

Research Paper

Spiritual Intelligence of Students in Kermanshah University of Medical Sciences and its Relationship With Demographic and Educational Factors



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ABSTRACT

Background and Objectives: Spiritual intelligence (SI) is a combination of many factors such as the capacity for transcendence, transcendental awareness, recognition of spiritual beings, and the use of spiritual resources to solve problems. This study aims to determine the SI of students in Kermanshah University of Medical Sciences (KUMS) and its relationship with demographic and educational factors.

Methods: This descriptive-analytical study that was conducted on 318 students of KUMS in Kermanshah, Iran in 2017 who were selected using a random sampling method. The data were collected using a self-report questionnaire. Data were analyzed in SPSS software, version 16.

Results: The Mean±SD of SI was 102.53±22.53. The students obtained 70.7% of the maximum obtainable score for SI. In overall, 75 students (25.3%) had low SI, 213(72%) had moderate SI, and 8(2.7%) had high SI. Older age had a significant relationship with SI ($P=0.033$).

Conclusion: Most of students in KUMS have moderate SI. It can be improved by educational interventions.

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Introduction

College students are one of the most important groups in society; any disruption in their lives can affect their academic success. Almost one quarter of college students are at risk of academic failure, and about 12% of medical students have experienced probation at least in one semester [1]. Investigating factors affecting their academic success has always been one of concerns [2]. Spiritual intelligence (SI) is one of the factors determining the academic progress of students [3, 4]. Spirituality is one of the inner needs of humans, which implies the highest levels of cognitive, moral, emotional, and personal development [5]. SI is one of the types of intelligence with completely human aspect and has received attention since the 1990s [6]. It is also called basic intelligence [7]. SI helps a person to coordinate with the surrounding phenomena and achieve internal and external integrity [8]. SI has four domains including critical existential thinking (the capacity to think critically about the nature of existence, reality, universe, time, and other metaphysical issues), personal meaning production (the ability to create personal meaning and purpose based on all mental and physical experiences, including the ability to create and master the life purpose), transcendental awareness (the ability to recognize the superior and transcendental dimensions of the self, others, and physical world during consciousness), and conscious state expansion (the ability to enter higher states of consciousness and exit them at own discretion) [9].

Raisi et al. in a study on the students of [Qom University of Medical Sciences](#) in Iran showed a positive and significant correlation between SI and academic progress of students [10]. Ashuri et al. also reported a positive and significant correlation between SI and academic progress of students at [Islamic Azad University of Varamin branch](#) [11]. Farhangpour et al. also found a positive and significant correlation between spiritual intelligence and academic progress [12]. Dastjardi et al. reported no significant correlation between SI and students' academic progress [13]. Considering the importance of the topic, the present study aims to assess the level of SI and its relationship with demographic and educational factors among the students of [Kermanshah University of Medical Sciences \(KUMS\)](#) in Iran.

Methods

This descriptive-analytical study was conducted in 2017 on 318 students of [KUMS](#). At the time of the study, the [KUMS](#) had six faculties of Medicine, Dentistry, Pharmacy, Health & Nutrition, Nursing & midwifery, and Paramedicine. To determine sample size, 1st different faculties were

considered as cluster. Then, samples were selected from each faculty using a simple random sampling method proportional to the population of each faculty. If a student did not want to participate in the study, s/he would be replaced by another student. The participants were assured of the confidentiality of their information, and received information about the study purpose and methods. They entered the study after declaring informed consent. The sample size was calculated 318 according to the standard deviation of the dependent variable (SI) which was 8.91 in a pilot study at 95% confidence interval with an error rate of 1 unit.

The data collection tool was a two-part a self-report questionnaire; the 1st part assesses demographic information including age, gender, marital status (single, married), educational level (Undergraduate, graduate, professional doctorate), occupation (only student, student and employed) living in dormitory, faculty, and parents' education level (junior high school, diploma, and university education). The 2nd part was the spiritual intelligence scale developed by Abdollahzadeh in Persian having 29 items (e.g. I am amazed and surprised when I see the universe) rated on a 5-point Likert scale (from completely disagree to completely agree). The total score ranges from 29 to 145; a score of 29-67.6 indicates a low SI, a score of 67.7-106.2 represents a moderate SI, and a score of 106.3-145 shows a high SI. The validity of this tool has been confirmed, and its reliability is 0.89 [14]. The collected data were entered into SPSS software, version 16 software and analyzed using one-way analysis of variance (ANOVA) and chi-square test.

Results

After removing incomplete questionnaires, the data from 296 questionnaires were analyzed. The response rate was 93.08%. The Mean \pm SD age of students was 22.21 \pm 2.10 years, ranged 18-31 years. Other demographic and educational characteristics of students are presented in [Table 1](#).

The Mean \pm SD of SI was 102.53 \pm 22.12. The students obtained 70.7% of the maximum obtainable score for SI. Our findings showed that 75(25.3%), 213(72%), and 8(2.7%) students had low, moderate, and high SI, respectively. [Table 2](#) shows the results of one-way ANOVA for the relationship between age and SI of students. According to the findings, the relationship was statistically significant ($F=3.323$, $P=0.037$). The results of post hoc tests showed a statistically significant difference in the age between students with low and high SI ($P=0.033$), where the students with high SI were older. There was no significant difference between the age of students with low and moderate SI ($P=0.450$) and of students with moderate and high SI ($P=0.082$).

Table 1. Demographic and educational characteristics of students

Characteristics	No. (%)
Gender	Female
	167(56.4)
	Male
	129(43.6)
Educational level	Undergraduate
	187(63.2)
	Graduate
	11(3.7)
	Professional doctorate
	98(33.1)
Faculty	Medicine
	67(22.6)
	Dentistry
	20(6.8)
	Pharmacy
	22(7.4)
	Nursing & midwifery
	59(19.9)
	Health & nutrition
	58(19.6)
	Paramedicine
	70(23.6)
Father's education	Junior high school
	100(33.8)
	Diploma
	92(33.1)
	University education
	104(35.1)
Mother's education	Junior high school
	152(51.4)
	Diploma
	70(23.6)
	University education
	74(25)
Living in a dormitory	Yes
	218(73.6)
	No
	78(26.4)
Marital status	Married
	28(9.5)
	Single
	268(90.5)
Occupation	Student only
	270(91.2)
	Student and employed
	26(8.8)

Table 2. Relationship between age and SI of students

Variables	Mean±SD	F	P
Low	21.92±1.84	3.323	0.037
Moderate	22.25±2.17		
High	23.87±1.64		

Table 3. Relationship between demographic/educational factors and SI

Variables		No. (%)			P
		Spiritual Intelligence			
		Low	Moderate	High	
Gender	Female	48(28.7)	116(69.5)	3(1.8)	0.197
	Male	27(20.9)	97(75.2)	5(3.9)	
Marital status	Married	12(42.9)	16(57.1)	0(0)	0.063
	Single	63(23.5)	197(73.5)	8(3)	
Educational level	Undergraduate	50(26.7)	132(70.6)	5(7.2)	0.687
	Graduate	1(9.1)	10(90.9)	0(0)	
	Professional doctorate	24(24.5)	71(72.4)	3(3.1)	
Faculty	Medicine	18(26.9)	48(71.6)	1(1.5)	0.292
	Dentistry	3(15)	17(85)	0(0)	
	Pharmacy	4(18.2)	16(72.7)	2(9.1)	
	Nursing & midwifery	11(18.6)	45(76.3)	3(5.1)	
	Health & nutrition	19(32.8)	39(67.2)	0(0)	
	Paramedicine	20(28.6)	48(68.6)	2(2.9)	
Father's education	Junior high school	26(26)	72(72)	2(2)	0.812
	Diploma	24(26.1)	64(64.9)	4(4.3)	
	University education	25(24)	77(74)	2(1.9)	
Mother's education	Junior high school	40(26.3)	109(71.7)	3(2)	0.136
	Diploma	18(25.7)	52(74.3)	0(0)	
	University education	17(23)	52(70.3)	5(6.8)	
Living in a dormitory	Yes	53(24.3)	159(72.9)	6(2.8)	0.794
	No	22(28.2)	54(69.2)	2(2.6)	
Occupation	Student only	69(25.6)	195(72.2)	6(2.2)	0.258
	Student and employed	6(23.1)	18(69.2)	2(7.7)	

Table 3 shows the results of chi-square test for examining the relationship of gender, marital status, parents' education, occupation, and living in a dormitory with SI. As can be seen, none of these variables had a significant relationship with SI.

Discussion

The findings of our study showed that the students obtained 70.7% of the maximum obtainable score for SI. Tavan et al. reported that the mean SI score of students at the Faculty of Nursing and Midwifery, [Ilam University of Medical Sciences](#) was 68.5 [15]. These findings indicate that in the studies conducted in Iran, most students had a moderate SI, and there is a need to pay attention to this issue. It is recommended to hold educational workshops regarding the students' familiarity with SI by the universities. Our findings showed that, among the demographic variables, only age had a significant relationship with SI, such that older students had higher SI. Qadri and Shamsi also reported a statistically significant relationship between aging and improvement of SI [16]. Wigglesworth also reported that the relationship between age and SI and suggested that as people getting older, they seek spiritual intelligence skills and take steps to develop these skills intentionally or unintentionally [17]. In the studies by Ghana and Akbarizadeh, the relationship between age and SI was not significant [18, 19]. Duffy and Bluestein stated that teenage and youth people are influenced by each other's attitudes; they may not reach spiritual maturity yet, but the process may change as they get older [20]. According to these findings, it seems that providing educational interventions related to SI for 1st-year students at universities can lead to useful outcomes.

Our findings showed that students' SI had no significant relationship with their gender. Tavan et al. also stated that SI had a significant relationship with gender, where girls had higher SI [15]. Gorge also reported that the SI of women were higher than that of men [21]. Imam Qalian et al. conducted a study on nursing students of [Qazvin University of Medical Sciences](#) and showed that the score of SI was higher in female students, but there was no significant difference [22]. According to these findings, it is recommended that the interventions for improvement of SI should be developed for both male and female students by educational planners.

Our results also showed that the relationship between students' educational level and SI was not significant. This is consistent with the results of Mo et al. [23] and Tavan et al. [15]. The SI of students had no significant relationship with marital status, either. In line with this study, Nohi et al. in a study on nursing students of [Kerman University of Medical Sciences \(KUMS\)](#) showed that no significant relationship between marital status and SI [24]. It is recommended to conduct more studies on determining the relationship between SI and marital status in different cultures and cities of Iran.

Our study had some limitations. For example, the data was collected using a questionnaire, whose answers may be affected by the subjects' negative moods. Moreover, the study was conducted on students of one medical university (i.e. [KUMS](#)). Therefore, the findings may not be generalized to all medical students in Iran.

Conclusion

Most of students in [KUMS](#) have a moderate level of SI. The improvement of students' SI should be considered by educational planners by developing related programs.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Research Ethics Committee of [Kermanshah University of Medical Sciences \(KUMS\)](#) (Code: IR.KUMS.REC.1396.562)

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Authors' contributions

Conceptualization, Methodology and Supervision: Mehdi Mirzaei-Alavijeh and Farzad Jalilian; Data collection: Shoukofeh Dostvandi; Data analysis: Farzad Jalilian; Manuscript preparation: Behzad Karamimatin, Seyyed Nasrollah Hosseini, Narges Shekarbeygi and Javad Afshar Najafi; Final approval: All authors.

Conflict of interest

The authors declare no conflict of interest.

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