Original Article

A study on the symptom profile of depressive disorder in elderly Turkish patients: A factor analysis study

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Abstract

Aim: Depressive disorder manifests itself differently in elderly patients due to the symptom profile. We conducted this study on a population of elderly major depressive disorder patients in Turkey with the aim of determining the sociodemographic characteristics, distribution, and associations of their symptoms.

Material and Method: A retrospective study of 137 patients hospitalized during the last ten years in the Geropsychiatric Clinic of the Department of Psychiatry, Cerrahpaşa School of Medicine, Istanbul University. The patients were diagnosed according to the DSM IV criteria.

Results: Majority (51.8%) of the patients were female, most of which were married (65%). The most common symptoms in elderly patients in order of frequency were distress 112 (81.8%) anxiety 97 (70.8%), and insomnia 96 (70.1%). The least frequently observed symptoms were disorientation 5 (3.6%), nihilistic delusions 5 (3.6%), and increased appetite 2 (2.2%). The symptoms clustered in accordance with the DSM IV system.

Conclusion: It was concluded that the sociodemographic characteristics and weighted distribution of symptoms in Turkish geriatric depression patients were closely in parallel with the existing literature. However, results indicate a need to repeat this study in order to explore the same in a general Turkish population.

Keywords: Elderly; depression; sign; symptom; factor analysis.

INTRODUCTION

Depressive disorder is the most common psychiatric disorder in adult population and its lifetime prevalence varies between 5% to 25% (1,2). It is a major contributor to the global burden of disease and an important reason of disability worldwide. It is frequently seen in all age groups, but its diagnosis is of special importance in elderly patients because of a different symptom profile (3,4). Studies on the differences between adult and elderly depression found a high rate of anxiety in the latter (5,6). Furthermore, studies show that elderly depression patients are less likely to experience emotional symptoms such as worthlessness, guilt, and dysphoria (7). Instead, cognitive symptoms, somatic complaints, sleep disturbance, fatigue, loss of interest, hopelessness, distress and anxiety take over in the elderly (8,9). Similar to the results of studies and meta-analyses on elderly depression, it was shown that elderly depression patients had predominantly somatic symptoms, as well as a higher frequency of agitation and hypochondriacal thoughts (3,10). As comorbid

neurological and metabolic diseases such as dementia is often added to the mix, timely diagnosis and treatment of depression becomes difficult in old age. Therefore, it is important to profile the elderly depressive patient.

Studies on elderly patients in Turkey found a low rate of depression treatment despite the high incidence of depression (11). Additional variables such as gender, marital status, and stressors were considered to determine the predictive parameters of depression and the following characteristics were found to be predictive: female, widowed/separated, bereaved, poorly educated, no social support, living alone and suffering from a physical, metabolic, or neurological comorbid (12-14). However, as far as we know, there is no study to determine depressive symptom profiles of elderly patients.

In the light of the information above, it became even more important to determine the symptom profile, frequency, and comorbidity in elderly patients for a more accurate diagnosis of depressive disorder. This study

was conducted with the aim of determining the symptom profile and likelihood of comorbidity in the population of elderly depression patients in Turkey.

MATERIAL and METHODS

The sample of this retrospective cross-sectional study consisted of patients hospitalized in the Geropsychiatric Clinic of the Department of Psychiatry, Cerrahpasa School of Medicine, Istanbul University in the last 10 years. As a result of the retrospective screening of files, 562 out of 699 patients were excluded from the study due to diagnoses such as dysthymic disorder (114 patients), bipolar affective disorder (73 patients), anxiety disorder (171 patients), dementia (55 patients), schizophrenia (92 patients), personality disorder (19 patients), and other psychotic disorders (38 patients). Finally, 137 patients diagnosed with major depressive disorder according to the DSM-IV criteria were included in the study (15).

The study started upon the approval of the Ethics Committee of the University and complied with the Declaration of Helsinki in all stages.

Study Design

Sociodemographic and clinical parameters in patient files (i.e. age, gender, and number of depressive episodes, age at the time of the first episode, marital status, education, economic status, diagnosis, treatment, symptoms, complaints, and length of stay) were recorded in the appropriate data set and statistical analyses were performed.

Symptoms filed during application were identified for each patient and examined by frequency analysis. All symptoms were found to be in accordance with clinical experience and literature (15,16). Afterwards, factor analyses were performed to test the clustering of these symptoms. Symptoms that were subject to frequency analysis were loss of interest, anhedonia, psychomotor retardation, psychomotor agitation, depressive mood, decreased attention, disorientation, pessimism, forgetfulness, decreased self-esteem, delusion of guilt, somatic delusion, delusion of persecution, nihilistic delusion, thoughts of guilt, somatic complaints, thoughts of death, suicide attempt, morning anxiety, anxiety, distress, social isolation, irritability, increased appetite, decreased appetite, insomnia, hypersomnia, restlessness, and anergy.

Statistical Analysis

Frequency analysis was performed on the sociodemographic and clinical patient data. This was followed by a calculation of the frequencies of detected symptoms. "Factor analysis" technique can be used to determine new dependent variables by creating several special quantitative "clusters" among themselves. These clusters are called "factors." First, the relationships between these many independent variables are revealed. Variables with strong correlations among themselves create new theoretical variables (concepts) as factor sets. This was the purpose behind factor analysis of the symptoms.

RESULTS

Table 1 shows the sociodemographic and clinical parameters of the study patients. Out of the 137 patients diagnosed with major depressive disorder, 71 (51.8%) were female and 66 (48.2%) were male. Chi-square test showed no statistically significant difference between sexes. According to frequency analysis for age, the first group (55-64 years) included 41 people (29.92%), the second group (65-74 years) 59 people (43.08%), and the third (75-100 years) had 37 people (27%).

The inquiry about the age at the time of the first depressive episode showed that 31 patients (22.6%) had their first episode before the age of 54. From among the rest, 42 patients (30.6%) experienced it between the ages 55 and 64, 43 (31.3%) between 65 and 74 and 21 (15.5%) were 75 or older. As for education, 76 of the patients (55.5%) were primary school graduates or never attended school. 39 patients (28.5%) completed secondary school or high school education and 22 patients (16.1%) were university graduates. 89 patients (65%) were married and 48 patients (35%) were widowed. While 45 patients (32.8%) were retired, 56 patients (40.9%) of them were homemakers or had no occupation. Various occupations were represented throughout 36 patients (26.3%).

Chi-square test was performed to find out if some sociodemographic characteristics (e.g. marital status, education, or occupation) differed across sexes, but no statistically significant difference was found. Student's t-test was used to investigate any differences across diagnostic groups in terms of age, number of episodes, period of hospitalization, and age at the first episode. Again, no statistically significant difference was found.

Distribution of Symptoms

The most frequent symptoms in elderly patients in order of frequency were distress (112 patients, 81.8%) anxiety (97 patients, 70.8%), and insomnia (96 patients, 70.1%). The least frequently observed symptoms were disorientation (5 patients, 3.6%), nihilistic delusions (5 patients, 3.6%) and increased appetite (2 patients, 2.2%). Table 2 shows the distribution of symptoms.

Results of Factor Analysis

Symptoms identified in elderly patients of depression were considered independent variables in this study and their possible clustering's were investigated. The factor analysis technique used for this purpose returned a Kaiser-Meyer-Olkin value of 0.513 and a chi-square value of 778.245 (p<0.001). Four interdependent groups of symptoms were identified. Table 3 shows the results of factor analysis.

Group 1: Existence of persecution delusion, delusions of guilt, irritability and disorientation was associated with a non-existence of guilty thoughts, pessimism and anhedonia.

Group 2: Existence of psychomotor retardation, loss of interest, anergy, decreased attention, and forgetfulness was associated with the non-existence of suicide

attempts, psychomotor agitation and somatic delusion.

Group 3: Existence of anxiety, distress, restlessness, and low self-esteem was clustered together and associated with the non-existence of hypersomnia and increased appetite.

Group 4: Existence of insomnia, loss of appetite, somatic complaints, social isolation and nihilistic delusions.

Table 1. Sociodemographic and clinical characteristics of the patients included in the study

Variable	Number (n)	Percentage (%)
Age Distribution		
55-64	41	29.9
65-74	59	43.2
75-100	30	21.9
First Episode & Age Distribution		
54 or younger	31	22.6
55-64	42	30.6
65-74	43	31.7
75 or older	21	15.5
Sex		
Female	71	51.8
Male	66	48.2
Marital Status		
Married	89	65.0
Separated/Widowed	48	35.0
Education		
None - Primary school	76	55.5
Secondary - High school	39	28.5
College	27	16.1
Occupation		
Retired	45	32.8
None - Homemaker	56	40.9
Other	36	26.3
Diagnosis		
Non-psychotic	90	65.7
Psychotic	47	34.3
Length of Stay (Days)		
1-14	26	19.3
15-28	46	34.1
29-42	38	28.1
43 or longer	27	18.5
Number of Depressive Episodes		
	46	33.5
	56	40.8
	20	14.5
	7	5.1
	3	2.1
	2	1.4
	1	0.7
	1	0.7
	1	0.7

Table 2. Frequency analysis of the symptoms identified in psychological examination of the patients included in the study

Symptom	Number (n)	Percentage (%)
Depressive mood	**137**	100
Distress	112	81.8
Anxiety	97	70.8
Insomnia	96	70.1
Psychomotor retardation	85	62.0
Loss of appetite	78	56.9
Loss of interest	75	54.7
Restlessness	61	44.5
Somatic complaints	61	44.5
Thoughts of death	58	42.3
Anergy	55	40.1
Forgetfulness	51	37.2
Suicidal thoughts	49	36.0
Anhedonia	45	32.8
Agitation	42	30.7
Decreased attention	39	28.5
Social isolation	36	26.3
Irritability	32	23.4
Delusions of persecution	31	22.6
Obsession	25	18.2
Low self-esteem	22	16.1
Delusions of guilt	22	16.1
Somatic delusions	17	12.4
Attempted suicide	15	10.9
Thoughts of guilt	12	8.9
Hypersomnia	7	5.1
Morning anxiety	6	4.4
Disorientation	5	3.6
Nihilistic delusions	5	3.6
Increased appetite	3	2.2

Table 3. Factor analysis results of the symptoms included in the study

	Component			
	1	2	3	4
Delusions of persecution	0.503			
Delusions of guilt	0.903			
Thoughts of guilt	0.472			
Irritability	0.454			
Disorientation	0.366			
No anhedonia	0.500			
No morning anxiety	0.307			
No obsession	0.261			
No pessimism	0.463			
Psychomotor retardation		0.689		
Loss of interest		0.569		
Anergy		0.464		
Decreased attention		0.464		
Forgetfulness		0.450		
No suicide attempts		0.493		
No agitation		0.424		
No suicidal thoughts		0.359		
No somatic delusions		0.264		
Restlessness			0.464	
Anxiety			0.648	
Distress			0.632	
No increase in appetite			0.570	
No hypersomnia			0.678	
Insomnia				0.679
Loss of appetite				0.654
Somatic complaints				0.457
Social isolation				0.338
Nihilistic delusions				0.303

DISCUSSION

In our study, we evaluated the symptoms in an elderly population of depression patients, together with the associations among these symptoms. Most noteworthy results of the study are that, first, the most frequent symptoms in the elderly depression patients in Turkey include distress, anxiety, insomnia, psychomotor retardation and loss of appetite, while the least frequent ones are hypersomnia, morning anxiety, disorientation, nihilistic delusions, and increased appetite. Another important aspect is the clustering of these symptoms into four different groups. In terms of identifying the symptom profile of elderly depressive patients in Turkey, our study is unprecedented to our knowledge.

A review of literature shows that previous studies investigating the symptom profile of elderly depressive patients found that anxiety and somatic symptoms were generally more frequent in elderly patients of depression (17,18). In a recent study Grover et al. evaluated elderly patients of depression against four different scales and found that anxiety and somatic symptoms showed a high frequency (7). Furthermore, Fiske et al. showed that somatic complaints, sleep disorders, fatigue, loss of interest, distress and anxiety were frequent in elderly patients of depression (8). Similarly, in our study we found that distress, anxiety, sleep disorders, loss of appetite and psychomotor retardation were at higher frequencies, in line with the literature. The most likely cause is fear of losing objects in the elderly. Fear of death should also be considered as another possible cause. Decline in perception and attention, slowing down in thinking, decreased productivity and associated sense of uselessness, needing help in daily activities may all be contributing factors in the anxiety seen in elderly patients of depression.

As in any other psychiatric disorder, the symptoms seen in elderly patients of depression may be interrelated. Comparing elderly patients of depression with and without anxiety, Jeste et al. suggested that anxiety could be related to psychosocial support and suicidal thoughts (5). On the other hand, Drayer et al. conducted a large-sample study to show the association with somatic symptoms (19). Therefore, symptoms are expected to present in a certain association. Grover et al. applied factor analysis on the Geriatric Depression Scale (GDS) and identified five different factors (7). In this study, we conducted a factor analysis of the symptoms identified in patients hospitalized for depression. According to this, symptoms showed four different types of clustering. In the first group, delusion of persecution, delusion of guilt, irritability, and disorientation clustered together with a non-existence of thoughts of guilt, pessimism, and anhedonia. In the second group, psychomotor retardation, loss of interest, anergy, decreased attention, and forgetfulness were together with the non-existence of suicide attempts, psychomotor agitation, or somatic delusion. In the third group anxiety, distress, restlessness, low self-esteem were clustered in association with the non-existence of hypersomnia and decrease in appetite; and finally in the fourth group, insomnia, loss of appetite, somatic complaints, social isolation, and nihilistic delusions clustered together. These results are consistent with the symptom associations in the literature (20-22). These studies attempt to determine whether the prevalence and characteristics of symptoms show regional variations. The results obtained in our study in terms of prevalence and clustering of symptoms indicate that elderly Turkish patients of depression manifest a symptom clustering consistent with the DSM IV system. Their symptoms are in a significant association across the groups in descriptive and dynamic terms.

Notwithstanding the above, the findings of our study should be taken with some limitations. First, the study design of retrospective scanning of patient files did not allow us to determine the severity of depression. Another limitation is that the severity might be relatively higher as the patients included in the study were all hospitalized. This is an obstacle to any generalization of the results to the population of elderly patients of depression at large. The small sample size of the study may be yet another limitation. Finally, it can be the use of the DSM-IV criteria.

CONCLUSION

In conclusion, our study bears importance for showing symptom associations and percentages in elderly patients of depression in a Turkish population. In our opinion, this may be helpful for clinicians, especially in identifying symptoms that may lead to an irreversible action such as suicide. Sociodemographic and clinical studies in Turkey conducted on elderly depression continues its increased importance both for doctors and for patients. Depression in old age holds many questions yet to be answered. This study provides answers for some of them, but more comprehensive studies without the shortcomings of this one are definitely needed.

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