Depression a common condition in older hospitalized chronic patients-a transversal study

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Abstract

Objective: *To examine the prevalence of depression among older hospitalized patients and its relation to chronic diseases.*

Method: *A transversal study was conducted in a Regional Hospital in South Albania which included a total of 100 hospitalized chronic patients. The study lasted one month and the Patient Health Questionnaire (PHQ-9) was used for the data collection. Each participant completed a validated Albanian version of the questionnaire. Patients diagnosed with various pathologies who presented for examination but were not admitted to the hospital were excluded from the study. For the data analyses were used descriptive statistics.*

Results: *Participants' mean age was 55.9 ± 18.45. 46 % of patients were female and 54% were male. The results of variables assessing the depression were as follows: 24% of female patients report "Little interest or pleasure in doing things" nearly every day; 15% of female and 11% of male patients report "Feeling down, depressed, or hopeless"; 39% of female and 24% of male patients feel "tired or have little energy". The diagnosis was significantly associated with the trend for depression, $p<0.05$. The most frequent diagnoses diagnosis were hypertension, diabetes, and stroke respectively 23.00%, 14.00%, and 10.00%.*

Conclusion: *Depressive symptoms occur more commonly in older hospitalized patients with chronic diseases. They require a longer rehabilitation time, which influences the day hospital stay. For improving the quality of care and life of this patient a routine depression screening and more support from nurses are recommended.*

Introduction

Depression affects millions of people around the world and is a major cause of disability. It is also the main cause of suicides [1]. The predominant symptoms of depression are loss of general interest and energy as well as inability to feel pleasure. A person with depression is disconnected from social life and interaction with others. Apathy towards work, school, relationships, responsibilities, and general objectives negatively affects the person and their family. The economic cost is evident in terms of wasted time, reduced productivity, and health care [2]. Even if depression is less prevalent among older adults compared to younger counterparts it can still have serious consequences. Older adults with depression are more likely to express cognitive and somatic symptoms and loss of interest [3]. Community-based psychological studies have revealed that the prevalence of depressive disorders within the elderly population varies between 10% and 20% and depends on cultural situations [4]. A study found that, in older people, age and amount of medicine intake are positively correlated with depression,

while physical activities are negatively correlated with depression [5]. In addition, the past 20 years suggest that compared to younger adults' depression is not more common. Depression in late life may appear symptomatically different with a higher prevalence of somatic symptoms. Depression in older adults tends to take a more chronic course, which is likely moderated by medical comorbidity [6]. Depression (major clinical depression or clinical depression) is a common but very dangerous mood disorder. It causes many symptoms that affect the affective mental sphere and performance of daily activities like sleep, nutrition, and work. For a person to be diagnosed with depression the symptoms must be present for at least two weeks [7].

Classification of Depression

✓ Mild depression-has no symptoms other than the five needed for diagnosis, when the symptoms do not affect work, school, or social interactions;

✓ Moderate depression-there are five symptoms plus one or two

more, where these symptoms affect although mildly work, school, or social interactions (example, cause absenteeism, loss of concentration);

✓ Severe depression without psychosis-some or all of the major symptoms, where these symptoms significantly affect work, school, or social interactions (cause failure at school or in relationships);

✓ Severe depression with psychosis-delusions, and hallucinations making normal functions impossible;

✓ Depression in partial remission-mild depression in which symptoms begin to fade and there are no past episodes of it;

✓ Depression in full recovery-without symptoms for six months it begins to fade and there are no past episodes of it [8,9].

Studies show that depression is often not recognized or treated among older adult patients admitted to hospitals [10]. In hospitalized patients, depression may worsen the course of diseases [11]. This study aimed to examine the levels of depression among older hospitalized chronic patients in a selected Regional Hospital in Albania.

Materials and Methods

Research Design: A transversal descriptive design was conducted. Setting: The study was conducted in a state Regional Hospital in South Albania. The data collection lasted one month.

Study Participants: Older chronic patients that were admitted to the hospital during the time when the study was conducted.

Sample Size and Selection Method: The total sample size included 100 hospitalized patients. Only patients who provided consent to participate in the study were included. A random voluntary response sampling technique was applied.

Inclusion Criteria: Hospitalized patients.

Exclusion Criteria: Patients diagnosed with various pathologies who presented to the hospital for examination but were not hospitalized.
Tool and Instruments: The Patient Health Questionnaire (PHQ-9) was utilized for the data collection. The questionnaire includes 9 questions that assess mental problems over the prior 2 weeks. For every question is answered through a 4-point Likert scale ranging from 0 to 4 where 0=Not at all; 1=several days, 2=More than half the days, 3=nearly every day. PHQ-9 total scores for 5-20 express respectively mild to severe depression [12]. The PHQ-9 questionnaire is already validated and translated in Albanian.

Data collection procedure: The data collection started after the ethical approval for the study was secured (both from the relevant research Ethic Committee of academic institutions and the hospital) and the informed consent of all patients that expressed eligibility to participate in the study was obtained. The questionnaire was anonymous and at no point was it possible to identify patients. The participation was voluntary and the selection of the patients was random. All the participants completed the questionnaire by themselves. It should be noted that PHQ-9 is a short questionnaire very useful for clinical practice, which can be completed in a few minutes. Only error-free and fully completed questionnaires were included in the final analysis.

Data analysis: For data entry and analysis the statistical package CD-C Epi Info TM 7 software version 7.1.3.10 was used. The analysis included descriptive statistics presented as frequencies, percentages, means and standard deviation. P values ≤ 0.05 were considered statistically significant.

Results

In all, only 100 hospitalized patients completed the questionnaires. The mean age of the subjects was 55.9 years, SD ± 18.45. Socio-demographic characteristics are presented in Table 1. The most frequent diagnoses were hypertension, diabetes, and stroke respectively 23.00%, 14.00%, 10.00%. A significant association was found between different variables of depression assessment and the chronic diseases of diabetes, hypertension, and stroke, p<0.05.

Table 1: Socio-demographic Characteristics.

Demographics data	Frequency (N=100)	Percent (%)
Age (years)		
Mean ± SD	55.9 ± 18.45	
40-44	6	6.00
45-49	5	5.00
50-54	10	10.00
55-59	14	14.00
60-64	25	25.00
65-69	20	20.00
70-74	7	7.00
75-79	8	8.00
80-84	4	4.00
85+	1	1.00
Gender		
Male	46	46.00
Female	54	54.00
Hospital ward		
Surgery	43	43.00
Pathology	52	52.00
Others	5	5.00
Educational Level		
Elementary	51	51.00
Secondary	41	41.00
Higher	8	8.00
Marital Status		
Married	84	84.00
Single	16	16.00
Residence		
Village	28	28.0
Town	72	72.00
Total	100	100.00

46.0% of participants were male and 54.00% were female. The majority of patients were married and residents of towns. Furthermore, 51.00% and 41.00% had completed respectively elementary and secondary education levels. The majority of the patients belonged to the pathology ward (52.00%) and age groups (60-64) and (65-69), respectively 25 and 20 patients.

Table 2: Evaluation questions concerning the depression tendency of subjects, n=100.

Over the last 2 weeks, how often have you been bothered by any of the following problems?			
1. Little interest or pleasure in doing things	**Frequency**	**Percent**	**95% coefficient interval**
0= Not at all	53	53.00	(42.76-63.06)
1=Several days	19	19.00	(11.84-28.07)
2=More than half the days	10	10.00	(4.90-17.62)
3 = Nearly every day	18	18.00	(11.03-26.95)
2. Feeling down, depressed, or hopeless			
0=Not at all	43	43.00	(33.14-53.29)
1=Several days	25	25.00	(16.88-34.66)
2=More than half the days	19	19.00	(11.84-28.07)
3 Nearly every day	13	13.00	(7.11-21.20)
3. Trouble falling or staying asleep, or sleeping too much			
0=Not at all	30	30.00	(21.24-39.98)
1=Several days	27	27.00	(18.61-36.80)
2=More than half the days	18	18.00	(11.03-26.95)
3=Nearly every day	25	25.00	(16.88-34.66)
4. Feeling tired or having little energy			
0=Not at all	24	24.00	(16.02-33.57)
1=Several days	24	24.00	(16.02-33.57)
2=More than half the days	21	21.00	(13.46-30.29)
3=Nearly every day	31	31.00	(22.13-41.03)
5. Poor appetite or overeating			
0=Not at all	58	58.00	(47.74-67.80)
1=Several days	18	18.00	(11.03-26.95)
2=More than half the days	13	13.00	(7.11-21.20)
3=Nearly every day	11	11.00	(5.62-18.83)
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down			
0=Not at all	53	53.00	(42.76-63.06)
1=Several days	19	19.00	(11.84-28.07)
2=More than half the days	11	11.00	(5.62-18.83)
3=Nearly every day	17	17.00	(10.23-25.82)
7.Trouble concentrating on things, such as reading the newspaper or watching television			
0=Not at all	52	52.00	(41.78-62.10)
1=Several days	19	19.00	(11.84-28.07)
2=More than half the days	14	14.00	(7.87-22.37)
3=Nearly every day	15	15.00	8.65-23.53)
8. Moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual			

0=Not at all	73	73.00	(63.20-81.39)
1=Several days	5	5.00	(1.64-11.28)
2=More than half the days	7	7.00	(2.86-13.89)
3=Nearly every day	15	15.00	(8.65-23.53)
9.Thoughts that you would be better off dead, or of hurting yourself			
0=Not at all	34	34.00	(24.82-44.15)
1=Several days	37	37.00	(27.56-47.24)
2=More than half the days	10	10.00	(4.90-17.62)
3=Nearly every day	19	19.00	(11.84-28.07)
THE DIFFICULTY OF THE ABOVE PROBLEMS IN PERFORMING DAILY ACTIVITIES			
10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Frequency	Percent	95% coefficient interval
Not difficult at all	24	24.00	(16.02-33.57)
Somewhat difficult	58	58.00	(47.71-67.80)
Very difficult	16	16.00	(9.43-24.68)
Extremely difficult	2	2.00	(0.24-7.04)

Table 2 shows the results of evaluation questions concerning the depression tendency of subjects. As seen, 18.00% of participants have reported feeling little interest or pleasure in doing things nearly every day. While 19.00% of participants reported that they felt depressed more than half the days of the past two weeks. 25.00% reported sleeping disorders and 31.00% reported that having little energy and feeling tired.17% reported that they feel like a failure and a burden to the family. 11.00% reported eating disorders nearly every day. 15.00% respectively reported trouble concentrating on things and difficulties with moving and speaking nearly every day. 19.00% of study participants reported that almost every day they have considered harming themselves. 58.00% of participants have expressed finding somewhat difficulty in performing their daily activities due to the problems assessed.

Discussion
The final analysis included 100 hospitalized patients. Referring to Table 1 we note that the average age of the subjects in the study was 55.9 years, SD ± 18.45. Age interval (40-88) years. The most common age of hospitalized patients was 55 years. A predominance of males (54%) versus females (46%) was seen. The stratification of variables assessed by gender found that female patients in our study had more tendency for depressive symptoms in comparison to male patients. In this regard, our results do not differ from the literature since the prevalence of depression varies based on gender, ethnicity, and age [7]. Women have a higher risk of depression compared to men, also minority groups and adults aged 45-64 are more likely than any other age group to be affected by depression. The majority of the patients in our study belong to the age group (60-69) years old. This is the age group that has a higher risk of depression and chronic diseases. And, as suggested by studies, depression in older adults can have more serious health consequences in comparison to younger adults [13].

As seen in Table 1 most of the patients are married (n=84). One of the favorable factors for the onset of depression is significant changes in the lives of individuals as well as stressful events such as divorce or caring for close relatives. While positive events such as marriage, employment can prevent the onset of depression and the individual in these cases can pass the situation only with slight boredom [3].

In our study the most prevalent diagnosis were hypertension, diabetes, and stroke respectively 23.00%, 14.00%, 10.00%. A statistical association was found between depressive symptoms (Table 2) and chronic diseases. As reported by Table 2, 1/4 of study participants noted sleep problems. In this regard, our results do not differ from the literature. A study found sleep disorders as well as higher presence of depressive symptoms in patients with stroke and diabetes mellitus. Signs of fatigue were higher in these patients. In addition, the prevalence of depression is much higher among people with higher burdens of chronic disease [14].

If refer to Table 2, Variable 1 "Little interest or pleasure in doing things" shows that 53% of patients (n=53) have a tendency of 0 points versus 18% (n=18) who report this symptom almost every day, 3 point score. In the distribution by gender, we found that 23.91% of female patients have a score of 3 versus 12.91% of male patients for the same score. The results are similar to a retrospective study which included patients who had suffered stroke and the prevalence of possible depression from the disease was higher in females compared to males. Early detection of a tendency to depression is very important for patients with stroke as well as those with type 2 diabetes [15,16].

For variable 2, in Table 2 we notice that 43% of patients report a score of 0 and 13% of them a score of three. In the same variable, we found that 15.22% of female patients had a score of 3 versus 11.11% of male patients with the same score. It has been observed that depression, stress, lack of visits from family members, and hospitalization significantly influence the quality of life of hospitalized patients. Depression in older patients is most often

encountered at a time of a real crisis or simply as an accompaniment to a difficult period [15]. Variable 3, Table 2 shows that 30% of patients score 0 and 25% score 3. The distribution by gender for this variable found that the tendency for depression is higher in women 26. 09% versus men 24. 07%. While variable 4, Table 2 shows that 24% of patients score 0, versus 31% who report a score of 3. While referring to the same variable based on gender, we found that 39.13% of patients with a score of 3 are female, versus 24.07% males. Variable 5 in Table 2 shows that 58% of patients have a score of 0, while 11% of patients have a score of 3. This variable by gender found that 13.04% of women have a score of 3 versus 9.26% of males. Variable 6, Table 2 shows that 53% of patients (n=53) have a score of 0, while 17% of patients have a score of 3. From the distribution by gender for this variable we notice that the tendency for depression is higher for female patients, where 23.91% of them report a score of 3.

Based on the results cited above, hospitalized female patients have a higher tendency for depressive symptoms such as sleeping and eating disorders, fatigue, little energy, and feelings of failure. The results are in accordance with the literature, where is stated that women in general with or without chronic diseases are more prone to depression compared to men [17]. Variable 7, Table 2 shows that 52% of patients score 0 which means they do not feel this difficulty at all, while 15% of patients report a score of 3 with a high tendency for depression. Based on gender, we found 16.67% of males patients with a score of 3. Variable 8, Table 2 shows that 73% of patients have a score of 0 and 15% of patients have a score of 3 points. Based on the same variable by gender, we have a predominance of women in a score of 3 with 15.22%. Variable 9, Table 2 shows that a score of 0 is reported by 34% of patients against the score of 3 reported by 19% of patients. Meanwhile, if we refer to this variable, but regarding gender distribution scoring 3 is a greater percentage of female patients, 26.09% vs 12.96% of men. While 58% of patients expressed somewhat difficulty with all 9 variables: working, taking care of people, or in communication with others. Based on the variables cited above a tendency for depression was observed, more so in women although with small differences to male patients in the study. A study comparing patients admitted to the university and regional hospitals found no differences. Almost all patients admitted regardless of gender exhibit depressive symptoms which should be recognized and evaluated by health staff [18].

Limitations
Our study is subject to some limitations. First, the method of sampling was a voluntary response which may contribute to reduced objectivity of the results as well as generalization due to the small size. The transversal type of the study is also a limitation. Prospective patient follow-up could give us more information about the impact that the onset of depressive symptoms could have on patients' daily hospital stay. However, despite the limitations, the study has a scientific value due to the lack of data related to the topic at the Albanian national and local level.

Conclusion
The findings suggest that the tendency for depression in hospitalized patients is present in moderated levels. Older patients with chronic diseases are more prone to depressive symptoms. For all variables studied, the tendency for depression was higher in women compared to male patients. Sleeping disorders and insomnia were the depressive symptoms reported in high percentages by both genders. For improving the standard of care and life quality of older patients admitted to the hospital a routine depression screening and more support from nurses are recommended. Early screening for depressive symptoms will facilitate early intervention and recovery of hospitalized patients.

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Conflict of Interest
The authors state that they have no conflict of interest.

Ethical Approval
The study took approval from the relevant research Ethic Committees of the institutions involved in the study.

References
1. WHO (2016) Depression. Fact sheet, Reviewed April 2016.
2. Ferrari AJ, Charlson FJ, Norman RE, Patten SB, Freedman G, et al. (2013) Burden of Depressive Disorders by Country, Sex, Age, and Year: Findings from the Global Burden of Disease Study 2010. PLoS Med 10(11): e1001547.
3. Fiske A, Wetherell JL, Gatz M (2009) Depression in older adults. Annual review of clinical psychology 5:363-389.
4. Rangaswamy SM (2001) Geneva, Switzerland: The World Health Organization. World Health Report: Mental Health: New understanding New Hope.
5. An TM Dao, Van T Nguyen, Huy V Nguyen, Lien TK Nguyen (2018) Factors Associated with Depression among the Elderly Living in Urban Vietnam. Biomed Res Int 2018:2370284.
6. Haigh EAP, Bogucki OE, Sigmon ST, Blazer DG (2018) Depression among Older Adults: A 20-Year Update on Five Common Myths and Misconceptions. Am J Geriatr Psychiatry 26(1):107-122.
7. https://www.nimh.nih.gov/health/topics/depression/index.shtml
8. National Collaborating Centre for Mental Health (UK) (2010) Depression: The Treatment and Management of Depression in Adults (Updated Edition). Leicester (UK): British Psychological Society; (NICE Clinical Guidelines, No. 90.) APPENDIX 11, The Classification Of Depression And Depression Rating Scales/Questionnaires.
9. American Psychiatric Association (APA) (2013) Diagnostic and Statistical Manual of Mental Disorders.
10. Shastri A, Aimola L, Tooke B, Quirk A, Corrado O, Hood C, Crawford MJ (2019) Recognition and treatment of depression in older adults admitted to acute hospitals in England. Clinical medicine (London, England) 19(2):114-118.
11. Katon WJ (2011) Epidemiology and treatment of depression in patients with chronic medical illness. Dialogues Clin Neurosci 13(1):7-23.
12. Kroenke K, Spitzer RL, Williams JBW (2001) The PHQ-9. J Gen Intern Med 16(9):606-613.
13. Aziz R, Steffens DC (2013) What are the causes of late-life depression?. The Psychiatric clinics of North America 36(4):497-516.
14. De Groot M, Anderson R, Freedland KE, Clouse RE, Lustman

PJ (2001) Association of depression and diabetes complications: a meta-analysis. Psychosom Med 63(4):619-630.

15. Sugawara N, Metoki N, Hagii J, Saito S, Shiroto H, et al. (2015) Effect of depressive symptoms on the length of hospital stay among patients hospitalized for acute stroke in Japan. Neuropsychiatr Dis Treat 11:2551-2556.

16. Darwish L, Beroncal E, Sison MV, Swardfager W (2018) Depression in people with type 2 diabetes: current perspectives. Diabetes Metab Syndr Obes. 2018;11:333-343.

17. Albert PR (2015) Why is depression more prevalent in women?. Journal of psychiatry & neuroscience. JPN 40(4):219-221.

18. Hantrakul Wipawee, Wangsomboonsiri Wittaya, Sriphrapradang Chutintorn (2020) Depression among patients admitted to medical wards: comparison between a university hospital and regional hospital. Open Health 1:21-28.