



An Investigation of the Relationship between Spiritual Health and Depression, Anxiety, and Stress among Students of Ilam University of Medical Sciences

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ABSTRACT

Due to daily occupational stress, students of medical sciences may experience some disorders in their spiritual, mental, and physical well-being. Therefore, this study was conducted to determine the relationship between spiritual health and depression, anxiety, and stress among the students of Ilam University of medical sciences in 1395. This is a descriptive-cross sectional study that was performed on 300 randomly selected students of Ilam University of medical sciences in 1395. In order to measure the level of spiritual health among the participants, Paloutzian-Ellison's 20-item standard questionnaire was utilized and DASS-21 questionnaire was used to measure variables depression, anxiety, and stress. Findings: In the present study, of 300 subjects under investigation, 194 subjects (64.6 percent) were female. The highest frequencies for depression, anxiety, severe stress, and extremely severe stress were observed among single subjects (12, 20, and 10.6 respectively). Pearson's correlation coefficient indicated that there is a statistically significant linear correlation between the mean score of spiritual health and the level of depression, anxiety, and stress in students ($p=0.001$). Conclusion: Results of this research showed a positive correlation between spiritual health and indices depression, anxiety, and stress among students of Ilam University of medical sciences. Accordingly, it can be said that acquiring skills in the domain of spiritual health for medical sciences students is as necessary as acquiring nursing and medical care skills.

Key words: Spiritual Health, Depression, Anxiety, Stress, Students.

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INTRODUCTION

In the definition given by World Health Organization (WHO), spiritual health is reckoned as one of the main dimensions of health. Spiritual health unites other health dimensions and includes religious and existential dimensions [1-3]. When spiritual health is endangered in a person, he/she may suffer from mental disorders such as loneliness, depression, and loss of

meaning in life [4]. When tension is experienced, positive feelings can calm down people; among these positive factors one can refer to spiritual health [5]. Students of medical sciences, due to mental and spiritual tensions of hospital environment, encountering patients' problems, or their daily occupational stress may confront many mental, spiritual, and physical disorders [6-7]. Furthermore, because of special conditions of studentship period like being far from family, entering larger stressful environments, economic issues, insufficient income, and heavy load of lessons, they are susceptible to losing mental health [8-9]. In previously conducted studies in

Iran, the prevalence of mental problems among students was reported to be 23-57 percent [10]. Spiritual health is the newest dimension of health which coordinates physical, mental, and social dimensions [11]. Spirituality and spiritual health can take on appearance in different ways like daily communication with others, specific spiritual interactions through love, respect, trust, honesty and righteousness, integration, sacrifice, sympathy, relationship with a personal god who knows the person and protects him/her [12]. Spiritual health is one of the important subjects within different dimensions of health. At some historical stages, different aspects of spiritual health have been endangered [13]. When someone's spiritual health is seriously at risk, he/she may face mental and spiritual disorders such as feelings of loneliness, depression, and loss of meaning in life [14]. When spiritual health finds its place among people, perfect health would be attainable for them [15]. Numerous studies conducted on different groups in Iran and other countries in the world indicated a significant relationship between spiritual health and mental disorders; further, it has been concluded that religious beliefs and spirituality can be used to fight against stressful factors [16-26]. Mental disorders are the risk factors for many physical problems [49-51]. Susceptible as they are to such disorders due to their job and occupational pressure, students of medical sciences, as part of society, who are responsible for protecting and ensuring societies' health are expected to enjoy a high level of spiritual and mental health in order to be increasingly successful in their education and , consequently, in their profession [27]. For example, nursing students have an important role to play in society, given that they work as nurses in the future [48]. Therefore, this research study aimed at investigation the relationship between spiritual health and depression, anxiety, and stress among the students of Ilam University of medical sciences.

MATERIALS AND METHODS

This is a descriptive cross-sectional study undertaken in 1395 on 300 students of Ilam University of medical sciences. Random sampling method was utilized. A Sample size of 300 subjects was determined through the formula = $(N.Z2.S2) / (N.d2+Z2.S2)$ with 95% confidence level and error coefficient of 0.05 %. In order for measuring the level of spiritual health in participants Ellison-Paloutzian Spiritual Well-Being Scale consisted of

20 items was utilized, 10 items of which measure religious health and the other half measuring individuals' existential health. Spiritual health score is the sum of these two subscales scores with a range of 20-120. Replies to these questions were arranged within the framework of a six-point Likert Scale including totally disagree, disagree, relatively disagree, relatively agree, agree, and totally agree. In items 3, 4, 7, 8, 10, 11, 14, 15, 17, 19, and 20, one point was given to option strongly disagree while in items 18, 16, 13, 12, 9, 6, 5, 2, and 1 it was given six point. Finally, according to spiritual health scores, participants were divided into three categories namely, 20-40 (low level), 41-99 (average level), and 100-120 (high level). Reliability and validity of this instrument have been previously measured and confirmed in studies conducted in Iranian populations. In a study by Mehri et al. Cronbach alpha coefficient for this instrument was calculated to be 0.87% [10] and 0.89 % in another study by Bagheri et al. [11]. DASS-21 Standard Questionnaire was employed to examine anxiety, stress, and depression. Each subscale (depression, anxiety, and stress) includes 7 items (the ultimate score for each is obtained by summing up the score of related items) (Table 1). Every item is scored from 0 (describes me not at all) to 3(describes me very well). Since DASS-21 scale is the shortened from of the original version (42 items), the final score of each subscale is doubled (Table 2). Reliability and validity of this scale were investigated and authenticated by Sabahi et al. in Iranian contexts.

Before data collection a short explanation about the study was given to participants to gain their consent, in case of agreement, questionnaires were given to participants with enough time to answer carefully. Finally data were entered into SPSS software, version 16 to be analyzed.

Table 1: subscales and their related items

Subscales	Items
Anxiety	20•19•15•9•7•4•2
Stress	18•14•12•11•8•6•1
Depression	21•17•16•13•10•5•3

Table 2: Severity of each subscale

	Anxiety	Stress	Depression
Normal	0- 7	0-14	0-9
low	8- 9	15- 18	10- 13
Average	10- 14	19- 25	14- 20
severe	15- 19	26- 33	21- 27
Extremely severe	20+	33+	28+

Table 3: Frequency distribution and percentage for depression, anxiety, and stress in students of Ilam University of medical sciences

Level of subscales	Depression		Anxiety		Stress	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Normal	164	54.7	132	44	172	57.3
Low	38	12.7	28	9.3	46	15.3
Average	62	20.7	80	26.7	48	16
Severe	26	8.7	26	8.7	30	10
Extremely severe	10	3.3	34	11.3	4	1.3
Total	300	100	300	100	300	100

RESULTS

The highest frequency (24.7%, 74 cases) belonged to age group of 22 years. 90/7% (274 cases) of participants understudy were single and the rest were married.

Mean score of religious dimension was 47.13 ± 10.4; mean score of existential dimension was 43.8±9.8; and total mean score for spiritual health was 91.4±17.6. The level of spiritual health in 58% of subjects was at average.

Mean score of anxiety in the sample under investigation was 9.7± 8; mean score of depression was 9.69± 8.4; and stress mean score was 14± 9.5. 12% of participants had severe and extremely severe depression. 20% had severe and extremely severe anxiety, and 11.3% of them had sever and extremely severe stress (Table 3).

Pearson’s correlation coefficient indicated that there is a statistically significant linear correlation between the total score of spiritual health and the level of depression among students (p=0.001, r= -0.620) (Table 4).

Table 4: Relationship between spiritual health and its religious and existential dimensions and depression, anxiety, and stress in students of Ilam University of medical sciences

Subscales	Religious dimension		Existential dimension		Spiritual dimension	
	P-VALUE		P-VALUE		P-VALUE	
	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>
Depression	0.001	-0.283	0.001	-0.633	0.001	-0.602
Anxiety	0.001	-0.290	0.001	-0.385	0.001	-0.376
Stress	0.001	-0.329	0.008	-0.125	0.001	-0.297

According to the findings of this study a statistically significant linear correlation was obtained between the total spiritual health score and the level of anxiety among the students of Ilam University of medical sciences (p=0.001, r=-0.376). In addition, a significant relationship between the level of stress and total mean score of

spiritual health was observed; that is, students who enjoyed high levels of spiritual health had a significantly lower level of stress (p=0.001, r=-0.297) (Table 4).

Highest frequencies for depression, severe and extremely severe anxiety and stress (12%, 20%, and 10.6% respectively) were seen among single participants.

DISCUSSION

One of the most prevalent incapacitating problems of the youth and adolescents, that is widely developing, is depression which among other mental disorders is referred to as a common cold of mental illness [28]. Lack of religion would lead to such negative behavioral and mental outcomes which in turn would cause depression [29]. The peak for depression is seen during 20-50 years of age which includes the period of studentship (30). The present study set out to investigate the relationship between spiritual health and depression, anxiety, and stress among the students of medical sciences. Results indicated that there a significant linear correlation between the overall mean score of spiritual health and the levels of depression, anxiety, and stress among the students Ilam University of medical sciences. Bayani et al. in their study concluded that there is a negatively significant correlation between students’ religious orientations and their depression and anxiety; that is, the mean scores for depression and anxiety among those students who had low religious orientations were significantly higher than that of the students who had average and high religious orientations. Furthermore, mean scores of depression and anxiety in students with average religious orientations were significantly higher than those of the students with high religious orientation, findings that are supportive of this study’s findings [31]. In addition, in the current study, there was a significant correlation between

depression and religious and existential dimensions of spiritual health. However, in a study by GhareBughloo *et al.*, there was found no significant correlation between depression and spiritual health and no significant correlation between depression and religious and existential dimensions of spiritual health as well, these findings don't support the findings of the present study [32]. This inconsistency of results may be due to differences in questionnaires and instruments for measuring depression and, also, differences in sample size; it should also be noted that samples in GhareBughloo's study were selected from two different cities. In the current study there was a significant correlation between spiritual health and depression and anxiety. This finding supports the findings of KhademVatani *et al.*, They found a significant relationship between spirituality level and the levels of depression and anxiety in the patients hospitalized in cardiology ward. This means that subjects with higher levels of spirituality enjoyed a better condition with respect to depression and anxiety levels [33]. Still in another study by Bonab *et al.*, a significant correlation between spirituality and depression and anxiety was reported which is again in line with the findings obtained herein; moreover, they introduced spirituality as an index for predicting depression and anxiety.

Similarly, EyvanBagh *et al.*, in their study found a negatively significant relationship between overall score of depression and spiritual health, which supports the present study. However, a significant linear correlation between spiritual health and anxiety was reported; that is, as spiritual health increases anxiety would also increase [35], this is in contrast to the present study. Such differing results can be attributed to differences in statistical population; in addition, as mentioned in this study test anxiety as a destructive factor should be considered [36].

Jan Bozorgi, in a similar study, concluded that there is a significant correlation between general health and religious orientations; in a way that the more individuals' religious orientation become external, the lower their general health would be. In addition, as religious orientations get more external, the level of depression and individuals' tendency towards suicide would also increase. In other words, there is a significant correlation between external religious orientations and the occurrence of depression [37].

Another study by Khezri *et al.* indicated that there is a significant correlation between existential dimension of spiritual health and participants' depression; this is in agreement with the presents study. In addition there were negatively significant correlations between overall mean score of spiritual health and death anxiety and between death anxiety and religious and existential dimensions. However, between spiritual health, its religious dimension and depression there was found no significant correlation (38), which may be due to selecting different sample sizes and different tools for measuring depression. This finding doesn't agree with the present study.

Results of a study by Momeni Ghale Ghasemi *et al.*, showed negatively significant correlations between the total mean score of spiritual health and anxiety, mean score of existential dimension and anxiety, and the mean score of religious dimension and anxiety [39], all supporting the results of the present study.

In the present study spiritual health of the majority of students was at average level, a finding which is in line with the results of Khezri *et al.* [26], Dehbash *et al.*, [40], Moghimian *et al.*, [41], and Kaviri *et al.*, [42]. However, it doesn't support the studies of Rezaei *et al.*, [43] and Hojati *et al.*, [44] in which most of cancer patients had a high level of spiritual health. One possible reason for such inconsistencies may be differences in the target population and sample size.

In the present study the mean score for religious dimension of spiritual health was higher than that of existential dimension supporting the findings of Khezri *et al.*, [38], Mousa Rezaei *et al.*, [45]. However, Hojati *et al.* in their study revealed that the mean score for existential dimension in hemodialysis patients was higher than religious dimension's mean score. Moreover, results of Moghimian *et al.*, investigations [41] on patients' spiritual health indicated that mean score for existential health of cancer patients was higher than their score on religious health. Results of these two studies don't agree with current study, which may be attributed to the dominance of religious culture in Iranian societies and the fact that people would resort to religion in crises.

In this study, 45.3% of subjects experienced some degrees of depression, which is close to the Ranai's *et al.*, report on depression level among

students (37.5%). However, in some other studies it is quite higher; for instance, MolaBagheri *et al.*, [47] obtained 74.5% for depression. Differences in the level of depression in these studies and the current study can be due to socioeconomic problems, deprivation of cities under study, or differences in sample size and instruments measuring depression.

CONCLUSION

Results of the current study show a positive correlation between spiritual health and depression, anxiety, and stress in students of Ilam University of medical sciences. It seems that high spiritual health is an important protective factor against depression, anxiety, and stress among these students. Hence, reinforcement and internalization of religious values can increase the level of mental health. Further it has implications for universities' councils and programmers to emphasize the effect of religious beliefs on students' mental health and utilize religion as a guiding element effectively when giving counsel to students having depression.

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