Power of emotional intelligence, coping strategies and locus of control in predicting students' general health

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Abstract

General health is a concern for university students. This study aimed to assess power of emotional intelligence, coping strategies with stress, and locus of control in predicting nursing students' general health. This is a correlative study, with a study population of all undergraduate nursing students. Due to the small sample size, all nursing students of the years: 2009, 2010, and 2011 were selected as subjects, which made a total of 145 students. Study tools included emotional intelligence, coping strategies, and locus of control and general health questionnaires. For analysis of data, stepwise regression test was used. Analysis results showed that variables of emotion-oriented coping styles, locus of control, and emotional intelligence, respectively could predict students' general health. Results obtained in this study confirm the role of coping styles with emotional stress, locus of control, and emotional intelligence as predicting parameters of students' general health. This result can be effective in counseling students for promotion of their health.

Keywords: Emotional Intelligence, Health, Student

Introduction

In every society, students are the workforce and builders of the future of that society. Thus, their mental and physical health is highly important, and can be provided through promotion of health and prevention [1]. Recent studies indicate that, with industrialization of countries, problems associated with students' mental health are observed more than ever [2]. An important issue in relation to students is their mental health. Mental health has been defined as a mixture of positive emotions (emotional welfare) and positive performance (psycho-social welfare) [3]. A factor presumed to be associated with students' general health is emotional intelligence [4]. Emotional intelligence has been defined as the capacity for perception, expression, recognition and understanding, application and control of one's own and others' emotions [5]. Emotional intelligence demonstrates the ability to recognize, evaluate, and express emotions in a proper and adaptive manner [4,5]. Sallowayet al. concluded that emotional intelligence is associated with mental health, and those with high emotional intelligence are better able to cope with stress, and become less ill under pressure. In a study by Bar-On, the relationship between emotional intelligence and mental health was also investigated and confirmed [6]. Another parameter presumed to affect students' general health promotion is their coping styles with stressful situations. Strategies adopted by a person to cope with life pressures and stressful situations are defined

as coping styles. There are 3 groups of coping styles: problem-oriented, emotion-oriented, and reactive-avoidance. The problem-oriented coping style describes methods used by the person to reduce or eliminate stress. Emotion-oriented coping style describes methods in which the person focuses on himself and attempts to reduce his undesirable emotions. Finally, avoidance coping style requires actions and cognitive changes, aiming to avoid stressful situation [7]. Generally, studies indicate that use of emotion-oriented and avoidance coping styles are associated with high levels of mental pressure, while using problem-oriented coping style creates less stress and mental pressure. According to psychological theories, coping strategies have an important role in reducing stress, and hence in people's mental health. In other words, the more resourceful people are to cope, the less likely it is for them to be involved in situations where they are vulnerable [8].

An important aspect worth studying in public health is locus of control in people. In terms of locus of control, people are either intrinsic or extrinsic [9]. People with extrinsic locus of control, perceive event beyond their control, and leave outcomes to chance or to others. Conversely, people with intrinsic locus of control believe that events are dependent on their behavior and relatively permanent personal attributes [10]. Another study has shown that people with intrinsic locus of control are less affected by anxiety and depression. Furthermore, intrinsic locus of control has a more significant relationship with general health and psychological adaption, and lesser relationship with mental problems [11].

Results of a study show that emotional intelligence is related both to mental health and general health [12]. Findings of another study revealed the relationship between coping styles and general health such that coping styles were effective in choosing adaptive coping strategies, problem-oriented coping style was more efficient, and high satisfaction with life and low anxiety [13]. In addition, a positive relationship was reported between general health and intrinsic locus of control [14].

Research into students' general health and factors affecting it provides valuable information that can be effective in educational and medical planning, as well as in prevention of incidence of mental disorders. The present study examines factors presumed to have an important role in students' health. Thus, the aim of present study was to answer the question, "Can students' general health be predicted using variables of emotional intelligence, coping styles with stress, and locus of control?"

Method

This was a descriptive-correlative study, with a population of all 145 undergraduate nursing students of Zainab (S) Nursing School in Larestan affiliated to Shiraz University of Medical Sciences during 2011 and 2012. Because of the small sample size, all nursing students of the years 2009, 2010, and 2011 were selected as subjects. Every student answered 4 questionnaires of emotional intelligence, coping styles with stress, locus of control, and general health. To observe ethical considerations, students were asked to write down a code instead of their personal details. Confidentiality of results was also stressed. Collected data were analyzed in SPSS-16. Tools used in this study included 4 questionnaires of emotional intelligence, coping styles with stress, locus of control, and general health; each of which is briefly described as follows:

General Health Questionnaire (GHQ=28): This questionnaire comprises 4 sub-scales of physical symptoms, social dysfunction, anxiety, depression, which were scored using Likertstyle (0-1-2-3). This questionnaire contains 28 items, and every 7 items evaluate one sub-scale. In Iran, Cronbach'salpha, retest reliability and validity of this questionnaire were reported 0.93, 0.69, and 0.84, respectively. In this scale, high scores indicate low general health [8]. The Bar-On emotional intelligence questionnairecontains 90 items, and in addition to the overall score, this test assesses 15 components of emotional intelligence (emotional self-awareness,

assertiveness, self-respect, self-actualization, autonomy, empathy, interpersonal relationships, accountability, problem solving, reality testing, flexibility, stress tolerance, impulse control, happiness, and optimism). Five-pointLikertstyle was used for scoring from 5 to 1 (totally agree 5 to totally disagree 1), and in questions with negative contents, from 1 to 5 (totally agree1 to totally disagree 5). The total score for each scale equaled sum of the scores of questions in that scale, and the overall score of the test equaled sum of scores of the 15 scales. In Iran, Dehshiri reported reliability coefficient of 0.93, using retest method [5].

Coping style questionnaire: This questionnaire was designed by Roger and Jarvis in 1993 to investigate methods of coping with stress, and contains 60 items. Answer to each question is identified in a 5-point Likert style from never (1) to very often (5). Questions are divided into 3 sub-scales of a) problem-oriented (rational), b) emotion-oriented (emotional), and c) reactive-avoidance. In Iranian normalization, Cronbach'salpha for these styles was 0.88, 0.82 and 0.78, respectively. It is scored based on 5-point Likert style, and each person's score in each sub-scale is calculated according to the items in that subscale [4].

Rotter's Locus of Control Scale: This scale contains 29 items and each item has 2 statements, and participant should select one of the two statements. Using Coder Richardson's formula, initial coefficient of reliability for this scale was found 0.73. In Iranian normalization, reliability of this questionnaire was reported 0.75 by Darabi, using retest method. Lower scores in this test indicate intrinsic control source [7].

Data were analyzed using descriptive statistics (central indices) and inferential statistics (stepwise regression) in the SPSS-16 software.

Results

The data obtained from 145 participants are presented in the form of descriptive and inferential results. Out of the 145 participants, 55 were male (37.9%) and 90 were female (62.1%), and all were studying as nursing undergraduates. 139 subjects (0.96%) lived in the dorms and the rest were local residents. Central and distribution indices and correlation coefficients in study variables are presented in table 1. Given the results in table 1, mean general health was 16.2, locus of control source was 6.1, emotional intelligence 351.77, and reactive coping style 26.33, emotional coping style 14.63, and rational coping style were 48.9. There was a positive and significant relationship between general health and control source, and a significant relationship between emotional intelligence and general health. Coping styles with stress had a significant correlation with general health.

Table 1 *Mean and standard deviation and correlation coefficient of parameters*

	M	**± SD**					
General health	16.20	6.45	-				
Control source	6.10	43.3	0.30**	-			
Emotional intelligence	351.77	29.04	-0.27**	-0.22**	-		
Coping styles							
Reactive style	26.33	5.71	0.11	-0.03	0.09	-	
Emotional style	14.63	6.87	0.38**	0.18**	-0.21**	-0.14	-
Rational style	48.9	8.85	-0.19*	-0.20**	0.16*	0.42**	-0.42**

To perform stepwise regression analysis, at first relevant assumptions were examined (linearity of correlations between predicting variables), and regression analysis was conducted based on realization of assumptions. Using adjustment methods, unrealistic scores were excluded from analysis. Therefore, regression equation was used to determine the effects of each predicting variable (emotional intelligence, coping styles, and control source) on predicted variable (general health), and results are shown in Table 2.

Table 2 *Summary of stepwise regression analysis to explain criterion variable on the basis of predictor variables*

Model	variables	R	R^2	B	SE B	β	t	F$_{(1.144)}$
1	Emotional coping style	0.387	0.29	0.36	0.07	0.38	4.99**	24.94**
2	Emotional coping style	0.447	0.34	0.32	0.07	0.34	4.49**	18.22**
	Locus of control			0.46	0.15	0.24	3.15**	
3	Emotional coping style	0.479	0.54	0.29	0.07	0.32	4.11**	13.78**
	Locus of control			0.41	0.15	0.21	2.76**	
	Emotional intelligence			-0.03	0.02	-0.15	-2.02*	

Results of the regression analysis showed that of the 5 variables (emotional intelligence, coping styles with stress of: emotion-oriented, problem oriented, and reactive-avoidance, and control source) only 3 were used in regression analysis: emotion-oriented coping style, control source, and emotional intelligence. These variables together could explain around 23% of variance of general health. Additionally, to determine how much of students' general health variance is explained by these 3 variables, stepwise regression was used. Accordingly, general health was taken as the criterion and emotional intelligence, coping styles and control source as predictors in the regression model. In the first step, emotional coping style explained 15% of general health. In the second, with addition of control source to emotional coping style, 20% of general health was explained. In the third step, with addition of emotional intelligence to the previous two, 23% of general health was explained. Thus, according to predicting coefficients obtained from stepwise regression, it was found that the best predictor of general health was emotion-oriented coping style; so that, higher emotion-oriented coping style was associated with poorer general health. In total, these three variables together could predict 23% of general health.

Discussion

The present study was conducted to determine power of emotional intelligence, coping styles with stress, and control source in predicting students' general health. Results showed that emotional stress coping style, control source and emotional intelligence are suitable predictors of general health. Results also showed that the most powerful predictor of students' general

health was emotional coping style. Emotional coping style with stress is significantly correlated with higher disease symptoms and consequently with poorer general health. However, reactive-avoidance and rational coping styles are not suitable predictors of students' general health. Results of other studies also show that among coping styles, problem-oriented coping style has a positive and significant correlation with general health, and emotional and reactive-avoidance styles have negative and significant correlations with general health [5,7]. It seems problem-oriented coping style helps people to choose adaptive coping strategies, and people with rational coping styles experience less anxiety and are more satisfied with life [6].

Next, the variable with a major share in predicting general health of students was control source. It had a positive and significant correlation with general health. That is higher intrinsic control source was correlated with more symptoms, and consequently poorer general health. Intrinsic control source may increase people's sense of control on the environment, self-esteem, and feeling of self-thought, and reduce anxiety and feeling of guilt. Intrinsic control source has a significant correlation with general health [4].

Results also revealed a significant correlation between emotional intelligence and general health. General health was reported better as a result of higher emotional intelligence score. Results of previous studies indicate that emotional intelligence as a psychological factor is associated with general health because there are skills in emotional intelligence that facilitate processing of emotional information, which leads to cohesiveness of thought [3,5].

People who have noticed their feelings and understood and identified them, and have higher emotional intelligence, can minimize the effects of stressful events and deal with them with ease, and consequently enjoy better general health [8]. Results of this study showed that students with higher emotional intelligence had more intrinsic control and more effective coping style with stress, and therefore, reported higher levels of general health.

Given the importance of students' health and promotion of their health, and based on the results of the present study, an important way for enhancing students' health is education of psychological empowerment in line with increased coping skills. Therefore, it is recommended that to promote students' mental health, programs in the form of education of components of emotional intelligence be developed and performed by student counseling centers. A major limitation in this study was the small sample size, which included only nursing undergraduates of Zainab Nursing School; for this reason and also because of some incomplete questionnaires generalizability of results is reduced. Thus, for better generalizability, it is recommended that similar studies be conducted on students of other levels and disciplines. In other words, future research is recommended with larger sample size and extended geographical boundaries.

Conclusion
Results of this study showed that variables of coping styles with stress, control source, and emotional intelligence can be good predictors of general health of students. Results of this study can be useful for consulting professors and university counselors for effective student counseling and education of emotional intelligence components to individuals and groups, in order to prevent incidence of mental disorders in students.

Contributions
Study design: MB, MRF
Data collection and analysis: MB, SK
Manuscript preparation: MB. MRF. SK

Conflict of interest
"The authors declare that they have no competing interests."

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