Original Article

Prevalence of Depression in Physical Therapists Versus Nurses in Karachi Pakistan

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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 throgh 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 lifes 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

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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]. Our study aims to determine the prevalence of depression in physical therapists as well as nurses in Karachi.

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

Demographics	Physical Therapists N (%)	Nurses N (%)
Age		
20-29	95 (30.64%)	102 (29.05%)
30-39	83 (26.77%)	101 (28.77%)
40-49	52 (16.77%)	79 (22.50%)
50-59	36 (11.61%)	61 (17.37%)
>59Year	44 (14.19%)	8 (2.27%)
Gender		
Male	105 (33.87%)	152 (43.30%)
Female	205 (66.12%)	199 (56.69%)
Marital Status		
Single	200 (64.51%)	236 (67.23%)
Married	110 (35.48%)	115 (32.76%)
Economic Status		
Upper Class	72 (23.22%)	67 (19.08%)
Middle Class	139 (44.83%)	203 (57.83%)
Lower Class	99 (31.93%)	81 (23.07%)
Working Hours		
6-8 Hours	122 (39.35%)	214 (60.96%)
8- 10 Hours	107 (34.51%)	91 (25.92%)
10-12 Hours	56 (18.06%)	21 (5.98%)
>12 Hours	25 (8.06%)	25 (7.12%)
Working Experience		
1-10	105 (33.87%)	186 (52.99%)
11-20	55 (17.74%)	58 (16.52%)

| 21-30 | 77 (24.83%) | 91 (25.92%) |
| >30 | 73 (23.54%) | 16 (4.55%) |

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.
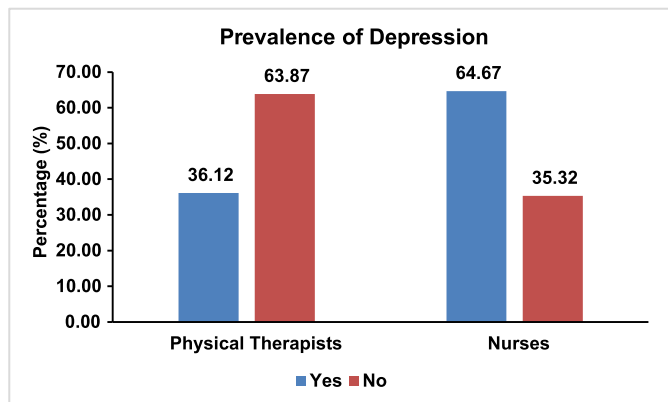

Figure 1: Prevalence of Depression in Physical Therapists vs Nurses

Healthcare workers working in seven districts of Karachi are: Central 117, East 101, Kemari 81, Korangi 106, Malir 121, South 64, and West 71.

When we asked questions related to the level of pleasure from the research participants 162 PT and 97 nurses responded that they used to enjoy things as much as they could, 63 PT and 105 nurses responded about the inability to enjoy pleasure, 49 PT and 87 nurses responded that they felt a lack of pleasure in anything while 36 PT and 62 nurses responded that they felt bored every time. When we asked the questions related to the level of sadness among the research participants 193 PT and 110 nurses answered that they were not sad, 51 PT and 106 nurses answered that they were feeling sad, 36 PT and 71 nurses answered that they were always sad, while 30 PT and 64 nurses answered that they were very sad. When we were asked the question related to the level of hope of the research participants they replied: 198 PT and 97 nurses that they were not hopeless, 51 PT and 135 nurses replied they were hopeless regarding the future, 24 PT and 87 nurses replied they do not expect their future while 37 PT and 32 nurses reply they were feeling useless. When the question related to work was asked from the research participants 187 PT and 76 nurses responded that they can perform all tasks like they were performed in the past, 51 PT and 123 nurses responded that they need more energy to initiate any tasks, 42 PT and 87 nurses have lack of interest in any tasks while 30 PT and 65 nurses responded that they cannot do any task. When the question related to the level of satisfaction was asked from the research participants they answered: 198 PT and 117 nurses responded that they were satisfied with their

lives, 46 PT and 143 nurses responded that they were unhappy with their lives, 37 PT and 63 nurses responded that they were angry with their lives while 29 PT and 48 nurses responded that they were unsatisfied with their lives as shown in table 2.

Table 2: Beck Depression Inventory

Questions	Physical Therapists (n=310)	Nurses (n=351)
Level of Pleasure N (%)		
I Used To Enjoy As Many Things As Possible	162 (52.25%)	97 (27.63%)
I Am Unable To Enjoy Things	63 (20.32%)	105 (29.91%)
Lack of Pleasure In Anything	49 (15.80%)	87 (24.78%)
Feeling Bored Every Time	36 (11.61%)	62 (17.66%)
Level of Sadness N (%)		
I am Not Sad	193 (62.25%)	110 (31.33%)
I am Feeling Sad	51 (16.45%)	106 (30.19%)
Always Sad	36 (11.61%)	71 (20.22%)
Very Sad	30 (9.67%)	64 (18.23%)
Level Of Hope N (%)		
I Am Not Hopeless	198 (63.87%)	97 (27.63%)
I Am Hopeless Regarding The Future	51 (16.45%)	135 (38.46%)
No Expectations Regarding The Future	24 (7.74%)	87 (24.7%)
I Feel Useless	37 (11.93%)	32 (9.11%)
Level of Work N (%)		
I Can Perform My Tasks Like In The Past	187 (60.32%)	76 (21.65%)
Require More Effort To Start Any Task	51 (16.45%)	123 (35.04%)
Require More Effort To Start Any Task	42 (13.54%)	87 (24.78%)
I Cannot Do Any Task	30 (9.67%)	65 (18.51%)
Level of Satisfaction N (%)		
Satisfied With Own Life	198 (63.87%)	117 (33.33%)
Unhappy With Own Self	46 (14.83%)	123 (35.0%)
Angry With Own Self	37 (11.93%)	63 (17.94%)
Unsatisfied	29 (9.35%)	48 (13.67%)

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.
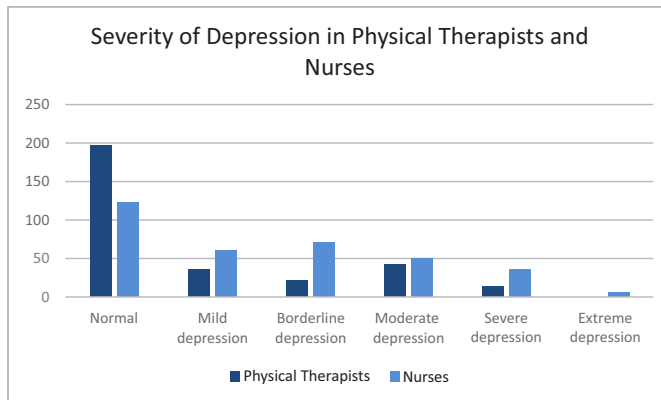
Severity of Depression in Physical Therapists and Nurses

Figure 2: Severity of Depression In Research Participants

DISCUSSION

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 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

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.

CONCLUSIONS

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 nursese who have depression were mostly found in borderline depression category.

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