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Frequency of depression amongst patients with lower limbs physical disability

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Abstract---Background: A congenital, developmental, mental, or physical defect that has the potential to seriously interfere with a person's daily activities is referred to as a disability. People with impairments are susceptible to a wide range of secondary issues, such as pain, fatigue, depression, obesity, and other unknown causes. Objective: To assess the frequency of depression amongst patients with lower limbs physical disability. Methodology: The current study was cross sectional, carried out at Balochistan Institute of Psychiatry and Behavioral Sciences and Bolan Medical Complex Hospital Quetta from March 2019 to March 2020. Patient Health Questionnaire (PHQ-9) was employed to assess the depression. A pre-designed proforma was then used to collect all the required information's. The SPSS version 24.0 was used to input and analyze the data. Results: In our study, totally 220 patients were enrolled. The male patients were 154 (70%) while female patients were 66 (30%). The mean age (SD) in our study was 42 (4.1) years. Distribution based on PHQ-9 score shows that 132 (60%) patients were observed with PHQ-9 score of less than 4 whereas 88 (40%) patients were observed with PHQ-9 score of more than 4. Therefore the overall frequency of depression amongst patients with lower limb disability was 88 (40%). Conclusion: Our study concludes that the frequency of depression amongst patients with lower limb disabilities is very high. For complete recovery and rehabilitation, a variety of treatments may be used to provide psychological assistance in the form of counseling and psychotherapies. Additionally, for complete management, rehabilitation facilities that deal with people who have physical impairments must enlist the aid of clinical psychologists and psychiatrists.

Keywords---frequency, depression, lower limbs, physical disability.

Introduction

A congenital, developmental, mental, or physical defect that has the potential to seriously interfere with a person's daily activities is referred to as a disability (1). The World Health Organization (WHO) projected in 2014 that more than ten million people, or 15% of the global population, live with an ailment. Individuals between 2.2 and 3.8% had this condition for at least 15 years and had serious functional consequences. Additionally, older persons had higher levels of impairment (2). People with physical limitations are often denied access to basic health treatments in impoverished nations (3). People with impairments are susceptible to a wide range of secondary issues, such as pain, fatigue, depression, obesity, and other unknown causes (4). Additionally, studies have indicated that depression itself restricts physical activity, which negatively impacts quality of life. According to published research, depression affects around 11.3% of individuals at some point in their life (5).

According to the evidence, 13.4% of those who were using lower limb prostheses within five years following amputation had depression. These psychological problems were thought to be linked to amputated people's discomfort and adjustment problems (6). Another research, using the Hospital Anxiety and Depression Scales (HADS), revealed the high frequency of anxiety and depression in amputees, with rates of 37% and 20%, correspondingly. It also underlined the significance of sociodemographic characteristics in amputees (7). Depression is thought to have a link to the onset of physical impairment in non-elderly individuals and a greater link to the onset of social disability (8). A similar research revealed a strong link between disability and depression, and that study also revealed a female preponderance for depression (9, 10).

A few comparative investigations have also shown that impaired patients scored more depressed than healthy ones (11, 12). Last but not least, a long-term study of 179 people with type II diabetes who had lower limb amputations revealed greater levels of anxiety and despair before and after surgery (13). The WHO reports that the percentage of people with disabilities is rising daily. Similar to this, during the last 15 years, war and terrorism have increased the number of disabled people in Pakistan. There is a chance that depression will also become more common at the same time, particularly among those who are physically challenged. As a result, we designed this research to assess the prevalence of depression amongst people who appear with physical disabilities of the lower limbs. We focused on lower limb impairment in particular since there is little accessible literature and data from our area of Balochistan, which has diverse cultural norms and is the province most devastated by war and terrorism.

Materials and Methods

The current study was cross sectional, carried out at Balochistan Institute of Psychiatry and Behavioral Sciences and Bolan Medical Complex Hospital Quetta. The study duration was one years from March 2019 to March 2020. The study

approval was taken from IRB of the institute. The calculated sample size based on WHO sample size calculator was 220.

Inclusion criteria

- All the patients of:
- Both genders
- All age patients
- Patients with lower limb physical disability
- Patients willing to participate in our study

Exclusion criteria

- Participants diagnosed with depressive illness
- Participants taking anti-depressant medications
- Participants not willing to participate in our study

Informed consent was taken in written from all the participants. Patient Health Questionnaire (PHQ-9) was employed to assess the depression. A pre-designed proforma was then used to collect all the required information's. The SPSS version 24.0 was used to input and analyze the data. Frequencies and percentages were used to represent qualitative variables. In terms of Mean SD, quantitative variables were represented.

Results

In our study, totally 220 patients were enrolled. The male patients were 154 (70%) while female patients were 66 (30%). The mean age (SD) in our study was 42 (4.1) years. Based on age distribution, 33 (15%) patients were in age group 18-30 years, 66 (30%) patients were in age group 31-40 years, and 66 (66%) patients were in age group 41-50 years while 55 (25%) patients were in age group 51-60 years. The mean (SD) physical disability period was 11 ± 2.21 years. The scores of PHQ-9 (SD) were 11 ± 1.99 . Distribution based on PHQ-9 score shows that 132 (60%) patients were observed with PHQ-9 score of less than 4 whereas 88 (40%) patients were observed with PHQ-9 score of more than 4. Therefore the overall frequency of depression amongst patients with lower limb disability was 88 (40%).

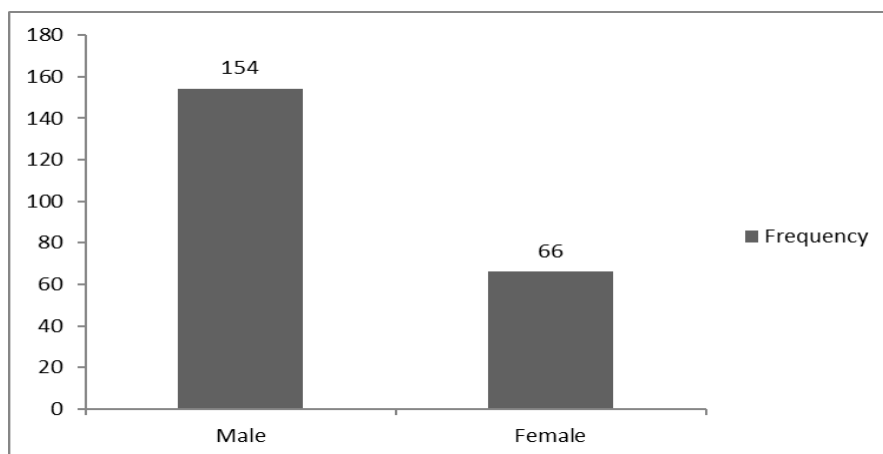


Figure 1. Gender wise distribution of patients

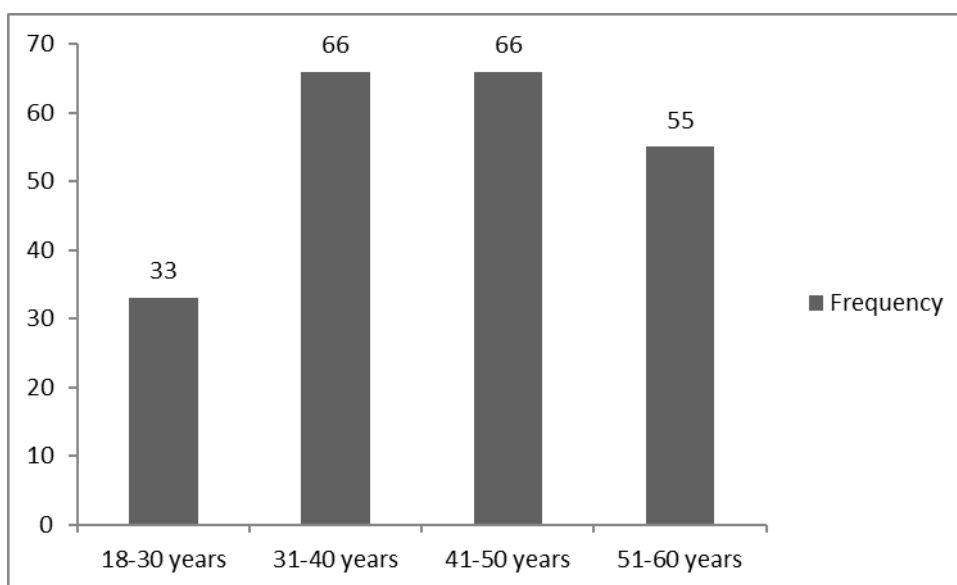


Figure 2. Age wise distribution of patients

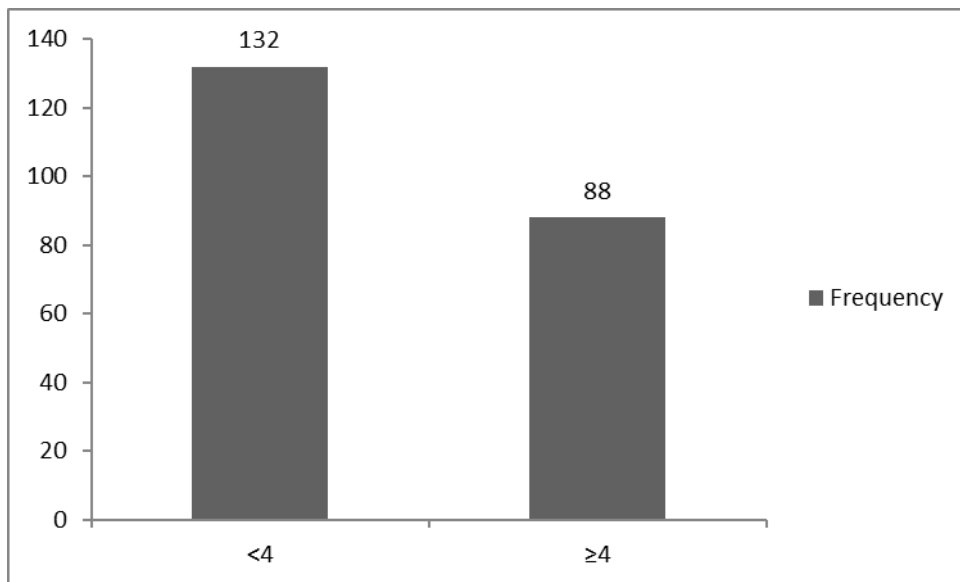


Figure 3. Distribution of patients based on PHQ-9 score

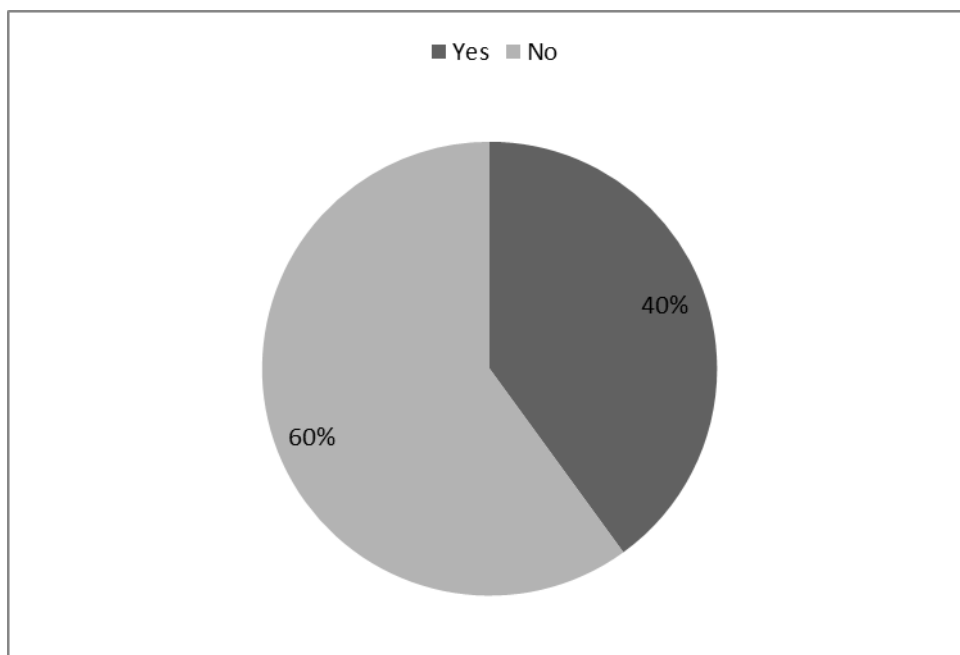


Figure 4. Frequency of depression amongst patients with lower limb disability

Discussion

This research was designed to assess the prevalence of depression amongst people who appear with physical disabilities of the lower limbs. We focused on lower limb impairment in particular since there is little accessible literature and data from our area of Balochistan, which has diverse cultural norms and is the province most devastated by war and terrorism. In our study, totally 220 patients

were enrolled. The male patients were 154 (70%) while female patients were 66 (30%). The mean age (SD) in our study was 42 (4.1) years. Based on age distribution, 33 (15%) patients were in age group 18-30 years, 66 (30%) patients were in age group 31-40 years, and 66 (66%) patients were in age group 41-50 years while 55 (25%) patients were in age group 51-60 years. The mean (SD) physical disability period was 11 ± 2.21 years. The scores of PHQ-9 (SD) were 11 ± 1.99 . Distribution based on PHQ-9 score shows that 132 (60%) patients were observed with PHQ-9 score of less than 4 whereas 88 (40%) patients were observed with PHQ-9 score of more than 4. Therefore the overall frequency of depression amongst patients with lower limb disability was 88 (40%).

As disability could be congenitally present or develop at any point in life. Accordingly, the WHO stated in 2014 that amongst the world's more than one billion inhabitants, 15% are affected by various types of disability, and among them, 2.2% to 3.8%), persons with this condition for at least 15 years have considerable functional impairment. Additionally, the level of disability is increasing at this stage of life as a result of senile changes and a worsening of long-term health conditions (2). Our research's results are supported by a study that found that the prevalence of depression rose with physical disability, reaching a substantial level in 17.1% of those with physical disabilities (14). Similar results from another research on people who had lower limb amputations revealed significant rates of anxiety and depressed symptoms after amputation, with a prevalence of up to 41% (15).

People with chronic neck discomfort and controls were the subjects of a case-control research, with 40 men and 40 women in each group. The research found that whole-body fitness plays a key role in the relationship between anxiety and depression and chronic neck pain, thus appropriate interventions should be used to enhance both quality of life and outcomes (16). Small sample size was the major limitation of our study. Other studies based on large sample size should be carried out for better outcomes.

Conclusion

Our study concludes that the frequency of depression amongst patients with lower limb disabilities is very high. For complete recovery and rehabilitation, a variety of treatments may be used to provide psychological assistance in the form of counseling and psychotherapies. Additionally, for complete management, rehabilitation facilities that deal with people who have physical impairments must enlist the aid of clinical psychologists and psychiatrists.

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