ORIGINAL ARTICLE

Prevalence of recognised and unrecognised depression among medical and surgical patients in a tertiary care hospital

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Abstract

Objective: To observe the prevalence of recognised and unrecognised depression among in-patients.

Methods: The cross-sectional study was conducted from June 2012 to May 2013 at a tertiary care hospital in Karachi, and comprised patients admitted in the Medicine and Surgical departments at the time. Patients with known history of depression or on anti-depressants or on anti-psychotics, or with suicidal attempt were excluded. The prevalence of unrecognised depression was then perceived using Patient Health Qurstionnaire-9. Statistical analysis was performed using SPSS 20.

Results: Of the 1180 patients, 432(36.6%) either had history of depression or on were on anti-depressants. The study sample, as such, comprised 748(65%), and of them 399(53%) were from the Medicine and 349(47%) patients were from Surgery department. Prevalence of recognised depression was 36.6%; 48% in Medical and 14% in Surgical patients. Unrecognised depression was 51.2%; 45.3% in Medical and 53.6 in Surgical patients. Overall prevalence was 87.9%; 93.4% in Medical and 53% in Surgical patients. Gender was not found to be significantly associated with depression in Medical (p= 0.367) and Surgical (p=0.606) patients. No depression was found in 48(12%) Medical patients and 131(37.5%) Surgical patients.

Conclusion: More than one-third of in-patients had co-morbid depression diagnoses, mostly unrecognised by their clinicians.

Keywords: Depression, Mental health, Prevalence, Patient health questionnaire, PHQ-9, Tertiary care. (JPMA 65: 1320; 2015)

Introduction

Depression is a common mental disorder, presents with depressed mood, loss of interest, feelings of guilt or low self-esteem, disturbed sleep or appetite, low energy and poor concentration.[1,2] These problems can become chronic or recurrent, and can lead to substantial impairment in the ability to carry out everyday responsibilities. Worldwide estimated number of people affected from depression is 350 million and accounts for the loss of about 850,000 lives every year.[2,3] Lifetime prevalence rates range from approximately 3 percent in Japan to 16.9 percent in the United States, with most countries falling somewhere between 8 to 12 percent. One out of 10 people suffers from major depression and almost one out of five persons have suffered from this disorder during their lifetime (one-year prevalence is 10% and lifetime prevalence 17%). The World Health Organisation (WHO) ranks depression as the fourth leading cause of disability worldwide.[4] It has been estimated that by 2020, depression will be the second leading cause of world disability and by 2030, it is expected to be the largest contributor to disease burden.[5]

Depression causes disability of life and has negative effects on the body's recovery from illness.[6] However, only a small percentage of these disorders are recognised and treated.[7] Apart from sickness, the hospital environment itself can be stressful as it detaches patients from usual environment and social support.[8] Undiagnosed and untreated depression has major implications in compliance treatment and may increase the frequency of consultation with health services.[9] A study observed that up to half of the patients consulted by physicians remain unrecognised and therefore untreated.[10] The current study was planned to assess the prevalence of recognised and unrecognised depression among in-patients and to observe the prevalence of unrecognised depression in acute and chronic Medical and Surgical patients.

Patients and Methods

The cross-sectional study was conducted from June 2012 to May 2013 in a tertiary care hospital in Karachi, and comprised patients admitted in the Medicine and Surgical departments. The study was performed systematically (Figure).

Two Residents from each department were trained to take patients' history and conduct interview according to the Patient Health Questionnaire-9 (PHQ-9) questionnaire.[11]

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Permission was obtained from the institutional ethical review committee and after taking informed consent, patient's short history was initially taken to differentiate recognised and unrecognised depressive patients. Participants who were previously diagnosed as a patient of depression were classified as 'recognised depression' and those who had never been diagnosed as depressive were classified as 'unrecognised depression'. Acute and chronic disorders were taken into account according to the patients' presentation and admission in hospital. The unrecognised prevalence of depression was observed in Surgical and Medical patients. Depression and its severity was also seen and compared between both genders and the acute and chronic disorders of both types of patients.

PHQ-9 is a self-reporting depression component of the Primary Care Evaluation of Mental Disorder Procedure (PRIME-MD)[11] which has been validated for use in primary care for the diagnosis of depression. It scores each of the 9 Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria from 0 (not at all) to 3 (nearly every day). PHQ-9 can also be used to evaluate the severity of symptoms (score 1-4 minimal or none; 5-9 mild; 10-14 moderate;15-19 moderately severe; 20-27 severe) and has been used for monitoring symptom progression or remission over time.[12] It has been proven that the Urdu translations of PHQ can be used as screening tests for depressive disorders in Pakistani population.[13]

Data analysis was done using SPSS 20. Data was expressed as frequencies and percentage. Prevalence of unrecognised depression was assessed across age groups (<40/40-60/>60) and type of disease (acute/chronic). Chi-square test was used to assess whether age/type of disease was associated with the prevalence of unrecognised depression.

Results

Of the 1218 patients contacted, 24(1.97%) were unwilling to participate in the study, and 14(1.14%) were excluded. Thus, a total of 1180(96.88%) patients were initially recruited. Of them, 432(36.6%) either had history of depression or had been on anti-depressants. The study sample, as such, comprised 748(63.4%) who had been

Table-1: Frequencies of Unrecognised Depression in Different Age Groups - n (%).

	Min/No	Mild Dep	Mod Dep	Mod SevDep	SevDep	Total	P Value
All Patients							<0.001
?40 Count	109 (30.6)	116 (32.6)	74 (20.8)	41 (11.5)	16 (4.5)	356 (100)	
40-60 Count	56 (19.2)	109 (37.3)	84 (28.8)	24 (8.2)	19 (6.5)	292 (100)	
?60 Count	14 (14)	36 (36)	29 (29)	10 (10)	11 (11)	100 (100)	
Total Count	179 (23.9)	261 (34.9)	187 (25)	75 (10)	46 (6.1)	748 (100)	
Medical							0.04
?40 Count	26 (18.1)	54 (37.5)	37 (25.7)	16 (11.1)	11 (7.6)	144 (100)	
40-60 Count	14 (7.7)	79 (43.2)	64 (35)	10 (5.5)	16 (8.7)	183 (100)	
?60 Count	8 (11.1)	25 (34.7)	22 (30.6)	7 (9.7)	10 (13.9)	72 (100)	
Total Count	48 (12)	158 (39.6)	123 (30.8)	33 (8.3)	37 (9.3)	399 (100)	
Surgical							0.8
?40 Count	83 (39.2)	62 (29.2)	37 (17.5)	25 (11.8)	5 (2.4)	212 (100)	
40-60 Count	42 (38.5)	30 (27.5)	20 (18.3)	14 (12.8)	3 (2.8)	109 (100)	
?60 Count	6 (21.4)	11 (39.9)	7 (25)	3 (10.7)	1 (3.6)	28 (100)	
Total Count	131 (37.5)	103 (29.5)	64 (18.3)	42 (12)	9 (2.6)	349 (100)	

Table-2: Unrecognised Depression in Medical & Surgical Patients - n (%).

	Min/NoDep	Mild Dep	Mod Dep	Mod SevDep	SevDep	Total	P
							<0.001
Medical	48 (6.4)	158 (21.1)	123 (16.4)	33 (4.4)	37 (4.9)	399 (53.3)	
Surgical	131(17.5)	103 (13.8)	64 (8.6)	42 (5.6)	9 (1.2)	249 (46.7)	
Medical							<0.001
Acute	29 (7.3)	100 (25.1)	41 (10.3)	12 (3)	12 (3)	194 (48.6)	
Chronic	19 (4.8)	58 (14.5)	82 (20.6)	21 (5.3)	25 (6.3)	205 (51.4)	
Surgical							0.059
Acute	24 (6.9)	25 (7.2)	20 (5.7)	4 (1.1)	3 (0.9)	76 (21.8)	
Chronic	107 (30.7)	78 (22.3)	44 (12.6)	38 (10.9)	6 (1.7)	273 (78.2)	

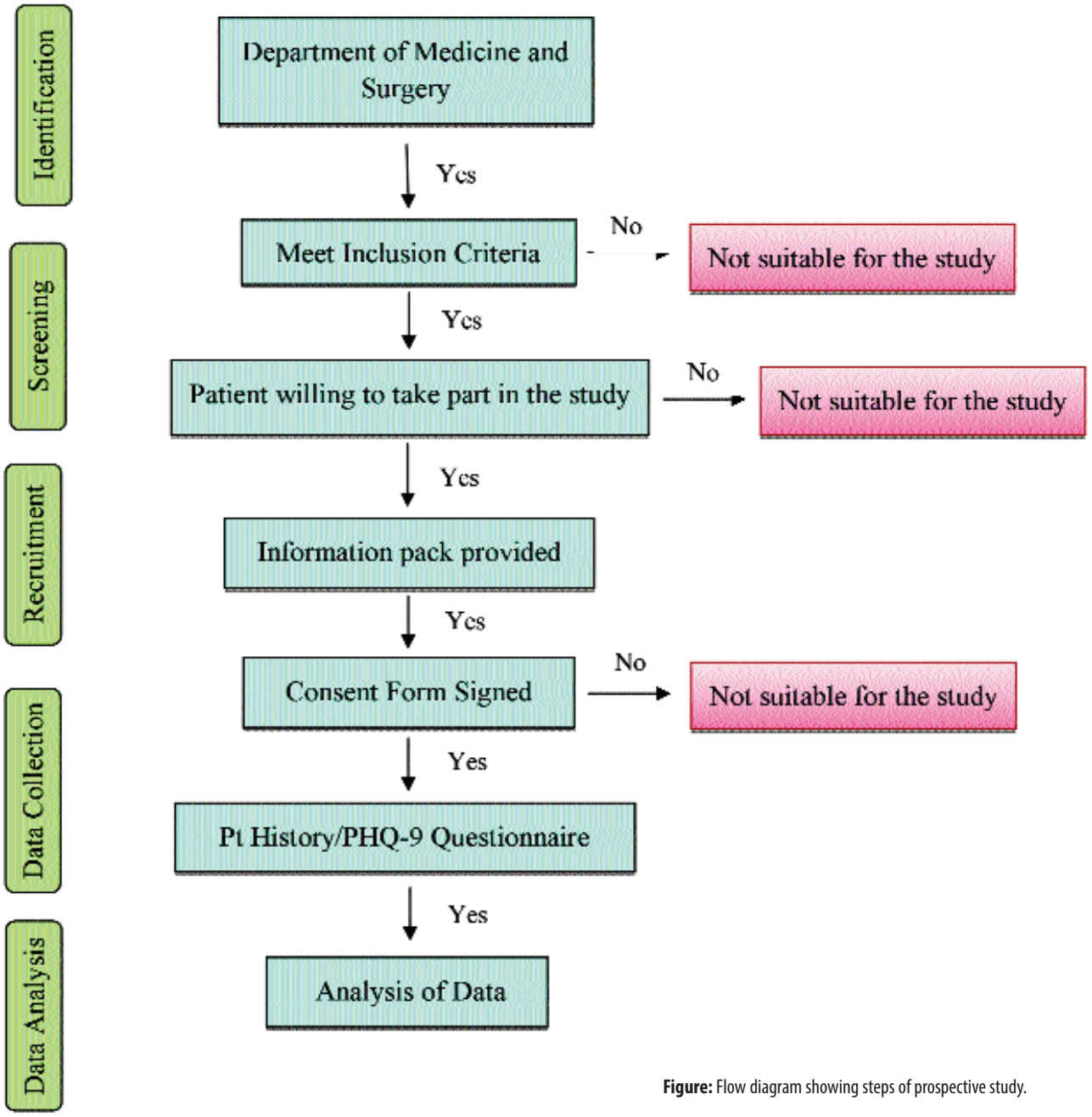

Figure: Flow diagram showing steps of prospective study.

previously undiagnosed. Of these 748 patients, 399(53%) were from Medicine and 349(47%) were from Surgery department. The mean age of Medical patients was 46.14±15 years (range: 13-98 years) and that of Surgical patients was 40.23±15 years (range: 14-80 years). There were 233 (58.4%) men in Medical (p=0.367) and 178 (51%) in Surgical (p=0.606) patients.

Prevalence of recognised depression in our study population was 432 (36.6%); 375 (86.8%) in Medical and 57 (13.2%) in Surgical patients. Once PHQ-9 score was calculated to assess the presence of depression in patients with no history of the disease, overall prevalence mounted to 1001 (84.8%). Among patients with no previous history of depression, 569(76.1%) had mild to severe depression. Depression was noticed most in patients aged less than 40 years, followed by those aged between 40-60 years and was the least in patients >60 years (p<0.001) (Table-1).

Minimal/No depression was found in 48 (12%) and 131 (37.5%) and unrecognised depression in 351 (88%) and

218 (62.5%) Medical and Surgical patients respectively. Out of 351 Medical and 218 Surgical patients with no history of previous depression, mild depression was seen in 158 (39.6%) Medical and 103 (29.5%) Surgical patients. Moderate depression was found in 123 (30.8%) Medical and 64 (18.5%) Surgical patients. Moderately severe and severe depression was found in 33 (8.3%) and 37 (9.3%) in Medical patients respectively. In surgical patients moderately severe depression was seen in 42 (12%) and severe depression in 9(2.6%) patients.

Among 399 Medical patients 194 (48.6%) had acute illness, while 205 (51.4%) were suffering from chronic disease entities. In patients who were admitted with acute medical illness, 29 (7.3%) patients had minimal or no depression, and in chronic medical disorders 19 (4.8%) had minimal or no depression. Depression was found to be significantly associated with acute and chronic medical disorders. Among Surgical patients 76 (21.8%) presented with acute surgical problems while 273 (78.2%) presented with chronic problems. In patients with acute surgical disorders, 24 (6.9%) had minimal/no depression, while in chronic Surgical patients 107 (30.7%) had minimal/no depression. Depression was not significantly associated with acute and chronic surgical disorders (Table-2).

Discussion

To our knowledge this is the first study about the prevalence of unrecognised depression in general Medical and general Surgical patients in Pakistan. In this study, unrecognised depression in Medical patients was 87.9%, while in Surgical cases it was seen in 62.4%. It was noted that depression was increasingly seen in patients with a younger age. A study conducted in India, in the out-patient department (OPD) with a total population of 395, reported the prevalence of unrecognised depression of 23.8% using the Primary Care Evaluation of Mental Disorders (PRIME-MD)questionnaire and noted that depression was seen in a younger age group.[14] In Sri Lanka, the overall proportion of patients with any depression was reported to be 17.8% in a total sample of 12841 in a primary healthcare facility, four years after the end of a protracted 30-year armed conflict.[15] We reported prevalence of unrecognised mild depression (score of 5-9) in 39.5% Medical and 29.5% Surgical patients, moderate depression (score of 10-14) in 30.8%Medical and 18.3% Surgical patients, moderately severe depression (score of 15-20) in 8.2% Medical and 12.03% Surgical patients, and severe depression in 9.2% Medical and 2.5% Surgical patients. Our figures of unrecognised depression are higher than in Sri Lanka. In Sri Lanka mild depression was reported in 13.3%, moderate depression in 3.3% and less than 1% were found to have moderately severe and severe depression.[15] We reported the prevalence of major unrecognised depression (score>10) as 17.5% in Medical group and 14.6% in Surgical group, while it was just 4.5%[13] in Sri Lanka and 4.3% in Hong Kong.[16] The reported prevalence of mild depression is India[14] is 59.6%, moderate depression 29.8%, moderately severe depression 7.4%, and severe depression in 3.2%cases which is similar to our study. A study conducted in 400 English-speaking Singaporean primary care patients using PHQ-9 and the quick inventory of depressive symptomology-self report (QIDS-SR16) showed prevalence of major and minor depressive disorders of 9%.[17] In 2003, the reported prevalence of generalised anxiety disorders was 56% and that of depression was 24% in Rawalpindi , Pakistan.[18]

Our study found a statistically significant difference between the prevalence of unrecognised depression in acute and chronic Medical cases, which was not seen in Surgical patients. In India, there was no association reported between specific medical diagnosis and depression, and 24.5% patients with unrecognised depression were suffering from some chronic disease but the association was not significant.[14] Similarly, depression screening results in a study were not found to be associated with a well-defined chronic medical condition.[19]

Our study has a number of limitations such as the length of hospital stay was not recorded on an individual basis. A longer than usual hospital stay can also lead to depressive illness, which was not considered. Secondly, psychiatric morbidities other than depression can also be a frequent occurrence in our community[18] but they were not our consideration. Finally, other demographic and cultural factors, such as socioeconomic class, marital status, literacy status, can also have significant association with the large number of unrecognised depression which was again not an objective of the study.

Conclusion

Unrecognised depression is a major health burden in Pakistan, and depression was significantly associated with acute and chronic medical disorders. More than one-third of the patients admitted in the hospital had co-morbid depression diagnoses, mostly unrecognised by their clinicians. This requires an effective screening in admitted patients for depression.

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