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The Role of Meanings of Education in Perceived Stress and Academic Optimism Among Students

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Abstract

This study aimed to examine the relationship of meanings of education with perceived stress and academic optimism. A corpus of 375 senior high school students in Neishabur (125 female students and 250 male students) was selected as a sample using a stratified random sampling method. The participants were evaluated by Meanings of Education Scale, Perceived Stress Inventory, and Academic Optimism Survey. Data were analyzed using a Pearson correlation coefficient, a one-sample t-test, an independent t-test, and a stepwise regression analysis. Results indicated that the variable of meanings of education was not significantly related to perceived stress and academic optimism. However, there was a significant difference in meanings of education between the male and female students. The female students' mean score on meanings of education (301.76) was higher than that of their male counterparts (284.85).

Keywords: meanings of education, perceived stress, academic optimism.

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Introduction

In general, people's beliefs in themselves and in their abilities to have good performances are among factors affecting their academic performance. Academic optimism is a new concept formed by Tschannen-Moran et al. in 2013. This concept consists of three main components, i.e. students' academic emphasis, their trust in teachers, and their sense of identity towards school, and is a positive belief among students which aids them to provide the grounds for their academic achievement by considering themselves capable of trusting their teachers and having a sense of identity towards school with an emphasis on their learning. Academic optimism contributes to creating a positive environment at school. Additionally, being in such an environment leads to an increase in teachers' efficiency (Hoy et al., 2006). Academic emphasis creates high expectations and standards for academic success (Goddard et al., 2000). At schools with high levels of academic optimism, teachers, students, and parents trust each other. This trust creates empathy amongst them (Hoy et al., 2006). Students' trust in teachers is the second component of academic optimism among students. Students' trust in teachers means that students believe their teachers are always ready to help them, are easily accessible for having a discussion, and put all their efforts into their teaching. Moreover, they believe that they can count on their teachers' help and they believe that their teachers do a great job, are always honest, and actually listen to them. The last component of academic optimism among students is their academic emphasis. It is based on this belief that students are likely to succeed in environments that provide interesting and challenging activities. Students' academic emphasis includes policies, measures, expectations, and norms that lead them towards progress (Tschannen-Moran et al., 2013). Stress is a common phenomenon in the modern life. Many students complain about the stress they have to deal with during their study periods at universities. During their study years, students engage in challenging academic tasks, search for job positions, and make decisions that can have a profound effect on their futures. A large number of students who enter universities have some certain feelings and attitudes towards education, educational environment, and the institute in which they study. Over time, their viewpoints affect their educational behaviors and motivational purposes and may influence their academic

achievement or failure. Scheier, Carver, and Bridges (2003) suggested that people's levels of optimism had significant impacts on their perceptions. Therefore, optimism can be considered as a useful predictor of people's behaviors. For instance, while it is assumed that optimistic students are able to manage challenges of postgraduate education, pessimistic students have few abilities to do so. In a study conducted on college students, optimism predicted high levels of adjusting to college, high levels of self-esteem, and low levels of loneliness (Montgomery, Haemmerlie, & Ray 2003). Moreover, it was predicted that very optimistic students, compared to others, would be less likely to consider education as a method of getting away from their real lives. Furthermore, it is assumed that optimism has a direct correlation with this viewpoint that education could lead to changes in the world and changes in learning and developing self-esteem and social relations; since they include a positive outlook on the future that optimists often believe in (Michelle, Krypel, & Henderson-King 2010). Analysis of perceived stress among college students is specifically related to the present study. A study showed that perceived stress tended to increase during the first academic year among freshman students (Wintre & Yaffe, 2000). In addition, high levels of perceived stress were associated with an increase in anger and a decrease in the possibility of controlling anger among college students (Winterowd et al., 2005). This is while another study demonstrated that high levels of perceived stress were correlated with symptoms of physical diseases among freshman college students (Miczo, Miczo, & Johnson, 2006). Accordingly, based on what is known about the diversity of perceived stress, various students can experience and interpret a potentially same aspect of education in specific ways. This may explain a divergence in their views on education. From this perspective, students with high levels of perceived stress may regard periods of their undergraduate studies as years of dealing with negative situations rather than gaining positive goals. As a result, students with high levels of perceived stress may focus on few positive aspects of education, including learning, as methods of developing their roles, since they may be more concerned about the stress they have to deal with during their education. This is while they may consider education, like other aspects of life, as a source of stress. Gan et al. (2007) have reported that severe levels of stress were associated with students' low

participation. Hence, it was predicted that high levels of perceived stress were negatively related to a number of characteristics, like considering education as a chance to learn and develop esteem, and was positively correlated with other characteristics, including regarding education as a source of stress. Little research has directly been conducted to examine students' viewpoints on meanings of education. A study aimed to compare meanings of education among successful and unsuccessful students showed that among 10 components of meanings of education, there were significant differences in three components, i.e. career preparation, stress, and escape, between the two groups under study (Isazadegan, Hasani, & Ahmadian, 2009). According to Astin (1993), meanings of education among students form during the first school years. Weiner (1999) indicated that education provides an experience of having a sense of order, a purpose in life, and a sense of hope when dealing with stressors. New findings have demonstrated that meanings of education are related to perceived stress, optimism, and coping styles among students (Krypel & Henderson-King, 2010). In another study, Astin et al. (2002) showed that students' priorities for education were changing such that an applicable view of education, focusing on achieving professional opportunities and gaining financial benefits, became a great priority. Most of the previously carried out studies addressed the viewpoints of specific populations of students on education. For example, comparing students' viewpoints on education with those of their classmates who had the experience of studying in a college. The first generation of college students often finds studying in a college as a way of gaining status and respect, a method of making their families proud, and a chance to help their families financially after getting their degrees. Based on the mentioned theoretical foundations, this study was conducted with the aim of examining the relationship of meanings of education with perceived stress and academic optimism among senior high school students in Neishabur (Zebarkhan).

Methodology of Research

This descriptive study followed by a correlational design. The current study had a statistical population constituting of all senior high

school students in Neishabur (Zerabkhan) in the academic year 2016-2017 who were 9125 students. Among these people, based on the Krejcie-Morgan table, 375 students were selected as the sample using the stratified random sampling method. Out of these 375 students, 125 students were female and 250 students were male. The Meanings of Education Scale was developed by Henderson-King and Smith (2006) to measure meanings of education. It includes 86 items and 10 components. Each component indicates a specific aspect of meanings of education and obtaining high scores on each of these components shows that a subject gives priority to that component. The components of this scale are career preparation (11 items), independence (5 items), finding direction for the future (3 items), learning (10 items), self-development (11 items), taking the next step (3 items), making social connections (12 items), changing the world (8 items), stress (12 items), and escape (11 items). The reliability of this scale was examined using a Cronbach's alpha coefficient and it was reported to range from 0.77 to 0.91 (Isazadegan et al., 2009). In the current study, using a Cronbach's alpha coefficient, the internal consistency of this scale was obtained 0.92. Cronbach's alpha coefficients of its components, i.e. career preparation, independence, finding direction for the future, learning, self-development, taking the next step, making social connections, changing the world, stress, and escape, were 0.89, 0.67, 0.56, 0.80, 0.73, 0.35, 0.77, 0.64, 0.66, and 0.61, respectively. The Perceived Stress Inventory was designed by Cohen et al. (1983) and it includes 14 items. Each item is scored based on a 5-point Likert-type scale (4=not at all, 3=low, 2=moderate, 1=high, and 0=very high). Doran et al. (2006) assessed its Cronbach's alpha coefficient and indicated that its reliability was 0.74. To examine the criterion validity of this inventory, using symptomatological measures, Cohen et al. (1983) assessed its correlation coefficient and reported that it ranged from 0.52 to 0.76. In the current study, the Cronbach's alpha coefficient of this inventory was 0.73. The Academic Optimism Survey was designed by Tschannen-Moran et al. (2013) and it has 28 items which are scored based on a 5-point Likert-type scale. It includes three subscales, i.e. students' academic emphasis (8 items), students' trust in teachers (10 items), and students' sense of identity towards school (10 items). The reliability of these three subscales were 0.892, 0.869, and 0.912, respectively. The reliability of the whole scale was 0.923.

In the present study, the Cronbach's alpha coefficient was 0.89 and the Cronbach's alpha coefficients of its subscales, i.e. students' academic emphasis, students' trust in teachers, and students' sense of identity towards school, were 0.86, 0.78, and 0.83, respectively.

Results of Research

What is the level of meanings of education among the students?

Table 1. Mean scores of meanings of education and its components among the students.

Variable	N	M	SD	Expected mean	Error	df	Sig
Meanings of education	375	290.42	44.52	258	2.29	14.13	0.00*
Career preparation	375	38.29	8.26	33	0.426	374	0.00*
Independence	375	18.31	4.16	15	0.274	374	0.00*
Finding direction for the future	375	10.67	2.55	9	0.129	374	0.00*
Learning	375	35.48	7.65	30	0.364	374	0.00*
Self-development	375	38.77	7.67	33	0.396	374	0.00*
Taking the next step	375	10.42	2.77	9	0.143	374	0.00*
Making social connections	375	42.34	8.48	36	0.438	374	0.00*
Changing the world	375	27.35	5.86	24	0.303	374	0.00*
Stress	375	34.904	7.34	36	0.379	374	0.04
Escape	375	33.94	6.47	33	0.334	374	0.07

$P < 0.05$

Given the results presented in Table 1, the mean score of meanings of education among the students (the female and male students) is higher than the expected mean (258). Therefore, with a 95% confidence level, it can be stated that the level of meanings of education among the students is greater than the expected mean of the considered population under study. Moreover, according to these results, the means of components of meanings of education, i.e. career preparation, independence, finding direction for the future, learning, self-development, taking the next step, making social connections, and changing the world, are 33, 15, 9, 30, 33, 9, 36, and 24, respectively. Except for stress and escape, which means are 36 and 33, respectively, all other components' mean scores are greater than the expected mean among the students. Accordingly, with a 95% confidence level, it can

be stated that the levels of the components of meanings of education, except for stress and escape, are all higher than the expected mean and they are all significant at the 95% level.

What is the level of perceived stress among the students?

Table 2. Mean score of perceived stress among the students.

Variable	N	M	SD	Expected mean	Error	df	Sig
Perceived stress	375	26.91	6.57	42	0.339	374	0.00*

P<0.05

Given the results presented in Table 2, the mean score of perceived stress among the students (the female and male students) is lower than the expected mean (42). Therefore, with a 95% confidence level, it can be stated that the level of perceived stress among the students is lower than the expected mean of the considered population under study and is significant at the 95% level.

What is the level of academic optimism among the students?

Table 3. Mean score of academic optimism and its subscales among the students.

Variable	N	M	SD	Expected mean	Error	df	Sig
Academic optimism	375	91.88	20.87	84	1.36	374	7.6
A sense of identity towards School	375	31.27	8.21	30	0.424	374	2.99
Trust in teachers	375	33.22	8.26	30	8.26	374	0.00*
Academic emphasis	375	27.45	6.19	24	0.321	374	0.00*

P<0.05

Given the results presented in Table 3, the mean score of academic optimism among the students (the female and male students) is higher than the expected mean (84). Therefore, with a 95% confidence level, it can be stated that the level of academic optimism among the students is higher than the expected mean of the considered population under study. Moreover, according to these results, the means of the subscales of academic optimism, i.e. academic emphasis and trust in

teachers, are 24 and 30, respectively, which are higher than the expected mean of the considered population. However, considering a sense of identity towards school with the mean of 30, there is not a great difference between the obtained and expected means such that it can be stated that, with a 95% confidence level, the levels of academic emphasis and trust in teachers are greater than the expected mean and they are significant at the 95% level.

Is there any significant relationship between meanings of education and perceived stress?

Table 4. Pearson correlation coefficients between meanings of education and perceived stress.

Variable	Correlation coefficient	Sig
Meanings of education	0.76	-0.16
Career preparation	0.06	0.91
Independence	-0.28	0.59
Finding direction for the future	0.80	0.123
Learning	0.03	0.956
Self-development	0.03	0.950
Taking the next step	0.46	0.371
Making social connections	-0.49	0.347
Changing the world	0.26	0.611
Stress	0.65	0.210
Escape	-0.41	0.426

Given the results presented in Table 4, there is a significant difference in meanings of education, its components, and perceived stress. Meanings of education and its components were not significantly related to perceived stress.

Is there any significant relationship between meanings of education and academic optimism?

Table 5. Pearson correlation coefficients between meanings of education and academic optimism.

Variable	Correlation coefficient	Sig
Meanings of education	0.76	-0.16
Career preparation	0.06	0.91
Independence	-0.28	0.59
Finding direction for the future	0.80	0.123
Learning	0.03	0.956
Self-development	0.03	0.950
Taking the next step	0.46	0.371
Making social connections	-0.49	0.347
Changing the world	0.26	0.611
Stress	0.65	0.210
Escape	-0.41	0.426

According to the results presented in Table 5, there is not a significant difference in meanings of education, its components, and academic optimism. Meanings of education and its components were not significantly related to academic optimism.

Are there any significant differences in meanings of education, perceived stress, and academic optimism among the male and female students?

Table 6. Results of the independent t-test conducted to examine meanings of education, perceived stress, and academic optimism among the male and female students.

Variable	Group	N	M	t-statistic	Df	sig
Meanings of education	Female	125	301.76	-3.51	373	0.00*
	Male	250	284.85			
Perceived stress	Female	125	90.11	-1.25	373	0.229
	Male	250	92.76			
Academic optimism	Female	125	27.49	1.26	373	0.228
	Male	250	26.62			

Considering the results presented in Table 6, there is a significant difference in meanings of education among the male and female students such that, with a 95% confidence level, it can be stated that the female students' mean on meanings of education(301.76) is higher than that of the male students(284.85).However, no significant

difference is found between the male and female students with regard to perceived stress and academic optimism.

Discussion and Conclusion

The present study aimed to examine the relationship of meanings of education with perceived stress and academic optimism among the senior high school students (male and female) in Neishabur. The results of this study indicated that there were no significant differences in meanings of education, its ten components, and perceived stress. The results of the current study are not in line with results of studies carried out by Krypel and Henderson-King (2010), Gan et al. (2007), Wintre and Yaffe (2000), and Bisepar (2013). In the study conducted by Krypel and Henderson-King, it was demonstrated that students with high levels of perceived stress may regard periods of their undergraduate studies as years of dealing with negative situations rather than gaining positive goals. As a result, students with high levels of perceived stress may focus on few positive aspects of education, including learning, as methods of developing their roles, since they may be more concerned about the stress they have to deal with during their education. It was predicted that high levels of perceived stress were negatively related to a number of characteristics such as considering education as a chance to learn and develop esteem and was positively correlated with other characteristics, including regarding education as a source of stress. Results of a study carried out by Bisepar (2013) showed that meanings of education were significantly and positively related to perceived stress. As the results of the present study demonstrated, from the students' points of view, the relationships of the components of meanings of education with perceived stress are prioritized as follows: learning, self-development, changing the world, career preparation, making social connections, independence, and finding direction for the future. Moreover, among these components, learning had the highest correlation with perceived stress. No previously conducted studies, the results of which agree with the results of this study, were not found. Additionally, the results of the current study showed that there were no significant differences in meanings of education, its ten components, and academic optimism. No research has been conducted to examine whether meanings of education and its components are related to academic optimism or not;

however, a number of studies have been carried out to evaluate their relationships with optimism. Several studies were performed to investigate the relationship of academic optimism with other variables (academic achievement, academic performance, and the like). The results of the current study are not consistent with results of studies conducted by Krypel and Henderson-King (2010), Cheraghikhah et al. (2015), Isazadegan, Mikaeli, and Maroei Milan (2014), and Moradi et al. (2014). In the study carried out by Krypel and Henderson-King (2010), it was assumed that optimism had a direct correlation with this viewpoint that education could lead to changes in the world and changes in learning and developing esteem and social relations; since they include a positive outlook on the future that optimists often believe in. Furthermore, the results obtained from this study are in line with results of Bisepar (2013). In the mentioned study, optimism was not significantly related to perceived stress and meanings of education. Moreover, results of the above-mentioned study showed that meanings of education together with coping styles could predict perceived stress. Results of studies indicated that optimism predicted academic performance and academic achievement. Results of another study conducted by Isazadegan et al. (2014) demonstrated that hope, optimism, and meanings of education explained and predicted 25.6% of the variances in academic performance. There was no research on academic optimism. In the present study, the mean of meanings of education among the female students was higher than that of their male counterparts. Another study done by Isazadegan et al. (2009) suggested that women, compared to men, obtained significantly higher scores in career preparation, finding direction for future, and learning and the men, compared to the women, obtained significantly higher scores in stress. There were no gender-related differences in independence, self-development, taking the next step, making social connections, changing the world, and escape. In explaining these results, they can be compared with results of a study conducted by Jokar and Delavarpor (2007), in which the authors argued that female students, compared to male students, were more sensitive and concerned about their academic activities. When the value of a goal is high for individuals and whenever people expect to succeed in achieving the goal, they will strive really hard. Moreover, since education still has certain social functions for female students and it

maintained its value for them, female students are highly motivated for studying. This is why it seems that this high sense of responsibility among female students is due to gender roles. The high mean of perceived stress among the male students can be explained based on the issue of having concerns about finding a job in the future and gaining an income and worries about post-graduate issues, going to military service, and gender roles. In the present study, there was no significant difference in perceived stress among the male and female students. This finding is not consistent with results of a study conducted by Shokouhi Amir Abadi, Khalatbari, and Rezabakhsh (2010) which indicated that there was a significant difference in perceived stress among male and female students and its level was higher among the female students compared to their male counterparts. Among reasons for inconsistency between the results of this study and results of other studies, the following can be mentioned. Perhaps the students did not fill out the questionnaires honestly, they did not respond to them patiently due to the large number of questions, they did not answer them properly due to emotional, cognitive, or behavioral factors, including low self-esteem and false self-esteem, or they did not have a correct understanding of meanings of education. It should be noted that since teachers can play a key role in improving student's trust and respecting the students and establishing close relationships with them can increase their motivational and cognitive orientations, it is suggested that workshops be held to increase academic optimism among school teachers. In general, the results of the current study indicated that, in addition to emotional and affective factors involved in education, the cognitive dimension of learning may also be influenced by future expectations. Students who intend to continue their studies have specific meanings of education and cognitive factors in their minds and they pursue specific goals in line with them. In fact, the educational viewpoint and meanings of education can reflect a part of the cognitive system and students' viewpoints before entering the university. This may also affect their methods of processing information and, subsequently, affect their academic behaviors and motivational orientations after high school. Since the present study was carried out in one of the cities in Iran and its statistical population was only limited to the senior high school students in this city, cautious should be exercised

when generalizing these findings to other students studying in other cities. Among limitations of this study, the fact that the measurement tool used to examine meanings of education was recently developed, lack of a thorough psychological examination, and lack of research conducted to assess meanings of education in Iran and other countries can be mentioned. Perhaps through understanding meanings of education from students' perspectives, their motivational and value orientations can be better perceived.

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