

The relationship between emotional intelligence with general health and academic achievement: a case study in Iran's Health system



Mohammad Ranjbar,¹ Razieh Montazerfaraj,² Mastoureh Pourmahmoodian^{3*}

ABSTRACT

Objective: Today, emotional intelligence as a new scientific issue, plays an important role in various aspects of individuals life. Studies that have been done in this area, explain the role of emotional intelligence in different aspects of one's life such as academic achievement, general health, and social relations. The aim of this study was to determine the relationship between emotional intelligence, general health and academic achievement among students of Shahid - Sadooghi University of Medical Sciences in Yazd.

Methods: Siberia Shirring Emotional Intelligence and Goldberg General Health Questionnaire were used for data collection. Students Average GPA was used as an indicator of academic achievement. To analyze the data, Pearson correlation and regression analysis were used.

Results: The results showed that average emotional intelligence and average general health for students are (15.46 ± 99.63) and (11.36 ± 22.98), respectively. There was a significant relationship between emotional intelligence, general health and academic achievement (p<0.001). Other findings showed that there is a statistical correlation between some demographic information with emotional intelligence, general health and academic achievement (p<0.001).

Conclusion: In order to achieve a high level of academic skills, and future success, in addition to general cognitive abilities, students should have suitable growth in aspects such as emotional control. Therefore it is recommended for university curriculum planners to pay more attention to emotional intelligence and the need for improving it among students.

Keywords: Emotional Intelligence, academic achievement, general health.

Cite This Article: Ranjbar, M. Montazerfaraj, R. Pourmahmoodian M. 2018. The relationship between emotional intelligence with general health and academic achievement: a case study in Iran's Health system. *Bali Medical Journal*. 7(2): 505-510. DOI:10.15562/bmj.v7i2.750

¹Ph.D. in Health Policy, Health Policy Research Center, Shahid Sadoughi University of medical sciences, Yazd, Iran

²Ph.D. in Healthcare Management, Hospital Management Research Center, Shahid Sadoughi University of medical sciences, Yazd, Iran

³MSc in Healthcare Management, Shahid Sadoughi University of medical sciences, Yazd, Iran

INTRODUCTION

Health is known as a part of human right and a fundamental social objective. Health is crucial for fulfilling the basic human needs and for the improvement of the quality of human life.¹ Emotional intelligence represents ability to properly and adaptively identify, assess and express emotions. It also includes the ability to understand the human environment, the ability to recognize others emotions and using emotional knowledge to facilitate the cognitive activities, adaptive practice and thinking guidance.² According to Mayer et al., emotional intelligence abilities and skills consist of four domains: the ability to understand the emotions, using emotions to expedite thinking, understanding emotions and emotional management.³

People who have higher emotional intelligence, have greater social skills, make better and more stable relationships and are better at dealing with problems. Regarding The Constitution of the World Health Organization, general health refers to a complete physical, mental and social welfare and there is an interaction between these three aspects. Therefore, according to this definition, health not only consists

of individual's physical aspect, but mental and social aspects should also be considered.⁴

Mental health is the ability to establish a balance in life and to withstand problems. According to psychologists, one of the factors that promote mental health and has a predictive role in this regard is Emotional Intelligence.⁵ One of the most important criteria of emotional intelligence is that how well a person responds to stress. There are some emotional intelligence skills that facilitate processing of emotional information and make the thoughts coherent. So, those who identify, understand and pay attention to their emotions and rebuild their moods, can minimize the influence of stressful events and easily confront them and as a result, benefit from greater physical and mental health.² Studies on the relationship between emotional intelligence and general health have shown that components of both constructs have a significant relationship with each other.⁵ Like this study, Slaskiet et al. as well as Schotte et al. in their study found that emotional intelligence is positively correlated with mental health. Their findings reveal the importance of emotional intelligence

*Correspondence to:
Mastoureh Pourmahmoodian, MSc
in Healthcare Management, Shahid
Sadoughi University of medical
sciences, Yazd, Iran
m.pourmahmoodian@yahoo.com

in mediating stress and increasing flexibility. If emotional intelligence can be increased by focusing, it can be used as a stress management technique.^{6,7} The study by Oginska-Bulik showed that people with higher emotional intelligence have less job stress and health problems. In his view, emotional intelligence has a preventive role in health problems, particularly depression. People with high levels of emotional intelligence exhibit better ability to cope with stress, higher emotional expression as well as greater management and control of them.⁸ Hemmati et al., have shown that emotional intelligence is associated with depression and people with higher emotional intelligence have lower rates of depression.⁹ The results of some other studies indicate that there is a positive relationship between emotional intelligence and mental health.¹⁰ Another application of emotional intelligence is its use in the field of education and social learning programs. Because in the twenty-first century, in addition to cognitive development and academic achievement, we must also pay attention to the emotional development of students and to prepare them to engage responsible decision makings, resisting against peer group pressure and the influence of mass media.¹¹

The mental challenges during university can cause anxiety, endanger students health and cause educational failure.¹² In this context, Parker et al. examined the relationship between emotional intelligence and academic success. The researchers studied 37 students studying in the first year at Ontario University. They concluded that the academic success largely depends on emotional intelligence and emotional intelligence can be decisive in the competitive process to achieve higher levels of education.¹³

Austin assessed emotional intelligence in 156 first-year students studying medical sciences. Results showed significantly higher emotional intelligence in females compared to males. In addition, after the study, limited evidence was obtained about the relationship between emotional intelligence and educational status of the participants.¹⁴

This study aimed to investigate the relationship between emotional intelligence with general health and academic achievement in students of Shahid-Sadooghi University of Medical Sciences.

METHODS

This is descriptive-analytic research, with a cross-sectional study conducted in 2016. The study population consisted of all undergraduate and graduate students studying in Shahid - Sadooghi University of Medical Sciences. Stratified random method was used for sampling. Considering a

95% confidence level and a 20% correlation coefficient between emotional intelligence and general health, the minimum required sample size for this study was estimated to be about 200. Of them, 155 individuals were undergraduate student, and 45 individuals were graduate students. After determining the sample size, the questionnaires (including Emotional Intelligence Questionnaire, general health Questionnaire) were used for data collection. The student GPA was used as an indicator of academic achievement.

Data were collected by a questionnaire consisted of two parts: the first part included demographic characteristics (age, sex, educational level, field of study, semester, location) and the Siberia Shiring Emotional Intelligence Questionnaire (SibriaShiring),¹⁵ which is one of the most comprehensive self-report tests or emotional intelligence. It is a questionnaire with 33 items consisting of 5 subscales: self-motivation, self-awareness, self-control, social awareness and social skills. The test ranking is based on the five - options Likert scale. Replies are sequential and have 5 degrees (always, often, sometimes, rarely, never) and a score of one to five was assigned to it. Scores for every person range between 33 and 165. High scores on this scale indicate high emotional intelligence. Validity and reliability of the questionnaire have been reviewed and approved in Iran. Ranjbar et al. reported reliability of 0.81.¹⁶

The second part includes the Goldberg General Health Questionnaire (GHQ).¹⁷ The questionnaire was designed by Goldberg, which contains 28 questions with four-options of answer in four domains of physical symptoms, anxiety, social dysfunction, and depression. Questions 7 to 8 are related to physical symptoms, questions 8 to 14 are related to anxiety and insomnia, questions 15 to 21 are related to social dysfunction and questions 22 to 28 are related to depression.

This test shows the mental - physical state of a person's health. The test ranking is based on the 4-choice Likert scale, and a score of zero to three was assigned to it. Finally, scores range from 0 to 84. The total score is divided into three areas: perfect health, disease threshold, and the deterioration. General health scores are as follows: score of 0-28 indicates perfect health, score of 56-29 represents disease threshold, and score of 84-57 reflects the severity of the disease. The higher score indicates worse general health status. Goldberg et al. reported the validity of the questionnaire to be 78. In Iran, the reliability of the questionnaire using three methods namely Test-retest, Split-half, and Chronbach's Alpha was reported to be 70, 93, and 90, respectively.¹⁸

Students average GPA was used as an indicator of academic achievement. To collect data, questionnaires were randomly administered to students in the classroom. The study population consisted of all undergraduate and graduate students of Shahid Sadooghi University of Medical Sciences in Yazd. Each of the courses makes up a class. Sampling was randomly done within each class as well. Inclusion criterion included students who have studied at least one semester in the School of General Health. Exclusion criteria were senior students. Data were analyzed using descriptive statistics (mean, standard deviation) and inferential statistics (Pearson correlation coefficient, regression, T-Test) via SPSS 22. Before the study, verbal consent was obtained from all students participated in the study. They were assured that the data was collected anonymously and only for use in research. Code of ethics: IR.SSU.SPH.REC.1395.27

RESULTS

From whole 200 participants, 136 participants were women (68%), and 64 participants were male (32%). And the number of undergraduate and

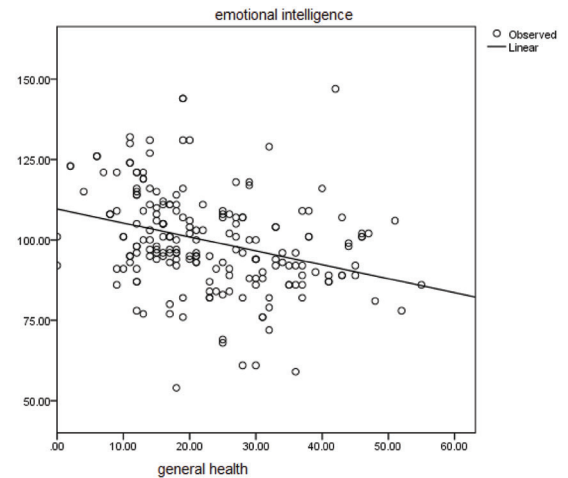


Figure 1 Correlation Coefficient of Emotional Intelligence and General Health in Students

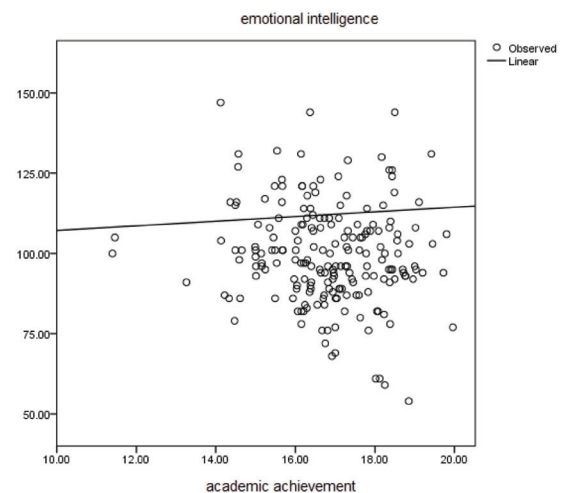


Figure 2 Correlation of Emotional Intelligence and Academic Achievement in Students

Table 1 Correlation between Academic Achievement, Emotional Intelligence, and General Health

Variable	General Health	Emotional Intelligence	Academic Achievement
Emotional Intelligence	*-0.324	1	0.122
General Health	1	-0.324	-0.027
Academic Achievement	-0.027	0.122	1

Table 2 Regression Coefficients of the Impact of Emotional Intelligence on General Health

Predicting variable	Significance level	T-test statistic	Standard error	β
Emotional Intelligence	0.00	9.269	4.991	-
General Health	0.00	-4.720	0.050	-0.318

R = 0.318, R² = 0.101, F = 22.280

Table 3 Regression Coefficients of the Impact of Emotional Intelligence on Educational Achievement

Predicting variable	Significance level	T test statistic	Standard error	β
Fixed amount	0.000	27.448	0.653	-
Emotional intelligence	0.021	1.843	0.065	0.122

R = 0.122, R² = 0.015, F = 3.397

graduate students was 155 (77.5%) and 45 (22.5%), respectively. As many as 87 participants (43.5%) were living in the dormitory. Average scores on emotional intelligence and the average general health of students were (15.46 ± 99.63) and (11.36 ± 22.98), respectively.

Linear regression was used to further investigate the relationship between emotional intelligence, general health, and academic achievement and to determine that to what extent the score of emotional intelligence can predict general health and academic achievement. According to Table 2, emotional intelligence was considered as the predictor variable, and general health was considered as a dependent variable. The =0.101 showed that 10% of the variance in general health is explained by emotional intelligence. Furthermore, There is a statistically significant relationship between emotional intelligence and general health (P < 0.001).

Based on Table 3, emotional intelligence was considered as the predictor variable, and Academic achievement was considered as a dependent variable. The $r=0.105$ and only about 2 percent of the variance in students' academic achievement is explained by emotional intelligence. The t-test statistic and its significance level also show that there is a correlation between the two variables $p<0.021$.

DISCUSSION

The results of this study showed that there is a negative and significant relationship between emotional intelligence and general health ($r=-0.318$) ($p < 0.0001$). This finding is consistent with the results of Sureshjani, Khosrowjerdi, Khanzadeh, and Parker, indicating the significance of the relationship between general health and emotional intelligence among students.^{11,19,20} Academic years is an exciting and challenging period for students. During this period, stressors and challenges can cause anxiety which endangers students' health. On one hand, having psychological problems lead to problems in doing homework, lack of motivation, anxiety, fear, and concern. Mental health problems cause a significant effect in students' mind. Therefore, they certainly don't have sufficient energy for educational and learning activities.

Based on the results obtained, it was observed that among dimensions of emotional intelligence, self-control variable has a more negative correlation with health dimensions ($r = -0.326$). Among the dimensions of general health, anxiety and depression have a more negative correlation with dimensions of emotional intelligence, ($r=-0.361$ and $r=-0.252$, respectively). Students with high emotional intelligence often properly manage anxiousness in high-pressure situations. These findings show that scores of anxiety test are reduced when emotional control is increased. Emotional intelligence also plays an important role in reducing stress. Studies emphasize on the relationship between this theory and depression. This means that people with higher emotional intelligence, have lower rates of depression.^{6,7} Based on the findings of the study, there is a significant positive relationship between emotional intelligence and academic achievement ($p < 0.001$) ($r=0.122$). This means that with increasing emotional intelligence, academic achievement increases. Given that intelligence has been defined as problem-solving skills and the ability to learn and deal with abstract issues (Slavin 2006), this result was expected. Another research that is consistent with this hypothesis is

the study of Parker and colleagues examining the relationship between emotional intelligence and academic success. The study participants were 37 students in the first year of Ontario University. They concluded that the academic success largely depends on emotional intelligence and emotional intelligence can be decisive in the competitive process to achieve higher levels of education.²⁰ Some studies of similar theme has been done in Iran, for example, Samariin with his study titled "the investigation of emotional intelligence and academic achievement in students" in 2006 concluded that the overall score of emotional intelligence and some of its components have a significant relationship with levels of academic achievement ($p < 0.005$). In explaining this hypothesis, it can be said that the findings of this study and previous research clarify the importance of emotional intelligence as teachable skills in academic achievement and sustainability with educational environments. Emotional and social skills training can lead to short-term and long-term success. The inclusion of the concept of emotional intelligence in schools and universities curriculum can help learners to cope better with the school stresses, and so, it's less likely to develop emotional problems and quit their education.

The results showed a significant relationship between emotional intelligence, general health, and academic achievement ($p < 0.001$). We found a negative correlation between emotional intelligence and general health ($r = -0.324$), with a correlation coefficient equivalent to 4/32 percent and a positive correlation between emotional intelligence and academic achievement with a correlation coefficient ($r=0.122$), equivalent to 12.2 percent were obtained. This finding is consistent with study by Sureshjani et al, Aschvtet et al, and Ślaşkieet et al that reported the significance of the relationship between emotional intelligence, academic achievement, and general health.^{6,7,11,19,20} The reasons for such approval can be argued that people with high levels of emotional intelligence are determined by the ability to cope better with stress, the ability of emotional expression, and the ability for control and management of stresses. So it can be said that high emotional intelligence on the one hand by increasing coping skills reduces stress and affects individuals' health. On the other hand, the emotional intelligence skills increase communication skills and the ability to establish and maintain social networks which in turn affects individuals' health. Also, students with high emotional intelligence have greater control against stressors and properly manage psychological pressures. These abilities help them to control their emotions and be flexible in confronting problems.

Those students which are able to deal intelligently with their emotions, have more continence and self-confidence and attempt more to learn.

Regression analysis was performed, and the emotional intelligence was considered as predictor variables and the general health was considered as a dependent variable. Regression analysis showed that emotional intelligence significantly predicts students' mental health ($p = 0.000$). The results of this study were consistent with Sureshjani findings regarding the predicting role of emotional intelligence in students' mental health. High emotional self-awareness, the ability to solve problems effectively and courage. They need to be independent and know clearly their goals to help for mental health process and to increase their abilities for being successful in life. Hence, emotional intelligence predicts mental health. According to the regression analysis results, emotional intelligence positively and significantly predicts academic achievement of students ($p=0/021$) that is consistent with the findings of life.¹⁹ When students see the university as a place where social and emotional needs are met efficiently and responsibly, they are more likely to be interested in learning. So, emotional intelligence can be a predictor of academic achievement.

CONCLUSION

According to the results of this study and several other studies, it can be concluded that today's students are facing with various problems and needs which impose a huge burden on their mental health and their motivation to progress their academic performance. Thus, the supporting policies of the universities for students, contributing to their quality of life, helping them to build healthy relations with their teachers, creating diverse opportunities for them to benefit from various scientific and cultural activities can boost students' morale and mental health. Therefore, it is necessary for university authorities to emphasize cognitive intelligence in the educational system, to pay attention to the concept of emotional intelligence, and to apply it. So, it seems that learning and applying the concept and skills of emotional intelligence in academic achievement and not solely focus on cognitive intelligence, could improve these skills and improve emotional intelligence of students at the university level and effect on their occupational success in the future. Therefore, improving and strengthening the concept of emotional intelligence skills at the university level is one of the important tasks of relevant authorities. Hence, the teaching of these subjects is essential.

ACKNOWLEDGMENTS:

We sincerely appreciate and thank all those who helped us in this study, especially all the students who participated in this study. Intervention group significantly reduced after the study compared with the control group.

REFERENCES

1. Botvin GJ, Griffin KW. Life skills training: Empirical findings and future directions. *Journal in primary*. 2004; 25(2): 211-32.
2. Tehrani, T. (1391) The investigation of the relationship between emotional intelligence, mental health and academic achievement in Nishapur Nursing Students, the Journal of the Faculty of Nursing and Midwifery, Hamadan. Volume 20, Issue 3.
3. Mayer J, Salovey P, Caruso DR. Emotional intelligence: Theory, findings and implications. *Psychological inquiry*. 2004;15(3):197-215.
4. Salehish TF, Afghari P, Motevalli M. The Relationship between Academic Achievement & Emotional Intelligence in Nursing Students of Isfahan University of Medical Sciences. *Iranian Journal of Medical Education*. 2012;16(1):629-37.
5. Fata L., Mutabi F, Shakiba SH., Barootion E. Components of emotional intelligence, social as predictors of mental health. *Psychological Studies Faculty of Educational Science and Psychology, Alzahrauniversity*. 2008; 4(2): 101-124.
6. Slaski M, Cartwright S, Health, performance and emotional intelligence: an exploratory study of retail managers. *Strees and Health*. 2002; 18(2) : 63-68.
7. Schutte NS, Malouff JM, Thorsteinsson EB, Bhullar N, Rooke SE. A metaanalytic investigation of The relationship between emotional intelligence and health. *Personality and Individuadifferen cos*. 2007; 42(6): 921-933
8. Oginska-Bulik N. Emotional intelligence in the workplace: Exploring its effects on occupational stress and health outcomes in human service workers. *International Journal of Occupational Medicine and Environmental Health*. 2005;18(2):167-75
9. Hemmati T, Mills JF, Kroner DG. The validity of the Bar-on emotional intelligence quotient in an offender population. *Personality and Individual Differences*. 2004; 37(4): 695-706.
10. Nammazi, Asiya (1394). The investigation of The relationship between general health, emotional intelligence and academic achievement in midwifery students. *Journal of Clinical Nursing and Midwifery*. Volume 4, Issue 2, 20-28
11. Khosrojerdi R, Khanzadeh A. The relationship between emotional intelligence and general health in the teacher training university of Sabzevar. *J Asrar*. 2007;4(2):110-6.
12. Bahrami H. Survey of psychological and social problems in students. *Proceedings of Student mental health*. Tehran. 2006; 54-58.
13. Keshavarz, N. (1393). The investigation of The Relationship between emotional intelligence and academic achievement in students of Medical Sciences of Shiraz University. *Journal of Shiraz*. Volume 5, Issue 3.
14. Austin EJ, Evans P, Goldwater R, Potter V. A preliminary study of emotional intelligence, empathy and exam performance in first year medical students. *Personality and Individual Differences*. 2005;39(8):1395-405.
15. Mansori B. Normalization of Emotional Intelligence Test Sybryashrink on Tehran University students [MA thesis]. Tehran: AllamehTabatabaai University; 2001.
16. Ezzatabadi MR, Bahrami MA, Hadizadeh F, Arab M, Nasiri S, Amiresmaili M, et al. Nurses Emotional Intelligence Impact om the Quality of Hospital Services. *Iranian Red Crescent Medical J*. 2012; 758-763.

17. Hooman, A. (1377). "The Standardization of the general health questionnaire on undergraduate students of teacher training university." Research Report, student counseling Center, Tehran University.
18. Taghavi S. Validity and Reliability of the general health Questionnaire (GHQ-28) in college students of Shiraz University. *Journal of psychology*. 2002
19. Bakhshi Surshjani L. The relationship between emotional intelligence and mental health and academic performance of male and female students of Islamic Azad university- Behbahan. *J Knowledge Res SciEdu curriculum* 2008; 22(19):97-116. [In Persian].
20. Parker JDA, Creque RE, Barnhart DL, Harris JL, Majeski SA, Wood LM, et al. Academic achievement in high school: Does emotional intelligence matter? *J Personal Individual Diff* 2004; 29:313-320.



This work is licensed under a Creative Commons Attribution