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# The relationship between religiosity with stress, anxiety, and depression among the students in Kurdistan University of Medical Sciences, Iran, 2017

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**Original Article**

## Abstract

**BACKGROUND:** Religion affects all aspects of the life. One of the most important aspects of human health is its mental health, and how it gets affected by stress, anxiety, and depression. The purpose of this study was to evaluate whether there was any relationship between religiosity with stress, anxiety, and depression among the students of Kurdistan University of Medical Sciences, Iran.

**METHODS:** This cross-sectional study was conducted at Kurdistan University of Medical Sciences in 2017. The total number of 282 students were selected using a two-stage stratified sampling method to fulfill univariate religiosity questionnaire and Depression, Anxiety and Stress Scale-21 (DASS-21). All statistical analysis was performed using SPSS software.

**RESULTS:** The mean age of participants was $22.34 \pm 3.05$ years. 70.9% of participants were women, and 92.2% were single. Out of four dimensions of religiosity, only ritual dimension was found to have a significant correlation with stress ($P = 0.030$). The correlation between other dimensions of religiosity (belief, emotional, and consequential) and aspects of mental health found to be not statistically significant ($P > 0.050$).

**CONCLUSION:** Based on the findings of this study, religious activities can reduce the stress of individuals. Designing non-syllabus interventions is recommended in order to increase religious activities in order to improve students' mental health.

**KEYWORDS:** Religion, Mental Health, Students, Iran

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## Introduction

Religion is "believing in a creator for the world and human, and practical instructions in accordance with these beliefs,"[1] and religiosity is to adhere to religion. Research shows that religiosity affects almost all aspects of life.

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Studies show a relationship between religiosity with mental health,[2,3] self-esteem,[4,5] life satisfaction,[6] happiness,[6,7] self-actualization,[8] sports participation,[9] and academic achievement,[10-12] and it promotes the level of these variables. Mental health and its related factors such as depression, anxiety, and stress are a research topic received a great attention over the past decades.

Many studies conducted on the relationship

between spirituality and mental health show a positive effect of religion.[13,14] It has been found that religiosity is linked to greater spirituality and mental health in individuals.[15] A reverse and significant relationship has been also reported between religiosity and spirituality with mental health components such as anxiety, depression, and stress.[16,17] Mousavi showed that some religiosity elements were inversely related to mental health components, and all elements lead to reduction of depression. In addition, the components of religious belief and commitment to religious duties reduced the anxiety.[2] Ghodrati and Khormaie study on the relationship between religiosity and mental health in adolescents indicated a higher level of religiosity to be connected with higher level of mental health. This connection was established between all the components of religiosity (religious commitment, religious beliefs, and religious emotions) with four components of general health (physical complaints, anxiety, depression, and incompatibility).[18]

Among various classes of a society, healthy students are important in terms of their potential position to rule the country in future. Like other students, mental health of the students in medical sciences and community health require more attention. Students constantly face many stressors which may overwhelm their physical and mental health leading to the development of some issues such as depression, anxiety, and sleep disorders[19] that can affect their educational achievement.[20] High levels of stress, anxiety, and depression can negatively affect health, quality of life, academic achievement, and the ability of students to accept their professional roles.[21] Therefore, identifying effective factors in improving mental health and adopting appropriate strategies for their improvement is essential. Therefore, the purpose of this study was to determine the relationship between religiosity with stress, depression, and anxiety

among students of Kurdistan University of Medical Sciences, Sanandaj, Iran, in 2017.

## Materials and Methods

The participants of this study were 282 students of Kurdistan University of Medical Sciences who had at least one year of accomplishment in 2017. Students were selected from five university faculties using a two-stage stratified sampling approach. Within each faculty, of each academic year, proportion to enrolment size, a number of students were selected to fulfill Glock and Stark questionnaire[22] for religious data, and Depression, Anxiety and Stress Scale-21 (DASS-21) psychological information.

Glock and Stark questionnaire was designed to measure religious beliefs and religiosity.[22] The questionnaire involves five dimensions of religiosity, Ideological (beliefs), Ritualistic, Experiential (emotions), Consequential, and Intellectual (knowledge) aspects. Since it is believed that the knowledge of religious affairs is not a sign of religiousness, and teaching of religious affairs is a part of the educational system, the intellectual dimension were omitted from the questionnaire in Iran. Thus, the questionnaire reduced to 26 questions with four dimensions. The measurement scale of questionnaire is a five-point Likert scale ranging from strongly agree to strongly disagree (strongly agree, agree, neutral, disagree, and strongly disagree). A score of 0-26 indicates poor religiosity, 26-78 moderate religiosity, and 78-104 high religiosity. The overall Cronbach's alpha of this questionnaire was calculated as 0.83 in an Iranian population. It was 0.93 for belief dimension, 0.82 for emotional and, consequential dimensions, and 0.89 for ritual dimension.[23]

The DASS-21 questionnaire is a shortened version of the DASS-42. The questionnaire has 21 questions that measure three dimensions of stress (7 questions), anxiety (7 questions), and depression (7 questions).

**Table 1. Interpretation of subscales scores of Depression, Anxiety and Stress Scale-21 (DASS-21)**

| Degree / Subscale | Normal | Mild | Moderate | Severe | Extremely severe |
|---|---|---|---|---|---|
| Stress | 0-14 | 15-18 | 19-25 | 26-33 | 34 and more |
| Anxiety | 0-7 | 8-9 | 10-14 | 15-19 | 20 and more |
| Depression | 0-9 | 10-13 | 14-20 | 21-27 | 28 and more |

The measurement scale of questionnaire is a four-point Likert scale from 0 to 3 representing at all, low, high, and a very high level. For each dimension, scores are summed and multiplied by 2. The final score is interpreted according to table 1. The reliability of the DASS-21 questionnaire in Iranian population was evaluated through internal consistency with Cronbach's alpha calculation. The calculated Cronbach's alpha for depression, anxiety, and stress subscales was 0.77, 0.79, and 0.78, respectively.[24]

Analyzing descriptive statistics was done by calculating the frequencies and related ratios, mean, and standard deviation (SD), and analytical statistics done using t, Pearson correlation coefficient, multivariate regression due to several dependent variables (stress, anxiety, and depression) and the possibility of correlation among these dependent variables, and also the univariate analysis of variance using SPSS software (version 21, IBM Corporation, Armonk, NY, USA).

## Results

The characteristics of 282 participants in the study are presented in table 2. The mean age of participants was 22.34 ± 3.25 years, and 70.9% of them were women, 92.2% were single, and 63.8% were undergraduate students.

Table 3 represents the mean and SD of the students' scores for both religiosity and DASS-21 subscales in terms of their gender. The mean score of religiosity was 67.19 ± 13.74 which indicated an average level of religiosity. The mean score of stress, anxiety, and depression subscales were 13.65 ± 9.22, 9.75 ± 8.21 and 9.23 ± 8.57, respectively indicating a mild level of stress, anxiety, and depression.

**Table 2. Distribution of the demographic variables of the participants**

| Variable | n (%) |
|---|---|
| Gender | |
|   Girl | 200 (70.9) |
|   Boy | 82 (29.1) |
| Marital status | |
|   Single | 260 (92.2) |
|   Married | 22 (7.8) |
| Grade | |
|   Associate degree | 24 (8.5) |
|   BSc | 184 (65.2) |
|   MSc | 10 (3.5) |
|   MD | 60 (21.3) |
|   PhD | 4 (1.4) |
| School | |
|   Dentistry | 34 (12.1) |
|   Medicine | 57 (20.2) |
|   Paramedicine | 41 (14.5) |
|   Nursing and Midwifery | 90 (31.9) |
|   Health | 60 (21.3) |
| **Variable** | **Mean ± SD** |
| Age | 22.34 ± 3.05 |

BSc: Bachelor of science; MSc: Master of science; MD: Doctor of Medicine; PhD: Doctor of philosophy; SD: Standard deviation

Table 4 reports Pearson correlation between religiosity subscales and mental health. Negative correlation between dimensions showed a week reverse association between all subscales.

To investigate the significance of independent and dependent variables, multivariate regression analysis was used. The result of this analysis showed that between the four dimensional religiosity, only the relationship between ritual dimension with mental health dimensions was significant (P = 0.037) (Table 5).

Finally, an analysis of variance of a variable showed that there was a significant relationship between religious dimension with stress (P = 0.030) (Table 6).

**Table 3. The mean scores of subscales in gender subcategories**

| Subscales | Overall (Mean ± SD) | Women (Mean ± SD) | Men (Mean ± SD) | t | P |
|---|---|---|---|---|---|
| Belief dimension | 22.49 ± 4.45 | 22.84 ± 4.12 | 21.63 ± 5.10 | 2.09 | 0.019 |
| Emotional dimension | 18.23 ± 4.00 | 18.40 ± 3.74 | 17.82 ± 4.55 | 1.11 | 0.133 |
| Consequential dimension | 13.56 ± 3.59 | 13.82 ± 3.55 | 12.90 ± 3.60 | 1.97 | 0.025 |
| Ritual dimension | 12.91 ± 5.84 | 12.17 ± 5.09 | 14.69 ± 7.07 | -3.35 | < 0.001 |
| Stress | 13.65 ± 9.22 | 14.15 ± 8.99 | 12.42 ± 9.68 | 1.43 | 0.077 |
| Anxiety | 9.75 ± 8.21 | 9.77 ± 8.23 | 9.71 ± 8.23 | 0.06 | 0.477 |
| Depression | 9.23 ± 8.57 | 9.31 ± 8.43 | 9.04 ± 8.96 | 0.24 | 0.406 |

SD: Standard deviation

**Table 4. Correlation coefficients of religiosity subscales and mental health**

| Subscale | Stress | Anxiety | Depression |
|---|---|---|---|
| Belief dimension | -0.113 | -0.061 | -0.111 |
| Emotional dimension | -0.123 | -0.061 | -0.120 |
| Consequential dimension | -0.190 | -0.114 | -0.163 |
| Ritual dimension | -0.199 | -0.085 | -0.104 |

## Discussion

The results of this study showed that the degree of religiosity among students of Kurdistan University of Medical Sciences was 79.79%. This is consistent with Khazaei et al. study in which the rate of religiosity reported among medical students in Kermanshah, Iran (79.10%).[25]

**Table 5. Multivariate regression results to assess association between religious dimension and mental health dimensions**

| Subscales of religiosity | F | P |
|---|---|---|
| Belief dimension | 0.124 | 0.946 |
| Emotional dimension | 0.287 | 0.835 |
| Consequential dimension | 1.298 | 0.275 |
| Ritual dimension | 2.872 | 0.037 |

One reason for this similarity can be due to the social and cultural homogeneity of two provinces.

**Table 6. Results of single-variable variance analysis of variance ritual dimension with mental health dimensions**

| Subscales of mental health | F | P |
|---|---|---|
| Stress | 4.773 | 0.030 |
| Anxiety | 0.579 | 0.447 |
| Depression | 0.185 | 0.667 |

In this study, comparison of mean scores of religiosity in different sex groups did not show a statistically significant differences. However, the average score of religious values in girls was higher than that of boys in Khazaei et al. study.[25] In addition, the study of religiosity subscales in sex groups was shown in our study that, the mean scores of beliefs and consequential dimensions were significantly higher in girl students compared to boy students and the mean scores of religious dimension were significantly higher in boy students than girl students.

The findings of the current study showed that the severity of depression and stress was at normal level among the students of Kurdistan University of Medical Sciences, and the severity of anxiety was mild; and the comparison of mean score of health components in sex groups in all subscales did not show a significant statistical difference. This finding is consistent with Kashfi et al.[26] results but inconsistent with Khazaei et al.[25] findings. In the recent study, anxiety was associated with gender and anxiety, and was higher in girls than in boys.

We also found an inverse but weak relationship between all subscales of religiosity with mental health subscales. This means that higher degree of religiosity may can improve the mental health of students. Stronger inverse relationship between mental health components with religiosity subscales has been reported in various studies.[25,27,28] In this study, only the relationship between religious

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dimension and stress was statistically significant. In study by Salehi and Mosalman,[27] the relationship between religious attitude with stress and depression was significant, while there was no significant relationship with anxiety component. In a study by Amrai et al., they showed a significant relationship between religious attitude with anxiety and depression.[28] A significant relationship was found between the component of anxiety and religious values in the study of Khazaei et al.[25] and the component of anxiety with the belief dimension in the study of Vasegh and Mohammadi.[29] Bahrami Ehsan study showed a significant relationship between religious orientation and anxiety.[30] In the Taheri-Kharameh et al.[31] study, there was a significant relationship between general religiosity and depression, and Musarezaie et al.[32] found a significant relationship between religious dimension or commitment and prayer privilege priority with depression. The results of these studies are consistent with what has been mentioned in the Qur'an as the most important source of guidance and education for the human community. The Holy Qur'an is full of verses (verses 48 and 82 of Surah al-A'am, and verse 28 of Raad), which deals with the relationship between various aspects of religiosity with the components of health.

## Conclusion

The findings of this study showed that the majority of medical students had a moderate level of religiosity and good mental health. In addition, increasing the dimensions of religiosity is associated with the reduction of mental health components, especially in this regard, the ritual dimension in decreasing stress and ultimately improving mental health plays a more effective role. Therefore, the design of non-syllabus interventions involving all religious dimensions is recommended for improving students' mental health.

## Conflict of Interests

Authors have no conflict of interests.

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## References

1. Mesbah Yazdi MT. Ethics in the Quran. Qom, Iran: The Imam Khomeini Educational Research Institute; 2001. [In Persian].
2. Mousavi R. Survey of mental health and religiosity relationship model in Shahed and Non-Shahed College students. Clinical Psychology & Personality 2013; (7): 65-76. [In Persian].
3. Richards PS. Religious devoutness in college students: Relations with emotional adjustment and psychological separation from parents. J Couns Psychol 1991; 38(2): 189.
4. Bakhshayesh AR. An investigation into the relationship between confidence in god, self-esteem and academic achievement among the students. Ravanshenasi Va Din 2011; 4(2): 79-98. [In Persian].
5. Farahang Pour F, Khadivi A, Adib Y. Relationship of spiritual intelligence and self- esteems with students' educational improvement. Journal of Woman & Study of Family 2010; 3(9): 99-122. [In Persian].
6. Hejazi M, Sobhi A, Hosseini M. Relationship between religiosity and life satisfaction and happiness among girl students. Woman & Study of Family 2013; 6(22): 61-77. [In Persian].
7. Manzari Tavakoli A, Araqi Pour N. Relationship between religiosity and happiness among the students of Kerman Islamic Azad University. Quarterly Educational Psychology 2011; 6(19): 19-45. [In Persian].
8. Afshani SA, Khorampour Y, Mombini S. Examining relationship between religiosity and self-actualization: Case study: Yazd University. Journal of Studies of Socio-Cultural Development 2014; 3(1): 29-52. [In Persian].
9. Parsamehr M, Rasoulinejad SP. Relationship between religion and sport: The study of the relationship between religiosity and sports participation among students of Yazd University. Journal of Studies of Socio-Cultural Development 2015; 4(2): 59-84. [In Persian].
10. Abar B, Carter KL, Winsler A. The effects of maternal parenting style and religious commitment on self-regulation, academic achievement, and risk

behavior among African-American parochial college students. J Adolesc 2009; 32(2): 259-73.

11. Raisi M, Ahmari Tehran H, Heidari S, Jafarbegloo E, Abedini Z, Bathaie SA. Relationship between Spiritual Intelligence, Happiness and Academic Achievement in Students of Qom University of Medical sciences. Iran J Med Educ 2013; 13(5): 431-40. [In Persian].

12. Tabibi M, Ahmari Tehran H, Soltani Arabshahi SK, Heidari S, Abdi Z, Safaeipour R. The association between spiritual health and academic achievement in medical students of Qom University of Medical Sciences, 2011. Qom Univ Med Sci J 2013; 7(S1): 72-8. [In Persian].

13. Larson DB, Sherrill KA, Lyons JS, Craigie FC Jr, Thielman SB, Greenwold MA, et al. Associations between dimensions of religious commitment and mental health reported in the American Journal of Psychiatry and Archives of General Psychiatry: 1978-1989. Am J Psychiatry 1992; 149(4): 557-9.

14. Gharaei B, Ahmadvand A, Akbari Dehghi A, Zonouzian S. Relationship between mental health and intrinsic-extrinsic religion in Kashan. Journal of Psychology 2008; 3(10): 59-83. [In Persian].

15. Vaillant G, Templeton J, Ardelt M, Meyer SE. The natural history of male mental health: Health and religious involvement. Soc Sci Med 2008; 66(2): 221-31.

16. La Cour P, Avlund K, Schultz-Larsen K. Religion and survival in a secular region. A twenty year follow-up of 734 Danish adults born in 1914. Soc Sci Med 2006; 62(1): 157-64.

17. Tse S, Lloyd C, Petchkovsky L, Manaia W. Exploration of Australian and New Zealand indigenous people's spirituality and mental health. Aust Occup Ther J 2005; 52(3): 181-7.

18. Ghodrati M, Khormaie E. The relationship between religiosity and mental health in adolescents. Journal of Behavioral Sciences 2010; 2(5): 115-31. [In Persian].

19. Rezaei-Adryani M, Azadi A, Ahmadi F, Azimi AV. Comparison level of stress, Anxiety, Depression and quality of life in dormitory resident students. Iran J Nurs Res 2007; 4(2): 31-8. [In Persian].

20. Gammon J, Morgan-Samuel H. A study to ascertain the effect of structured student tutorial support on student stress, self-esteem and coping. Nurse Educ Pract 2005; 5(3): 161-71.

21. Najafi Kalyani M, Pourjam E, Jamshidi N, Karimi S, Najafi Kalyani V. Survey of stress, anxiety, depression and self-concept of students of Fasa University of medical sciences, 2010. J Fasa Univ Med Sci 2013; 3(3): 235-40. [In Persian].

22. Glock CY, Stark R. Religion and society in Tension. Chicago, IL: Rand McNally; 1965.

23. Movahed M, Hamidizadeh E. A Study of relationship of women's religiosity and their scientism: A case study of female PhD students of Shiraz University. Sociology of Women 2010; 1(1): 45-68. [In Persian].

24. Sahebi A, Asghari M, Salari R. Validation of depression anxiety and stress scale (dass-21) for an Iranian population. Journal of Developmental Psychology 2005; 1(4): 36-54. [In Persian].

25. Khazaei H, Rezaei M, Ghadami MR, Tahmasian M, Ghasemi Mobarra A, Shiri E. Relationship between religious values and anxiety among Kermanshah University of Medical Sciences students. J Kermanshah Univ Med Sci 2010; 14(1): e79543. [In Persian].

26. Kashfi SM, Yazdankhah M, Babaei Heydarabadi A, Khani Jeihooni A, Tabrizi R. The relationship between religious attitude and mental health in students of Shiraz University of Medical Sciences. Journal of Research on Religion & Health 2016; 1(3): 33-40. [In Persian].

27. Salehi I, Mosalman M. Evaluation of the relationship between religious attitude and depression, anxiety and stress in students of Guilan University. Religion and Health 2015; 3(1): 57-64. [In Persian].

28. Amrai K, Zalani HA, Arfai FS, Sharifian MS. The relationship between the religious orientation and anxiety and depression of students. Procedia Soc Behav Sci 2011; 15: 613-6.

29. Vasegh S, Mohammadi MR. Religiosity, anxiety, and depression among a sample of Iranian medical students. Int J Psychiatry Med 2007; 37(2): 213-27.

30. Bahrami Ehsan H. Religious orientation, anxiety and self-esteem. Journal of Psychology 2003; 6(4): 336-47. [In Persian].

31. Taheri-Kharameh Z, Abdi M, Omidi Koopaei R, Alizadeh M, Vahidabi V, Mirhoseini H. The relationship between religious-spiritual well-being and stress, anxiety, and depression in university students. Health Spiritual Med Ethics 2016; 3(1): 30-5.

32. Musarezaie A, Naji-Esfahani H, Khosravi N, Momeni- Ghaleghasemi T, Masaeli N. Relationship between commitment and priority to prayer with depression and some demographic parameters. J Res Behav Sci 2012; 10(6): 441-52. [In Persian].