doi: 10.22100/ijhs.v4i3.568
Original Article

IJHS 2018;4(3):12-16
ijhs.shmu.ac.ir

IJHS
International Journal of Health Studies

The Prevalence of Mental Disorders (Depression and Anxiety) and their Related Factors among the Elderlies in Bastam 2018

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Received: 28 April 2019
Accepted: 3 July 2019

Abstract

Background: *Depression and anxiety are common problems in the elderly, which also cause disability and physical illness. The aim of this study is to investigate the prevalence of mental disorders (depression and anxiety) and factors affecting them among the elderlies of Bastam city.*

Methods: *This study is a descriptive cross-sectional study. By referring to Bastam Health Center, 262 adults aged 60 and over were selected via simple random sampling method. Depression and anxiety in the elderly were measured using the Geriatric Depression Scale and Beck Anxiety Inventory, respectively. For data analysis, descriptive statistics and inferential statistics including independent t-test, Pearson correlation test and Chi-square test were used.*

Results: *In the present study, 25.6%, 11.1% and 8% of the elderly had mild, moderate and severe depression, respectively. There was no significant difference between depression scores in terms of gender, marital status, and employment status (Pvalue>0.05); however, there was a significant difference between the mean depression scores in terms of underlying disease (Pvalue<0.001). There was also a significant difference between the mean score of anxiety in terms of gender, marital status, occupational status, and underlying disease (Pvlue<0.05). Further, a direct and significant relationship was found between the age and mean score of depression as well as anxiety. On the other hand, there was a significant negative correlation between the level of education of the elderly and depression as well as anxiety scores (Pvalue<0.05).*

Conclusions: *Depression and anxiety are prevalent among elderly people in Bastam. Therefore, it is important to address mental health problems, especially depression and anxiety in the elderly and to identify risk factors among the elderly.*

Keywords: Depression, Anxiety, Elderly.
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Please cite this paper as: Afzali A, Ebrahimi H, Emamian MH. The prevalence of mental disorders (depression and anxiety) and their related factors among the elderlies in Bastam 2018. Int J Health Stud 2018;4(3):12-16.

Introduction

The phenomenon of aging has been the result of the development of societies. Meanwhile, many efforts have been made to control and cure epidemic diseases. On the other hand, the low birth rate has led to the aging of the world's population.[1] According to the forecasts of international organizations, Iran is a developing country which is approaching the aging population.[2] According to the World Health Organization (WHO, 2015), about 10% of the Iranian population is over 60 years old.[3] Many physical and mental changes occur in aging, in response to which the risk of many diseases increases.[4]

The most common and prevalent mental disorder is depression, followed by cognitive and anxiety disorders.[5] Depression is an issue of public health and is one of the main causes of disability in the world.[6] It is the second leading cause of disability in the elderly, and people who had a previous history of depression are also at greater risk of developing depression in their elderly years.[7] The World Health Organization has announced that 350 million people are depressed.[8] In a review and meta-analysis in Iran, the prevalence of depression among Iranian elderly was reported as 43%.[9] This condition is a major contributor to healthcare expenditure in the elderly population and is expected to be the leading cause of illness in the elderly by 2020.[10] Elderly people with chronic illness and low levels of health and well-being are at a greater risk for depression.[11] About a quarter of successful suicides in old age are due to depression.[12] Another common mental disorder among elderlies is anxiety. Anxiety in old age can occur due to motor problems, grief, loss of autonomy and chronic diseases.[13] When the elderly have a high level of anxiety, the risk of heart and respiratory illness increases and the immune system may be suppressed.[14] Anxiety disorders are common worldwide. In the United States, annually about 16 million people suffer from anxiety disorders. The incidence of these disorders in women is twice as high as in men.[15] In one study, the prevalence of anxiety in Iranian elderly was reported as 44%.[16]

It should be noted that an individual encounters anxieties during their lifetime, which are beneficial and can lead to growth. About 10% of anxiety is essential for an ordinary person, but abnormal anxiety causes illness and burnout.[17] Limited studies have been conducted on the prevalence of mental disorders (depression and anxiety) in the elderly in Iran. No study was found examining the prevalence of depression and anxiety and related factors. Most studies have also been conducted in nursing homes. The aim of this study is to investigate the prevalence of mental disorders (depression and anxiety) and factors affecting them among the elderlies of Bastam city. It is hoped that the findings from this study will help health policymakers identify risk factors and develop mental health programs for the elderly.

Materials and Methods

The present study is a cross-sectional descriptive study conducted to determine the prevalence of mental disorders (depression and anxiety) and factors affecting them among the elderlies of Bastam city in 2017. This city is located 6 km northeast of Shahrood city. The population of this city, according to the latest census in 2016, is about 8600 people. The research population consisted of all elderly people living in

Bastam. Based on similar studies and calculations, a sample size of 262 people was calculated. Referring to the city health center, a comprehensive list of elderly residents in the city was prepared, out of whom 262 people were selected using simple random sampling. The entry criteria included: age 60 and over, having complete satisfaction for participation in the study, lack of speech and hearing impairment. On the other hand, the exit criteria were: non-willingness to participate in the study, having a history of disorders and forgetfulness. The data were collected using an individual characteristics questionnaire, elderly depression scale (GDS) and Beck anxiety inventory (BAI). In order to assess depression in the elderly, standardized GDS scale with 15 questions was used. This questionnaire was first designed and validated by Yesavage et al. (1983) to estimate depression in the elderly. The questionnaire has a total of 15 scores with yes or no answers. The classification of depression on this scale is as follows: 4-0 normal, 8-5 mild depression, 11-9, moderate depression, and a score of 15-12 severe depressive disorder.[18] This tool was evaluated and verified by Malekuti et al. (2006), where Cronbach's alpha (0.9) and validity (0.89) were obtained.[19] In order to assess the anxiety of the elderly, the Beck Anxiety Inventory (BAI), developed by Beck and colleagues in 1990, was used. The questionnaire has 21 questions, with the scores ranging from zero to 3. The division of anxiety based on the scores obtained is as follows: A score of 0-7 shows no or minimum anxiety, a score of 15-8 mild anxiety, a score of 16 to 25 average anxiety, and a score of 26-63 severe anxiety.[20] The validity and reliability of this questionnaire have been confirmed by Kaviani et al. This tool has a good validity (r=0.72, Pvalue<0.001), reliability (r=0.83, Pvalue<0.001) and internal consistency (Alpha=0.92).[21] The individual characteristics questionnaire captured age, gender, marital status, educational level, employment status, number of children and existence of underlying illness. To analyze the data, SPSS 21 software was used. Descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics including independent t-test and Pearson correlation test were used to analyze the data. Significant levels in this study are less than .05.

Ethical considerations:

The required explanations were given to each participant about the purpose of the research. The principle of privacy and confidentiality was observed. Participants could resign at each stage of the research. This research has been registered with the code of ethics IR.SHMU.REC.1396.13 at Shahroud University of Medical Sciences.

Results

In this study, 262 elderly patients were evaluated. Most of the elderly (51.5%) were women. The mean age of subjects was 70±7.66 years. Most of the elderly (73.3%) had at least one underlying disease. Most of them (66%) were employed and married (70.2%) (table 1). The mean score of depression was 5.7±3.78. According to the criterion for the classification of depression in the GDS questionnaire, most participants (55.3%) were in the normal range (table 2). The prevalence of depression in the elderly based on gender, marital status, employment status, and underlying illness has been presented in table 3. According to the independent sample t-test, there was no significant difference between the mean depression score in terms of gender (Pvalue=0.082), marital status (Pvalue=0.105) and employment status (Pvalue=0.644). There was, however, a significant difference between the depression mean scores in terms of underlying disease (Pvalue<0.001). Those who suffered from an underlying disease had a higher depression score (table 3). Based on the Pearson correlation test, there was a direct and significant relationship between age and mean score of depression (Pvalue<0.001). There was also an inverse relationship between the level of education of the elderly and their depression score; as the number of years of study increased the severity of depression decreased (Pvalue= 0.004) (table 4). The mean anxiety score was 11.28±8.23. According to the anxiety classification criteria in the BAI questionnaire, most participants (37.8%) were in the normal range (table 2). Table 3 also reports the prevalence of anxiety in the elderly based on gender, marital status, employment status and underlying illness. According to the t test, there was a significant difference between the mean scores of anxiety in terms of gender (Pvalue=0.011), marital status (Pvalue=0.006), occupational status (Pvalue=0.024), and underlying illness (Pvalue<0.001); women, elderlies without husband, employed individuals, and those who had an underlying disease had higher mean anxiety scores (table 3). Based on the Pearson correlation test, there was a direct and significant relationship between age and anxiety score (Pvalue=0.002). There was also a significant negative correlation between the level of education of the elderly and their anxiety scores. As the number of years of study increased, anxiety severity diminished (Pvalue=0.044) (table 4).

Table 1. Demographic characteristics of the elderly present in the research

Variables	Number	Percent
Age groups		
– 60-69	148	56.5
– 70-79	73	27.8
– 80-89	35	13.4
– ≤90	6	2.3
Sex		
– Male	127	48.5
– Female	135	51.5
Marital status		
– married	184	70.2
– single	78	29.8
Educational status		
– Illiterate	146	55.7
– 1 - 5	55	21.0
– 6 -11	44	16.8
– ≤12	17	6.5
Chronic disease		
– affected	192	73.3
– Non-affected	70	26.7
Job		
– Employed	173	66.0
– Not employed	89	34.0
Number of children		
– 0 – 2	55	21.0
– 3 – 5	147	56.1
– ≤6	60	22.9

Table 2. Prevalence of depression and anxiety in the elderly

Variables / Prevalence	Depression %	Anxiety %
Normal	55.3	37.8
Mild	25.6	37.4
Moderate	11.1	16.4
Severe	8.0	8.4

Table 3. The relationship between demographic variables and depression and anxiety scores in the elderly according to independent t test sample

Variables	Mean±SD %		Pvalue*	
	Depression	Anxiety	Depression	Anxiety
Sex				
– Male	4.65±3.73 40.2%	9.95±8.46 52.0%	0.082	0.011
– Female	5.46±3.79 48.9%	12.54±7.84 71.9%		
Marital status				
– Married	4.82±3.79 41.3%	10.37±8.07 57.1%	0.105	0.006
– Single	5.65±3.71 52.6%	13.43±8.25 74.4%		
Job				
– Employed	5.15±3.63 46.8%	12.10±8.70 65.3%	0.644	0.024
– Not employed	4.92±4.06 40.4%	9.68±7.01 56.2%		
Chronic disease				
– Affected	5.62±3.81 51.0%	12.88±8.24 70.3%	<0.001	<0.001
– Not affected	3.55±3.25 27.1%	6.91±6.47 40.0%		

*.significant level was set at 0.05.

Discussion

According to Sarokhani et al. the prevalence of severe depression in Iranian elderly is 19% and moderate depression is 33% which is not consistent with the results of the present study. The comprehensive study on the prevalence of depression in Iranian elderly people can be the reason for these contradictory results.[22] In the study of Aly et al. in Egypt, severe depression is not prevalent among elderly people, but the prevalence of mild depression is 18.9% which is not consistent with the results of the present study. This difference can be due to the presence of rural samples in this study.[23] In this study, the prevalence of depression in women was higher than that in men, but this relationship was not statistically significant. The studies by Mirzaie et al., Nair et al. and Nazemi et al. also showed the same result and relationship.[24-26] However, less prevalence of depression in women has been reported in the study of Manzoori et al. and Nejati et al. The reason for this discrepancy can be cultural differences and differences in women's lifestyle.[27,28] Based on this study, the prevalence of depression among married elderly people was lower than among the elderly who lived alone, but this relationship was not statistically significant. According to Papadopoulos et al. and Keshfi et al., the prevalence of depression in married elderly was lower than that in elderly people who were not married and this relationship was statistically significant.[29,30] In the study of Nazemi et al., the prevalence of depression among married elderly and those living alone was almost equal and there was no statistically significant relationship between depression and marital status. The reason for this conflict can be the living conditions of the nursing home.[26] In the present study, the prevalence of depression in unemployed elderly was lower than that in employed individuals, but this relationship was not statistically significant. In the study of Garanjik et al., the mean depression among employed elderly was lower than that among unemployed and disabled subjects and this relationship was statistically significant.[31] In the study of Arslantas et al., the mean depression in employed elderly was lower than that in unemployed ones, but it was not statistically significant.[32] The results of this study revealed that the prevalence of depression in elderly people with an underlying disease was higher than that in those with no underlying disease and this relationship was statistically significant. In the study of Babazadeh et al., the prevalence of depression among elderly people with a history of disease was more than that in those with no such a background and this relationship was statistically significant.[33] In the study of Mirzaie et al., the prevalence of depression in elderly people with a history of disease was higher than that in those without this background, but this relationship was not statistically significant.[24] In the present study, the prevalence of depression rose with increasing age and there was a significant relationship between these two variables. In the Milanović et al. study, age was a predictor of depression symptoms, and this relationship was statistically significant.[34] In the present study, the prevalence of depression in older people who had higher educational level was lower and this relationship was statistically significant. In the study of Lina Ma et al., the prevalence of depression symptoms in the literate elderly was lower than that among illiterate individuals and this relationship was statistically significant.[35] The results showed that 8.4% of the participants had severe anxiety and 16.4% of the participants had moderate anxiety. According to Azadi et al., 52.9% of the elderly had an average level of anxiety. Perhaps the reason for the increased prevalence of anxiety in Azadi et al. is that this study was conducted on diabetic people.[36] In the study of Delphin-Combe et al., 9.4% of the elderly had a moderate to severe anxiety level.[37] In the present study, the prevalence of anxiety was higher in women than in men and this relationship was statistically significant. In the study of Rashidi et al., the prevalence of anxiety was higher in women than that in men and this relationship was statistically significant.[13] In this study, the prevalence of anxiety was lower in married elderly compared to individuals living alone. In the study of Hee-Ju Kang, the anxiety prevalence in married elderly was higher and there was a significant statistical relationship.[38] In the present study, the prevalence of anxiety in employed elderly was less than that of those who did not have a job and this relationship was statistically significant. In the study of Azadi et al., the prevalence of anxiety in employed elderly was less than that of the elderly who did not have a job and there was a significant relationship between employment status and anxiety as well as morbidity.[36] In the present study, the prevalence of anxiety in elderly with an underlying disease was higher than that of those who did not have such a history and this relationship was statistically significant. In the study of Babazadeh et al., the prevalence of anxiety among older people with a history of disease was greater than that of those who did not have this background and this relationship was statistically significant.[33] The results of this study suggested that with an increase in age, the prevalence of anxiety also increased and there was a significant relationship between these two

variables. Similarly, in the study of Ying Liang, with an increase in age, anxiety also increased and this relationship was statistically significant.[39] Finally, in the present study, the prevalence of anxiety was lower in elderly people who had more years of education, and this relationship was statistically significant. In the study of Ahangari et al., the prevalence of anxiety was lower among educated people and this relationship was statistically significant.[40]

Considering the high prevalence of depression and anxiety among elderly people in Bastam, it is very important to address mental problems, especially depression and anxiety in the elderly. One of the ways to reduce the prevalence of depression and anxiety for this group is to educate the elderly and their families about risk factors and prevent these disorders. The staff of the medical staff, especially physicians, nurses and health care providers have a significant role in educating and identifying risk factors for depression and anxiety to reduce the prevalence of these disorders in the elderly.

Acknowledgement

The present study was supported by Shahroud University of Medical Sciences as a research. We hereby acknowledge the research deputy for grant number 9606.

Conflict of Interest

The authors declare that they have no conflict of interest.

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