the psychometric properties of academic self- regulation questionnaire. Journal of School Psychology, 2(2), 75-92. (In Persian)

Rezaei-Dehaghani, A. Keshvari, M. & Paki, S. (2018). The relationship between family functioning and academic achievement in female high school students of Isfahan, Iran, in 2013–2014. Iranian journal of nursing and midwifery research, 23(3), 183.

Vandenkerckhove, B. Brenning, K. Vansteenkiste, M. Luyten, P. & Soenens, B. (2019). The explanatory role of basic psychological need experiences in the relation between dependency, self-criticism and psychopathology in adolescence. Journal of Psychopathology and Behavioral Assessment, 41(4), 574-588.

[DOR: 20.1001.1.28212525.1402.4.6.6.6]