Investigating the Prevalence and Risk Factors of Depression Disorders in the Elderly: 2019

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ABSTRACT

By identifying the risk factors and the prevalence of depression, more accurate planning can be performed for its early diagnosis, leading to a reduced period of depression, reduced complications, and reduced treatment costs, imposed on the patient and medical system. The present study aimed to Investigating the Prevalence and Risk Factors of Depression Disorders in the Elderly. The present study was descriptive-analytical. The statistical population of the present study consisted of all elderly (44 people) living in a nursing home in Behbahan in the spring of 2019. Data were collected using a standard geriatric depression scale (GDS) and a structured clinical interview conducted by the researcher. Data were analyzed in SPSS22 software and descriptive and inferential statistics.

Based on the results, 27.29% of the elderly had low depression and 72.71% had high depression, 38.64% were over 70 years old and 40.90% were male, and 36.40% had a diploma or less. There was a significant relationship between the previous history of chronic disease and the prevalence of depression in the elderly (P <0.05). There was a significant relationship between age, length of stay, family support, marital status, previous history of chronic disease, and prevalence of depression in the elderly (P <0.05). Since geriatric depression is spreading, it is recommended that an adequate budget be allocated to equip and provide nursing homes following the standards. Also, the use of geriatric technologies such as robots and intelligent sensors can monitor the medical care of the elderly well.

Keywords: Prevalence, Risk factors, Depression disorders, Nursing home.

INTRODUCTION

Nowadays, increasing life expectancy and reducing fertility and birth rates have led to an increase in the number of elderly compared to the general population, and this increasing growth of the elderly population continues. Based on experts, one in five people in the world will be elderly in near future. With increasing the number of the elderly population, the issue of health and providing their comfort and well-being in the society is gaining new and wide dimensions every day [1]. Geriatricians have divided the elderly into two groups: Young-old (ages 65 to 74) and old-old (aged 75 and older), and some of them have considered people over the age of 85 as well-old people. The elderly can also be divided into healthy elderly and sick elderly. Healthy elderly do not suffer from any disease, but sick elderly have defects that affect their performance and require medical or psychiatric attention. The medical needs of the elderly have grown significantly with the aging population, and physicians and psychiatrists play a major role in the treatment of this group of society [2]. Clubs for the elderly have been established in many countries, to prevent the psychological effects of retirement to continue social life and maintain the social and psychological characteristics of the elderly. In these clubs, various devices are used for recreation, entertainment, sports, and study [3]. The elderly are the largest consumers of health

care services in the community and due to an increase in their population, demand for their services is increasingly growing. Their treatment differs from other age groups so that the cost of treatment in the elderly is twice that of a young person [4]. Depression is more common in the elderly than the general population, and various studies have reported the prevalence of depression in the elderly at 25 to 50 percent. Depression in the elderly is not well diagnosed and is not adequately treated [5, 6]. Depression in the elderly may be less identified since it manifests itself as physical complaints more than the depression of younger people [7]. Depression is also more common in hospitals and nursing homes [7, 8]. Depressed elderly will experience more problems over time, and if they do not accept their disease or are embarrassed to seek help, the situation will become more complicated [9-11]. Hence, removing such barriers will improve the health system to help these people [9]. The results revealed that depression had a significant relationship with female gender, loneliness, divorce, low education, low income, unemployment, lack of health insurance, and having a chronic disease and it was recommended that the elderly be screened periodically [12]. Due to the high prevalence of depression in the community, especially in the elderly living in nursing homes, which causes disability, disability, and death for people and imposes a heavy cost on the treatment system, identifying the risk factors and prevalence of depression will help to have more accurate planning for early diagnosis. It will result in a reduced period of depression, reduced complications and better treatment of depression, and a reduction in the heavy costs imposed on the patient and medical system. Given what was stated above, the present study is an attempt to evaluate the prevalence and risk factors of depressive disorders in the elderly living in a nursing home in Behbahan city in 2019.

MATERIALS AND METHODS

The present study was descriptive-analytical. The statistical population of the study included all elderly living in a nursing home in Behbahan in the spring of 2019. The sample consisted of 44 elderly living in a nursing home. They were selected by the census sampling method. Inclusion criteria of the study included elderly with good physical and mental health and having the willingness to participate in the study, and exclusion criterion included incomplete information in the questionnaire. Information about the study variables was obtained through researcher interviews with the elderly and was recorded in the standard GDS. The studied variables included two groups of demographic variables (age, gender, chronic disease, previous history of depression, family history of depression, substance use, family support, and length of stay) and the main variable (depression). GDS has been widely used in clinical studies and screening. Its initial form includes 30 questions, each of which has zero or one answer (yes/no) and its alpha coefficient has been reported at 0.94 and its reliability by the test-retest method has been reported at 0.85. This questionnaire includes 15 questions in the dual spectrum (yes = 1, no = 0) and the questions 1, 5, 7, 11 and 13 are answered reversely (yes = 0, no = 1). A score of 5 or higher indicates a low probability of depression and a score of 10 or higher indicates a high probability of depression. Structured clinical interview for DSM-V, SCIDV is a semi-structured interview for primary diagnoses. This tool is implemented by a trained clinician or mental health professional, familiar with the diagnostic and classification criteria of disorders in the DSM-V. The target population is psychiatric patients or those with a general medical condition or people who do not consider themselves as patients. SCID interviews with people with severe cognitive disorder, restlessness, or severe psychotic symptoms may not be possible. These people are often identified in the first ten minutes of the review. In such cases, the SCID can be used as a diagnostic checklist for interviewing other informed sources. All data were analyzed in SPSS22 software and at a significance level of 0.05. For descriptive data, standard deviation, mean, distribution tables, and frequency percentage were used. Inferential data were also analyzed using independent chi-square tests.

RESULTS AND DISCUSSION

Demographic characteristics of the elderly including age, gender, education, marital status,

and ethnicity are shown in the following table
(Table 1).

Table 1. Prevalence of depression in the sample group based on age, gender, education, marital status, and ethnicity

Statistical indices variable		Low depression		High depression		P-VALUE
		Frequency distribution	Percentage of frequency	Frequency distribution	Percentage of frequency	
Age	50-60 years	2	54.4	2	54.4	012.0
	60-70 years	7	93.15	13	54.29	
	Over 70 years	3	81.6	17	64.38	
	Total	12	29.27	32	71.72	
Gender	Male	8	18.18	18	90.40	056.0
	Female	4	11.9	14	81.31	
	Total	12	29.27	32	71.72	
Education	illiterate	2	54.4	7	90.15	098.0
	Diploma and lower	7	90.15	16	40.36	
	Associate	2	54.4	9	45.20	
	Bachelor	1	27.2	0	0	
	Master and higher	0	0	0	0	
	Total	12	29.27	32	71.72	
Marital status	Single	1	27.2	1	27.2	003.0
	Married	4	09.9	5	36.11	
	Spouse-deceased	3	81.6	18	93.40	
	Divorced	4	09.9	8	18.18	
	Total	12	29.27	32	71.72	
Ethnicity	Arab	1	27.2	9	45.20	221.0
	Fars	1	27.2	2	54.4	
	Lor	4	11.9	5	36.11	
	Other	6	63.13	16	36.36	
	Total	12	29.27	32	71.72	

Based on the results of **Table 1**, 27.29% of the elderly living in nursing homes had low depression and 72.71% of them had high depression and its prevalence was higher in elderly over 70 years of age (17.38%). There was a significant relationship between age groups and the prevalence of depression in the elderly (P <0.05) and 18 (40.90%) of the elderly with high depression were males. There was no significant relationship between gender and the prevalence of depression in the elderly (P> 0.05). Also, 36.40% of the elderly had high depression, had a diploma or lower level of education. There was no significant relationship between education level and prevalence of depression in the elderly (P> 0.05) and 40.93% of the elderly with high depression were in spouse-deceased status. There was a significant relationship between marital status and the prevalence of depression in the elderly (P <0.05). Also, 20.45% of the elderly with high depression were Arab. There was no significant relationship between ethnicity and the prevalence of depression in the elderly (P> 0.05). **Table 2** presents demographic characteristics of the elderly, including a previous history of depression, a history of chronic disease, and a family history of depression.

Table 2. Prevalence of depression in the sample group based on the previous history of depression, history of chronic disease, and family history of depression

Statistical indices Variable		Low depression		High depression		P-VALUE
		Frequency distribution	Percentage of frequency	Frequency distribution	Percentage of frequency	
previous history of depression	Yes	7	90.15	17	63.38	103.0
	No	5	36.11	15	11.34	
	Total	12	29.27	32	71.72	
History of chronic disease	Yes	6	64.13	27	36.61	004.0
	No	6	64.13	5	36.11	
	Total	12	29.27	32	71.72	
family history of depression	Yes	4	11.9	3	81.6	231.0
	No	8	18.18	29	90.65	
	Total	12	29.27	32	71.72	

Based on the results of **Table 3**, 38.63% of the elderly with high depression had a previous history of depression. There was no significant relationship between the previous history of depression and the prevalence of depression in the elderly (P> 0.05). Also, 61.36% of the elderly with high depression had a history of chronic disease. There was a significant relationship between the previous history of chronic disease and the prevalence of depression in the elderly (P <0.05). Also, 65.90% of the elderly with high depression did not have a family history of depression. There was no significant relationship between family history of depression and prevalence of depression in the elderly (P> 0.05). **Table 3** presents demographic characteristics of the elderly, including the history of substance use, family support, and length of stay.

Table 3. Prevalence of depression in the sample group based on the history of substance use, family support, and length of stay

Statistical indices Variable		Low depression		High depression		P-VALUE
		Frequency distribution	Percentage of frequency	Frequency distribution	Percentage of frequency	
History of substance use	Yes	4	09.9	12	27.27	106.0
	No	8	18.18	20	46.45	
	Total	12	29.27	32	71.72	
Family support	Yes	1	28.2	2	54.4	0001.0
	No	11	25	30	18.68	
	Total	12	29.27	32	71.72	
Length of stay	Less than one year	7	94.15	3	81.6	0001.0
	1 to 3 year	3	81.6	12	27.27	
	More than 3 years	2	54.4	17	63.38	
	Total	12	29.27	32	71.72	

Based on the results of **Table 3**, 45.46% of the elderly with high depression did not have a history of substance use. There was no significant relationship between the history of substance use and prevalence of depression in the elderly (P> 0.05) and 68.18% of the elderly with high depression did not have family support. There was a significant relationship between family support and the prevalence of depression in the elderly (P <0.05). Also, 38.63% of the elderly with high depression had a stay of more than three years in a nursing home. There was a significant relationship between the length of stay and the prevalence of depression in the elderly (P <0.05). The results of the present study showed that there was no significant relationship between gender and the prevalence of depression in the elderly (P> 0.05). There was a significant relationship between marital status and the prevalence of depression in the elderly (P <0.05).

The results showed that there was a significant relationship between education level (P = 0.015), lifestyle (P = 0.017), type of housing ownership (P = 0.038) and ways of spending leisure time (P = 0.017) and depression [13], which are consistent with the results of the present study. In a study in Imam Hossein Hospital in Shahroud, Farjam far (2017) showed that 37% of the elderly had depression so that mild cases of depression were 18.3%, moderate depression cases were 0.9% and severe depression cases were 9.9% in the elderly [13]. Depression was more prevalent among females than males. Depression was about 50% in illiterate people and about 7% in people with an academic level of education [14]. The results of the mentioned study regarding the relationship between depression prevalence and education level were consistent with those of the present study, but they are consistent with the results of our study regarding the relationship between gender and depression prevalence. This difference might be attributed to the geographical differences and lifestyles of people in these two areas. In a cross-sectional study entitled "Prevalence and risk factors of depression in the local elderly community", Yaka *et al.* (2014) investigated 482 elderly people over 65 years in Turkey. Their research results showed a significant relationship between depression and female gender and loneliness, divorce, low education, low income, unemployment, lack of health insurance, and chronic disease. Their research recommended periodical screening of the elderly [12].

Results of the present study revealed that 38.63% of the elderly with high depression had a previous history of depression. There was no significant relationship between the previous history of depression and the prevalence of depression in the elderly (P> 0.05). Also, 61.36% of the elderly with high depression had a history of chronic disease. There was a significant relationship between the history of chronic disease and the prevalence of depression in the elderly (P <0.05). Also, 65.90% of the elderly with high depression did not have a family history of depression. There was no significant relationship between family history of depression and prevalence of depression in the elderly (P> 0.05). König *et al.* (2021) showed that depression in old age significantly increases costs even if the chronic disease is controlled [15]. In a cross-

sectional study conducted by Saeidimehr (2016), results showed that the mean age of the samples was 65.4 years [16]. The elderly in different age groups had almost the same quality of life and depression symptoms and there was no significant difference between any of the dependent variables (quality of life and depression symptoms) (P <0.05). The regression of predicting depression symptoms in the elderly by components of quality of life (physical quality and mental quality) was significant (P <0.05). There was also a significant difference between the elderly without disease and the elderly with diabetes, hypertension, and cancer in terms of quality of life. There was a significant difference between the elderly with diabetes and the elderly with cancer in the quality of life [16], which is consistent with the results of the present study in terms of the relationship between the prevalence of depression and history of chronic diseases. The results of the present study also indicated that 45.46% of the elderly with high depression had no history of substance use. There was no significant relationship between the history of substance use and the prevalence of depression in the elderly (P> 0.05). Moreover, 68.18% of the elderly with high depression did not have family support. There was a significant relationship between family support and the prevalence of depression in the elderly (P <0.05). Also, 38.63% of the elderly with high depression had a stay of more than three years in a nursing home. There was a significant relationship between the length of stay and the prevalence of depression in the elderly (P <0.05). Results of the present study are consistent with those of previous studies, which indicated that stress, anxiety, and depression of elderly living in nursing homes were higher than average compared to the stress, anxiety, and depression of elderly people living in their own homes [17-20]. In a review study, Bastami (2016) showed that regular physical activity and proper diet reduce the level of depression. Also, the result of a study showed that the treatment method of reviewing one's life is effective in reducing the severity of depression in female elderly. Social support is the most important protective factor against depression in the elderly. Additionally, given the contradictory results obtained from different studies, more studies are needed in this area to determine the role of metabolic syndrome in depression in the

elderly [21]. Due to the high prevalence of depression in nursing homes and the significant relationship between the prevalence of depression and increasing the length of stay and reducing the number of visitors, paying special attention to these two factors can reduce depression in the nursing homes. It is in line with the results of the present study. Since 90% of the elderly in Behbahan nursing home had been transferred from Ahvaz to Behbahan city by Welfare Organization, they had low family support [22].

CONCLUSION

Given the high prevalence of geriatric depression, it is recommended for health care teams and elderly family members to examine the health of the elderly and their ability in performing their daily activities carefully to prevent depression in them. Geriatric depression is a serious psychological problem that should be treated. Although no definitive treatment has been found for this problem, its occurrence can be largely predicted. Walking and group exercise are recommended to prevent depression. Geriatric depression has no definitive treatment, and most treatments recommended in this regard are protective and supportive.

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