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The Relationship between Hope Components with Academic Burnout, Motivation, and Status of Students in Qom University of Medical Sciences, Qom, Iran

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Abstract

Background & Objective: Hope can maximize the satisfaction and mental wellbeing of students and result in their physical and mental health and adaptation. This study aimed to determine the relationship between hope components with academic status, motivation and burnout in students of Qom University of Medical Sciences, Qom, Iran.

Materials and Methods: This correlational, descriptive study was conducted on 261 students in 2017, who were selected by random relative cluster sampling based on gender. Data were collected using the hope components questionnaire by Snyder et al., academic burnout scale by Berso et al., and academic motivation scale by Vallerand et al. In addition, data analysis was performed using Pearson's correlation coefficient, independent t-test and stepwise multiple regression.

Results: In this study, there was a negative, significant relationship between the total score of hope components and their subscales with academic burnout. On the other hand, a positive, significant association was observed between the mean total score of hope components and their dimensions with academic motivation. However, no significant relationship was found between the mean total score of hope components and their dimensions with academic status. Moreover, the regression results indicated that academic burnout was able to predict hope components in a negative, significant manner.

Conclusion: According to the results of the study, hopeful students have more academic motivation and lower vulnerability to academic burnout. Therefore, it is suggested that the hope level of students be increased by university authorities and professors in order to improve and decrease their academic motivation and burnout, respectively.

Introduction

Education is fundamental to the development and growth of any society. Every year, a substantial sum of national incomes is spent on higher education in all countries. However, some factors lead to the loss of a part of this investment. In this regard, one of the factors affecting the academic performance of students is psychological factors (1), including academic motivation. The psychology of learning considers motivation as a prerequisite for learning (2). Motivation is the inner state that motivates a person to perform a particular activity (3). According to Fidan & Ozturk, motivation is a force that drives the individual to achieve a high level of success and performance and to overcome obstacles (4). In addition, psychologists and teachers believe that motivation is a key concept and is applied to explain different levels of performance (5).

In fact, motivation is the basis for learning and one of the most important determinants of failure and success (6). Academic motivation helps students get the motivation needed to successfully complete a task, move toward their goals and achieve a specific level of competency in their work so that they would ultimately achieve the necessary success in learning and academic achievement (7). When learners are motivated to learn, the process of teacher-student communication is facilitated, subjects become more fluent, anxiety is reduced, and creativity and learning are manifested. Impaired motivation can cause problems at the level of emotions and behavior and can provide the basis for pessimism, anxiety, depression and psychological problems as well as a significant decline in personal, social, and occupational performance, thereby negatively affecting students' academic performance (8).

Given the fact that motivational factors affect the academic performance of medical students, which is related to the health of the entire community, educational systems should strive to enhance education

and related components, such as learners, teachers, as well as the educational environment and facilities (9). Not only medical science students are the most important asset for the medical community, but also they are a national capital. Basically, academic motivation is the driving force of student activities (7). Academic burnout is one of the important causes of decreased motivation and a decline in the academic performance of students, which lays the foundation for negative consequences such as decreased growth and development, depression and mental health deterioration (10). In educational situations, academic burnout refers to fatigue arising from study-related requirements, development of a pessimistic and insensitive attitude toward educational content, and a sense of poor personal development in the field of education (11).

Previous studies have shown that academic burnout in students is associated with poor academic performance (12), lack of passion and interest to study (13), test anxiety (14), procrastination and academic perfectionism (15) and intrinsic motivation (16). Given the consequences of burnout, researchers seek to identify the factors that contribute to or counteract this educational dilemma (17). Academic burnout could occur due to various reasons, recognition of which plays an important role in the control of this phenomenon. While overlooked, hope seems to play a significant role in academic burnout. Moreover, hope is one of the variables recently addressed in the field of successful practice in various fields, including education, and is closely linked to academic motivation (18). In fact, hope is a motivational-cognitive structure that has recently been emphasized as a potential psychological force that could be beneficial as a support factor for individuals facing adverse life events. In the Islamic view, hope is an important factor for motivation, effort, and living, and preventing depression, suicide and rebellion. The Holy Quran regards hope as an important factor in the movement and life of mankind, considering it as a factor that leads human beings to work or practice (19).

Snyder, the founder of hope theory and treatment based on this issue, believes that two kinds of thinking are needed to create hope, including pathways and agency thinking. Pathway thinking is the cognitive component of hope and represents one's capacity and ability to identify, create, and form pathways to the goal (20). In fact, pathway thinking refers to the recognition that one considers various possible paths to achieving the set goals (21). On the other hand, agency thinking is the motivational component of hope, where a person motivates oneself for the use of paths (20). In addition, this type of thinking ensures the person that

he can start and tolerate the necessary efforts to follow specific pathways. Agency thinking reflects directly the individuals' understanding of their ability to start and tolerate targeted behaviors (22).

In a three-year longitudinal study, Day, Hanson, Maltby, Proctor & Wood concluded that hope uniquely goes beyond the intelligence, personality, and past achievements of students, and is able to predict the next achievements of students (23). In a study, Sapio reported a significant relationship between hope and academic performance, and the more hopeful people will have more goals and will make more progress (24). In addition, Ajam Ekrami et al. marked a significant, negative association between the variables of hope to work and academic motivation and burnout (25). In this regard, Isazadegan et al. demonstrated a significant, positive relationship between hope and academic performance (26). The results obtained by Kiafar et al. were indicative of a significant, positive correlation between hope and academic motivation (20). In a study, Zhang, Gan and Cham evaluated academic burnout and motivation among Chinese students, indicating a negative correlation between academic burnout and academic motivation (27). On the one hand, hope is the motivation to seek the will to move toward goals while it is the evaluation to find the right ways to achieve the latent goals from the other hand. Therefore, hope acts as a supportive mechanism in life and leads to growth and increased quality of life (28). Hope emphasizes that hopeful people have full confidence in achieving their future goals. That same confidence leads to more positive thoughts, which in turn generate more motivation and positive emotions that lead the person to achieve his goals. As such, it seems that a positive attitude generated from hope has a positive effect on the academic performance and motivation of students (22).

Decreased academic motivation of students is one of the important causes of academic failure (29). Since motiveless actions in medical students is a serious threat to medical education due to its destructive nature, all preventive or mitigating measures can be important and helpful. Medical students play an important role in providing health for people, and training motivated, and efficient people could improve community health. According to research findings, there is a growing rate of academic burnout in academic centers of Iran (30), in a way that students suffer from a high rate of academic burnout and its outcomes (31). In addition, academic burnout has adverse effects on students in terms of psychological and physical wellbeing (32). Therefore, it seems necessary to identify factors involved in the academic burnout of students. Given the limited number of

research in this field in the country and lack of a similar study in Qom University of Medical Sciences, the present study aimed to determine the relationship between hope components and academic status, motivation and burnout in students of Qom University of Medical Sciences.

Materials and Methods

This cross-sectional and correlational research was conducted during the academic year of 2017-2018. The subjects were selected by random cluster sampling, for which the statistics of studying students were collected after coordinating with the vice-chancellor for research of the university. Afterwards, the total number of students in each school was determined based on gender, and the sample size was determined using the correlation formula (7). Moreover, the number of questionnaires to be distributed in each school and the gender ratio of students were determined. Ultimately, 261 students were selected from six schools (medicine, dental, nursing and midwifery, paramedical, health and traditional medicine). Data were collected using a demographic characteristics questionnaire, as well as hope components, academic motivation, and academic burnout scales. In addition, the academic status of students was determined based on their overall GPA.

The scale of hope components: designed by Snyder in 1991, quoted by Shirmohammadi et al., the scale is used to determine the level of hope among adults (33). This 12-item questionnaire is scored based on an eight-point scale (from completely agree=1 to completely disagree=8). Therefore, the score range of the tool is 8-64. Moreover, the subjects expressed their viewpoint about each item. However, items 2, 9, 10 and 12 assess the factor thinking, items 1, 4, 7, and 8 evaluate strategic thinking, and items 3, 5, 6, and 11 are distractive questions. In a research, Kashdan et al. estimated a Cronbach's alpha of 0.82 for the entire scale and 0.81 and 0.66 for factor and strategic thinking styles, respectively (34). Quoted by Kermani, Lopez and Snyder calculated the internal consistency of the scale at a Cronbach's alpha of 0.74-0.84 and reported the coefficient of the validity of the tool at 0.80 using a retest (35). In a research by Kermani et al., the reliability of the scale was confirmed at the Cronbach's alphas of 0.86, 0.77, and 0.79 for the total hope scale and subscales of factor thinking and paths, respectively (35). Kiafar et al. (2014) reported a Cronbach's alpha of 0.80 for the entire scale, as well as 0.78 and 0.61 for factor and strategic thinking styles, respectively (20). In the present study, the content validity of the scale was confirmed by experts and its reliability was approved at the Cronbach's alpha of 0.71.

Academic motivation scale: this tool was designed and its validity was confirmed by Vallerand et al. (36). The questionnaire evaluates three main dimensions of intrinsic motivation, extrinsic motivation, and motiveless. This 28-item scale is scored based on a seven-point scale, where the score ranges of 28-69, 70-112, 113-153 and 154-196 are indicative of motiveless, low motivation, moderate motivation and high motivation, respectively. Vallerand et al. estimated the total reliability of the tool at 0.71 (36). In addition to primary confirmation of the face validity of the academic motivation scale, several faculty members of Shiraz University of Medical Sciences evaluated the tool's reliability by retest and estimation of the Cronbach's alpha. The coefficient of 0.73 was obtained in retest with a two-week interval. Moreover, the Cronbach's alpha of the whole scale was reported to be 0.88 (5). In a research by Javadi et al., the Cronbach's alpha was estimated at 0.87, 0.73, and 0.82 for the subscales of intrinsic motivation, extrinsic motivation and motiveless, respectively (37). In a study by Rahimi et al., the Cronbach's alpha of 0.69, 0.81, and 0.57 for the subscales of intrinsic motivation, extrinsic motivation and motiveless, respectively (6). In the present study, the content validity of the scale was confirmed by experts, and its reliability was approved at the Cronbach's alpha of 0.91.

Formerly designed by Marzoughi, the academic burnout questionnaire was another tool applied in the current research (38). This 15-item sale encompasses three academic burnout categories, including academic fatigue (five items), academic disinterest (four items), and academic inefficiency (six items). The questionnaire is scored based on a five-point Likert scale (from completely agree=5 to completely disagree=1). In the scale, items 1, 4, 7, 10 and 13 are related to the subscale of academic fatigue, whereas the items 2, 5, 11 and 14 and items 3, 6, 8, 9, 12, and 15 are related to the subscales of academic disinterest and academic inefficiency, respectively. On the other hand, the items of academic burnout subscale, which were presented as positive sentences, were scored reversely (completely disagree=5 to completely agree=1). After that, the academic burnout of each subject is calculated by summing up the scores obtained on the scale. In this tool, the score range of students' academic burnout is 15-75, where lower scores are indicative of lower academic burnout and higher scores show higher academic burnout. In a research by Na'ami, the reliability of the scale was confirmed at the Cronbach's alpha of 0.79, 0.82, and 0.75 for academic fatigue, academic disinterest and academic inefficiency, respectively (39).

In a study by Dashtbozorgi, the reliability of the tool was approved at the Cronbach's alpha of 0.84 for the entire academic burnout scale (15). Bahrami et al. reported Cronbach's alphas in the range of 0.78-0.91 for the entire scale and the factors of academic fatigue, academic disinterest and academic inefficiency (40). In the current research, the content validity of the scale was approved by experts and its reliability was confirmed at the Cronbach's alpha of 0.90.

The present study as approved by the ethics committee of Qom University of Medical Sciences on October 31st, 2017 (code of ethics: IR.MUQ.REC.1396.99). The questionnaires were distributed among the students of the six schools inside classrooms. Prior to the study, the research objectives were explained to the subjects and they were ensured of the confidentiality terms regarding their personal information. In addition, the students were informed that participation in the study was voluntary. Furthermore, the questionnaires were filled anonymously in order to adhere to ethical considerations.

Data analysis was performed in SPSS version 21 using Pearson's correlation coefficient (to determine the degree of correlation between the variables), the independent t-test (to determine the difference between means [between two genders]), analysis of variance (to compare the mean of several groups [schools]), and stepwise multiple linear regression (to predict a criterion variable using two or several predictive variables.

Results

In this research, 259 out of 261 questionnaires were analyzed (99.23% return of scales). The frequency of subjects is shown in Table 1 based on gender, marital status, residential status and school. In addition, the majority of students were in the age range of 18-22 years with a mean of 21.98 ± 4.26. Moreover, the mean GPA of the participants was 16.70 ± 1.21. It is worth noting that these figures were obtained based on the information provided by students. According to the results, the mean score of students' hope components was 48.20 ± 7.01 while their mean score of academic motivation was estimated at 137.56 ± 26.12 In addition, the mean score of academic burnout was 39.74 ± 10.92. In the present study, we applied Pearson's correlation coefficient to evaluate the relationship between the variables of hope components and their subscales with academic status, academic motivation and academic burnout. According to the results presented in Table 2, there was a reverse, significant association between the total score of hope components and their dimensions with academic burnout. Furthermore, a positive, significant relationship was observed between the mean total score of hope components and their dimensions with academic motivation. On the other hand, no significant correlation was found between the mean total score of hope components and their subscales with academic status.

Table 1: Demographic characteristics of the subjects

Variables		N	Percent
Gender	Female	157	60.6
	Man	102	39.4
Marital status	Single	206	79.5
	Married	53	20.5
Residential status	Native	150	58.4
	Non-native	109	41.6
Schools	Medicine	69	26.6
	dental	31	12
	Nursing and midwifery	47	18.1
	Paramedical	68	26.3
	Health	42	16.2
	Traditional medicine	2	0.8
	total	259	100.0

Table 2: The Relationship between hope components and their subscales with academic burnout, motivation, and academic status

Variables	Hope Components (total score)	Subscale of factor thinking	Subscale of strategic thinking	Academic Burnout	Academic Motivation	Academic Status
Hope Components (total score)	1					
Subscale factor thinking	0.928** p= 0.000	1				
Subscale strategic thinking	0.910** p= 0.000	0.691** p= 0.000	1			
Academic Burnout	-0.404** p= 0.000	-0.411** p= 0.000	-0.321** p= 0.000	1		
Academic Motivation	0.225** p= 0.001	0.221** p= 0.001	0.206** p= .002	-0.240** p= 0.000	1	
Academic Status	0.040 p= 0.554	0.064 p= 0.336	0.003 p= 0.964	-0.108 p= 0.117	0.102 p= 0.137	1

** Correlation is significant at the 0/01 level

The results obtained from independent t-test and one-way ANOVA demonstrated a difference between students in various age groups regarding the mean academic burnout.

In this regard, the difference in the mean of hope components, academic burnout and total academic motivation and subscales of the intrinsic and extrinsic motivation of female and male students was not statistically significant. However, there was a significant difference between the mean score of male and female students in terms of the motiveless subscale (in this subscale, a higher score is indicative of a higher level of motiveless and vice versa) (Table 3). The results also indicated a significant difference between the mean score of hope components and academic burnout and motivation of students interested or uninterested in their academic discipline. In other words, students interested in their field of study had a higher level of hope components and academic motivation and low academic burnout. In contrast, the uninterested students had lower hope components and academic motivation and higher academic burnout (Table 4).

Table 3: Results of independent t-test on the mean score of male and female students in the hope components, academic burnout and academic motivation and its Subscale

Statistical index Variables	Female Mean & Standard deviation	Male Mean & Standard deviation	SD	t	p
Hope Components	6.42±48.59	7.81±47.61	248	1.086	0.279
Academic Burnout	11.01±40.09	10.81±39.22	236	0.606	0.545
Academic Motivation (total score)	27.00±138.67	24.74±135.87	239	0.812	0.418
Subscale of intrinsic motivation	85.25±15.70	13.76±61.70	244	1.823	0.070
Subscale of extrinsic motivation	63.25±14.63	13.45±62.45	246	0.433	0.666
Subscale of motiveless	9.88±6.25	6.73±11.82	249	-2.235	* 0.021

Table 4: A Comparison of demographic variables in hope components, academic motivation and burnout

Variables		Hope Components		Academic Motivation		Academic Burnout	
		Mean & Standard deviation	(Pvalue)	Mean & Standard deviation	(P value)	Mean & Standard deviation	(P value)
Age	18-22	48.11±6.58	F=0.172 P=0.842	26.16±136.56	F=0.930	10.65±40.40	F=3.017
	23-26	47.97±6.63		25.55±138/59	P=0.396	10.13±39.40	P=0.051
	26>	49.11±11.70		28.52±145.47		13.26±33.70	
Marital status	Single	48.17±6.83	t=-0.102	25.57±138.65	t=1.263	11.03±39.63	t=-0.325
	Married	48.28±7.73	P=0.919	27.99±133.42	P=0.208	10.53±40.21	P=0.745
Residential status	Native	48.08±6.36	t=-0.274	35.99±135.67	t=-1.364	10.97±39.26	t=-0.730
	Non-native	48.33±7.89	P=0.785	26.27±140.33	P=0.174	10.96±40.32	P=0.466
Schools	Medicine	49.37±6.26		23.41±136.39		10.42±38.29	
	Health	48.42±5.75		26.31±142.20		11.35±41.31	
	Nursing and midwifery	49.32±8.87	F=1.543	29.06±136.95	F=0.782	10.40±38.70	F=1.359
	Paramedical	46.78±6.42	P=0.177	28.11±134.54	P=564	11.52±40.95	P=0.241
	dental	46.51±6.66		23.05±142.70		10.53±40.79	
	Traditional medicine	50.00±5.65		12.72±123.00		7.77±25.50	
Interest in field of study	Interested in field of study	48.79±7.21	t=2.858	25.10±139.25	t=2.006	10.65±38.67	t=-2.968
	uninterested in field of study	45.33±5.2	P=0.005	30.52±129.92	P=0.046	11.08±44.25	P=0.003

In the present study, we applied stepwise multiple linear regression to evaluate the role of predictive variables of academic status, motivation and burnout with the criterion variable of hope components. In total, three variables were entered in the regression equation to determine the share of the three academic status, motivation and burnout variables in determining hope components. As observed in Table 5, the academic status and motivation of students were eliminated from the equation due to the lack of explaining the variance of hope components.

According to the results, the variable of academic burnout predicted hope components reversely and anticipated 15.5% of the variance of hope components. Therefore, academic burnout had the highest share in explaining hope components with a β coefficient of -0.394 at 0.01 alpha level. In other words, the academic burnout variable was the only suitable predictor of hope components. Therefore, it could be concluded that hope components could increase with the decrease of academic burnout.

Table 5: Multiple regression analysis to explain variance of hope Components by variables of academic burnout, motivation and academic status

Predictive variables	Criterion variable	R	R2	F	Sig (F)	Beta	Sig (Beta)
Academic Burnout	Hope Components	0.394	0.155	35.500	0.000	-0.394	0.000

Discussion

According to the results of the present study, there was a reverse, significant relationship between the total score of hope components and their subscales with academic burnout, which is in line with the results of previous studies (25, 32, 41-43). This could be justified by the fact that hopeful people have a better feeling and imagination of their future, and these feelings and perceptions give them the ability to endure some adverse conditions in the present. In fact, hope for brighter futures makes present-day hardships tolerable and even attractive, and students are less likely to be negatively affected by the stressful conditions affecting academic burnout (42). In the present study, there was a positive, significant relationship between the total score of hope components and their subscales with academic motivation, which is consistent with the results of previous studies (20, 22, 28, 44). In explaining this research finding, it can be expressed that hopeful individuals are confident that they will achieve their future goals. That same confidence leads to more positive thoughts, and these positive thoughts generate greater motivation and positive emotions that lead to the achievement of one's goals (45). Moreover, people with high hopes have a greater motivation to find alternative ways to achieve more creative goals. They regard obstacles as challenges and believe they can learn from past successes and failures to achieve future goals. They also choose goals that require more effort (28).

Hopeful people will also have a lot of energy, which motivates them to move on in life and have a positive outlook on the future. People who have high hopes feel that they are in control of the personal events of their lives. Therefore, they consider themselves an active being capable of self-regulating and adjusting their behavior, and this sense of control is a basis for motivation and well-being and creates individual achievements in all areas of life (20). In the current research, there was no significant association between the total score of hope components and their subscales with the academic status of students, which is not in line with the previous studies (46, 47). This lack of association might be related to the study's limitations. For instance, the GPA of students was an indicator of their academic status. Given the fact that the participants were selected from different schools, the meaning of GPAs is not the same for all schools and depends on the overall academic status of other students in each school. In addition, information related to the GPA of students is provided by themselves. Therefore, lack of direct access to

students' GPA was one of the drawbacks in the present study, for which it is recommended that the standardized scores of academic achievement of students be used in future studies based on the norms of each school.

According to the results of the present study, no significant difference was observed between the male and female students in terms of the mean total score of academic motivation and the subscales of intrinsic and extrinsic motivation. However, there was a significant difference between the male and female students regarding the subscale of motiveless, which is congruent with the results obtained by Javadi and Fariabi (37). This difference may be because female students are more diligent in homework assignments and more sensitive to their educational progress. Of course, other factors such as personality, family, academic, and social variables need to be considered in this context. Our findings were indicative of no significant difference between the male and female students regarding academic burnout, which is consistent with the results obtained by previous studies (38 and 48). This lack of association between academic burnout and gender in the present study might indicate that stressors previously felt by female students to compete with male students were reduced, and girls have had equal performance in fields formerly dominated by men to show their competency (49).

According to the results of the current research, there was a significant difference between the mean score of hope components and academic motivation and burnout of students interested and uninterested in their academic discipline, which is in accordance with the results obtained by Sharifi Shad et al. (50). This could be justified by saying that students uninterested in studying do not make sufficient effort and their lack of attention will result in academic burnout (51). Ultimately, the regression results demonstrated that academic burnout predicted hope components negatively and significantly, which showed that students with lower burnout have higher hope components. In this regard, our findings are consistent with the results obtained by Sadoughi et al. (32). In general, students with academic burnout are hopeless and uninterested in their discipline. In addition, they less participate in classroom activities, which results in their poor academic performance (52).

Furthermore, academic burnout can lead to mental tensions such as anxiety, failure, anger, fear, depression and stress (10). In a research by Baudrea et al. (quoted by Ajam Akrami et al.), academic burnout led to anxiety and stress about scores and doubt about

the future (25). Finally, learning stress affects learners' self-confidence in a way that discourages them and questions their identity. In other words, they doubt their abilities and feel anxious about their social status (53). One of the major drawbacks of the present study was collecting the research data by self-report. Therefore, the interpretation of the results must be carried out with caution. It is suggested that similar studies be performed in other universities of medical sciences in the future.

Conclusion

According to the results of the present study, and with regard to the importance and role of hope in increase of academic motivation and decrease of academic burnout, it is recommended that the effectiveness of training interventions related to hope or changes in beliefs related to academic motivation and burnout or other training and educational outcomes be assessed in future studies. Moreover, professors and authorities are encouraged to provide opportunities for faculty and students to pursue lifelong learning with interest and motivation and continue living with passion, motivation, and hope. In addition, an opportunity must be made by professors to improve hope components in students regarding their field of study so that students would be motivated to fulfill their assignments and avoid academic burnout.

Acknowledgments

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