



Emotional and Spiritual Intelligence Among Medical Students in Iran

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Abstract

Background: Spiritual intelligence is an important factor for effective functioning of emotional intelligence.

Objectives: The present study was conducted with the aim to determine the relationship between spiritual and emotional intelligence among Iranian medical students.

Methods: This cross sectional study was conducted in 2015 on 324 students, who were selected through stratified random sampling from Mazandaran University of Medical Sciences, Sari, Iran. Data were collected using Bradberry-Greaves emotional intelligence and Eysenck spiritual intelligence questionnaires.

Results: The participants included 94 males and 230 females. The mean total scores of emotional and spiritual intelligence were 110.52 and 89.37, respectively. The mean score of spiritual intelligence was higher among women in comparison with men, whereas the mean score of emotional intelligence was higher among men. A significant correlation was found between emotional and spiritual intelligence ($r, 0.48; P < 0.05$).

Conclusions: Based on the findings, students' emotional intelligence can be fostered by reinforcing their spiritual intelligence, and correct behaviors can be promoted in accordance with social values.

Keywords: Emotional Intelligence, Iran, Spiritual Intelligence

1. Background

Spiritual intelligence was first introduced by Stevens in 1996 and improved by Emmons in 1999 (1, 2). This dimension is considered when an individual needs to make an important decision, reflect on matters of existence, or resolve daily problems. It is defined as a framework for recognition and organization of skills and capacities associated with spirituality (2, 3). Generally, the fundamental principles of religion, such as reaching unity beyond the apparent multiplicity, finding the origins of existence, recognition of spiritual models, and following spiritual patterns, are the main components of spiritual intelligence (4).

On the other hand, the concept of emotional intelligence refers to an individual's compatibility and success in life. The theory of emotional intelligence explains a wide range of abilities, associated with knowledge and emotions. It states that in daily performance, emotional intelligence is often more important than cognitive intelligence (5).

Emotional intelligence is associated with the knowledge of oneself and others, interaction with others, and adjustment with the environment; it is also essential for realization of social demands (6). Similar to other scien-

tific phenomena, there are principles and techniques for emotional intelligence, some of which may be adept, while some may be insubstantial (7). Overall, emotional intelligence is important in an individual's success, given its association with personal and social life skills.

Based on previous reports, there is a direct relationship between emotional and spiritual intelligence (8, 9). Therefore, interdependence of emotional and spiritual intelligence is essential for a stress-free life and physical/psychological health. Evaluation of the effects of spiritual intelligence on emotional intelligence provides an opportunity for authorities to focus on these phenomena, as they can be strengthened by training and used to overcome many social problems.

In general, it can be stated that spiritual and emotional intelligence are essential for the success of students in work and life. However, based on the available literature, these important phenomena have been neglected in Iranian medical students. Therefore, the present study aimed to determine the relationship between emotional and spiritual intelligence in Iranian medical students.

2. Objectives

The purpose of this study was to determine the relationship between spiritual and emotional intelligence among Iranian medical students.

3. Materials and Methods

This cross sectional study was conducted to determine the relationship between emotional and spiritual intelligence among medical students in 2015. The study population included all undergraduate students of public health, paramedics, and nursing and midwifery at the University of Medical Sciences. Based on the Krejcie and Morgan table (10), the sample size was calculated at 324.

First, subjects were selected from the schools of nursing and midwifery, paramedics, and public health, and then, a sample of 324 students were selected via random sampling. The sample size consisted of 82 (27 males and 55 females) students from the school of nursing and midwifery, 160 (40 males and 120 females) students from the school of paramedics, and 82 (27 males and 55 females) students from the school of public health.

3.1. Inclusion and Exclusion Criteria

The inclusion criteria were as follows: 1) good mental and physical health based on self-reports; 2) lack of chronic diseases; and 3) willingness to participate in the study. On the other hand, the exclusion criteria were: 1) students' dissatisfaction during the study; and 2) major adverse events during the study. Consent forms were obtained from all the participants. After obtaining permission from the university departments, questionnaires were distributed among the participants, who were selected via randomization.

3.2. Instruments

In this study, standardized questionnaires, including Bradberry-Greaves emotional intelligence and Eysenck spiritual intelligence scales, were used for data collection.

Emotional intelligence was assessed, using the standard Bradberry-Greaves questionnaire, which contains 28 items in 4 areas of self-awareness, self-management, social awareness, and relationship management. This questionnaire is graded on a Likert scale. Items with positive content are scored from 1 to 6 (never to always), while items with negative content are scored from 6 to 1 (always to never). Scores of 59, 60 - 79, 80 - 89, and 90 - 100 show weak and worrying, weak to average, average, and high emotional intelligence, respectively (11). In the present study, the validity of the questionnaire was confirmed, based on

the comments of 10 nursing experts. Also, its reliability was confirmed with Cronbach's alpha (0.79) among medical students.

To assess spiritual intelligence, the standardized Eysenck spiritual intelligence scale was used, which contains 24 items and 4 constructs: critical existential thinking (7 items), personal meaning construction (5 items), transcendental awareness (6 items), and conscious state expansion (6 items). The items are rated on a 5-point scale, ranging from 0 (not at all true for me) to 4 (completely true for me); the total score ranges from 0 to 96. The cutoff point of this scale has not been mentioned in other studies. Overall, higher scores represent higher levels of spiritual intelligence (12).

King reported Cronbach's alpha coefficients of critical existential thinking, personal meaning construction, transcendental awareness, and conscious state expansion to be 0.78, 0.78, 0.87, and 0.91, respectively (13). In the present study, the validity of the questionnaire was confirmed, based on the comments of 10 nursing experts at the university. Also, its reliability was confirmed using Cronbach's alpha (0.87) among medical students.

3.3. Ethical Considerations

The present study was approved by the ethics committee of the university in 2015. The students were informed about the study objectives and procedures. All demographic information was determined by assigning codes to the participants.

3.4. Statistical Analysis

SPSS version 16 was used for statistical analysis. Descriptive statistics including mean and standard deviation (SD) were calculated, and multivariate regression was used to determine the effect of spiritual intelligence components on emotional intelligence. In addition, independent sample t test was conducted to assess differences in emotional and spiritual intelligence among men and women.

4. Results

The demographic characteristics of the participants are presented in Table 1. The mean total scores of emotional and spiritual intelligence were 110.52 and 89.37, respectively.

Table 2 shows significant gender differences in terms of spiritual intelligence. The mean scores of existential critical thinking and personal meaning construction were higher among men, compared to women. On the other hand, the mean values of transcendental awareness and

Table 1. Demographic Characteristics of the Participants

Variables	No. (%) or Mean (SD)
Gender	
Female	230 (71)
Mal	094 (29)
Educational status	
BSc	242 (74.6)
MSc	082 (25.4)
Economic status	
Weak	062 (19.1)
Average	226 (69.8)
Good	036 (11.1)
Age	022.14 (2.136)

conscious state expansion were higher in women, compared to men.

According to Table 3, there was a significant difference between men and women in terms of self-management, social awareness, and relationship management. In addition, according to Table 4, spiritual intelligence could explain 54.04% of variance in the dependent variable of emotional intelligence, 14.01% of variance in critical existential thinking, 19.36% of variance in personal meaning construction, 22.09% of variance in transcendental awareness, and only 4% of variance in conscious state expansion.

The mentioned results indicate a significant linear relationship between the dependent variable of emotional intelligence and spiritual intelligence and its constructs (existential critical thinking, personal meaning construction, transcendental awareness, and conscious state expansion) ($P < 0.05$).

5. Discussion

According to the present results, there was a significant linear relationship between emotional and spiritual intelligence. These results are consistent with studies by Chin et al. (2012), Ross (1994), Thompson (2012), Van Leeuwen and Cusveller (2004), and Wiggle Worth (2007) (8, 9, 14, 15). In addition, there was a significant linear relationship between emotional intelligence and existential critical thinking, personal meaning construction, transcendental awareness (R^2 , 0.2809), and conscious state expansion (R^2 , 0.04).

Furthermore, in a study by Faramarzi, emotional intelligence was affected and improved by most constructs of spiritual intelligence (16). According to these results,

if an individual trusts God in different situations and establishes positive relationships with others according to God's will, he/she can become a pious and honest person (17); in fact, such conducts can satisfy God and other people. Therefore, improvement of spiritual intelligence (following God's orders) promotes social behaviors and encourages respect for other people's rights and emotions; in other words, it can promote emotional intelligence (18).

The results showed significant gender differences in terms of existential critical thinking and transcendental awareness in the domain of spiritual intelligence. The mean values of existential critical thinking and personal meaning construction were higher in men compared to women, while the mean values of transcendental awareness and conscious state expansion were higher in women compared to men.

In a study by Gorge et al., as quoted by Raghieb and Syadat (2011), spiritual intelligence scores were higher among women, compared to men. In addition, Raghieb and Syadat (2011) revealed that in domestic studies, including the one performed by Ahmadi and Kajbaf, women had higher scores in spiritual intelligence than men. A similar finding has been reported by Tavan et al. (2015) (19), which is in line with the present research. This finding can be explained by the fact that men are more interested in political and theoretical aspects, while women tend to attach greater importance to aesthetic, social, and religious aspects. However, in a study by Mahasneh, et al. (2015), women and men were similar in terms of spiritual intelligence, which is in contrast with the present study (12). The observed discrepancy might be due to differences among the study samples and cultural circumstances.

The present results showed significant gender differences in all dimensions of spiritual intelligence, with the exception of self-awareness and the overall score of emotional intelligence ($P < 0.05$); in fact, men obtained higher scores than women in emotional intelligence. These results are in contrast with a study by Asgharnejad, Vahadadi-Kohsar, and Roshan (2004). In addition, Haghghatjo, Shafiqpour, and Ansari (2006) reported contradictory results, while Aghajani et al. revealed similar findings (20-22). The discrepancy may be due to cultural diversities and differences in the number of male and female subjects between studies, which could influence the final scores.

5.1. Limitations

The limitations of the present study were: (i) data collection using a self-administered questionnaire, which could induce some measurement biases; (ii) limited sample size restricting the generalization of the results; and (iii) cross sectional design of the study limiting our ability to determine the causal relationships between the con-

Table 2. Gender Differences in Spiritual Intelligence

Areas	Gender	Mean	SD	P Value
Existential critical thinking	Female (n = 230)	20.41	03.12	3.51
	Male (n = 94)	94	24.38	
Personal meaning construction	Female (n = 230)	19.13	04.12	0.1
	Male (n = 94)	20.02	03.21	
Transcendental awareness	Female (n = 230)	26.27	02.31	0.01
	Male (n = 94)	20.50	03.29	
Conscious state expansion	Female (n = 230)	25.12	03.55	0.06
	Male (n = 94)	23.78	03.871	
Spiritual intelligence	Female (n = 230)	92.93	03.55	0.02
	Male (n = 94)	88.68	03.871	

Table 3. Gender Differences in Emotional Intelligence

Areas	Gender	Mean	SD	P Value
Self-awareness	Female (n = 230)	26.12	4.40	0.1
	Male (n = 94)	25.24	4.25	
Self-management	Female (n = 230)	24.65	7.21	0.001
	Male (n = 94)	30.61	6.44	
Social awareness	Female (n = 230)	31.50	4.44	0.01
	Male (n = 94)	27.98	5.68	
Relationship management	Female (n = 230)	26.75	3.521	0.001
	Male (n = 94)	32.14	4.517	
Emotional intelligence	Female (n = 230)	109.02	8.65	0.02
	Male (n = 94)	115.97	7.421	

Table 4. Multivariate Regression Coefficients of the Effects of Spiritual Intelligence Components on Emotional Intelligence

Areas	Nonstandard Coefficients	Regression Coefficients	R ²	T	P Value
Critical existential thinking	0.86	0.49	0.2401	10.02	0.001
Personal meaning construction	000.1936	0.26	0.0676	3.2	0.02
Transcendental awareness	0.33	000.2809	0.2209	07.023	0.002
Conscious state expansion	0.24	0.20	0.04	3.34	0.028
Spiritual intelligence	44.12	6.32	0.5404	5.61	0.003

structs. Therefore, we recommend further research with a large sample size to elucidate the relationships among variables. Also, other methods and designs (interventional studies) can be applied to obtain more definite results.

5.2. Conclusion

The present results showed a significant linear relationship between emotional and spiritual intelligence. A

major effect of spiritual intelligence on life is that people with spiritual behaviors and practices have a greater tendency towards social support, resulting in increased self-esteem, psychological health, and dominance over the environment through faith and belief in God. By prioritizing God's will and tolerating people's incorrect behaviors, we can prepare the context for the development of emotional intelligence. Accordingly, students' emotional intel-

ligence can be fostered by reinforcing their spiritual intelligence, and correct behaviors can be encouraged in accordance with social values.

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Footnotes

Authors' Contribution: Alimorad Heidari Gorji and Morteza Darabinia conceived and designed the study. All the authors contributed to clinical data collection and drafting of the manuscript. Alimorad Heidari Gorji revised the manuscript critically for important intellectual content. All the authors read and approved the final version of the manuscript.

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