Original Research Article

Depression and its associated factors in hospitalized patients

Abstract

Background and Objectives: The basic aim of this study was to analyze the prevalence of depression and its associated factors among hospitalized patients in local hospital of Pakistan. **Methods:** This Cross sectional study was conducted in Jinnah Hospital Lahore during June 2019 to June 2020. This study was conducted according to the ethical committee of hospital and patients of both gender were included in this study. **Results:** This study include 200 patients who were admitted in Jinnah hospital, Lahore. We collect and analyze the data and find the mean values of age, BMI, patient's income status, economic status and some other socio-demographical values of patients. The data represents that the most frequent reason of admitted in hospital is some kind of gastrointestinal issues. It was also noted that the median length of hospital stay was 7-8 days in 75% of the patients. **Conclusion:** It is concluded that depression is a great factor which contribute towards the hospitalized patients suffering. Hospitalized patients were at higher risk for anxiety if they were physically inactive and stayed 8 days or longer in hospital. The risk for depression was higher in patients with a low income and older patients.

Key words: Patients, Hospitalized, Depression, Anxiety

Introduction

Depression is a serious and often underdiagnosed psychiatric disorder. Everyone experiences feelings of unhappiness and sadness occasionally, but when these depressed feelings start to dominate everyday life and cause physical and mental deterioration, they become what are known as depressive disorders[1]. World Health Organization (WHO) announced that 350 million

individuals are influenced by depression with prevalence of 3– 16.9% all through the around the world. The World Mental Health Survey revealed that 15% of the population from high-pay nations contrasted with 11% from low-and center salary nations was probably going to get depression over their life time. Roughly 60 million individuals in the United States live with one of four incessant states of which significant depression is normal[2].

All inclusive, depression is one of the three driving reasons for malady and it will be the second driving reason for world incapacity by 2030. It is the biggest benefactor of ailment trouble. Along these lines, inability to perceive and regard depression jeopardizes the patient and also the network on the loose[3]. Depression is a typical and exorbitant comorbidity among individuals with diabetes and another ceaseless sickness and it expands utilization of healthcare administrations and costs and can bring about early demise and unsettling influence in the general condition of wellbeing[4]. An investigation of USA national cases information for in excess of 9 million individuals demonstrated that patients with endless physical ailment who were likewise accepting treatment for depression or nervousness had normal month to month restorative costs.

Depression builds the danger of CHF especially in those as of now in danger for CHF (e.g., patients with systolic hypertension). Depression is additionally a solid hazard factor for typical subjects advancing to mellow intellectual disability. It likewise causes inability of practical weakness, diminished personal satisfaction, negatively affects the body's recuperation from ailment, and expands the rate of suicide[6].

Mental disarranges represent just about 10% of all inabilities among the elderly, with depression as a standout amongst the most common mental issue in this population around the world.

Notwithstanding the lower assessed prevalence of depression among older grown-ups contrasted with more youthful grown-ups, depression is related with a few unfriendly health results including useful decrease, diminished personal satisfaction, expanded mortality, and generous health costs[7]. The prevalence of depressive manifestations is particularly high in hospitalized elderly: supposedly in the scope of 5.9-81% contrasted with the overall public[8].

Objectives of the study

The basic aim of this study was to analyze the prevalence of depression and its associated factors among hospitalized patients in local hospital of Pakistan.

Methods

This Cross sectional study was conducted in Jinnah Hospital Lahore during June 2019 to June 2020. This study was conducted according to the ethical committee of hospital and patients of both gender were included in this study.

Inclusion criteria

- Patients of both genders.
- Willing to participate.
- Suffering from depression and anxiety

Exclusion criteria

- Not willing to participate.
- Suffering from life threatening disorders.

Data collection

We collect data randomly from 200 patients of different age range who were admitted to the hospital. Participants were interviewed within 48 hours of admission using an interviewer administered questionnaire to provide basic demographic and clinical information. Patient Health Questionnaire-9 (PHQ-9) was used to screen for depression.

Statistical analysis

The collected data were analyzed using SPSS software (version 17). The results are presented as a mean with 95% confidence interval limits or standard deviations. The significant value for P <.05 was accepted as statistically significant.

Results

This study include 200 patients who were admitted in Jinnah hospital, Lahore. We collect and analyze the data and find the mean values of age, BMI, patient's income status, economic status and some other socio-demographical values of patients. The data represents that the most frequent reason of admitted in hospital is some kind of gastrointestinal issues. And it is all because of Pakistani life style and food impurity. It was also noted that the median length of hospital stay was 7-8 days in 75% of the patients. (Table 01)

Table 01: socio-demographic characteristics of patients (n=200)

Variables	**Values**
Male	82 (41)
Female	118 (59)
Age, years (mean, SD)	70.23 (8.07)
BMI (mean, SD)	29.48 (10.49)
Married	123 (61.5)

Employed	17 (8.5)
Income	
Low	112 (56)
Median	56 (28)
High	32 (16)
Clinical characteristics	
Department surgical Wards	98 (49)
Department medical Wards	102 (51)
Department	
Cardiovascular	25 (12.5)
Cancer	27 (13.5)
Gastrointestinal	39 (19.5)
Genitourinary	26 (13)
Infectious	20 (10)
Metabolic-endocrine	10 (14)
Musculoskeletal	22 (11)
Neurological	14 (7)
Respiratory	11 (5.5)
Other	6 (3)
Hospital mortality	19 (9.5)
Any comorbidity	185 (92.5)
Number of comorbidities (mean, SD)	2.87 (1.83)
Length of stay, days (median, IQR)	7 (3-19)

The prevalence rates for major depression and other depression screened by PHQ-9 are shown in Table 2. Overall, there were 34 (17%) and 21 (10%) of the 200 patients identified with major depression and other depression, respectively. There was no statistically significant difference between major depressive disorder, other depressive disorder and no depression patients.

Table 02: Depression analysis of patients admitted in Jinnah Hospital, Lahore

Variables	**PHQ-9 screening instrument**			*P*
	Major depressive disorder	**Other depressive disorder**	**No depression**	
Prevalence	34 (17)	21(10.5)	145(72.5)	
Employed	4 (11.8)	1 (4.8)	12 (8.3)	.699
Income				.149
Low	23 (67.6)	13 (61.9)	76 (52.4)	
Median	9 (26.5)	7 (33.3)	40 (27.6)	
High	2 (5.9)	1 (4.8)	29 (20.0)	
Department surgical wards	21 (61.8)	7 (33.3)	70 (48.3)	.116
Medical Wards	13 (38.2)	14 (66.7)	75 (51.7)	
Admission				.974
Cardiovascular	5 (14.7)	3 (14.3)	17 (11.7)	
Cancer	5 (14.7)	3 (14.3)	19 (13.1)	
Gastrointestinal	8 (23.5)	3 (14.3)	28 (19.3)	
Genitourinary	4 (11.8)	2 (9.5)	20 (13.8)	
Infectious	3 (8.8)	3 (14.3)	14 (9.7)	
Metabolic-endocrine	2 (5.9)	1 (4.8)	7 (4.8)	
Musculoskeletal	4 (11.8)	1 (4.8)	17 (11.7)	
Neurological	1 (2.9)	3 (14.3)	10 (6.9)	
Respiratory	2 (5.9)	1 (4.8)	8 (5.5)	
Other	0 (0.0)	1 (4.8)	5 (3.4)	
Hospital mortality	6 (17.6)	2 (9.5)	11 (7.6)	.160
Length of stay (days)	7.0 (15.5)	7.0 (11.0)	8.0 (17.0)	.667

Table 03 represents the SD, mean and ANOVA test result of depression and anxiety which shows the prevalence of anxiety and depression among hospitalized patients.

Table 03: Prevalence of anxiety and depression among hospitalized patients

	Average score, mean ± SD	**Normal, n (%)**	**Anxiety or depression present, n (%)**			
			total	**mild**	**moderate**	**severe**
Depression	7.9 ± 3.8	73 (46.2)	85 (53.8)	49 (31.0)	27 (17.1)	9 (5.7)
Anxiety	7.9 ± 4.3	78 (49.4)	80 (50.6)	39 (24.7)	27 (17.1)	14 (8.9)
No anxiety/depression	NA	45 (28.5)	NA	NA	NA	NA

Discussion

Our results shows that there is a great depression and anxiety present in patients who stay more in hospitals. The data reveals that the middle income people suffer more from depression as compared to high income people. The higher prevalence identified in the current study could be attributed to the social isolation, reduced mobility, acute illness, and many other factors that are associated with hospital stay[9]. In this study, depression was more common in older patients probably due to higher disease severity, reduced mobility, multiple chronic conditions, and reduced social interactions in older patients. Encouraging social interactions and physical activities could help reduce the occurrence of depression during hospitalization. The effectiveness of such interventions should be investigated[10].

The finding that anxiety was significantly associated with length of hospital stay was important because patients with anxiety had an average length of hospital stay of 8 days or longer compared with an average of 5 days for those without anxiety. The severity of anxiety was also associated with the length of hospital stay[11]. Thus, reducing unnecessary hospital stay in diabetic patients could reduce the possibility of developing anxiety. Since these results indicate only association rather than causality, it should be expected that anxiety could also be contributing to longer hospital stay[12].

A recent systematic review found that depression was a high risk factor associated with poor prognosis in patients hospitalized with acute cardiovascular disease. Similarly, another study showed that there was an increased risk of mortality after myocardial infarction among hospitalized patients with depression. The findings of a recent meta-analysis further confirmed that depressive symptoms in hospitalized patients were associated with a high risk of adverse events especially post discharge[13]. Similarly, a previous meta-analysis reported a prevalence of 17% among cancer patients affected with depression as defined by clinical interview in a primary care setting. Findings from another meta-analysis showed the prevalence of DSM-defined major depression to be 16.7% in hospitalized cancer patients, which is almost identical to our findings of 16.6% in cancer patients. Altogether, these studies suggest that early identification of depression is imperative to reduce adverse events associated with depression in medically ill hospitalized elderly[14].

Conclusion

It is concluded that depression is a great factor which contribute towards the hospitalized patients suffering. Hospitalized patients were at higher risk for anxiety if they were physically inactive and stayed 8 days or longer in hospital. The risk for depression was higher in patients with a low

income and older patients. Screening for anxiety and depression in high-risk patients is recommended during hospitalization.

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