

## Correlation of mental disorders with religious attitude and mental health among the elderly of Ilam city

Kourosh Sayehmiri<sup>1</sup>, Mandana Sarokhani<sup>1</sup>, Milad Bagheri<sup>2</sup>, Reza Ghanei Gheshlagh<sup>3\*</sup>

1. Psychosocial Injuries Research Center, Ilam University of Medical Sciences, Ilam, Iran
2. Student Research Committee, Ilam University of Medical Science, Ilam, Iran
3. Clinical Care Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran

\*Corresponding author: Tel: +98 9144050284 Fax: +98 -

Address: Clinical Care Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran

E-mail: ghanei@muk.ac.ir

Received; 2019/06/17 revised; 2019/07/10 accepted; 2019/09/2

### Abstract

**Introduction:** The elderly are susceptible to mental disorders due to poor physical and mental ability, loss of relatives and poor social communication. Mental health and religious attitudes are factors that may be associated with mental disorders in the elderly. This research was aimed to explore the relationship of mental disorders with mental health and religious attitudes among the elderly.

**Materials and methods:** This descriptive, correlational study was conducted on 400 elderly in Ilam, Iran, who were selected by convenience sampling. Data were collected by the Symptom Checklist-90-R (SCL-90-R), General Health Questionnaire (GHQ-28) and Religious Attitude Questionnaire (Gloris-Brahni). The obtained data were analyzed by PASW software using descriptive statistics, Pearson correlation coefficient and stepwise regression analysis.  $P < 0.05$  was considered significant.

**Results:** The results showed a significant correlation between mental disorders and mental health ( $P=0.003$ ,  $r=0.147$ ) and religious attitude ( $P=0.001$ ,  $r=-0.187$ ). The results of regression analysis to predict mental disorders based on the predictor variables indicated that religious attitude could predict 4.6% of mental disorders in the Kurdish elderly. In the next steps, the marital status, gender and mental health variables were included in the model, which could generally predict 8.2% of changes in mental disorders among the elderly of Ilam city.

**Conclusion:** Religious attitude and mental health could predict mental disorders in the elderly. It seems necessary to gain a better understanding of the risk factors of mental disorders in the elderly to design interventional programs and to identify the people at risk.

**Keywords:** Elderly, Attitude, Religious, Mental disorders, Mental health

### Introduction

Mental disorders are highly prevalent among the elderly so that 30-50% of them suffer from mental disorders (1). Mental disorders in the elderly are associated with increased healthcare costs, poor quality of life, disturbed daily activities, suicide and increased mortality (2). Owing to loss of relatives, poor social communication,

reduced sensory function and physical disability, the chance of mental disorders in the elderly is increased (3). Some physical illnesses such as hypothyroidism, brain tumors and cardiovascular diseases as well as use of drugs such as anticholinergics, anti-Parkinson, steroid and beta blockers are associated with the prevalence of the

Copyright © 2019 Journal of Basic Research in Medical Science. This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits copy and redistribute the material, in any medium or format, provided the original work is properly cited.

symptoms and signs of mental disorders in the elderly (3, 4). The results of a longitudinal study showed a correlation between brain atrophy and depression in the elderly in the years to come (5). On the other hand, the chance of depression after a stroke in women and men has been reported to be three and four times greater than the size of general healthy population, respectively (6). Depression is a common disorder during aging which has a poor prognosis because it is diagnosed or treated in less than 20% of the elderly (7). The results of a meta-analysis by Cole et al showed that grief, sleep disorder and disability were the most important potential risk factors of depression among the elderly (7). However, it is not easy to judge which factors are the causes and which factors are the consequences of mental disorders in the elderly.

Religious attitudes are factors that are involved in mental disorders among the elderly. Religious attitude refers to coherent monotheistic beliefs of a person that considers God as the axis of all affairs, adjusting the moralities, values and behavior of humans, nature and himself (8). The relationship between human and religion is as old as the life of history because human has always needed the support of a supreme power during his life (9). Seyyed Fatemi et al conducted a study on the American elderly and reported that more than 90% of them turned to religion to find peace and adapt to stresses and pressures of life (10). Religion may have a protective role against mental disorders in the elderly because depression in the elderly has been found to remarkably improve when they participate in the religious activities (11). Some believe that religious tendencies promote the general health, give meaning to life and improve social communication (12, 13). However, the results of Koeing et al showed that religious beliefs did not always enhance mental health. He referred to the individuals who suffered from feeling of guilt, rumination, distress and rejection because

of the content of religious beliefs (14). The results of Ventis and Batson in Lewis et al (2001) showed a negative correlation between religious attitudes and mental health (15).

Considering the increasing population of the elderly in Iran and numerous tensions in this period, it is necessary to identify the factors predicting mental disorders among the elderly. This study was aimed at predicting mental disorders in the residents of Ilam, Iran based on their religious attitudes and mental health.

### Materials and methods

In this descriptive, correlational study, mental disorder was considered a criterion variable and religious attitude and mental health were regarded as predictor variables. Demographic variables such as age, gender, education and marital status, as confounding variables, were included in regression equation along with criterion and predictor variables.

The study sample comprised of 400 elderly living in Ilam, Iran in 2014. Ilam is one of the Kurdish cities of western Iran and center of Ilam province, with a population of 173 thousand people.

Based on the research objectives and related sample size formula and considering the confidence level of 99% and correlation coefficient of  $r=0.1$ , 400 samples were selected from among the study population. After approving the research proposal and taking permission for sampling, the researchers selected the samples by convenience sampling method in public places. They first explained the research objectives and mythology to the samples and distributed the questionnaires among them after taking their consent. Data were collected by demographic questionnaire, Symptom Checklist-90-R (SCL-90-R), General Health Questionnaire (GHQ-28) and Religious Attitude Questionnaire (Gloris-Brahni).

A) Religious Attitude Questionnaire (Gloris-Brahni): It consists of 25 items based on five-point Likert scale (from

strongly agree to strongly disagree). The strongly agree option is given the score of 4 and strongly disagree option is given the score of 0. Therefore, the minimum and maximum scores will vary from 0 to 100. The validity and reliability of this questionnaire were confirmed by Sadeghi M et al (16). The reliability of this questionnaire in the present study was calculated to be 0.78 by Cronbach's alpha coefficient.

B) General Health Questionnaire (GHQ-28): It comprises of 28 items and four dimensions of somatic symptoms, anxiety sleep disorders, social function and depression symptoms, whose responses are rated from 0 (never) to 3 (more than usual). A lower score shows a better mental health. Each dimension consists of 7 items. The validity and reliability of this scale have been confirmed in the Iranian elderly (17). The reliability of this scale in the current study was computed to be 0.82 by Cronbach's alpha coefficient.

C) The Symptom Checklist-90-R (SCL-90-R): It consists of 90 items based on five-point Likert scale from 0 (none) to 4 (very much). It evaluates nine scales of psychiatric symptoms (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) of an individual from a week before. The factor structure of this scale was confirmed by Esmaeili. The reliability of this questionnaire in the present study was calculated to be 0.85 by Cronbach's alpha coefficient.

For ethical considerations, the questionnaires were distributed anonymously among the elderly, and they were assured about the confidentiality of the data in the questionnaires. Data were analyzed by PASW software using descriptive statistics (frequency, mean and standard deviation) and inferential statistics (Pearson correlation coefficient and stepwise regression).  $P < 0.05$  was considered significant for all tests.

## Results

The samples included 218 men (54.5%) and 181 women (45.5%) living in Ilam, with the mean age of  $17.8 \pm 8.3$ . Of them, 91.8% were married, 43% were illiterate, 38.4% were homemaker, 50.2% had an average financial status and 80% were living in the city. The mean scores of Religious Attitude Questionnaire (Gloris-Brahni), General Health Questionnaire (GHQ-28) and The Symptom Checklist-90-R (SCL-90-R) for different demographic variables among the elderly are presented in Table 1. The mean scores of mental disorders (SCL-90), mental health and religious attitude of the elderly were  $25.1 \pm 10.1$ ,  $05.1 \pm 9.3$  and  $36.3 \pm 9.9$ , respectively. The results of Pearson correlation showed a positively significant correlation between mental disorders and mental health among the elderly ( $P = 0.003$ ,  $r = 0.147$ ). Since a higher score in the mental health questionnaire indicated a lower mental health, it can be concluded that the score of mental disorders increased with a reduction in mental health. Further, there was a negatively significant correlation between mental disorders and religious attitude ( $P = 0.0001$ ,  $r = -0.187$ ), indicating that the score of mental disorders reduced significantly with a rise in religious attitude score. Stepwise regression analysis was used to analyze the effect of predictor variables on the criterion variable (mental disorders). In multiple stepwise regression, the first predictor variable is subjected to analysis according to the highest correlation with criterion variable, and then other predictor variables are included in the analysis according to the correlation coefficient. In general, in stepwise regression the inclusion order of variables is not under the control of the researcher. The results of analysis of variance and statistical properties of stepwise regression analysis of mental disorders in the elderly based on mental health and religious attitude are shown in Table 2.

**Table 1.** Scores of study variables for different demographic characteristics among the elderly.

Variable	Religious attitude	Mental health	Mental disorder SCL-90	
<b>Gender</b>	Male	63.3 ± 9.56	60.08 ± 9.48	51.97 ± 10.49
	Female	64.52 ± 10.24	60.01 ± 9.21	53.11 ± 9.62
<b>Marital status</b>	Single	55.65 ± 10	59.12 ± 9.45	57.46 ± 8.74
	Married	64.04 ± 9.67	60.23 ± 9.34	51.67 ± 10.24
<b>Education</b>	Illiterate	62 ± 10.6	60.49 ± 9.33	54.51 ± 9.89
	Primary	65.3 ± 9.28	60.03 ± 9.38	50.73 ± 8.88
	High school	63.63 ± 9.24	59.7 ± 8.71	47.85 ± 12.5
	≥Diploma	61.88 ± 9.09	59.31 ± 10.16	50.5 ± 11.17
<b>Job</b>	Employee	62.04 ± 8.04	55.64 ± 7.38	50.57 ± 13.51
	Self-employed	63.42 ± 9.3	59.6 ± 8.86	52.57 ± 9.37
	Homemaker	61.58 ± 10.72	61.55 ± 9.45	48.3 ± 9.72
	Retired	65.42 ± 10.16	60.64 ± 9.78	53.09 ± 10.5
	Other	63.35 ± 6.5	60.21 ± 9.97	51.87 ± 4.87
<b>Residence</b>	City	63.23 ± 10.1	60.35 ± 9.62	52.2 ± 10.45
	Village	63.34 ± 9.31	60.11 ± 8.25	52.03 ± 9.33
<b>Economic status</b>	Poor	65.01 ± 9.05	60.09 ± 9.24	52.56 ± 11.6
	Average	63.18 ± 10.44	60.61 ± 9.02	51.54 ± 9.91
	Good	60.78 ± 9.53	59.29 ± 9.99	52.2 ± 8.64

Data are shown as mean ± SD.

**Table 2.** Predictive factors of mental disorder using multiple stepwise regression.

Model	Variable	Unstandardized coefficients		Standardized coefficients	t	R	R <sup>2</sup>	P
		B	Standard Error	B				
1	Constant	65.75	3.23		20.31	0.214	0.046	0.001
	Religious attitude	-	0.051	-0.214	-4.30			
2	Constant	59.24	4.24		13.94	0.243	0.059	0.001
	Religious attitude	-	0.052	-0.186	-3.67			
	Marital status	4.38	1.86	0.119	2.34			
3	Constant	63.66	4.67		13.63	0.267	0.071	0.001
	Religious attitude	-0.20	0.052	-0.199	-3.91			
	Marital status	4.23	1.86	0.115	2.27			
	Gender	-2.24	1	-0.11	-2.22			
4	Constant	54.54	6.32		8.62	0.286	0.082	
	Religious attitude	-	0.053	-0.172	-3.31			
	Marital status	4.58	1.85	0.125	2.46			
	Gender	-2.2	1	-0.108	-2.2			
	Mental health	0.11	0.05	0.107	2.12			

As indicated, in the first step the religious attitude variable, owing to having the highest correlation with the dependent variable, was included in the regression analysis, which had a multiple correlation coefficient of  $r=0.214$  and a squared correlation coefficient of  $r^2=0.046$  ( $P<0.001$ ). On the other hand, religious attitude could predict 4.6% of mental disorders in the Kurdish elderly of Ilam. In the next steps, the marital status, gender and

mental health variables were included in the model, which could altogether predict 8.2% of changes in mental disorders among the elderly.

## Discussion

This study was aimed at predicting mental disorders in the elderly according to religious attitude and mental health variables. The findings showed that religious attitude, gender, marital status and

mental health could generally predict 8.2% of changes in mental disorders among the elderly. In line with the findings of this study, the results of various studies have also indicated a negative correlation between mental distress and religious tendencies (18, 19). It seems that religious attitudes provide the elderly with a sense of meaning, control and hope and help them to cope with the stressful conditions of life better and be more satisfied with life (20, 21). Bonelli et al performed a review on 187 relevant studies. Their findings revealed that two third of the reviewed articles reported an inverse correlation between depression and religious/spiritual tendencies; as depression decreased with a rise in religious/spiritual tendencies (20). Dehkordi believes that religious attitudes can help the elderly to adapt to the aging process better and tolerate their problems more and more (22). However, extreme religious orientations and using religion for the sake of non-religious affairs are the negative aspects of religion. This situation in the patients with mental disorders leads to illusion and imaginary beliefs as well as poor adaptation to problems (23). The results of the present study showed a significant correlation between mental health and mental disorders. Accordingly, it can be argued that a kind of criterion validity exists between these two questionnaires. Seemingly, the General Health Questionnaire (GHQ-28) can be substituted by the Symptom Checklist-90-R (SCL-90-R), which is easier to use and has a lower number of items.

In the present study, marital status and gender could predict mental disorders in the elderly, which is not far-fetched. The results of Hybels and Blazer showed a correlation between mental disorders and gender and marital status (24). Death of a spouse is a stressful event for the elderly. With the loss of a spouse, an elderly loses a support and companion to make changes in his/her health behaviors. The findings of Goldman et al indicated that the prevalence of disability in the elderly who had lost their

partners and lived alone was higher than the other elderly (25). Other studies have also shown that losing a spouse and living alone are associated with psychological distress (26, 27). The studies carried out on the elderly in Sweden and Spain have showed that the prevalence of mental disorders and depression was higher in women than men, confirming the results of the current study (1, 2). This can be due to the higher perception of stress in women. With regard to the correlation between gender and mental disorders, the findings of Baladon et al showed that the prevalence rates of depression and anxiety were 3.5 and 3 times more in women than in men, which is in line with the results of the present study (28).

### Conclusion

In general, the findings of this research indicated that religious attitudes and mental health could predict a part of the score of mental disorders in the elderly. Since mental disorders in the elderly is a multidimensional concept that is influenced by many factors, further studies are recommended to be conducted in this regard. It seems that better understanding of the risk factors of mental disorders in the elderly can help to design interventional programs and identify the people at risk.

### Acknowledgements

This study was derived from a research project (no: 937005/68) approved by the Psychosocial Research Center of Ilam University of Medical Sciences. The authors appreciate the financial support of the research deputy of Ilam University of Medical Sciences as well as all the elderly who participated in this research.

### Conflict of Interests

The authors declare no conflict of interests.

### Funding/Support

Ilam University of Medical Sciences.

## References

1. Olivera J, Benabarre S, Lorente T, Rodríguez M, Pelegrín C, Calvo JM, et al. Prevalence of psychiatric symptoms and mental disorders detected in primary care in an elderly Spanish population. The PSICOTARD Study: preliminary findings. *Int J Geriatr Psychiatry*. 2008;23(9):915-21. doi: 10.1002/gps.2004.
2. Olafsdottir M, Marcusson J, Skoog I. Mental disorders among elderly people in primary care: the Linköping study. *Acta Psychiatr Scand*. 2001; 104(1):12-8. doi:10.1034/j.1600-0447.2001.104001012.x.
3. Skoog I. Psychiatric disorders in the elderly. *Canadian J Psychiatr*. 2011; 56(7):387-97. doi:10.1177/070674371105600702.
4. Östling S. Psychotic symptoms in the elderly. *Prim Care Companion J Clin Psychiatr*. 2005; 7(5): 238-41.
5. Olesen PJ, Gustafson DR, Simoni M, Pantoni L, Östling S, Guo X, et al. Temporal lobe atrophy and white matter lesions are related to major depression over 5 years in the elderly. *Neuropsychopharmacol*. 2010;35(13):2638. doi:10.1038/npp.2010.176
6. Lindén T, Blomstrand C, Skoog I. Depressive disorders after 20 months in elderly stroke patients. *Stroke*. 2007; 38(6):1860-3. doi:10.1161/STROKEAHA.106.471805.
7. Cole MG, Dendukuri N. Risk factors for depression among elderly community subjects: a systematic review and meta-analysis. *Am J Psychiatr*. 2003; 160(6):1147-56. doi:10.1176/appi.ajp.160.6.1147.
8. Behere PB, Das A, Yadav R, Behere AP. Religion and mental health. *Ind J Psychiatr*. 2013 Jan;55(Suppl 2):187-194. doi:10.4103/0019-5545.105526.
9. Salehi I, Mosalman M. Evaluation of the relationship between religious attitude and depression, anxiety and stress in students of Guilan University. *Relig Health*. 2015; 3(1):57-64.
10. N SF, Rezaei M, Givari A, Hosseini F. [Prayer and spiritual well-being in cancer patients]. *Payesh*. 2006; 5(4):295-303. (Article in Persian)
11. Saberian M, Hajiaghajani S, Gorbani R. [Survey of health, social and economic conditions of the elderly and their leisure time]. *Koomesh*. 2003;4(3):25-32. (Article in Persian)
12. Halling A, Halling A, Unell L. General health and tobacco habits among middle-aged Swedes. *The European J Pub Health*. 2006; 17(2):151-4. doi:10.1093/eurpub/ckl086.
13. Trevino KM, Pargament KI, Cotton S, Leonard AC, Hahn J, Caprini-Faigin CA, et al. Religious coping and physiological, psychological, social, and spiritual outcomes in patients with HIV/AIDS: Cross-sectional and longitudinal findings. *AIDS Behav*. 2010;14(2):379-89. doi:10.1007/s10461-007-9332-6.
14. Koeing H. Spirituality wellness and quality of life: Sexuality reproduction and menopause. *Fertil Steril*. 2004;4(4):76-82. doi:10.1016/j.sram.2004.04.004.
15. Lewis CA. Cultural stereotype of the effects of religion on mental health. *Br J Med Psychol*. 2001;74 Part 3:359-67. doi:10.1348/000711201161037.
16. Sadeghi M, Bagherzadeh Ladari R, Haghshenas M. [A study of religious attitude and mental health in students of Mazandaran University of Medical Sciences]. *J Mazandaran Univ Med Sci*. 2010; 20 (75):71-5. (Article in Persian)
17. Malekooti SK MA, Fathollahi P , Salavati M, Kahali S, Afkham Ebrahimi A, et al. Validity, reliability and factor analysis of General Health Questionnaire-28 (GHQ-28) in Iranian elderly. *Iran J Age*. 2006;1:11-21.

18. Khodayarifard M SY, Ghobari Bonab B. Religious attitude scale preparation of students. *J Psychol.* 2000;4(3):268-85.
19. Mir Zamani M, Mohamadi M. [Research about the religious value in a group of mental patients based on test Lport study, Vernon and Lindsay]. *Hakim.* 2001; 4(1):51-8. (Article in Persian)
20. Bonelli R, Dew RE, Koenig HG, Rosmarin DH, Vasegh S. Religious and spiritual factors in depression: review and integration of the research. *Depress Res Treat.* 2012; 2012:962860. doi: 10.1155/2012/962860.
21. Abu-Raiya H. On the links between religion, mental health and inter-religious conflict: a brief summary of empirical research. *Isr J Psychiatry Relat Sci.* 2013;50(2):130-9.
22. Aliakbari Dehkordi M, Peymanfar E, Mohtashami T, Borjali A. The comparison of different levels of religious attitude on sense of meaning, loneliness and happiness in life of elderly persons under cover of social welfare organisation of urmia city. *Iran J Age.* 2015;9(4):297-305.
23. Weber SR, Pargament KI. The role of religion and spirituality in mental health. *Curr Opin Psychiatry.* 2014;27(5):358-63. doi: 10.1097/YCO.0000000000000080.
24. Hybels CF, Blazer DG. Epidemiology of late-life mental disorders. *Clin Geriatr Med.* 2003;19(4):663-96. doi:10.1016/S0749-0690(03)00042-9.
25. Goldman N, Korenman S, Weinstein R. Marital status and health among the elderly. *Soc Sci Med.* 1995;40(12):1717-30. doi:10.1016/0277-9536(94)00281-w.
26. Schulz R, Beach SR, Lind B, Martire LM, Zdaniuk B, Hirsch C, et al. Involvement in caregiving and adjustment to death of a spouse: findings from the caregiver health effects study. *JAMA.* 2001; 285(24):3123-9. doi:10.1001/jama.285.24.3123.
27. Avis NE, Brambilla DJ, Vass K, McKinlay JB. The effect of widowhood on health: A prospective analysis from the Massachusetts Women's Health Study. *Soc Sci Med.* 1991;33(9):1063-70. doi:10.1016/0277-9536(91)90011-Z
28. Baladón L, Fernández A, Rubio-Valera M, Cuevas-Esteban J, Palao DJ, Bellon JA, et al. Prevalence of mental disorders in non-demented elderly people in primary care. *Int Psychogeriatr.* 2015;27(5):757-68. doi:10.1017/S104161021400284.