



Predicting Academic Adjustment Based on Perfectionism and Emotional Creativity in High School Students

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ABSTRACT

The present research has been conducted to predict educational adjustment based on perfectionism and its components along with emotional creativity and its components. Using random multi-stage cluster sampling with the classroom as unit, a sample of 400 students of second graders in high schools was chosen in Booshehr, Dashtestan. They filled out three scales including educational adjustment perfectionism and emotional creativity. Analysing the data using appropriate statistical methods revealed that the reliability and validity of the scale is desirable. In general, the obtained results predicted a direct and positive effect of perfectionism on educational adjustment scores. Also, emotional creativity was a positive and significant predictor of educational adjustment scores. It means that with an increase in emotional creativity we would observe an increase in educational adjustment too with regard to previous findings and researches, our findings were discussed and suggestions were made to conduct future project. Applications and limitation of the study are also mentioned.

Keywords: Educational Adjustment, Emotional Creativity, Perfectionism

INTRODUCTION

The basis for the everyday attempts of human beings is adjustment. Every human being consciously or unconsciously tries to meet his diverse, variant and sometimes contradictory needs in the environment he lives in. People achieve adjustment when they establish a healthy connection between themselves and the social environments (including family, work place, school, university, and such). If people cannot properly communicate with the environment, they are considered to be incompatible or maladaptive. Lazarous [1] introduces adjustment as an important factor in reducing the common contradiction between the internal and external aspects of human behavior. Piaget [2] defines adjustment as constant attempt of an organism to achieve a balance with the environment using mechanisms including assimilation and accommodation. According to Miller [3], adjustment is a psychological process that is induced in human beings by different factors such as environmental stimuli, facilities, and actions. Different approaches are adopted toward the combination of internal abilities and capabilities that contribute to the formation of adjustment. Reed-Victor believes that adjustment is a process in which man tries to adapt to internal pressures and external requirements. From Islami-Nasab's point of view [4], people's needs are the most important factors that contribute to the emergence of adjustment. People have to interact or cope with the environment in order to meet their needs because otherwise they will not be able to achieve their goals. It shall be noted that adjustment evolves from birth to death and is utilized differently at every stage of man's life. Moreover, there are different aspects to adjustment such as: adjustment to a new environment or situation, adjustment to interpersonal relations, and adjustment to educational environments (known as academic adjustment). In fact, academic adjustment refers to the ability of the learner to adapt to academic circumstances, requirements and roles defined by the school as the social entity in charge [5].

Therefore, adjustment can be introduced as a personality trait or a combination of several personality traits and social, family and educational factors. Roeser et al. [6] state that in students who have difficulty in developing

academic adjustment, the problem is manifested in other areas of academic adjustment such as motivation for learning, accomplishing academic tasks, gaining a clear understanding of educational goals, and gaining complete satisfaction with the academic environment. Academic adjustment can be defined as the combination of positive attitudes toward educational goals, satisfaction of educational needs, effectiveness of the attempts made by learners to achieve their goals, and a positive attitude toward the academic environment [7].

School, as the social entity secondary to family (the first social entity) plays an important role in the process of socializing the next generation of the society. This entity acts as a process that actualizes educational experiments, attitudes, and successes or failures. In addition, upon entering school students are detached from the family environment and face new variant circumstances that require new forms of adaptation. Education is a challenging process with various fluctuations, competitions, tasks, and such. Therefore, adapting to such a process requires special strategies [8].

One of the forms of adjustment is the balance created between what is and what ought to be. That is to say, a person who is in an ideal and desirable state or tries to reach such a state should meanwhile take note of his assets. Such a compatible state of balance cannot be achieved all the time due to some reasons especially the tendency of people toward increasing growth and evolution. All human beings need to utilize their potentials to the possible extent and grow beyond the existing limits. Human being naturally tries to actualize their potential capabilities. Making the utmost level of attempts and unlocking hidden potentials and talents are of great importance, but the aforementioned natural tendency of man sometimes exceeds the limit and becomes a sickness and consequently disturbs adjustment or balance. This state is a manifestation of perfectionism, which is the focus of attention of researchers who investigate mental health and adjustment. Some studies have revealed that perfectionism is related to some of the indicators of psychopathology [9]. Therefore, perfectionism is one of the constructs that may be related to adjustment.

Perfectionism has several literal meanings some of which introduce it as a negative and some as a positive trait. Hence, this personality trait has many types some of which are healthy and some pathological. On one hand it can be used to refer to a certain group of people with characteristics contrary to those of realists. However, since perfectionism is a relative concept, it can be said that all human beings are somehow perfectionist, though people's definition of perfection or the desirable state are different. Perfection is a state of desirableness far from the current state. Different forms of perfections emerge depending on the difference between the desirable state and the current state as well as the reference that defines the desirable state. Pathological perfection is observed when the distance between the existing situation and the desirable situation is so large that none of them affects the other. This difference or detachment is manifested in different forms. This difference is, for example, revealed when the person craves for a desirable state regardless of the existing abilities and facilities. Naturally this form of perfectionism is manifested as naïve idealism, which makes the person achieve his goal in passive and not active manner. The second factor, i.e. the reference of perfectionism, also can result in healthy or pathological perfectionism. An example of pathological perfectionism is seen when the reference of perfection is a person who does not value the opinions of others.

Perfectionism has been known for more than one decade. However, before empirical studies had been conducted on perfectionism, it was simply defined as a construct by the physicians. Basic clinical descriptions of perfectionism can properly describe the characteristics of this phenomenon. Most of the basic definitions introduce perfectionism as an inefficient feature. Philosophers and basic therapists also introduce perfectionism as an important aspect of human behavior [10].

Freud [11] considered perfectionism to be a sign of OCD, especially the compulsive form of OCD. He believed that perfectionism is a result of a strict and punisher "ego" that seeks to achieve unique and peerless progress in all fields. He also believed that perfectionism is one of the aspects of narcissism. Hence, primary authors considered perfectionism to be a personality trait. Frost, Marten and Lahart [12] define perfectionism as the combination of very high performance standards that is accompanied by extreme critical self-assessment. Flett et al. [9] also believe that perfectionism can be defined as man's tendency toward having a collection of extremely high standard and at the same time focusing on failures and performance deficits. Frost et al. [12] assumed the following six different aspects to perfectionism: concern over mistakes, personal standards, parental criticism, parental expectations, need for order and organization, and doubt about actions.

Previously it was mentioned that adjustment requires a balance between what is and what ought to be and that pathological perfectionism reflects a type of extreme involvement with musts. These musts are at least reflected in the following functions: thinking (knowledge), emotions and behaviors. Hence, it can be concluded that adjustment includes the balance among the aforementioned three areas as well. The emotional creativity variable is the studied here as one of the antecedents of the emotional aspect of man's performance. The following section tries to introduce and describe this construct.

According to Averill [13], human beings are rational creatures that possess emotional characteristics that make them emotional creatures as well. In the past various cultures discouraged emotion-driven actions because of the existing traditions and conventions. The reason was that they believed that emotions are the origin of hostility and brutality. However, in today's world psychologists try to indicate that emotions and intelligence are not contradictory by raising the issues of emotional creativity and emotional intelligence. Therefore, emotional creativity is studied parallel to emotional intelligence in the study of the interaction between emotions and

cognition. Averill, Thomas, and Knowles [14] define emotional creativity as “the ability to experience and express a combination of emotions in an innovative, effective and original manner”. According to their definition emotional creativity must meet the following criteria: innovation or novelty, and effectiveness and originality. The former criterion refers to the ability to change usual feelings and provoke new emotional states that is either contrary to the norms and standards or a new combination of common emotions. The latter criterion, i.e. effectiveness, refers to the harmony between the creative response and social and cultural contexts. In this sense, emotional creativity brings about desirable communications and improvement in individual’s thinking. Averill & Nonly [15] clarified the aspects and elements of effective and original creativity. They define emotional creativity as a means expression one’s self (authenticity) by a new method (novelty) which is the basis for the expansion of man’s lines of thought and his interpersonal relationships (effectiveness). Besides the aforementioned criteria Averill, Thomas and Knowles [14] believe that people who are not capable of showing their creative emotions try more than others to know their emotions and carefully monitor the emotions of others and themselves. The latter characteristic is defined as preparedness while cognitive models of creativity refer to it as the ability to gain knowledge and information [16]. Because of the interconnectedness of emotions, cognition and cognitive and social functions of man and his creativity, perfectionism and adjustment this study is aimed at analyzing the relationships among emotional creativity variables, perfectionism and academic adjustment. The objective of the educational system of any society is the happiness and progress of students. Academic adjustment is undoubtedly among the important issues that affect the emotional and social health and progress of students. It is therefore necessary to identify and study the factors that influence this objective to the possible extent. If academic adjustment is achieved the person will have a positive attitude toward other aspects of life.

Academic adjustment is the focus of attention of psychologists and researchers. It is also theoretically necessary to describe and conceptualize this notion in Iran. Although studies have been conducted worldwide on the notion of academic adjustment and its related factors in students, few similar studies have been carried out in Iran. There are also a few numbers of researches that are focused on emotional creativity. Another reason that necessitates the study of adjustment is the relationship between academic adjustment and general health of students. That is to say, academic adjustment helps the students to experience a good level of general health and academic, occupational, and ...successes. It also guarantees the health of the society as well [17]. The objectives of the present study include: studying the relationship of adjustment with perfectionism and its different aspects; analyzing the relationship of adjustment with emotional creativity and its aspects; and comparing the abilities of perfectionism and emotional creativity to predict academic adjustment. The following sections explain the nature of the aforementioned relationships.

MATERIALS AND METHODS

Statistical Population, Sample, and Sampling Method: The statistical population under study included all of the second grade female and male students studying at the high schools in Dashtestan city in the 2010-2011 academic years. The participants were selected using the multi-stage cluster sampling method. In the first stage 10 high schools were randomly selected from a total of 102 high schools (51 boy and 51 girl high schools). Next, the second grade students of all of the ten high schools were selected and assessed. The samples included 400 students who were selected out of 9000 students .

Research Tools

Adjustment Inventory for School Students (AISS): The Adjustment Inventory for School Students was used to measure the adjustment of students. The inventory, which has a great potential for measuring the academic adjustment of students, was introduced in 1993 by Singh & Sing. This scale contains 60 items that are answered by Yes (1) or No (0). It measures the following three aspects of adjustment: emotional, social, and educational. The total score obtained from the three subscales gives the total adjustment score. Singh & Sing tested the final version of this scale on 1950 students who were randomly selected from 40 high schools and also normalized the test using the collected data. Based on the resulting standards a total adjustment score equal to or higher than 31 and subscale score equal to or higher than 11 reflect low levels of adjustment .

Singh & Sing reported a validity of 0.51 for the main version of the scale based on the correlations among the total scores and the rankings of the data related to 60 students at five levels of adjustment. The reliability coefficients of the scale and subscales were also obtained to be 0.90 and 0.96 using the re-test and split-half methods.

Perfectionism Scale

In order to measure the perfectionism of students the perfectionism scale, which was developed and normalized by Hill, was employed. The original version of this scale contains 59 questions and 8 subscales that include: concern over mistakes, high standards for others, and need for approval, organization, perceived parental pressure, planfulness, rumination, and striving for excellence.

Items included in this scale are ranked using a five-point Likert scale. That is to say, the items are ranked from 1 (completely disagree) to 5 (completely agree). This scale makes a clear distinction between the positive

and negative aspects of perfectionism. The scores obtained from the following subscales show the negative aspect of perfectionism: need for approval, concern over mistakes, perceived parental pressure, and rumination; the total scores obtained from the following subscales show the positive aspect of perfectionism: organization, planfulness, striving for excellence, and high standards for others. The total perfectionism score is also obtained by summing up all of the 8 subscale scores .

Hill reported the reliability coefficients of between 0.83 and 0.91 for different aspects of perfectionism. These coefficients were obtained using the Cronbach's alpha method. They also used the re-test method to examine the reliability coefficients after 3-6 weeks (the average interval between each test was 4.5 weeks) and obtained reliability coefficients of 0.71-0.91. In addition, the convergent and divergent validity coefficients of the scale were also calculated using relevant methods .

This scale was translated into Persian and was normalized by Jamshidi et al. [41]. They used the factor analysis method to examine the validity of the scale construct and modified the original version of the scale. Analysis of the factor structure of the perfectionism scale by principal component analysis and varimax rotation based on scree slopes suggest that this scale includes 6 factors that account for 43% of the total variance. In addition, 8 questions with factor loads of less than 0.3 were also omitted from the scale.

Different aspects of the test include: negative self-image (17 items), organization (9 items), planfulness (9 items), perceived parental pressure (6 items), striving for excellence (5 items) and high standards for others (5 items). In this version negative self-image, perceived parental pressure, and high standards for other stand for the negative aspect of perfectionism and organization, planfulness and striving for excellence show the positive aspect of perfectionism.

Jamshidi et al. [41] obtained a reliability coefficient of 0.90 for the whole scale using the Cronbach's alpha method. Using the aforementioned method they also reported reliability coefficients of 0.88, 0.90, 0.81, 0.77, 61, and 0.47 for negative self-image, organization, and planfulness, perceived parental pressure, striving for excellence, and high standards for others, respectively. The reliability coefficients for negative and positive perfectionism were 0.87 and 0.91, respectively. Moreover, a satisfactory validity coefficient was also obtained using the factor analysis method .

Emotional Creativity Inventory (ECI): The Emotional Creativity Inventory, developed and normalized by Averill [18] was used for assessing the emotional creativity of the participants. It covers novelty, effectiveness, authenticity, and preparedness and includes 30 items: 7 items for emotional preparedness, 14 items for novelty, 5 items for effectiveness, and 4 items for authenticity. The ranking of each items ranges from 1 (very low) to 5 (very high). Furthermore, items 11 and 29 are ranked reversely .

Using the Cronbach's alpha method Averill [18] reported the total reliability of 0.91 for emotional creativity. The reliability coefficients of preparedness, effectiveness, authenticity and novelty were also obtained to be 0.80, 0.89, 0.80 and 0.85, respectively. In order to calculate the validity of the inventory the factor analysis and similar tests methods were employed. The factor analysis yielded three dimensions instead of four dimensions because effectiveness and authenticity formed one dimension together. Numerous other studies also analyzed the validity and reliability of this scale. Fuchess et al. [19] reported a satisfactory total reliability for emotional creativity and its three sub-dimensions using the Cronbach's alpha coefficient. Using the factor analysis method confirmed three of the dimensions introduced by Averill [18]. Latifian and Delavarpour [40] also employed the split-half method to obtain a reliability coefficient of 0.82 for the scale. The Cronbach's alpha coefficients for preparedness, effectiveness authenticity, and novelty were obtained to be 0.75, 0.77, and 0.74, respectively.

RESULTS

The main objective of this research was to predict academic adjustment with regard to perfectionism and emotional creativity. The first research question asked whether perfectionism can predict academic adjustment or not. Table 1 shows the results of the analysis of the relationship between perfectionism and adjustment by regression analysis. The results indicate that there is a linear relationship between these two variables ($F=37.73$, $P<0.0001$).

The value of R^2 in Table 1 indicates that perfectionism accounts for about 9% of the variations of adjustment. Based on the value of the coefficient (0.29) it can be said that the adjustment score is increased by 0.29 for any variations of perfectionism. In other words, as the level of perfectionism grows, adjustment decreases. Therefore, perfectionism can positively predict the academic adjustment score (0.29, $P<0.001$).

Table 1. Results of the regression analysis performed for predicting academic adjustment based on perfectionism (perfectionism as the predictor variable)

Variable	Analysis of Variance		R	R ²	β	t	Sig.
	F	P					
Total perfectionism	37.73	0.0001	0.29	0.09	0.29	6.14	0.0001

The value of R^2 in the Table 2 suggests that about 13% of adjustment variations are caused by different aspects of perfectionism. According to the value of the coefficient (0.28) it can be said that the adjustment score is

increased by 0.28 with any variations of negative self-image. In other words, increase in negative self-image adds to the adjustment score. Therefore, negative self-image is also another positive predictor of adjustment 0.28, $P < 0.0001$). As seen in Table 3, the remaining aspects of perfectionism, i.e. organization (0.59, N.S), planfulness (0.5, N.S), perceived parental pressure (0.01, N.S), striving for excellence (0.08, N.S), and high standards for others (0.07, N.S), cannot predict academic adjustment.

Table 2. Results of the regression analysis of academic adjustment based on different aspects of perfectionism

Predictor variables	Analysis of variance		R	R ²	β	t	Sig.
	F	P					
negative self-image	9.54	0.0001	0.36	0.13	0.28	4.80	0.001
organization					-0.05	-1.01	N.S
planfulness					0.05	0.83	N.S
perceived parental pressure					-0.01	0.27	N.S
striving for excellence					0.08	1.54	N.S
high standards for others					0.07	1.45	N.S

According to the results presented in Table 3 and especially the values of R² (0.02), it can be concluded that emotional creativity accounts for about 2% of the variations of adjustment. The value of also suggests that any variation of emotional creativity decreases the adjustment score by 0.14. In other words, increase in the emotional creativity leads to a decrease in adjustment. The assumption that value of the regression coefficient of emotional creativity is equal to 0 is rejected based on the value of t (t=2.84, $P < 0.005$). Therefore, emotional creativity is a negative predictor of the adjustment score (0.14, $P < 0.005$).

Results presented in Table 4 show that only one of the aspects of emotional creativity is responsible for about 3% of adjustment variations. According to the value of it can be said that any variations of novelty diminishes the adjustment score by 0.19. That is to say, increase in the level of novelty adds to adjustment. The value of t also helps to reject the assumption that the regression coefficient of novelty is equal to 0 (t=3.14, $P < 0.002$). Therefore, novelty is a negative predictor of the adjustment score (0.19, $P < 0.002$). As seen in this table, the other aspects of emotional creativity including authenticity (0.06, N.S) and preparedness (0.03, N.S) cannot predict academic adjustment.

According to the results of Table 5, perfectionism and emotional creativity together account for 9% of the variations of adjustment. The value of the coefficient (0.28) also suggests that adjustment is increased by 0.28 with an increase in the level of perfectionism. The assumption that the regression coefficient of perfection is equal to 0 is also rejected (t=5.43, $P < 0.0001$). Hence, perfectionism is positive predictor of adjustment (0.28, $P < 0.0001$). As seen in Table 4-7, emotional creativity cannot predict academic adjustment together with perfectionism (0.03, N.S).

Table 3. Results of regression analysis of academic adjustment based on emotional creativity

Predictor variables	Analysis of variance		R	R ²	β	t	Sig.
	F	P					
Emotional creativity	8.09	0.005	-0.14	0.02	-0.14	-2.84	0.005

Table 4. Results of the regression analysis of academic adjustment based on emotional creativity

Predictor variables	Analysis of variance		R	R ²	β	t	Sig.
	F	P					
Novelty	4.38	0.0001	-0.17	0.03	-0.19	-3.14	0.002
Authenticity					-0.06	-0.07	N.S
Preparedness					0.03	0.66	N.S

Table 5. Results of the regression analyses of perfectionism and emotional creativity with regard to academic adjustment

Predictor variables	Analysis of variance		R	R ²	β	t	Sig.
	F	P					
Perfectionism	27.12	0.0001	0.29	0.09	0.28	5.43	0.0001
Emotional Creativity					-0.03	-0.68	N.S

According to the results presented in Table 6 and especially the value of R² (which is equal to 0.14) it can be said that perfectionism and emotional creativity account for about 14% of variations of adjustment. Based on the value of the coefficient (0.27) the academic adjustment score is increased by 0.27 with any variations of negative self-image. In other words, increase in negative self-image leads to a decrease in academic adjustment. Hence, negative self-image is the only positive predictor of academic adjustment in this analysis (0.27, $P < 0.0001$). However, no other aspects of perfectionism as well as none of the aspects of emotional creativity can predict

academic adjustment. According to the results of the above analyses it can be said that negative self-image is the only aspect of perfectionism that greatly contributes to the prediction of academic adjustment. In addition, emotional creativity (which is a predictor of novelty) can predict academic adjustment as well. On the other hand, in simultaneous regression analysis of perfectionism and emotional creativity (as the dependent variable) only perfectionism can predict adjustment.

Table 6. Results of the regression analysis of academic adjustment based on perfectionism and emotional creativity

Variables	Dimensions	Analysis of variance		R	R ²	β	t	Sig.
		F	P					
Perfectionism	Negative Self-Image	6.77	0.0001	0.37	0.14	0.27	4.59	0.0001
	Organization					0.05	-0.89	N.S
	Planfulness					0.04	0.75	N.S
	Perceived Parental Pressure					-0.02	-0.41	N.S
	Striving For Excellence					0.08	1.5	N.S
	High Standards For Others					0.07	1.36	N.S
Emotional creativity	Novelty					0.10	1.74	N.S
	Authenticity/Effectiveness					-0.08	-1.39	N.S
	Preparedness					0.01	0.19	N.S

DISCUSSION

Results of the analyses of the relationship between perfectionism and academic adjustment indicated that the total perfectionism score can positively and significantly predict the academic adjustment score. This result complies with the results of the studies by the following researchers: Castro and Reise [20]; Mitchelson and Burns [21]; Elliot and McGregor [22]; Hollender [23]; Glina and Ashby [24]; and Stober and Rambo [25]. A significant amount of students' adjustment is supplied by perfectionism (as a personality trait). That is to say, increase in the level of perfectionism leads to a reduction in academic adjustment. Therefore, decrease in perfectionism will lead to an increase in adjustment. In order to explain these findings it can be said that according to Hollender [23], striving for perfection is the common reaction to the belief in unsatisfactory self-esteem. Consequently, perfectionists strive for a better appearance. Regarding this issue it can be said that since the perfectionists are goal-oriented people with self-driven perseverance and motivation, they constantly try to be better. However, when the constant attempts of perfectionist students are not rewarded with satisfaction, their academic adjustment will be decreased. In fact, they convince themselves that they cannot achieve high levels of progress without pain. Hamacheck [26] also believed that perfectionist individuals enjoy hard work and when they feel free they try to do their best. Even when they achieve satisfactory results, they still feel unsatisfied. Therefore, there is a negative relationship between perfectionism and the following positive characteristics: trying to progress, positive feelings, high self-esteem, self-efficacy, self-actualization, innovation, perceived control, adaptive response to stress, positive self-assessment by assessing personal projects, adaptive learning strategies, academic performance, and positive interpersonal characteristics (such as self-confidence, courage, and humanitarian social attitudes) [27]. There is a limit to the relationship between perfectionism and academic adjustment, because extreme reduction in perfectionism will lead to a decrease in academic adjustment. [28]

Analysis of the prediction of academic adjustment based on different aspects of perfectionism indicated that negative self-image (as one of the aspects of perfectionism) can positively and significantly predict academic adjustment score. In other words, students with higher levels of negative self-image show a lower level of academic adjustment. Therefore, academic adjustment cannot be predicted by negative self-image, because increase in the score obtained from the academic adjustment inventory shows a lower level of academic adjustment. These results are consistent with the results of the studies by the following researchers: Buchard et al. [29]; Hewitt et al. [30]; Stump and Parker [31]; and Rice and Dellwo [32]. To elaborate on this finding it can be said that people with negative self-image are not in a good mood while working because they are so concerned about their possible mistakes that they lack enough energy to enjoy challenges and their performance. Frost et al., [12]. According to Frost et al. [12] these individuals experience the following states in facing educational problems and issues:

“If I make mistake in my homework and schoolwork, I must become sad”.

“I despise imperfect works”.

“If I do not do well all the time, I will deserve self-punishment”.

“If I fail, I am an incapable person”.

The above expressions are manifestations of a negative self-image. That is to say, different types of irrational and cognitive definitions are the results of a negative self-image. Such people are more performance-oriented than mastery-oriented. A performance-oriented person is mainly in search of proving their abilities and talents to others. Such a person wants to show the best performance at any circumstance and as a result adds to their negative self-image. Performance-oriented people feel disappointed and desperate when they face difficulty.

Such perfectionists adopt a performance-oriented approach to the problems and extremely fear failure. On the other hand, the main objective of mastery-oriented individuals is to turn challenges into instructive experiences. They do not need easy tasks to do. Besides, when they feel they are rewarded with the results of their own attempts, they do not value failure or success. Instead of having fear of judgments about their performance and tasks, they try to improve their skills, abilities and motivations. Hence, it can be concluded that the academic adjustment is decreased in perfectionist students who suffer from a negative self-image .

In addition, people with high levels of negative self-image are more prone to depression, incompatibility, and anxiety compared to people who are less worried about the completion of their tasks [12]. Results of the analysis of the relationship between academic adjustment and emotional creativity indicated that the total emotional creativity score can negatively and significantly predict the academic adjustment score. That is to say, increase in the creativity score causes a decrease in the adjustment score because as it was mentioned a lower score from the academic adjustment inventory shows a higher level of adjustment. To elaborate on this finding it can be said that people with high levels of emotional capability properly utilize their feelings. They communicate with other people more successfully, are more resistant to stress, incompatibilities and problems, and deal with challenges more dynamically. Creative individuals are optimist about their tasks and future and their optimism enhances the levels of adjustment and risk-taking in them [33].

Another explanation of the prediction of academic adjustment based on emotional creativity suggests that since people with emotional creativity are highly flexible and sensitive, they show flexibility in finding new ways around problems and do not stick to only one way. Such people try many solutions to address problems associated with interpersonal relations, tasks and personal issues and consequently show a higher level of adjustment [34]. Sternberg [35] introduces impulsivity as one of the characteristics of creative people. Therefore, it can be said that creative individuals need to be free from usual emotional and inner bonds to feel fresh and express their creativity. In fact, they are capable of choose proper solutions depending on the occasion in order to address their emotional issues. Hence, there is probably a positive and significant relationship between creativity and adjustment. In other words, expression of feelings and emotions in new ways not only does not contradict adjustment but also facilitates it. The reason is that in such cases feelings are expressed depending on the occasion. In order to support this conclusion it should be mentioned that adjustment necessitates adaptive handling of educational challenges and incompatibilities. Therefore, an emotionally creative person is able to react depending on the occasion. Another assumption that is proved by this research was whether academic adjustment can be predicted based on the dimensions of emotional creativity or not. In order to answer this question the data collected using the multi-stage regression analysis were simultaneously analyzed .

Results of the analyses showed that novelty/innovation (as one of the aspects of emotional creativity) can negatively and significantly predict the academic adjustment score. In other words, increase in the creativity leads to a decrease in the academic adjustment score and a subsequent increase in adjustment. This finding is in accordance with the results of the studies carried out by Goleman [33]; Fuchess et al. [12]; Averill [15] and Moore [34]; and Seyyedi [36].

Although innovation or novelty forms the basis for creativity, there is not an agreement on the meaning of this notion. Some psychologists believe that the ability to create new behaviors by combining older ideas and behaviors increases adjustment [37]. Hence, novel and innovative emotions bring about adaptive behaviors and performance. Sternberg [35] stated that innovation is a potential and the best and healthiest way to escape the passive form of living. That is to say, innovation or novelty is a special way of solving problems that consequently provokes adaptive behaviors.

The regression analysis method was used to find out whether perfectionism and emotional creativity can predict academic adjustment or not. The results indicated that in simultaneous analysis of perfectionism and emotional creativity only creativity can positively and significantly predict academic adjustment. Previous studies suggest that perfectionism is one of the important factors that influence adjustment [38]. In order to explain this finding it can be said that, unlike emotional creativity, perfectionism is a dependent variable rooted in the way children are brought up in families. Parents usually expect the best performance from their children while sometimes compared to the abilities of the children parents ask too much. In such occasions, though children do their best to show the best performance, their parents express their dissatisfaction and make their children vulnerable to failures. Such children are led to believe that instead of enhancing their skills they should be worried about the judgments about their performance. This makes them extremely criticize even their smallest failures and be always unsatisfied with their performances even when they gain success .

According to Frost et al. [12], perfectionists try to do their best in accomplishing their tasks, but when they get satisfactory results they still feel unsatisfied. The feeling of dissatisfaction often leads to self-punishment. For example, when a student believes he must do his homework with any minor mistake, he punishes himself upon the breakout of an error and believes than he is an incapable and valueless person. This type of extreme perfectionism disturbs academic adjustment because perfectionists believe that higher levels of progress are not achieved without pain. This belief makes the perfectionist vulnerable to failures, brings about incompatibility, and provokes the belief that there are no alternate ways of living (Blatt, 1995). This finding is consistent with the findings of the studies by the following researchers: Stump and Parker [31]; Buchard et al. [29].

In order to find out whether different aspects of perfectionism and emotional creativity can predict academic adjustment or not a simultaneous regression analysis was performed. Results of the analysis revealed that in simultaneous analysis of perfectionism and emotional creativity only negative self-image can positively predict academic adjustment. The explanation provided on the previous questions is true for this question as well. As it was mentioned, perfectionism is unlike emotional creativity a dependent variable rooted in the way children are brought up in families. Parents usually expect the best performance from their children while sometimes compared to the abilities of the children parents ask too much. In such occasions, though children do their best to show the best performance, their parents express their dissatisfaction and make their children vulnerable to failures. Such children are led to believe that instead of enhancing their skills they should be worried about the judgments about their performance. This makes them extremely criticize even their smallest failures and be always unsatisfied with their performances even when they gain success.

Missildine [39] stated that negative self-image and discontent are two of the key elements of perfectionism that influence adjustment levels. When perfectionists are faced with problems, failures, or negative experiences they go through an extreme self-punishment and question and worry about their self-esteem. They want to demonstrate the best performance at any circumstances and they severely fear failure. Therefore, instead of improving their skills they spend their time worrying about their performance and tasks and consequently show maladaptive behaviors [12]. This finding is also in accordance with the findings of the studies by Blatt [38], and Hewitt et al. [30].

Applications

The findings of this research, which was an attempt to study the possibility of the prediction of academic adjustment based on perfectionism and emotional creativity, can be analyzed both theoretically and pragmatically. This research can be considered as an initial and small theoretical step toward developing the body of knowledge. On the other hand, due to the importance of academic adjustment, its relevant factors, and the effects of this construct on the performance and progress of students it can be said that this research can broaden the body of science. Every research can contribute to the growth of awareness of a special field. Therefore, the present study also plays a role even very small in understanding the relationships among academic adjustment, perfectionism, and emotional creativity of students. It also contributes to the formation of new studies as well.

This research can provide parents, teachers and students with important pragmatic information. One of the findings of the research suggests that perfectionism is a construct capable of predicting academic adjustment at a significant level. Hence, positive perfectionism enhances psychological performance, academic adjustment, and personal and social adjustment to the living and academic environments. Concerning emotional creativity it should be mentioned that it not only has a psychological aspect but also has social and cultural aspects as well. Therefore, regardless of the field of study and differences among students it can be said that emotional creativity can grow in a common social-cultural context.

Constraints

Although this study tried to provide precise, accurate and true results and findings, it was restricted with constraints similar to other researchers. The constraints are listed below in order to help other researchers with new studies.

- There were constraints on the sample group. The sample under study only included students studying at Dashtestan (Booshehr city) high school. Therefore the results of this research cannot be extended to other studies conducted on other students.
- Since the participants could be contacted again, the reliability of the inventory was only calculated using Cronbach's alpha coefficient.
- Information was mainly collected by questionnaires. Although this is a commonly practiced way of collecting information, it is recommended to gather information on each variable through various ways so that more reliable results are obtained that can be extended to other cases.
- The large number of items included in the scales led to the discontentment of students who were answering them.
- Shortage of previous studies or previously reported studies of academic adjustment and emotional creativity was also another constraint on this research.

Recommendations

Based on the results of the present study the following recommendations are provided to researchers who are interested in studying academic adjustment, perfectionism and emotional creativity.

- Researchers of education should concentrate on positivist psychological areas to study the potential capacities and talents of children and adolescents. Studies on positivist psychology should be increased as well because results of such researches can contribute to the prevention of primary issues and problems.
- Perfectionism plays an important role in the academic adjustment, social adjustment, personal and emotional adjustment, psychological well-being, and occupational success of people and the way they react to

contradictions and stresses. Hence, psychologists should give scientific speeches on this construct to parents, teachers and students .

- Emotional creativity is a new construct with some aspects that affect the academic as well as social-personal adjustment in students. Hence, it is recommended to identify its correlated variables in future studies .

- Due to the importance of academic adjustment and its aspects to the life and future success of people, it is recommended to study the predictor variables that affect academic adjustment and examine its effects on the lives of students, university students, and other groups.

- It is recommended to conduct studies on larger populations (such as university students and teachers) to analyze the proportion of the relation of academic adjustment with variables under study.

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