



PREVALENCE AND SEVERITY OF DEPRESSION IN HOUSE OFFICERS WORKING IN TEACHING DENTAL HOSPITALS OF PESHAWAR, PAKISTAN

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Abstract

Background: Mental health challenges, including depression, are increasingly recognized among healthcare professionals. The characteristics of depression are loss of interest, sadness and impaired daily functioning. House officers in dental teaching hospitals are particularly susceptible to depression due to their demanding roles. This study investigates the frequency and severity of depression among house officers working in teaching dental hospitals in Pakistan.

Methods: This cross-sectional study took place from July 1st to November 1st, 2022, involving 210 house officers from four teaching dental hospitals in Peshawar. Beck's Depression Inventory-II (BDI-II) was utilized to assess depression. The participants were placed in four groups on the basis of their scores.

Results: 210 participants took part in our study, 99(47%) were male and 111 (53%) female, the mean age was 24.08 years (± 1.119). 40.9% of the participants experienced some form of depression, predominantly in the moderate depression category (22.4%). Severe depression was observed in 6.7% of the participants. Association between gender was statistically significant with depression ($p=0.039$).

Conclusion: A considerable proportion of house officers in dental teaching hospitals experience depressive symptoms, with females showing higher prevalence and severity.

Keywords: Depression, Dentists, Burnout, House officers, Mental Health.

Introduction

Depression has become a major worldwide public health concern. The World Health Organization (WHO) describes depression as "A common mental disorder, characterized by sadness, loss of

interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness and poor concentration".^{1,2} About 280 million people in the world are reported to have depression.³

Depression among dental students is a serious issue that needs to be addressed as studies suggest that dentistry students suffer high degree of stress, anxiety, and depression.⁴ The House Officer group is particularly noteworthy because they are going to graduate from the Dental Institute as healthcare professionals. Research indicates that after graduating from an institute, healthcare students are more likely to have mental health issues and suicidal thoughts.^{5,6}

Depression is more prevalent in students of dentistry, according to a study conducted in Saudi Arabia, it was shown that the prevalence of depression was higher in dentistry students (51.6%) than in medical students (46.2%), applied medical sciences students (45.7%) and nursing students (44.2%).⁷ Similarly, a study from the University of Erlangen Nuremberg in Germany revealed that dental students exhibit higher levels of anxiety, despair and burnout compared to medical students.⁸ According to a study from the School of Dentistry of Seville in Spain, dental students are reported to be more probable to experience suicide thoughts and depression symptoms.⁹

In addition to experiencing depression, the majority of dental students who suffer from depression do not seek treatment for their condition as well, which prolongs the problem as reported by a UK study that found that only 21% of all dental, medical, and veterinary students suffering from severe depression sought professional assistance. Fear of their mental state being recorded and included in official records was the main obstacle preventing them from getting help.¹⁰

The objective of our study is to assess the prevalence and level of depression in house officers working in teaching dental hospitals of Peshawar Pakistan and to Identify associations between demographic factors, such as age, gender, living arrangements of house officer (day scholar or boarding student) and depression levels in this population.

Materials and Methods

From July 1st, 2022 to November 1st, 2022, four teaching dental institutions in Peshawar, Pakistan, participated in an analytical, cross-sectional study. These include: **1.** Sardar Begum Dental College & Hospital Peshawar **2.** Khyber College of Dentistry **3.** Rehman College of Dentistry **4.** Dental College of Peshawar. All of the dental house officers of the teaching dental hospitals listed above were included in the target population. They were all registered with Pakistan Medical Commission. A non-probability intentional sampling method was used. To assess depression Beck's Inventory of Depression (BDI-II) was employed. The Beck's Depression Inventory (BDI-II) is a 21 questions based data collecting tool, created by the psychiatrist Aaron T. Beck in 1961, the BDI is among the most widely used tests for measuring the severity of depression.¹¹ SPSS version 25 was utilized for data analysis. To ascertain the depression levels of house officers, the participant's responses were evaluated and their results were categorized into four groups i.e. "Minimal Depression", "Mild Depression", "Moderate Depression" and "Severe Depression" on the basis of their scores and analyzed in accordance with the Beck's Inventory of Depression (BDI-II) original guidelines.¹² A p-value of equal or less than 0.05 was considered statistically significant during data interpretation and analysis.

Results

The study included 210 house officers from various teaching hospitals. Of these participants, 99 (47%) participants were males and 111 (53%) participants were females. Average age of the participants in our study was 24.08 years, with a standard deviation of 1.119.

The participants were from four different institutions, 42.4% from Sardar Begum Dental College, 32.4% from Khyber College of Dentistry, 21.4% from Peshawar Dental College and 3.8% from Rehman College of Dentistry. Table 1 and Table 2 show the results of our study.

| Category | Frequency | Percentage |
|---------------------|-----------|------------|
| Minimal Depression | 124 | 59.1% |
| Mild Depression | 25 | 11.9% |
| Moderate Depression | 47 | 22.4% |
| Severe Depression | 14 | 6.7% |
| Total | 210 | 100% |

Table 1: Different levels of Depression among House Officers

Table 1 categorizes the levels of depression among the house officers. 124 (59.1%) of the participants were in the “Minimal depression” group. 25 (11.9%) participants were in the “Mild depression” group. Moderate depression was reported by 47 (22.4%) participants, while severe depression was noted in 14 (6.7%) participants. 40.9% of the house officers experienced some form of depression, ranging from Mild depression to Severe depression.

| Association Between Gender and Level of Depression | | | | | |
|--|--------------------|-----------------|---------------------|-------------------|---------|
| Gender | Minimal Depression | Mild Depression | Moderate Depression | Severe Depression | P-value |
| Male | 70 (70.7%) | 29 (29.3%) | 17 (17.2%) | 4 (4%) | 0.039 |
| Female | 72 (64.5%) | 18 (16.2%) | 30 (27%) | 10 (9.1%) | |
| Total | 124 (59.1%) | 47 (22.4%) | 47 (22.4%) | 14 (6.7%) | |

Table 2: Association between gender and level of depression.

Table 2 exhibits the association between gender and the level of depression among house officers. The table presents the frequency and percentage of male and female participants in each depression category, along with the total number of participants in each group. The P-value of (0.039) suggests there exists a statistically significant association between gender and the level of depression and that gender may influence the severity or type of depression reported.

Discussion

Depression is a severe mental illness since and has emerged as the primary cause of disability and a significant contributor to the global disease burden.¹³ Research indicates that medical professionals have greater prevalence of depression and burnout than the general population, making them more vulnerable to depression.¹⁴

According to the findings of our investigation, 40.9% of the house officers had clinical depression. A medical student's journey to learn and hone the art of healthcare is a protracted and never-ending one. A Portuguese study found that burnouts, cynicism, career worry, a stressful study schedule, and restless clinical hours were prevalent causes of depression in medical students, albeit the exact causes may differ.¹⁵ House officers belong to the post-teen period, which is one of the two phases in Erik Erikson's psychological stages of development where loneliness and hopelessness can turn into depression.¹⁶ A study conducted in Karachi found that the post-teen population had a higher rate of depression than people of old ages.¹⁷ In fact, depression is a serious issue for people of all ages and professions. According to a 2017 WHO report, depression and non-communicable illnesses and disorders are strongly correlated.¹⁸

In a study done in 2020 in Karachi, 29.33% incidence of depression was reported among medical colleges in Karachi, according to Beck's depression inventory which in comparison is less than the level of depression reported in our study done in 2022.¹⁷ Similarly, a study conducted in Malaysia revealed that a high frequency of mental health issues was prevalent among house officers; 42% of them had depression, 50% had anxiety, and 42.7% had stress.¹⁹ Another study conducted in Malaysia found that both sexes have comparable stress and depression symptoms, thus they are not statistically different either which is contrary to the findings of our study which according to table 2 states that

gender and depression are correlated.²⁰ In a similar study on medical students in India that used Beck's depression inventory, it was revealed that around half of the students (49.1%) showed depressive symptoms which is comparable with the results of our study.²¹

There exists a reciprocal association between depressive symptoms and burnout. Burnout can lead to job stress, which leads to depression and that ultimately leads to early burnout.²² According to a study done in a 2019, job stress is a common cause of burnout and about half (44%) of participants of the study that were experiencing burnout symptoms said they attributed their burnout to their jobs.²³ In comparison with the students in other professions, medical students are more likely to have tried suicide in the past due to their demanding work schedules, burnout and depression, as well as the delicate nature of their work.²⁴

A depressed healthcare professional may also negatively impact the quality of patient care. A dentist who is unhappy with their life has a detrimental effect on how they handle their patients and how they communicate, which affects how satisfied they are with their care.²⁵ A dentist's professional life, personal life as well as the standard of healthcare services they provide for patients, are negatively impacted by depression or burnout. A dentist who is negatively impacted in such a way may make mistakes during procedures and decrease patient compliance.²⁶

Conclusion

Our study highlights significant levels depression among house officers working in teaching dental hospitals in Peshawar, Pakistan, with nearly 41% exhibiting depressive symptoms ranging from mild to extreme. Female house officers were found to have a higher frequency and severity of depression compared to males. The findings emphasize the necessity for targeted mental health support and interventions to address the psychological challenges faced by this population. Depression not only affects the well-being of healthcare professionals but also impacts the quality of healthcare services provided to patients, underscoring importance of addressing this issue to improve both professional and patient outcomes.

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