

# A Survey of Anxiety and Depression among Elderly People Referred to Health Center of Larestan in 2019

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## Abstract

**Background:** Elderly people face many challenges and these problems make them vulnerable to various types of mental disorders. The purpose of this study was to evaluate the level of anxiety and depression in the elderly people who referred to the health center of Larestan city in 2019.

**Methods:** In this cross-sectional study, 109 elderly people were selected by convenience sampling from health center of Larestan city. Demographic information, Beck Depression Inventory and Spielberger Anxiety Questionnaire were completed by the samples. Finally, the collected data were analyzed using Spearman, Kruskal-Wallis and Mann-Whitney tests. In this study, a P value of 0.05 was considered as statistically significant.

**Results:** Out of 109 elderly people who participated in this study, 47 (43.1%) were male and 62 (56.9%) were female. The mean age of the men and women was 65.30±5.013 and 69.34±5.675 years, respectively. Most of the samples were married (79.80%) and illiterate (43.10%). The mean of depression, state and trait anxiety in men was 11.79±5.91, 33.02±11.56 and 34.19±13.50 respectively; also, the mean of depression, state and trait anxiety in women was 15.31±6.65, 40.68±12.44 and 40.82±12.29, respectively. The results of Mann-Whitney U test showed a statistically significant relationship between gender and the level of depression, state and trait anxiety (P<0.05). There was no significant relationship between depression, anxiety and other demographic variables (P>0.05).

**Conclusion:** The findings of this study indicate the high prevalence of depression and anxiety among the elderly under the study, especially among the elderly women; therefore, interventions are needed to reduce the stressors of the elderly people's lives.

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## Introduction

One of the most important and sensitive periods of human life is aging that begins from the age of 60 and is characterized by physiological changes such as muscular disability and increased physical illness, mental and social problems.<sup>1,2</sup> Research shows that by 2030, the

world's elderly population will grow from 9 percent to 16 percent and in Iran from 5.6 to 17.5 percent.<sup>3</sup> It is also estimated that the number of elderly in Iran will reach over 25 million by 2050.<sup>4</sup> Therefore, Iran is among the elderly countries.<sup>5</sup> As elderly population grows, attention to their issues becomes more important.<sup>6</sup> Some researchers describe aging as one of the most important

stages of human life that has been neglected. Symptoms of aging and changes in physical appearance and lack of previous abilities have made the elderly less visible in society.<sup>7</sup> Life expectancy in Iran is rising; however, the phenomenon of aging has not yet been considered as a necessary phenomenon in the country.<sup>8</sup> Nowadays, the elderly, due to the end of their employment, emotional and psychological separation from industrialization of societies, change in family structure, and forgetfulness of traditions are increasingly feeling lonely, so they are excluded and exposed to increasing psychological and psychological risks. Adaptation to retirement conditions is painful for older people and can cause mental problems.<sup>9</sup> Therefore, with the increasing proportion of the elderly population, their health problems, especially those related to mental health, become more important.<sup>10</sup> One of the most common psychological problems in the elderly is depression.<sup>11</sup> Depression in the elderly can be consequence of many factors such as pain, weakness, drug use, lack of social relationships, or emotional support resulting from the death of a spouse or isolation from others, functional disability, loneliness and worry about death, financial problems, and mental illness.<sup>2</sup> Depression is usually not well-diagnosed in the elderly and is not adequately treated.<sup>11</sup> One of the important reasons for not recognizing depression in the elderly is that it usually appears with physical complaints.<sup>12</sup> The elderly, on the other hand, are exposed to many anxiety-causing factors such as motor activity restriction and dependency,<sup>13, 14</sup> loss of friends and relatives,<sup>15</sup> loss of financial independence,<sup>16</sup> illness,<sup>14</sup> and fear of death.<sup>17</sup> Although there have been many scientific and technological advances in the modern era, disorders such as depression and anxiety are still considered as diseases of old age.<sup>1, 18</sup> Such disorders have important effects on the quality of life, clinical outcome, functional status and use of medical services and mortality and morbidity of the elderly.<sup>19</sup> Depression and anxiety are among the leading causes of disability in the world and are projected to become one of the most important economic and human diseases in the years 2020-2030.<sup>19-21</sup> However, one of the most important strategies for success in the prevention and treatment of mental illness in the elderly is to provide medical and care services to this group by the treatment team, including nurses, and it seems that epidemiological information about the elderly mental health problems such as depression and anxiety can be used to assess this goal and ultimately improve the elderly quality of life.<sup>9, 21</sup> On the other hand, by identifying the psychological problems of the elderly, including anxiety and depression, it is possible to improve the health, social, and economic policies of the society in such a way that it can reduce the amount of pressure from which this group suffers.<sup>10</sup> In this regard, the results of the study of Mirzaei et al. show that by timely screening and implementing preventive programs, the prevalence of depression can be reduced in the elderly people.<sup>22</sup> The findings of a study by Saeidimehr et al. show that

reducing the factors that cause depression and treat depression can improve the quality of life of the elderly.<sup>23</sup> The results of a study by Creighton et al. also revealed that anxiety among the elderly people was not usually reported by the treatment team, while the treatment staff should be aware of how anxiety manifests itself in the elderly and as a rule, they should use screening tests such as anxiety measurement tests to check the mental health of the elderly.<sup>24</sup> Depression is one of the most common causes of suicide in the elderly and accounts for nearly 24% of successful suicides in this age group.<sup>25, 26</sup> On the other hand, people with depression who report suicidal ideation experience a higher level of anxiety before treatment, which has negative effects on the recovery period.<sup>27</sup> Therefore, depression and anxiety are two of the most important psychological problems in the old age.<sup>10</sup> Although many studies have been conducted on the problems of old age in Iran, still analysis of the current situation and the future prospects of the elderly in Iran indicate that there are many challenges and problems now and in near future. In the meantime, paying serious attention to improving the health of the elderly, including the psychological problems of old age, although late, is necessary and makes the challenges with which the Iranian health system is faced in old age clear.<sup>9</sup> Therefore, the aim of this study was to evaluate the level of anxiety and depression in the elderly.

## Methods

This cross-sectional study was conducted in 2019 on 109 elderly people referring to the health center of Larestan city. Subjects were selected by convenience sampling. Being at least 60 years old, giving informed consent to participate in the study, and not having an acute family problems or history of mental illness were the inclusion criteria. They were excluded if they did not wish to participate in the study. Data collection tools included demographic questionnaire, Beck Depression Inventory, and Spielberger Anxiety Scale. The demographic questionnaire included age, gender, marital status, and level of education. The Beck Depression Inventory has 21 items, scored based on a Likert scale ranging from 0 to 3. The minimum score obtained in this test is 0 and the maximum 63. Scores of 1 to 10 indicate no depression, 11 to 16 mild depression, 17 to 20 a need for counseling, 21 to 30 moderate depression, 31 to 40 severe depression, and a score above 41 indicates very severe depression. In Iran, this questionnaire has been standardized.<sup>28</sup> Also, the test-retest reliability of this scale has been reported 0.48 to 0.86.<sup>29</sup> The Spielberger Anxiety Scale has two parts (the state and trait anxiety). Each of these two sections has 20 questions designed on a 4-point Likert scale (very low, low, high and very high) and weighs between 1 and 4. In the state anxiety, scores of 20 to 31 indicate mild anxiety, 32 to 42 moderate and downward anxiety, 43 to 53 moderate upward anxiety, 54 to 64 relatively severe anxiety, 65 to 75,

severe anxiety and 75 or higher indicate very severe anxiety. In the trait anxiety, scores of 20 to 31 indicate mild anxiety, 32 to 42 moderate downward anxiety, 43 to 52 moderate upward anxiety, 53 to 62 relatively severe anxiety, 63 to 72 severe anxiety, and 73 or higher very severe anxiety.<sup>30</sup> The validity and reliability of this tool have been confirmed in various studies in Iran.<sup>31</sup> At the data gathering stage, after reviewing the inclusion criteria and obtaining consent from the research units, the subjects completed the demographic questionnaire, Beck Depression Inventory and Spielberger Anxiety Scale. Data analysis was performed using SPSS software (version 25) at 95% confidence level. Quantitative variables were reported as mean and standard deviation; also, qualitative variables were reported as percentages. Spearman correlation test was used to investigate the relationship between quantitative variables and Mann-Whitney U and Kruskal-Wallis tests were used to investigate the relationship between quantitative and qualitative variables. The significance level was set at 0.05. This study was approved by the Ethics Committee of Larestan University of Medical Sciences (IR.LARUMS.REC.1398.006).

## Results

Of the 109 elderly people who participated in this study, 47 (43.1%) were male and 62 (56.9%) female. The mean age of men and women was 65.30±5.013 and 69.34±5.675 years, respectively. In terms of marital status, 87 were married (79.80%), 16 were widowed (14.70%) and 6 were

divorced (5.50%). In terms of education, 47 (43.10%) were illiterate, 46 (42.20%) could only read and write, and 16 (14.70%) had less than high school education. The mean scores of depression, state and trait anxiety were 55.6±13.79, 37.38± 12.60 and 37.96±13.18, respectively. Table 1 presents the frequency distribution of depression and anxiety in the elderly.

According to the results of Spearman correlation test, there was no statistically significant relationship between depression score and age ( $r=-0.104$ ,  $P=0.283$ ), and state anxiety and age ( $r=0.039$ ,  $P=0.685$ ), trait anxiety and age ( $r=0.02$ ,  $P=0.838$ ). Also, there was no significant statistical relationship between different age groups' depression and anxiety scores (Table 2).

The means of depression, state and trait anxiety in men were 11.79±5.91, 33.02±11.56 and 34.19±13.50 respectively, and those of depression, state and trait anxiety in women were 15.31±6.65, 40.68±12.44 and 40.82±12.29, respectively. The results of Mann-Whitney U test showed a statistically significant relationship between gender and the level of depression, state and trait anxiety ( $P<0.05$ ) (Table 3).

The results of Kruskal-Wallis test showed no significant difference in the relationship between depression, state and trait anxiety and educational level ( $P>0.05$ ) (Table 4). Also, the results of Kruskal-Wallis test did not show a significant difference in the relationship between depression, state and trait anxiety and marital status ( $P>0.05$ ) (Table 5).

**Table 1:** Frequency distribution of depression and anxiety in the elderly

Variables	Normal		Mild		Moderate		Severe		Very Severe	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Depression	47	43.10	44	40.40	16	14.70	2	1.80	0	0
State Anxiety	46	42.20	21	19.30	31	28.40	8	7.30	3	2.80
Trait Anxiety	46	42.20	18	16.50	28	25.70	14	12.85	3	2.80

**Table 2:** Mean rank of depression, state and trait anxiety by age in the elderly

Variables		Depression		State anxiety		Trait anxiety	
		Mean Rank	Number	Mean Rank	Number	Mean Rank	Number
Age	60-65	56.58	52	51.76	52	52	51.96
	66-70	54.58	25	59.50	25	25	57.20
	71-75	67.37	15	71.67	15	15	73.23
	76-80	39.88	17	43.59	17	17	44.97
Kruskal-Wallis H		6.369		7.453		7.319	
P value		0.095		0.059		0.062	

**Table 3:** Mean rank of depression, state and trait anxiety by gender in the elderly

Variables		Depression		State anxiety		Trait anxiety	
		Mean Rank	Number	Mean Rank	Number	Mean Rank	Number
Gender	Male	47	47.16	47	43.60	47	45.13
	Female	62	60.94	62	63.65	62	62.48
Mann-Whitney U		1088.50		921		993	
P value		0.024		0.001		0.004	

**Table 4:** Mean rank of depression, state and trait anxiety by education in the elderly

Variables		Depression		State anxiety		Trait anxiety	
		Mean Rank	Number	Mean Rank	Number	Mean Rank	Number
Educational Level	Illiterate	55	47	58.83	47	60.30	47
	Literacy in reading and writing	45.55	46	48.44	46	47.10	46
	Less than high school	43.60	16	42.01	16	42.23	16
Kruskal-Wallis H		1.912		4.811		5.361	
P value		0.384		0.090		0.069	

**Table 5:** Mean rank of depression, state and trait anxiety by marital status in the elderly

Variables		Depression		State anxiety		Trait anxiety	
		Mean Rank	Number	Mean Rank	Number	Mean Rank	Number
Marital Status	Widow	48.97	16	52.31	16	56.22	16
	Married	56.59	87	56.34	87	55.60	87
	Divorcee	48	6	42.67	6	43	6
Kruskal-Wallis H		1.106		1.189		0.922	
P value		0.575		0.552		0.631	

## Discussion

In today's life where there are many problems, the elderly face a lot of psychological stresses due to many deficiencies, such as loss of loved ones, poor economic status and reduced physical activity, which can cause extensive physical and mental problems in the elderly.<sup>32</sup> In the present study, 16.50% of the elderly had moderate to high level of depression, 38.50% had moderate to high level of state anxiety, and 41.35% had moderate to high level of trait anxiety. In the study of Alizadeh et al., 46.50% of the elderly showed moderate level of anxiety and depression disorders.<sup>8</sup> Moreover, in the study of Ghafari et al. the prevalence of depression and anxiety in the elderly was high.<sup>32</sup> According to research, depression is the most important problem in the elderly,<sup>33</sup> and about 15 percent of the elderly suffer from depression.<sup>12</sup> Aging is a time of decreasing income, decreasing social relationships, losing social roles, decreasing health and fatigue; the stress due to these factors has a significant positive relationship with depression symptoms in the elderly.<sup>10</sup> In addition, illnesses in old age, loss of family members and friends and disabilities of old age and thinking about death cause anxiety in the elderly.<sup>21, 34</sup> There was no significant relationship between depression and anxiety with age. However, the results of a study by Weiss et al. show that there is no significant statistical relationship between age and the level of anxiety and depression in the elderly;<sup>35</sup> other studies have shown that depression and anxiety increase with age<sup>36</sup> and increasing age is a risk factor in vulnerability to mental disorders in Iranian elderly.<sup>8</sup> Perhaps, the most important reason for the lack of significant differences between different age groups in this study is that most of the studied samples (47.70%) were in the age range of 60-65 years and in early years of old age that the problems of this period may not yet have appeared. In this study, a significant relationship was found between depression,

anxiety and gender, so that the level of depression and anxiety in women was significantly higher than men. In the study conducted by Babazadeh et al., the rate of depression and anxiety was higher in the elderly women.<sup>37</sup> Many studies have reported higher rates of depression in women than men.<sup>38-40</sup> Many social, cultural, biological and hormonal factors are involved in this gender difference.<sup>39, 41, 42</sup> There was no significant relationship among depression, anxiety and education level. Regarding the insignificance of this relationship, it can be said that most of the samples studied (85.30%) were illiterate or had low education level. However, in the study of Momayyezi et al. a significant statistical relationship was found among depression, anxiety and education level; with increasing level of education, level of anxiety and depression decreased.<sup>43</sup> In the study of Momayyezi et al., 69.50% of the subjects had diploma or higher levels. It can be said that probably educated people have a better understanding of the problems, so it can reduce depression and anxiety.<sup>44</sup> Studies have also shown that people with higher education have better coping skills when confronted with problems, and greater ability to use problem-solving techniques when facing with problems can help to improve a person's mental health.<sup>45</sup> There was no significant relationship among depression, anxiety and marital status in the present study. Also, in the study of Azadi et al. there was no significant relationship among depression, anxiety and marital status of the elderly.<sup>46</sup> In Mirzaei et al.'s study, there was no significant relationship between depression, anxiety and marital status.<sup>22</sup> The findings of this study are in the same line with those of other researchers.

Researchers faced some limitations for doing this study. Communication with the elderly and providing the necessary explanations for them require a lot of patience, so researchers spent a long time for completing questionnaires by the elderly. Also, limiting the sample to health center of Larestan city

limits the generalizability of the findings to other cities.

## Conclusion

The results of this study showed that many elderly people have moderate to high levels of anxiety and depression. Also, depression and anxiety were significantly higher in older women; therefore, it is recommended that the prevalence of depression and anxiety disorders in elderly, especially in elderly women, can be decrease by doing regular psychiatric examinations and finally treating depression and anxiety in this age group.

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**Conflict of Interest:** None declared.

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