

The Relationship of Mental Pressure with Optimism and Academic Achievement Motivation among Second Grade Male High School Students

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Abstract

The present study aimed to examine the relationship of mental pressure with optimism and academic achievement motivation among second grade second period male high school students. This study followed a descriptive-correlational method. The sample included 200 second grade second period male high school students in Sooran. Data collection tools in the current study were the Ursula Markham Mental Pressure Inventory (1976), the Tschannen-Moran et al. Optimism Scale (2013), and the Hermans Academic Achievement Motivation Questionnaire (1977). The obtained data was analyzed using both descriptive and inferential statistics (Pearson correlation coefficient and regression analysis) via SPSS software. The results indicated that mental pressure was significantly and negatively related to optimism ($P < 0.01$), such that with an increase in mental pressure, students' optimism decreased. The results of regression analysis revealed that mental pressure predicted 5% of the variance in students' optimism. Moreover, mental pressure was significantly and negatively related to students' academic achievement motivation ($P < 0.01$), such that with an increase in mental pressure, students' academic achievement motivation decreased. The results of regression analysis revealed that mental pressure predicted 4% of the variance in students' academic achievement motivation.

Keywords: mental pressure, optimism, academic achievement motivation, students

1. Introduction

Today, almost all human beings are familiar with the term *mental pressure*, since it has become an inseparable part of human life and human faces with stressful situations since childhood (Khodaiarifard & Parand, 2011). Mental pressure is any stimulus or change in the external and internal environment which may disrupt the vital balance and be pathogenic in certain circumstances (Shaw, 1973).

Adolescence is a part of the life extension when individuals face various developmental obstacles and challenges. In some cases, these challenges include identity and personality growth, achieving success independent of the family, and establishment of relationships and conformity with peer groups. In addition, the transition from childhood to adulthood occurs in parallel with a set of physical and mental changes. This is a period when individuals satisfy social roles in peer groups and in relationship with the opposite gender, learn social skills, provide requirements and conditions for presence in learning situations and make decisions for their own future job. Each of these changes and adaptive requirements demands a kind of coping ability that is indeed behavioral and cognitive strategies for effective and adaptive transition. Undoubtedly, all adolescents have worries that affect their lives. According to interactive model of life, stress is a natural and ordinary component of life (Fridenberg & Lewis, 1993).

The modern psychology attempts to not focus its attention solely on mental health problems and place a greater emphasis on the positive aspects of life. The main goal of positive psychology is to accelerate the change in the centerpiece of psychology, so that in addition to pay attention to the treatment of diseases, it helps to build positive quality of life. Optimism is a positive human characteristic which has attracted special attention in psychology and social sciences over the past two decades. Optimism usually refers to an orientation in which selection of positive outcomes is expected and those outcomes are considered results of fixed general intrinsic factors (Peterson, 2000).

Achievement motivation can be observed in many areas of activity such as work, school, home arts or sports and championships competitions. The construct of academic achievement motivation at school refers to behaviors that lead to learning and achievement. One of the best research reviews that have linked motivation to the educational environment was conducted by Pintrich and Degourt (1990). They concluded that this relationship is possible in three ways: 1–Goals that a student has for performing his/her school tasks; 2–one’s belief in his/her own abilities to perform tasks concerned with expectations from the person; 3–students’ emotional reactions to tasks, such as anxiety, anger, pride, shame and guilt (as cited in Shahsavani, 2000).

Optimism is among the aspects of positive thinking. The public defines optimism as "seeing the glass as half full", or seeing a glossy layer in any phenomenon, or the habit of waiting for a happy ending to any real trouble (Seligman, 2009). Moreover, optimism also means having positive expectations for the results and consequences (Scheier & Carver, 1985). Having optimistic attitude is a good way to cope with stress and present and future problems, while pessimistic attitude leads to doubt, frustration, sadness and apathy to attempt. Thus, optimism and pessimism are among the main factors that affect the mental health. In this regard, Seligman (2007) studied a unique case and concluded that bitter events do not have a great effect on our misery; however, the way people cope with these events shows how much they are vulnerable. Optimism has an important role in compatibility with stressful events of life.

Khoshouei (2009) investigated the relationship of optimism with mental pressure and coping styles among students in Isfahan and found that optimism and its components were significantly and negatively related to and mental pressure and inefficient coping styles, while optimism and its components were significantly and positively correlated with efficient coping styles.

Jafar-Tabatabaee et al. (2013) examined the effect of optimism training on anxiety and depression among students of Islamic Azad University of Birjand and concluded that after optimism training, the experimental group’s mean score on anxiety and depression scales decreased from 23.74 ± 10.70 to 11.48 ± 6.51 and from 26.70 ± 12.33 to 8.78 ± 6.61 , respectively ($P < 0.001$). In addition, optimism training increased optimism from 13.13 ± 2.72 to 15.04 ± 2.96 ; however, its effect on pessimism was not significant. It seems that optimism training was an effective tool which decreased students’ anxiety and depression effectively; however, the mean score of pessimism after the intervention was not statistically significant. Therefore, this training program can be used in student consultation centers to decrease students’ anxiety and depression.

Sarabadani, Blourdi, and Ghiassi (2011), in a study, examined the relationship of students’ mental pressure (stress) with their academic achievement motivation and self-esteem and found a significant negative relationship between mental pressure and academic motivation ($P < 0.01$). They also found a similar relationship between achievement motivation and self-esteem ($P < 0.01$).

Moradi et al. (2014) studied the relationship between academic optimism and academic achievement among male high school students of Districts 6 and 9 in Tehran and found a significant positive relationship between optimism and academic achievement. Among the components of academic optimism (students’ academic emphasis, students’ trust to teachers and students’ sense of identity towards school), students’ academic emphasis had the highest contribution to the prediction of academic achievement.

Considering the above literature, the main research question of the present study is whether there is a significant relationship between mental pressure, optimism and academic achievement motivation among second grade male high school students in Sooran?

1.1 Hypotheses

- 1) There is a significant relationship between second grade male high school students’ mental pressure and optimism.
- 2) Second grade male high school students’ mental pressure can predict their optimism.
- 3) There is a significant relationship between second grade male high school students’ mental pressure and academic achievement motivation.
- 4) Second grade male high school students’ mental pressure can predict their academic achievement motivation.

2. Methods

2.1 Statistical Population and Sample

The statistical population consisted of 437 second grade second period male high school students in Sooran. The hierarchical sampling method was used. According to Morgan’s table, the sample size was 205. However, in the end, the final sample included 200 students. In the next stage, after referring to each school, based on the number

of classes, the respondents were randomly selected to complete the questionnaire.

2.2 Data Collection Tools

2.2.1 Mental Pressure Inventory

This 38-item inventory was developed by Ursula Markham. After studying various cases, the inventory was standardized and revised according to the Iranian culture and norms by Pashasharifi. The inventory contains 38 Yes-No items for female students and 37 Yes-No items for male students. The items measure mental pressure-induced behaviors. Yes responses show mental pressure, and No responses indicate lack of mental pressure. In the current study, the researcher considered the sum of the scores at four levels: 0-9 = normal mental pressure, 10-18 = medium mental pressure, 19-27 = severe mental pressure and 28-38 very severe mental pressure (Pashasharifi, 2002). To calculate the reliability, in the present study, Cronbach's alpha was used, the results of which was 91% for the whole inventory.

2.2.2 Optimism Scale

Students' Academic Optimism Scale was developed by Tschannen-Moran et al. (2013) and contains 28 5-option items. The questionnaire consists of three subscales including academic emphasis (8 items), students' trust to teachers (10 items), and students' sense of identity towards school (10 items). This questionnaire was scored using a Likert type scale (very low=1, low=2, medium=3, much=4, and very much=5).

Table 1. Items of students' optimism scale

	Dimension	Items
1	Students' trust to teachers	1 to 10
2	Students' academic emphasis	11 to 18
3	Students' sense of identity towards school	19 to 28

Tschannen-Moran et al. (2013) reported the reliability related to each subscale of this scale as 0.93, 0.96, and 0.97, respectively. Moradi et al. (2014) obtained the reliability of this scale, the result of which for each subscale and the total scale was 0.91, 0.86, 0.89 and 0.92, respectively. In the present study, Cronbach's alpha was used to calculate the reliability of the subscales and the total scale, the results of which were respectively 0.92, 0.92, 0.93 and 0.97.

2.2.3 Academic Achievement Motivation Questionnaire

This questionnaire was designed by Hemans and contains 29 4-option items in 10 dimensions (stress, task, ambition, time perception, recognition behavior, choice of friends, achievement behavior, moving upward, risky behavior, time view, resistance), which measure subjects' achievement motivation. Higher-than-average scores represent high achievement motivation and lower-than-average scores indicate low achievement motivation. This questionnaire is scored according to 7 main characteristics based on which this questionnaire was developed. Some items are positively and others are negatively presented. Items no. 1, 4, 9, 10, 14, 15, 16, 20, 23, 27, 28, and 29 are positively scored (a=1, b=2, c=3, and d=4). However, items no. 2, 3, 5, 6, 7, 8, 11, 12, 13, 17, 18, 19, 21, 22, 24, 25, and 26 are negatively scored (a=4, b=3, c=2, and d=1) and the scores ranges from 29 to 116 (Akbari, 2007). Sheikh-Fini (1994) calculated Cronbach's alpha and test-retest reliability coefficients for this questionnaire, the results of which were 0.84 and 0.82, respectively. Since Hermans developed the items based on previous studies conducted on achievement motivation, the correlation coefficient of each item was calculated with achievement behavior ranging from 0.30 to 0.57. Thus, the questionnaire is valid. In the present study, Cronbach's alpha of the total questionnaire was obtained 0.91.

2.3 Data Analysis

This descriptive study followed a correlational-predictive design. To analyze the data, both descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (Pearson correlation and simultaneous regression analysis) were applied via SPSS.

3. Results

Table 2. The respondents' scores on the Mental Pressure Inventory

Variable	N	Mean	SD	df
Mental pressure	200	28.23	7.97	219

The results indicate that the respondents' mean scores is 28.22.

Table 3. The respondents' scores on the Optimism Scale

Variable	N	Mean	SD	df
Optimism	200	100.48	29.64	219

The results show that the respondents' mean scores is 100.48.

Table 4. The respondents' scores on the Academic Achievement Motivation Questionnaire

Variable	N	Mean	SD	df
Achievement Motivation	200	48.81	14.95	219

The results show that the respondents' mean scores is 48.81.

3.1 There Is a Significant Relationship between Second Grade Male High School Male Students' Mental Pressure and Optimism

Table 5. Cross-correlation coefficients between students' mental pressure and optimism

Variable	Optimism	
	R	P
Mental pressure	-0.255	0.001
p < 0.01		
(N = 200, P= 0.000, r = -0.23)		

According to Table 5, it could be argued that there is a significant negative correlation between mental pressure and optimism ($P < 0.01$). Therefore, the null hypothesis is rejected and the research hypothesis is confirmed at the 99% confidence level, suggesting a decrease in the respondents' optimism due to an increase in their mental pressure.

3.2 Second Grade Male High School Students' Mental Pressure Can Predict Their Optimism

Table 6. Results of regression analysis conducted to predict optimism by mental pressure

Variable	Non-standardized coefficients		Standardized coefficients	T	Sig
	B	Std. Error	Beta		
Constant	124.07	7.56		16.42	0.000
Mental pressure	-0.836	0.258	-0.225	-3.25	0.001
Sig = 0.001, f = 10.53, Adjusted R² = 0.05, r = - 0.225					

According to Table 6, F-value is significant at the 99% confidence level. Thus, the null hypothesis is rejected and the alternative one is confirmed. The Adjusted R^2 value is 0.05, i.e. mental pressure can predict 5% of the variance in optimism. Given the significance of beta coefficients, the null hypothesis is rejected at the 99% confidence level, suggesting the negative effect of the respondents' mental pressure with a Beta value of -0.225 on optimism.

3.3 There Is a Significant Relationship between Second Grade Male High School Students' Mental Pressure and Academic Achievement Motivation

Table 7. Cross-correlation coefficients between mental pressure and academic achievement motivation

Variable	Academic achievement Motivation	
	R	P
Mental pressure	-0.21	0.003
p < 0.01		
(N = 200, P= 0.000, r = -0.21)		

According to Table 7, it could be argued that there is a significant negative correlation between mental pressure and academic achievement motivation ($P < 0.01$). Therefore, the null hypothesis is rejected and the research hypothesis is confirmed at the 99% confidence level, suggesting a decrease in the respondents' academic achievement motivation due to an increase in their mental pressure.

3.4 Second Grade Male High School Students' Mental Pressure Can Predict Their Academic Achievement Motivation

Table 8. Summary of regression analysis conducted to predict mental pressure by academic achievement motivation

Variable	Non-standardized coefficients		Standardized coefficients	T	Sig
	B	Std. Error	Beta		
Constant	60.40	3.82		15.71	0.000
Mental pressure	-3.05	0.13	-0.21	-3.05	0.003
Sig = 0.003, f = 9.31, Adjusted $R^2 = 0.04$, r = - 0.21					

According to Table 8, F-value is significant at the 99% confidence level. Thus, the null hypothesis is rejected and the alternative one is confirmed. The Adjusted R^2 value is 0.05, i.e. mental pressure can predict 4% of the variance in academic achievement motivation. Given the significance of beta coefficients, the null hypothesis is rejected at the 99% confidence level, suggesting the negative effect of the respondents' mental pressure with a Beta value of -0.21 on academic achievement motivation.

4. Discussion and Conclusions

This study investigated the relationship of mental pressure with optimism and academic achievement motivation among second grade male high school students. The results related to the first research hypothesis indicated a negative significant relationship between mental pressure and optimism, suggesting that an increase in students' mental pressure reduces their optimism. In addition, the regression analysis indicated that mental pressure predicted 5% of the variance in optimism. This finding is consistent with the results obtained from a study conducted by Jafar-Tabatabaee et al. (2013), and Khoshouei (2009), who examined the relationship of optimism with mental pressure and coping styles among students in Isfahan and found that optimism and its components were significantly and negatively related to mental and inefficient coping styles; while optimism and its components were significantly and positively correlated with efficient coping styles. The results related to the third research hypothesis indicated a negative significant relationship between mental pressure and academic achievement motivation, suggesting that an increase in students' mental pressure reduces their academic

achievement motivation. In addition, the regression analysis indicated that mental pressure predicted 4% of the variance in academic achievement motivation. This finding is consistent with the results obtained from a study carried out by Mac and Sinclair (1992) and Sarabadani et al. (2011) who examined the relationship of students' mental health with their academic achievement motivation and self-esteem in Shiraz and found a significant negative relationship between mental pressure and academic motivation ($P < 0.01$) and a similar relationship between achievement motivation and self-esteem ($P < 0.01$).

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