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# FREQUENCY OF UNRECOGNIZED DEPRESSION AMONG THE PATIENTS HOSPITALIZED IN A TERTIARY CARE HOPSITAL OF PAKISTAN

**Shanzah Zubair*[1], Shaista Tahir[2], Shgufta Aftab[3], Phool Nimra Javaid[4], Dr. Rabia Javed[5], Dr. Mehnaz Gondal[6]**

[1,2,3,4]Final Year Medical Student, Gujranwala Medical College, Gujranwala.
[5]Demonstrator, Department of Community Medicine, Gujranwala Medical College, Gujranwala.
[6]Senior Registrar, Department of Obstetrics and Gynecology, Sir Ganga Ram hospital, Lahore.

***Corresponding Author: Shanzah Zubair**
Final Year Medical Student, Gujranwala Medical College, Gujranwala.

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## ABSTRACT

**Background:** Depression is a serious medical, psychological and social illness. Disease and hospitalization are the two major inducers of this condition. Depression in hospitalized patients not only halts the patient's personal and social activities but also worsens the prognosis of their diseases under treatment. The present study was carried out to observe the frequency of unrecognized depression among admitted patients of DHQ Teaching Hospital Gujranwala. **Methods:** We conducted a 2 months cross-sectional study from 1st May 2019 to 1st July 2019 on the admitted patients of Medicine, Surgery and Gynaecology/Obstetrics wards in the DHQ Teaching Hospital, Gujranwala. Patient Health Questionnaire-9 (PHQ-9) was used as data collection tool and data was analysed using SPSS. Using descriptive statistics, frequency of unrecognized depression, the various psychological symptoms and mean PHQ scores were calculated and compared between the patients of the three wards using chi-square test keeping a p-value of less than 0.05 as statistically significant. **Results:** The mean age of the respondents was 38.3±17.67. Frequency of unrecognized depression came out to be 68.2%. Mean PHQ score was found to be 8.92±6.22 (mild depression). Out of total 126 participants, 36(28.5%) reported mild depression, 27(21.4%) were suffering from moderate, 15(11.9%) with moderately severe while 8(6.3%) came up severe depression. Mean PHQ scores among patients of Medicine, Surgery and Gynaecology/Obstetrics wards were 9.6±6.5, 8.9± 6.5 and 6.9±4.4 respectively and no statistically significant difference was seen giving a p-value of more than 0.05. Lethargy was the most common symptom (80.1%) and suicidal tendency was the least common one (33.3%). Majority of the participants (71.4%) claimed no difficulty with depressive symptoms. **Conclusion:** Majority of the admitted patients were suffering from unrecognized mild depression. No statistically significant difference was seen among the patients of different wards. There is a need to find out the various causes of depression in hospitalized patients and to look for ways to address this critical illness otherwise it may lead to serious consequences.

**KEYWORDS:** Unrecognized Depression, Hospitalized patients, PHQ-9 Questionnaire.

## INTRODUCTION

Depression is a serious medical, social and psychological illness, characterized by perpetual feelings of grief and melancholy along with loss of interest in routine activities of life and being unable to perform them effectively for at least two weeks. Other symptoms include lethargy, appetite changes, decreased concentration, irresoluteness, restlessness and feeling worthless, guilty or hopeless along with thoughts of self-harm and suicide.[1]

Almost 3.8 billion people of different age groups suffer from depression worldwide.[2] According to an estimation the global prevalence of depression was found to be 4.4% in 2015. It is found to be more in females (5.1%) than in males (3.6%). Frequency is also different in different age groups. It is 7.5% among females of age 55-74 years and above 5.5% among males.[3]

There is a complex synergistic interaction between psycho-social and biological factors that results in depression which include family history, substance abuse, chronic disease, female gender, unemployment and psychological trauma.[2] Among heart patients, depression is 2.2 times more frequent than among patients with non-cardiac issues.[4] It is the 4th leading cause of disability worldwide.[2]

Depression mostly remains unrecognized and thus untreated.[5] Feeling nervous and depressed temporarily

in potentially stressful conditions is a normal psychological response. It gears you up to face terrible situation and cope with it appropriately, but persistent feelings of listlessness and depression is a very uncomfortable scenario that halts a person from performing routine activities.[1,3]

Illness and hospitalization are the two strongest inducers of depression.[4,6] Many people carry the misconception that symptoms of depression among the indoor patients with various illnesses is a normal short-lived psychological response to stress of illness and disability just like other stressful conditions. But in reality, it is a serious mood disorder and the most common disease of all the psychiatric disorders. It not only adversely affects the personal and social life of patients but also worsens the prognosis of their disease under treatment.[7]

A study was conducted by Rahman AS and Aziz A to assess the frequency of depression in Medicine and Surgery department and to compare the incidence of depression in acutely and chronically ill medical and surgical ward patients. Minimal depression was found to be 12% in medical ward patients and 37.5% in surgical ward patients. Moderately severe and severe depression was found to be 8.3% and 9.3% in medical ward patients respectively. While in surgical ward patients, moderately severe depression and severe depression was found to be 12% and 2.6% respectively.[6]

Another study done by Duko B, Erdado M and Ebrahin J revealed prevalence of depression and factors associated with it in hospitalized patients in South Ethiopia. The prevalence of depression was 38%. Depression was found high among age category of 18-24 years, heart disease patients and surgical ward patients.[4]

To the best of author's knowledge, no research work has been conducted to estimate the frequency of unrecognized depression in the patients admitted in DHQ Teaching Hospital Gujranwala.

Therefore, this study was carried out with the objective of assessing the frequency of unrecognized depression among the hospitalized patients of DHQ Teaching Hospital Gujranwala and to compare the results among the patients admitted in Medical, Surgical and Gynaecology/Obstetrics wards so that its magnitude can be measured and precautionary measures may be taken to manage it

## METHODOLOGY

**Study Design:** We conducted Cross-sectional type of observational descriptive study.

**Study Duration:** A duration of two months, from 1st May 2019 to 1st July 2019.

**Study Area:** Our research was conducted in DHQ Teaching Hospital, Gujranwala a teaching hospital attached to Gujranwala Medical College. A 472 bedded Hospital with various specialties including Medicine, Surgery Gynaecology, Paediatrics, ENT, Ophthalmology, Orthopaedics, Cardiology, Urology and Neurosurgery.

**Study Population:** Study population included hospitalized adult patients (greater than 18 years of age) of Medicine, Surgery and Gynaecology/Obstetrics wards of DHQ Teaching Hospital Gujranwala. Patients below age 18 and those already on antidepressants or anti-psychotics drugs and also the patients with diagnosed depressive disorders were excluded from the study.

**Sampling Technique:** Non-probability convenient sampling technique was used in our research.

**Sample Size:** Sample size of 126 was taken for the study with anticipated response of 80% and 7.5% margin of error.

**Data Collection Tool:** The questionnaire was divided into two parts. First part consisted of demographic variables (age, ward, gender, marital status, religion, educational status, occupation) and second part was composed of Patient Health Questionnaire - 9 (PHQ-9) which was used without any modification. It is a self-administered reliable, valid, concise, and is used as screening, diagnostic and prognostic appliance of depression assessment with sensitivity and specificity both of 88% for Major Depression Disorder with score > 10.[16,20] It consists of 9 items, each with score of (0-3) and severity of depression can be assessed by the total score: (1-4) minimal depression or none, (5-9) mild depression, (10-14) moderate depression, (15-19) moderately severe depression, (20-27) severe depression. It can be used for screening and diagnosis of depression, for grading severity of symptoms, taking decision regarding treatment, and monitoring the treatment and symptoms response and also assessing the suicide risk.[16,20]

**Data Collection Procedure:** After the approval from ethical review board of Gujranwala Medical College/DHQ Teaching Hospital, we started data collection. Informed consent forms with Urdu-translated versions of PHQ-9 questionnaires were distributed among admitted patients of Medicine, Surgical and Gynaecology/Obstetrics departments of DHQ Hospital, Gujranwala. The importance and objectives of research was explained to the participating patients giving them liberty to accept or refuse participation in the study. Signed consent forms and completely filled questionnaires were collected from the patients.

**Data Analysis** The data was entered and analysed using SPSS version 20. Using descriptive statistics, mean and standard deviation was calculated for Continuous variable (PHQ score, age) while frequencies and percentages were calculated for categorical variables

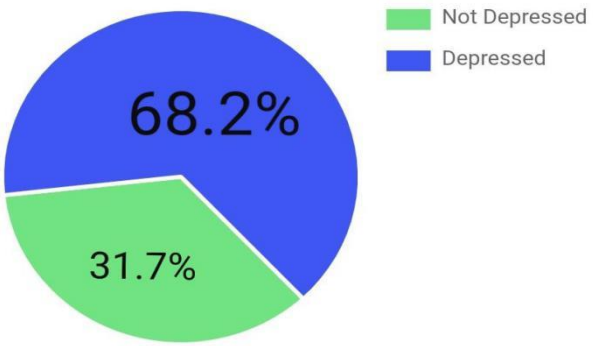
(ward, gender, marital status, religion, educational status, occupation). Chi square was used to assess difference in frequency of depression and the mean PHQ score among the patients admitted in Medicine, Surgery and Gynaecology/Obstetrics wards keeping a p-value of less than 0.05 as statistically significant.

**RESULTS**

- The overall response rate was 96.92% (126/130). The mean age of the respondents was 38.3±17.67. Majority (53.1%) of the patients were admitted in Medicine wards and 52.3% of the total patients were males. Most of the patients were married (76.9%). 96.03% of them were Muslims, mostly illiterate accounting for a percentage of 36.5% of the total and 66% were unemployed. (table 1) Overall frequency of unrecognized depression was found to be 68.2%. (graph 1)

**Table no. 1: Demographic variables.**

| Demographic Variable | u | Percentage |
|---|---|---|
| **Ward** | | |
| Medicine | 67 | 53.1% |
| Surgery | 35 | 27.7% |
| Gynaecology/Obstetrics/obstetrics | 24 | 19% |
| ***Gender*** | | |
| Female | 60 | 47.6% |
| Male | 66 | 52.3% |
| ***Marital status*** | | |
| Married | 97 | 76.9% |
| Unmarried | 28 | 23% |
| **Religion** | | |
| Muslims | 121 | 96.03% |
| Non-Muslims | 5 | 3.9% |
| ***Educational status*** | | |
| Illiterate | 46 | 36.5% |
| Primary/Secondary or Hafiz-e-Quran | 38 | 30.1% |
| Matric | 26 | 20.6% |
| Intermediate | 7 | 5.5% |
| Bachelors or above | 9 | 7.1% |
| ***Occupation*** | | |
| Tailor | 3 | 2.3% |
| Teacher | 2 | 1.5% |
| Shopkeeper | 10 | 7.9% |
| Lawyer | 1 | 0.7% |
| Labourer | 20 | 15.8% |
| Farmer | 2 | 1.5% |
| Office employee | 4 | 3.1% |
| Unemployed | 84 | 66% |




**Graph 1: Frequency of *Unrecognized Depression* among patients.**

**Table 2: Severity of Unrecognized Depression among patients of DHQ Gujranwala.**

| PHQ-9 score | Severity of Depression | n | Percentage |
|---|---|---|---|
| 1-4 | Minimal or none | 40 | 31.7% |
| 5-9 | Mild | 36 | 28.5% |
| 10-14 | Moderate | 27 | 21.4% |
| 15-19 | Moderately severe | 15 | 11.9% |
| 20-27 | Severe | 8 | 6.3% |

The mean PHQ score found was 8.92 (SD:6.22) which is categorized as mild depression according to PHQ criteria. The percentage distribution of different categories of depression among patients is given in table 2.

Mean PHQ scores were calculated and compared among Medicine, Surgery and Gynaecology/Obstetrics wards and no statistically significant difference was seen giving a p-value of more than 0.05. (table 3)

**Table no. 3: Comparison of Unrecognized Depression Among Patients of Medicine, Surgery and Gynaecology Ward.**

| Ward | Mean Score | SD | P-Value | Interpretation |
|---|---|---|---|---|
| Medicine | 9.65 | 6.51 | 0.078 | Not significant |
| Surgery | 8.91 | 6.58 | | |
| Gynaecology/Obstetrics | 6.91 | 4.41 | | |

Tiredness (80.1%) was the most common while suicidal thought was the least common (33.3%) symptom experienced by them. The responses given to the nine questions of PHQ-9 are given in table 4. Majority of the participants (71.4%) claimed no difficulty with depressive symptoms (Table 5).

**Table no. 4: Frequency of responses to PHQ-9 questionnaire.**

| Does depression cause difficulty in daily activities? | n | % |
|---|---|---|
| Not difficult at all | 90 | 71.42% |
| Somewhat difficult | 25 | 19.84% |
| Very difficult | 11 | 8.73% |
| Extremely difficult | 0 | 0% |

**•Table no. 5: Effect of depression symptoms on overall daily life activities.**

| Symptoms | Not at all | | Several days | | More than half a day | | About everyday | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| 1.loss of interest | 62 | 49.20% | 33 | 26.19% | 12 | 9.52% | 19 | 15.09% |
| 2.feeling down | 69 | 54.76% | 26 | 20.63% | 15 | 11.90% | 16 | 12.71% |
| 3.insomnia or hypersomnia | 50 | 39.68% | 28 | 22.22% | 17 | 13.49% | 31 | 24.61% |
| 4.feeling tired | 25 | 19.84% | 26 | 20.63% | 27 | 21.42% | 47 | 38.11% |
| 5.poor appetite or overeating | 53 | 42.06% | 23 | 18.25% | 15 | 11.90% | 35 | 27.79% |
| 6.feeling bad about yourself | 81 | 64.28% | 25 | 19.84% | 12 | 9.52% | 8 | 6.36% |
| 7.lack of concentration | 72 | 57.14% | 23 | 18.25% | 15 | 11.90% | 16 | 12.71% |
| 8.restlessness | 59 | 46.82% | 35 | 27.77% | 13 | 10.31% | 19 | 15.1% |
| 9.suicidal thoughts | 84 | 66.66% | 18 | 14.28% | 13 | 10.31% | 11 | 8.75% |

## DISCUSSION

Depression is a grave and miserable psychological state characterized by constant or periodic thoughts of hopelessness, grief, worthlessness, melancholy, guilt, self-harm and suicide.[1] It cripples the patient's personal and social life, making him unable to cope effectively with daily life activities. Disease and hospitalization are the two strongest triggers of depression and most of the patients admitted in a hospital reported depression at least in some form.[4,6,8] But people consider it normal to feel depressed during sickness and hospitalization and most of the time it remains unrecognized and thus untreated which further complicates and worsens the prognosis of the disease under treatment.[5,7] The objective of our study was to find out the frequency of unrecognized depression in the admitted patients of Medicine, Surgery and Gynecology/obstetrics ward of DHQ TEACHING HOSPITAL GUJRANWALA so that its magnitude can be assessed among admitted patients and adequate measures may be taken to manage it.

Our study reveals overall frequency of unrecognized depression of about 68.2%. Most of the patients fall under category of mild depression (28.5%). Our result is quite similar to a research done in Lahore on 148 patients, showing an overall prevalence of 84.8%.[8] Another study done in tertiary care hospital of Karachi showed prevalence of 51.2%.[5] Our result is also consistent with studies carried out in Eastern Ethiopia (59.7%)[10] and Argentina (56%).[9] Our result has frequency higher than one reported in South Ethiopia with sample size of 194 showing prevalence of 38%.[4] Also, another study carried out in Karachi has shown much lower frequency (36.6%) as compared to our study.

No statistically significant differences were seen among the patients admitted in either Medicine, Surgery or Gynaecology/Obstetrics wards. Similar findings were reported in other studies done in tertiary care hospitals of Karachi[5] and Lahore.[8]

Our findings revealed that 28.5% patients were having mild depression (score 5-9), 21.4% patients with moderate depression (score 10-14), 11.9% came up with moderately severe depression (score 15-19) and 6.3% with severe depression (score 20-27). Our figures are almost similar to those reported by research done in Lahore with unrecognized mild depression in 39.5% and 29.5%, moderate depression in 30.8% and 18.3% and severe depression in 9.2% and 2.5% of the patients admitted in medical and surgical wards respectively.[8] Mild depression prevalence reported in Eastern Ethiopia was 19.4%, moderate depression was 17.4% and severe depression was 22.9%.[10]

We reported tiredness as the most common symptom (80.1%) while suicidal thoughts as least common one (33.3%). A study done in Ethiopia reported tiredness (59.7%) and feeling bad about their own self (67.14%) as most common symptom among males and females respectively. While least common symptoms were suicidal thoughts (26.3%) among males and restlessness (26.4%) among females.[12]

Depression can severely affect daily life of a person. It does not occur for an individual in vacuum, it also affects patient's, family, co-workers and everyone around him. It can affect performance at work or levels of concentration so it can negatively affect productivity. Dysfunctional social behaviour has been associated with depression.

A number of limitations are present in our study such as different factors affecting frequency of depression are not considered. Duration of stay at hospital can affect frequency of depression. Frequency of depression may also be different among different age groups and between male/female. Psychiatric morbidity other than depression can also be frequent but they are not considered in our study. Finally, other demographic and cultural factors such as socioeconomic class, marital status, literacy status are also determinant of depression, but unfortunately they are not considered in our study. So, in future studies, these factors may be taken into account. Another limitation of this study is the small sample size and single centred study. It is therefore recommended that future studies should involve larger sample size and multiple centres may be involved so that the results can be more generalized at a provincial or national level.

## CONCLUSION

Majority of the admitted patients were suffering from unrecognized mild depression. No statistically significant difference was seen between the patients of different wards. There is a need to find out the various causes of depression among hospitalized patients and to look for ways to crub this serious illness that will otherwise may lead to serious consequences. The risk and magnitude of unrecognized depression should be assessed in hospitalized patients that will lead us to plan an effective way to manage depression.

## REFERENCES

1. https://www.who.int/mental_health/management/depression/en/
2. https://www.who.int/news-room/fact-sheets/detail/depression
3. https://www.google.com/url?sa=t&source=web&rct=j&url=https://apps.who.int/iris/bitstream/handle/10665/254610/WHO-MSD-MER-2017.2-eng.pdf%3Fsequence%3D1&ved=2ahUKEwjP7OrZvuHhAhUImYsKHXG8DBEQFjAHegQIBhAB&usg=AOvVaw0Ez8nu2rHTzdNrTJ7SX4UY
4. Duko B, Erdado M, Ebrahim J. Prevalence and factors associated with depression among hospital admitted patients in South Ethiopia: cross sectional study. BMC research notes., 2019 Dec; 12(1): 73.
5. Rahman AS, Aziz A, Jamal Q, Siddiqui MA, Riaz M, Ali R. Prevalence of recognized and unrecognized depression among medical and surgical patients in a tertiary care hospital. J Pak Med Assoc., 2015 Dec 1; 65: 1320-4.
6. Rahman AS, Aziz A, Jamal Q, Siddiqui MA. Prevalence of unrecognized depression in patients admitted in medical and surgical departments of a tertiary care hospital: a comparative analysis, Karachi, Pakistan.
7. Turan O, Yemez B, Itil O. The effects of anxiety and depression symptoms on treatment adherence in COPD patients. Primary health care research & development, 2014 Jul; 15(3): 244-51.
8. Chaudhry R, Javed M, Abid KJ. PREVALENCE OF RECOGNISED AND UNRECOGNISED DEPRESSION AMONG ADMITTED PATIENTS OF MEDICAL AND SURGICAL WARDS OF CHAUDHRY REHMAT MEMORIAL TRUST AND SAIRA MEMORIAL HOSPITALS LAHORE.
9. de la Torre AY, Oliva N, Echevarrieta PL, Pérez BG, Caporusso GB, Titaro AJ, Kicyla AT, Cuatz M,

Locatelli M, Nelson LM, Mac Mullen M. Major depression in hospitalized Argentine general medical patients: Prevalence and risk factors. Journal of affective disorders, 2016 Jun 1; 197: 36-42.
10. Tilahun H, Awoke N, Geda B, Mesfin F. Depression and associated factors among adult inpatients at public hospitals of Harari regional state, eastern Ethiopia. Psychiatry journal, 2018; 2018.
11. Shoar S, Naderan M, Aghajani M, Sahimi-Izadian E, Hosseini-Araghi N, Khorgami Z. Prevalence and determinants of depression and anxiety symptoms in surgical patients. Oman medical journal, 2016 May; 31(3): 176.
12. Tilahune AB, Bekele G, Mekonnen N, Tamiru E. Prevalence of unrecognized depression and associated factors among patients attending medical outpatient department in Adare Hospital, Hawassa, Ethiopia. Neuropsychiatric disease and treatment, 2016; 12: 2723.
13. Ofori SN, Adiukwu FN. Screening for Depressive Symptoms among Patients Attending Specialist Medical Outpatient Clinics in a Tertiary Hospital in Southern Nigeria. Psychiatry journal, 2018; 2018: 19.
14. Prior A, Vestergaard M, Larsen KK, Fenger-Grøn M. Association between perceived stress, multimorbidity and primary care health services: a Danish population-based cohort study. BMJ open, 2018 Feb 1; 8(2): e018323.
15. Anandakumar D, Ratnatunga SS, Dayabandara M, Hanwella R, de Silva VA. Depressive disorder in patients attending the outpatient department of a tertiary care hospital in Colombo. Ceylon Medical Journal, 2016 Oct 3; 61(3).
16. Kroenke K, Wu J, Yu Z, Bair MJ, Kean J, Stump T, Monahan PO. The patient health questionnaire anxiety and depression scale (PHQ-ADS): initial validation in three clinical trials. Psychosomatic medicine, 2016 Jul; 78(6): 716.
17. Ahmad S, Hussain S, Akhtar F, Shah FS. Urdu translation and validation of PHQ-9, a reliable identification, severity and treatment outcome tool for depression. JPMA. The Journal of the Pakistan Medical Association, 2018 Aug 1; 68(8): 1166-70.
18. Muñoz-Navarro R, Cano-Vindel A, Medrano LA, Schmitz F, Ruiz-Rodríguez P, Abellán-Maeso C, Font-Payeras MA, Hermosilla-Pasamar AM. Utility of the PHQ-9 to identify major depressive disorder in adult patients in Spanish primary care centres. BMC psychiatry, 2017 Dec; 17(1): 291.
19. AlBekairy A, AbuRuz S, Alsabani B, Alshehri A, Aldebasi T, Alkatheri A, Almodaimegh H. Exploring factors associated with depression and anxiety among hospitalized patients with Type 2 diabetes mellitus. Medical Principles and Practice, 2017; 26(6): 547-53.
20. https://www.apa.org/pi/about/publications/caregivers/practice-settings/assessment/tools/patient-health
21. Abbasi MS, Tahir M, Ranjha MA, Javed N, Khan MA. PROPORTION OF UNRECOGNIZED DEPRESSION AMONG PATIENTS ATTENDING MEDICAL OUTPATIENT DEPARTMENT, FEDERAL GENERAL HOSPITAL, ISLAMABAD. Pakistan Journal of Public Health, 2017; 7(2): 105-8.
22. Byrne G, Rosenfeld G, Leung Y, Qian H, Raudzus J, Nunez C, Bressler B. Prevalence of anxiety and depression in patients with inflammatory bowel disease. Canadian Journal of Gastroenterology and Hepatology, 2017; 20p17.
23. Quon BS, Bentham WD, Unutzer J, Chan YF, Goss CH, Aitken ML. Prevalence of symptoms of depression and anxiety in adults with cystic fibrosis based on the PHQ-9 and GAD-7 screening questionnaires. Psychosomatics, 2015 Jul 1; 56(4): 345-53.
24. Obadeji A, Oluwole LO, Dada MU, Ajiboye AS, Kumolalo BF, Solomon OA. Assessment of depression in a primary care setting in Nigeria using the PHQ-9. Journal of family medicine and primary care., 2015 Jan; 4(1): 30.
25. Assefa B, Duko B, Ayano G, Mihretie G. Prevalence and factors associated with depressive symptoms among patient with Chronic Kidney Disease (CKD) in Black Lion Specialized Hospital and Saint Paulo's Hospital Millennium Medical College, Addis Ababa, Ethiopia: Cross Sectional Study. J Psychiatry, 2016; 19(390): 2.
26. Duko B, Gebeyehu A, Ayano G. Prevalence and correlates of depression and anxiety among patients with tuberculosis at WolaitaSodo University Hospital and Sodo Health Centre, WolaitaSodo, South Ethiopia, Cross sectional study. BMC psychiatry, 2015 Dec; 15(1): 214.