Original Article

Prevalence of Depression in Physical Therapists Versus Nurses in Karachi Pakistan

Sabina Anwer Ali¹, Komal Jamil², Prem Lata³, Vinesh Kumar⁴, Obaida Arzoo⁵, Muhammad Faizan Hassan⁶, Sara Aamir Abro⁷ and Lubna Ilyas⁷

¹Department of Nursing, Sindh Government Hospital Liaquatabad, Karachi, Pakistan
²Department of Physical Therapy, Bahria University Health Sciences, Karachi, Pakistan
³Department of Physical Therapy, Sohail University, Karachi, Pakistan
⁴Department of Physical Therapy, Northwest Institute of Health Sciences, Peshawar, Pakistan
⁵Department of Physical Therapy, National Medical Centre, Karachi, Pakistan
⁶Department of Physical Therapy, Liaquat National Hospital, School of Physiotherapy, Karachi, Pakistan
⁷Department of Physical Therapy, Hussain Lakhani Hospital, Karachi, Pakistan

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*Corresponding Author:
Komal Jamil
Department of Physical Therapy, Bahria University Health Sciences, Karachi, Pakistan
komalansari4@gmail.com

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ABSTRACT

Depression is one of the major mental disorders that affect the population of Pakistan with a prevalence rate of 40.6% in females and 32% in males. It affects the population of all ages. It also affects the mental health of healthcare workers which impacts the quality of life of patients whom they care for in the working environment. Objective: To determine the prevalence and severity of depression among the physical therapists and nurses of Karachi. Methods: It was a cross-sectional study, conducted between Dec 2023 to May 2024 with a sample size of 661 calculated through Raosoftware. The Non-probability convenient sampling technique was used for sample selection. Data were collected through the Beck inventory questionnaire. The analysis of data were done through SPSS version 23.0. Results: The sample size of 661 research participants from which 310 were physical therapists and 351 were nurses recruited from 7 districts of Karachi. The level of depression was measured through Beck inventory questionnaire. The results found that the prevalence of depression is 64.67% in nurses and 36.12% in physical therapist. In addition, 63.83% physical therapists were more satisfied with their lives while the level of satisfaction of nurses was 33.33%. Conclusions: It is concluded that depression is present in both professions but nurses are more depressed as compared to physical therapists.

INTRODUCTION

Depression is a major health problem for an individual. It is a common problem that is related to the mental health issues. It includes mood swings, lack of participation, loss of pleasure, or a person is always in the same depressed mood called depression [1]. According to the World Health Organization, depression is the 2nd reason for disability after ischemic heart disease around the world in 2020 [2]. The prevalence rate of depression is 35 to 41 percent in the USA [3]. The ratio of depression around the world is about 280 million people have suffered from depression which is about 5 percent including the adult population in the world, and around 5.7 percent of adults are above the age of 60 [4]. When we are discussing the rate of depression only in Pakistan showed that 40.6 percent of females and 32 percent of males suffered from this mental health issue [5]. A study reported that 28.8 percent of physicians face depression, 18 percent are faced by nurses, and around 8 to 10 percent in physical therapists [6]. The major symptoms of depression include depressed mood, feeling helpless, unable to make decisions, irritable behavior, lack of interest or participation in any activity, low self-esteem, thinking about attempting suicide, changes in sleep...
patterns, loss of appetite, feeling lethargic, and they are not tolerating other people [7]. A person who suffers from depression also affects the body features and changes in the thinking process which affects the functional capacity of the person and sometimes leads to suicidal attempts [8]. The American Psychiatric Association Diagnostic Statistical Manual of Mental Disorder classifies depression into mood disorder, major, and persistent depression, and depression which is caused by any other medical condition [9]. Various studies reported that physical therapists faced depression related to their work because they faced many problems in their daily activities of job like lack of equipment, time management issues, shortage of staff, job stress, and excessive workload pressure these all are the reasons for depression and stress in a physical therapist [10]. The workload of physical therapists lies in both types of work like physical work and also they perform administrative tasks which is why they suffer from the symptoms of depression [11]. In the clinical setting, Nurses are an essential part of the hospital system and their role is to provide care and improve the quality of life of patients. But the field of nursing requires more effort and their job description is more complicated than any other medical profession [12]. According to the study, the job demand description of nurses causes more depression than any other medical profession [13]. Exposure to emergency cases, prolonged working hours, carrying patients heavyweight, and lack of rest between job timings all affect the quality of life of nurses and for prolonged periods cause depression and illness to the nurses related to the workplace environment issues are the root cause of the human error that affect the quality and care of patients [14]. Nurses are a vital part of any healthcare organization they help provide care to the patients as well and they are also proven to be supportive in the rehabilitation process of the patients, and their family members, and also give training to the caregivers concerning the health status of patients. Nurses can play a key role in the improvement of the health of patients [15]. There is a variety of work-related musculoskeletal disorders that are common in the nursing profession due to their long working hours, heavy workload, lack of training, and lack of support from the seniors [16]. With the demand of heavy workload jobs the health of the nurses may be seriously affected and can impact the physical and mental health of the nurses [17].

**METHODS**

A cross-sectional study was conducted among physical therapists and nurses from Dec 2023 to May 2024 from seven districts of Karachi (Central, East, Kemari, Orangi, Malir, South, West). Data were collected through online Google survey forms. The sample size of the study was 661 was calculated through Raosoft.com concerning the number of physical therapists and nurses available in Karachi according to the confidence interval of 95%. In this study the total number of participants was divided into two groups of nurses: 351 and Physical therapists: 310. The non-probability purposive sampling technique was used. The participants of both genders, age group between 20 years to >50 years, who have at least 1 year to >30 years of experience in the relevant field, whose working hours are >6 hours to >12 hours per day were included in this study while the physical therapy/nursing students, technicians or diploma holders were excluded from the study. For data collection we used a validated questionnaire named; Beck’s Depression Inventory to rule out the level of depression among the research participants of the study [18]. Data were analyzed by SPSS version 23.0 software. The frequencies and percentages of participants were calculated.

**RESULTS**

A total number of 661 research participants was present in this study, from which 310 were physical therapists and 351 were nurses from Karachi. The demographic variables of both physiotherapy and nursing participants consisted of age, gender, marital status, economic status, working hours, and working experience as shown in table 1.

**Table 1: Demographic Variables of Research Participants**

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Physical Therapists N (%)</th>
<th>Nurses N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>95 (30.84%)</td>
<td>102 (29.05%)</td>
</tr>
<tr>
<td>30-39</td>
<td>83 (26.77%)</td>
<td>101 (28.77%)</td>
</tr>
<tr>
<td>40-49</td>
<td>52 (16.77%)</td>
<td>79 (22.60%)</td>
</tr>
<tr>
<td>50-59</td>
<td>36 (11.61%)</td>
<td>61 (17.37%)</td>
</tr>
<tr>
<td>&gt;59 Year</td>
<td>44 (14.19%)</td>
<td>8 (2.27%)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>105 (33.87%)</td>
<td>162 (43.30%)</td>
</tr>
<tr>
<td>Female</td>
<td>205 (66.12%)</td>
<td>199 (56.69%)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>200 (64.51%)</td>
<td>236 (67.23%)</td>
</tr>
<tr>
<td>Married</td>
<td>110 (35.48%)</td>
<td>115 (32.76%)</td>
</tr>
<tr>
<td>Economic Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Class</td>
<td>72 (23.22%)</td>
<td>67 (19.08%)</td>
</tr>
<tr>
<td>Middle Class</td>
<td>139 (44.83%)</td>
<td>203 (57.83%)</td>
</tr>
<tr>
<td>Lower Class</td>
<td>99 (31.93%)</td>
<td>81 (23.07%)</td>
</tr>
<tr>
<td>Working Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-8 Hours</td>
<td>122 (39.35%)</td>
<td>214 (60.96%)</td>
</tr>
<tr>
<td>8-10 Hours</td>
<td>107 (34.51%)</td>
<td>91 (25.92%)</td>
</tr>
<tr>
<td>10-12 Hours</td>
<td>56 (18.06%)</td>
<td>216 (58.98%)</td>
</tr>
<tr>
<td>&gt;12 Hours</td>
<td>25 (8.06%)</td>
<td>25 (7.12%)</td>
</tr>
<tr>
<td>Working Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10</td>
<td>105 (33.87%)</td>
<td>186 (52.99%)</td>
</tr>
<tr>
<td>11-20</td>
<td>55 (17.74%)</td>
<td>58 (16.52%)</td>
</tr>
</tbody>
</table>
When the question asked from the research participants related to the presence of depression the results founded: In Physical therapists 112 (36.12%) said Yes and 198 (63.87%) said No. While In nurses 227 (64.67%) said Yes and 124 (35.32%) said No as shown in figure 1.

According to the answers of the questions obtained from the research participants about the depression who have depression: 35 (31.25%) physical therapist lies in mild depression, 21 (18.75%) lie in borderline depression, 43 (38.39%) lies in moderate depression, 13 (11.60%) lies in severe depression and no one lies in extreme depression category. While in nurses: 61 (26.87%) lies in mild depression, 72 (31.71%) lies in borderline depression, 51 (22.46%) lies in moderate depression, 37 (16.29%) lies in severe depression and only 6 (2.64%) lies in extreme depression category as shown in table 2.

Table 2: Beck Depression Inventory

<table>
<thead>
<tr>
<th>Questions</th>
<th>Physical Therapists (n=310)</th>
<th>Nurses (n=351)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Used To Enjoy As Many Things As Possible</td>
<td>162 (52.25%)</td>
<td>97 (27.63%)</td>
</tr>
<tr>
<td>I Am Unable To Enjoy Things</td>
<td>63 (20.32%)</td>
<td>105 (29.91%)</td>
</tr>
<tr>
<td>Lack of Pleasure In Anything</td>
<td>49 (15.80%)</td>
<td>87 (24.78%)</td>
</tr>
<tr>
<td>Feeling Bored Every Time</td>
<td>36 (11.61%)</td>
<td>62 (17.66%)</td>
</tr>
<tr>
<td>I Am Not Sad</td>
<td>183 (62.25%)</td>
<td>110 (31.33%)</td>
</tr>
<tr>
<td>I am Feeling Sad</td>
<td>51 (16.45%)</td>
<td>106 (30.19%)</td>
</tr>
<tr>
<td>Always Sad</td>
<td>36 (11.61%)</td>
<td>71 (20.22%)</td>
</tr>
<tr>
<td>Very Sad</td>
<td>30 (9.67%)</td>
<td>64 (18.23%)</td>
</tr>
<tr>
<td>I Am Not Hopeless</td>
<td>198 (63.87%)</td>
<td>97 (27.63%)</td>
</tr>
<tr>
<td>I Am Hopeless Regarding The Future</td>
<td>51 (16.45%)</td>
<td>135 (38.46%)</td>
</tr>
<tr>
<td>I Feel Useless</td>
<td>37 (11.83%)</td>
<td>32 (9.11%)</td>
</tr>
<tr>
<td>I Can Perform My Tasks Like In The Past</td>
<td>187 (60.32%)</td>
<td>76 (21.65%)</td>
</tr>
<tr>
<td>Require More Effort To Start Any Task</td>
<td>51 (16.45%)</td>
<td>123 (35.04%)</td>
</tr>
<tr>
<td>I Cannot Do Any Task</td>
<td>30 (9.67%)</td>
<td>65 (18.51%)</td>
</tr>
<tr>
<td>Satisfied With Own Life</td>
<td>198 (63.87%)</td>
<td>117 (33.33%)</td>
</tr>
<tr>
<td>Unhappy With Own Self</td>
<td>46 (14.83%)</td>
<td>123 (35.0%)</td>
</tr>
<tr>
<td>Angry With Own Self</td>
<td>37 (11.93%)</td>
<td>63 (17.94%)</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>29 (9.35%)</td>
<td>48 (13.87%)</td>
</tr>
</tbody>
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According to the answers of the questions obtained from the research participants about the depression who have depression: 35 (31.25%) physical therapist lies in mild depression, 21 (18.75%) lie in borderline depression, 43 (38.39%) lies in moderate depression, 13 (11.60%) lies in severe depression and no one lies in extreme depression category. While in nurses: 61 (26.87%) lies in mild depression, 72 (31.71%) lies in borderline depression, 51 (22.46%) lies in moderate depression, 37 (16.29%) lies in severe depression and only 6 (2.64%) lies in extreme depression category as shown in figure 2.
Mild

D I S C U S S I O N

feeling sad and 110 (31.33%) said they were not sad
sadness observed in physical therapists, 193 (62.25%) are
and they enjoy things [23]. According to the level of
importance of physical activity and exercise, therefore,
most of the physical therapists from our study were active
because their type of profession gives insight to the
profession, and taught exercises among the population
enjoy things as compared to what this study reported,
things at their jobs, and 105 (29.91%) nurses were unable to
study, 162 (52.25%) physical therapist was used to enjoying
is not according to their qualifications and need [22]. In our
reason behind the high prevalence of depression in Karachi was
issues of healthcare workers can be an important cause of
depression due to the market value of their salaries which
depends upon the genetics and environment as well.
Approximately, 35 % of Karachi's population is affected by
emotional issues, while from Quetta 43% and Lahore 53% are influenced by depression [20]. There is a huge effect of
depression on the lives of people. Our study was conducted
to determine the prevalence of depression among physical
therapists and nurses in Karachi. There are many studies conducted around the world to observe the mental status
of the workers of various occupations but none of the
research compares the level of depression among the two
healthcare professions: physical therapists and nurses. In
the present study, our data showed 112 (36.12%) of physical
therapists have depression while in nurses 227 (64.67)
depression is common. As compared to this a study conducted on the Physical therapist population showed,48.7 percent had mild depression, 23.5 percent had moderate and 2.9 percent of physical therapists had severe symptoms of depression [21]. The reason behind the high prevalence of depression in Karachi was associated with factors like the financial, social, marital, and occupational status of healthcare workers. Financial issues of healthcare workers can be an important cause of
depression due to the market value of their salaries which
is not according to their qualifications and need [22]. In our
study, 162(52.25%) physical therapist was used to enjoying things at their jobs, and 105 (29.91%) nurses were unable to enjoy things as compared to what this study reported. Physical therapists were used to reflecting their profession, and taught exercises among the population because their type of profession gives insight to the importance of physical activity and exercise, therefore, most of the physical therapists from our study were active and they enjoy things [23]. According to the level of sadness observed in physical therapists, 193 (62.25%) are feeling sad and 110 (31.33%) said they were not sad

Figure 2: Severity of Depression In Research Participants

around the world, depression is a common mental disorder.
It is different from the mood swings and daily feelings [19].
According to the pathological features of depression, it
depends upon the genetics and environment as well. Approximately, 35 % of Karachi's population is affected by
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study, 162(52.25%) physical therapist was used to enjoying things at their jobs, and 105 (29.91%) nurses were unable to enjoy things as compared to what this study reported. Physical therapists were used to reflecting their profession, and taught exercises among the population because their type of profession gives insight to the importance of physical activity and exercise, therefore, most of the physical therapists from our study were active and they enjoy things [23]. According to the level of sadness observed in physical therapists, 193 (62.25%) are feeling sad and 110 (31.33%) said they were not sad compared to this a study reported, that mild to moderate
levels of stress, anxiety, and depression was found in
nurses which can be reduced by implementing the mindfulness based training [24]. A study conducted in
Taiwan concluded, that there is a positive association between hopelessness with depression and a negative association between the meaning of life with depression in comparison to our study, physical therapists were 198 (63.87%) hopeful regarding their future and 135(38.46%) of nurses were hopeless regarding their future [25]. A study conducted in China reported, that there was a high prevalence of depression among nurses due to this they were unable to complete their tasks without much effort [25]. Similarly in our study, 187(60.32%) physical therapists were able to perform tasks like their past but 123 (35.04%) nurses required more effort to initiate any task. According to the research conducted in Iran, most of their nurses had a moderate level of depression which they reported may be due to high physical and psychological demands at the job another study reported, that physical therapists undergoing high levels of stress during their job and the associated factors were difficult to evaluate and maybe evaluate through proper discussion and interviews [26, 27]. From our research participants 198 (63.87%) physical therapists were satisfied with their life while only 117 (33.33%) nurses were satisfied with their life. In addition to this, there is a strong association of job satisfaction with salary at the workplace.

C O N C L U S I O N S

According to the observation of our study, it is revealed that nurses are more depressed as compared to physical
therapists which may be vary due to the dependent and independent variables, especially with the type of
profession and level of satisfaction with their occupations. Additionally, Physical therapist who have depression were mostly found in moderate depression while nurses who have depression were mostly found in borderline depression category.

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Methodology: VK, OA
Formal analysis: NI
Writing, review and editing: KJ, PL, OA, MFH, SAA, LI

All authors have read and agreed to the published version of the manuscript.

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The authors declare no conflict of interest.

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REFERENCES


