



ISSN : 2350-0743

www.ijramr.com



International Journal of Recent Advances in Multidisciplinary Research

Vol. 03, Issue 11, pp.2015-2018, November, 2016

## RESEARCH ARTICLE

### PREVALENCE OF RECOGNISED AND UNRECOGNISED DEPRESSION AMONG ADMITTED PATIENTS OF MEDICAL AND SURGICAL WARDS OF CHAUDHRY REHMAT MEMORIAL TRUST AND SAIRA MEMORIAL HOSPITALS LAHORE

\*Razia Chaudhry, Maham Javed and Khalid Javed Abid

Shalamar medical and Dental College, Lahore Pakistan

#### ARTICLE INFO

##### Article History:

Received 06<sup>th</sup> August, 2016  
Received in revised form  
24<sup>th</sup> September, 2016  
Accepted 17<sup>th</sup> October, 2016  
Published online 30<sup>th</sup> November, 2016

##### Keywords:

Depression,  
Mental Health,  
Prevalence,  
Patient Health Questionnaire,  
PHQ-9,  
Tertiary Care.

#### ABSTRACT

**Objective:** To observe the prevalence of recognised and unrecognised depression among in-patients (Medical and Surgical Wards of Chaudhry Rahmat Memorial Trust and Saira Memorial Hospital Lahore.)

**Methods:** The cross-sectional study was conducted from July 2016 to Sep. 2016 at two tertiary care hospitals in Lahore, 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 Questionnaire-9. Statistical analysis was performed using SPSS 20.

**Results:** Of the 180 patients, 32(17.6%) either had history of depression or were on anti-depressants. The study sample, as such, comprised 148, and of them 99(73%) were from the Medicine and 49(27%) patients from Surgery department. Prevalence of recognised depression was 17.6%; 10% in Medical and 7.6% in Surgical patients. Unrecognised depression was 45.3% in Medical and 53.7% 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 14(32%) Medical patients and 31(68%) Surgical patients.

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

#### 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 (<http://www.euro.who.int/en/healthtopics/noncommunicablediseases/sections/news/-2012/10/depression-in-europe/depressiondefinition>; Debjitbhowmik *et al.*, 2012). 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 (Debjitbhowmik *et al.*, 2012; URL:<http://www.who.int/mediacentre/factsheets/fs369/en/index.html>). 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 (Bromet *et al.*, 2011).

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.<sup>5</sup> Depression causes disability of life and has negative effects on the body's recovery from illness (Hadi *et al.*, 2010). However, only a small percentage of these disorders are recognised and treated (Ormel *et al.*, 2014). Apart from sickness, the hospital environment itself can be stressful as it detaches patients from usual environment and social support (Mark and Philip, 2012). Undiagnosed and untreated depression has major implications in compliance treatment and may increase the frequency of consultation with health services (Yohannes *et al.*, 2014). A study observed that up to half of the patients consulted by physicians remain unrecognised and therefore untreated (Borus *et al.*, 2010). 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 July 2016 to Sep 2016 in two tertiary care hospitals in Lahore and comprised patients admitted in the Medicine and Surgical departments. The study was performed systematically (Figure).

\*Corresponding author: Razia Chaudhry,  
Shalamar medical and Dental College, Lahore Pakistan.

**Data Collection Plan and Tool:** Two Residents from each department were trained with students of 4<sup>th</sup> year MBBS to take patients' history and conduct interview according to the Patient Health Questionnaire-9 (PHQ-9) questionnaire (Kroenke *et al.*, 2011). Permission was obtained from the institutional ethics 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 (Kroenke *et al.*, 2011)'. 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 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).

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 194 patients contacted, 14 (6.9%) were unwilling to participate in the study, and were excluded. Thus, a total of 180 patients were initially recruited. Of them, 32 (17.77%) either had history of depression or had been on anti-depressants. The study sample, as such, comprised 148 who had been previously undiagnosed. Of these 148 patients, 99 (53%) were from Medicine and 49 (47%) 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 64 (38%) men in Medical (p=0.367) and 84 (62%) in Surgical (p=0.606) patients. Prevalence of recognised depression in our study population was 48 (32.46%) Among these 28 ( ) were in Medical and 20 (13.2%) in Surgical patients.

**Table.1. Frequencies of Unrecognised Depression in Different Age Groups (%)**

All Patients	Min/No	Mild Dep	Mod Dep	Mod SevDep	SevDep	Total	P Value
Age(yrs)							<0.001
<40 Count	31 (30.6)	11 (09.6)	07 (08.8)	04 (5.5)	06 (4.5)	59 (100)	
40-60 Count	42 (71.18)	07 (11.86)	05 (8.40)	05 (8.40)	00 (0.00)	59 (100)	
>60 Count	19 (63.10)	09 (30.30)	02 (6.60)	0.0 (0.00)	0.00 (0.00)	30 (100)	
Total Count	92 (52.1)	27 (34.31)	12 (20.0)	09 (15.00)	00 (0.00)	148 (100)	
Medical							0.004
<40	10 (21.70)	16 (34.70)	20 (43.60)			46 (100)	
40-60 Count	20 (37.7)	25 (47.16)	07 (15.09)			53 (100)	
Total Count	31 (31.31)	41 (41.41)	27 (27.28)			99 (100)	
Surgical							0.8
<40 Count	08 (40)	02 (9.12)	04 (19.04)	02 (9.44)	5 (22.40)	21 (100)	
40-60 Count	09 (45)	03 (15)	01 (5)	04 (20)	3 (15)	20 (100)	
>60 Count	03 (37.5)	02 (25)	00	02 (25)	1 (12.5)	08 (100)	
Total Count	20 (40.8)	07 (14.2)	05 (10.20)	08 (16.32)	09 (18.36)	49 (100)	

**Table 2. Unrecognised Depression in Medical & Surgical Patients – 48 (32.46%)**

Min/NoDep	Mild Dep	Mod Dep	Mod SevDep	SevDep	Total	P
Medical						<0.05
71 (71.71)	15 (15.15)	07 (7.07)	03 (3.03)	03 (3.03)	99 (100)	
Surgical						
29 (59.1)	09 (18.38)	06 (12.24)	05 (11.11)	00 (00)	49 (100)	
Medical- Acute						<0.03
29 (59.18)	08 (16.32)	05 (10.20)	04 (8.16)	03 (6.12)	49 (100.0)	
Chronic						
03 (12.10)	09 (18)	07 (14)	11 (22)	20 (40)	50 (100.0)	
Surgical –Acute						0.021
20 (80)	02 (8)	02 (8)	01 (4)	00 (00)	25 (100)	
Chronic						
05 (20.80)	04 (16.66)	04 (16.66)	03 (12.5)	08 (33.33)	24 (100)	

**Data Analysis:** (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 (Zoberi *et al.*, 2012). It has been proven that the Urdu translations of PHQ can be used as screening tests for depressive disorders in Pakistani population.<sup>13</sup> Data analysis was done using SPSS 20.

Once PHQ-9 score was calculated to assess the presence of minimum/no depression, overall prevalence mounted to 108 (84.8%). Among patients with no previous history of depression, 48 (38.46%) had mild to severe depression. Depression was noticed most in patients aged 40-60 years, followed by those aged <40 years and was the least in patients > 60 years (p<0.001) (Table-1). Minimal/No depression was found in 71 (71.1%) and 29 (59.18%) in Medical and Surgical patients respectively.

Out of 99 Medical and 49 Surgical patients with no history of previous depression, mild depression was seen in 15 (15.6%) Medical and 09 (18.8%) Surgical patients. Moderate depression was found in 07 (7.07%) Medical and 6 (12.24%) Surgical patients. Moderately severe and severe depression was found in 6 (6.3%) and 5 (11.3%) in Medical and surgical patients respectively. Among 99 Medical patients 49 (48.6%) had acute illness, while 50 (51.4%) were suffering from chronic disease entities. In patients who were admitted with acute medical illness, 29 (59.18%) patients had minimal or no depression, and in chronic medical disorders 19 (4.8%) had minimal or no depression while 13 (26.5%) were suffering from mild-moderate and 7 (14.28) had severe depression. Total patients with chronic medical entities 31 (62%) had mild to severe form of depression. Depression was found to be significantly associated with acute and chronic medical disorders. Among Surgical patients 25 (51.8%) presented with acute surgical problems while 24 (49.2%) presented with chronic problems. In patients with acute surgical disorders, 20 (80%) had minimal/no depression and 5 (100%) had mild to moderate level of depression while no one was in severe depressive state. While in chronic Surgical patients 05 (20%) had minimal/no depression and 15 (61%) patients were in moderate to severe form of depression. Depression was significantly associated with acute and chronic surgical disorders (as these patients were of carcinomas) (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 Lahore. 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 who were in productive life and among 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 Health (Kohli *et al.*, 2013). Disorders (PRIME-MD) questionnaire and noted that depression was seen in a younger age group (Senarath *et al.*, 2014). 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 (Chin *et al.*, 2014). 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 (Senarath *et al.*, 2014). 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% in Sri Lanka and 4.3% in Hong Kong (Sung *et al.*, 2013). The reported prevalence of mild depression in India 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% (Kiani *et al.*, 2014). In 2003, the reported prevalence of generalized anxiety disorders was 56% and that of depression was 24% in Rawalpindi, Pakistan (Pearson *et al.*, 2009). 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 (Kohli *et al.*, 2013). Similarly, depression screening results in a study were not found to be associated with a well-defined chronic medical condition (Husain *et al.*, 2011). Our study has a number of limitations such as the length of hospital stay which was not longer as these hospitals are Semi-Govt and charge from the patients. 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 but they were not our consideration. Third reason was that data size was not reasonable as patient turn over is less in these hospitals. 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.

## REFERENCES

- Borus, J.F., Howes, M.J., Devins, N.P., Rosenberg, R., Livingston, W.W. 2010. Primary health care provider's recognition and diagnosis of mental disorders in their patients. *Gen Hosp Psychiatry*. 10: 317-21.
- Bromet, E., Andrade, L.H., Hwang, I., Sampson, N.A., Alonso, J., Girolamo, G *et al.* 2011. Cross-national epidemiology of DSM-IV major depressive episode. *BMC Medicine*. 9: 90.
- Chin, W.Y., Chan, K.T., Lam, C.L.K., Wong, S.Y.S., Fong, D.Y.T., Lo, Y.Y.C. 2014. Detection and management of depression in adult primary care patients in Hong Kong: a cross sectional survey conducted by a primary care based-research network. *BMC Family Pract* 15; 30-43.
- Debjitbhowmik, K.P., Kumar, A., Srivastava, S., Paswan, S., Dutta, A.S. 2012. Depression - symptoms, causes, medications and therapies. *Pharma Innovation*. 1: 37-51.
- Hadi, N., Jamali, N., Rahimi, E. 2010. The incidence of anxiety and depression in adult hospitalization patients in internal and surgical wards of Shiraj Hospitals. *Shiraj E Med J*, 11: 137-47.
- Husain, N., Gater, R., Tomenson, B., Creed, F. 2011. Comparison of the personal health questionnaire and the

- self-reporting questionnaire in rural Pakistan. *J Pak Med Assoc.* 56: 366-70.
- Husain, N., Gater, R., Tomenson, B., Creed, F. 2011. Comparison of the personal health questionnaire and the self-reporting questionnaire in rural Pakistan. *J Pak Med Assoc.* 56: 366-70.
- Kiani, I.S., Ahmed, A., Mahmood, F. 2014. Anxiety and depression presenting to a general medical clinic. *J Surg Pak.*, 9: 27-31.
- Kohli, C., Kishore, J., Agarwal, P., Singh, S.V. 2013. Incidence of unrecognized depression among outpatient department attendees of a rural hospital in Dehli, India. *J Clin Diagn Res.* 7: 1921-5.
- Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med.* 2011; 16: 606-13.
- Mark, S.G., Philip, R.M. 2012. Psychological responses to illness. In: *The American psychiatric publishing text book of psychosomatic medicine.* 3rd edition. New York: Mc Grew Hill Publishers, pp 67-87.
- Ormel, J., Martan, W., Koeter, M., Van den Brink, W., van den Willege, G. 2014. Recognition, management and course of anxiety and depression in general practice. *Arch Gen Psychiatry.* 48: 700-6.
- Pearson, S.D., Katzelnick, D.J., Simon, G.E., Manning, W.G., Helstad, C.P., Henk, H.J. 2009. Depression among high utilizers of medical care. *J Gen Intern Med.*, 14: 461-08.
- Senarath, U., Wickramage, K., Peiris, L. 2014. Incidence of depression and its associated factors among patients attending primary care settings in the post-conflict Northern Province in Sri Lanka: a cross sectional study. *BMC Psychiatry.* 14: 85-95.
- Sung, S.C., Low, C.C., Fung, D.S., Chan, Y.H. 2013. Screening for major and minor depression in a multi-ethnic sample of Asian primary care patients: a comparison of nine item patient health questionnaires (PHQ-9) and the 16-item quick inventory of depressive symptomatology-self report (QIDS-SR16). *Asia Pac Psychiatry.* 2013; 5: 249-58
- World Health Organisation. Depression Definition. [Online] 2012 [Cited 2014 May 25] Available from URL: <http://www.euro.who.int/en/healthtopics/noncommunicablediseases/sections/news/-2012/10/depression-in-europe/depressiondefinition>.
- World Health Organisation. Depression Fact Sheet. [Online] 2014 [Cited 2014 June 10]. Available from: [URL: http://www.who.int/mediacentre/factsheets/fs369/en/index.html](http://www.who.int/mediacentre/factsheets/fs369/en/index.html).
- World Federation for Mental Health. Depression: A Global Crisis: World Mental Health Day. [Online] 2012 [Cited 2014 May 15]. Available from URL [http://www.who.int/mental\\_health/management/depression/wfmh\\_paper\\_depressionwmhd\\_2012.pdf?ua=1](http://www.who.int/mental_health/management/depression/wfmh_paper_depressionwmhd_2012.pdf?ua=1).
- Yohannes, A.M., Baldwin, R.C., Connouy, J. 2014. Depression and anxiety in elderly patients with chronic obstructive pulmonary disease. *Age and aging.* 35: 457-9.
- Zoberi, K., Niemiec, R.M., Margolic, R.B. 2012. Teaching integrated behavioural health in primary care clerkship. *Med Teach.* 15: e218-e223.

\*\*\*\*\*