

Clinical and Epidemiological Profile of Musculoskeletal Disabled Patients Visiting the Physical Medicine and Rehabilitation Department: A Retrospective Study

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Abstract

Introduction: Globally, 3.8% of adults have severe disabilities and 19.4% have moderate-to-severe disabilities. Individuals with impairments frequently endure unbearable pain and hefty weights, which poses unique challenges for their families. This study's primary goal was to identify the clinical and epidemiological traits of musculoskeletal disability patients who visited the physical medicine and rehabilitation (PMR) outpatient department (OPD). **Materials and Methods:** This retrospective study was conducted in the PMR Department of All India Institute of Medical Sciences, Deoghar, Jharkhand. The study aimed to assess and describe the pattern and profile of patients seeking treatment in PMR OPD, based on 4 years of records (2021–2024). During this time, 2174 patients in total visited PMR OPD. The Institutional Ethical Committee granted ethical approval. **Results:** The mean age of the 2174 patients who visited the PMR OPD was 43.48 years. The majority of patients in the PMR department were female (51%) and underwent occupational therapy and physical therapy (87%). The majority of them had disorders of the upper and lower limbs (each 36%). Most patients (66%) in the PMR department travelled 50 km or less to get to the OPD. Only 9% of patients went more than 100 km, while 25% of patients travelled between 51 and 100 km to receive PMR OPD care. **Conclusions:** Physical constraints can have a major impact on people's daily activities, social participation, and overall quality of life, and no research was done to assess clinical and epidemiological features of musculoskeletal patients in the tribal areas of Jharkhand.

Keywords: Clinical profile, epidemiological profile, musculoskeletal disabled, physical medicine and rehabilitation

INTRODUCTION

A disability is defined as a long-term physical, mental, intellectual, or sensory constraint that, when paired with other barriers, prevents a person from fully and effectively participating in society on an equal basis. Roughly, 19.4% of adults worldwide have moderate-to-severe disabilities and 3.8% have severe disabilities.^[1] People with disabilities often experience excruciating pain and heavy loads, which presents particular difficulties for their family. Adopting a “social model” approach which acknowledges that impairment results from the interaction between an individual's skills and social and physical environment they inhabit is vital to effectively addressing these problems. About 27 million Indians, or

2.2% of the country's total population, live with disabilities, according to the Census of India (2011).^[2]

Every society has an obligation to address the issues of disability among its citizens while respecting the human rights and autonomy of those with disabilities, allowing them to live satisfying lives. Every nation must customize its approach to disability in light of its unique resources and advantages.^[3] Recognizing that cultural and regional differences might cause something to be crippling in one society not to have same level

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of restriction in another is crucial. Physical limitations might not be as restrictive in a rural setting as they would be in an urban one with plenty of facilities. In addition, the amount of resources available to assist people in compensating or adjusting to disabilities varies throughout societies.^[4]

The Rights of Persons with Disabilities (RPwD, 2016) act was adopted by India, a signatory to the United Nations convention on the RPwD. It adopts a right-based approach, defining the role of institutions and extending the definition of disabilities.^[5,6] The individual can get special provisions including work and educational reservations, benefits in land and housing schemes, social security benefits, and more if they are certified as having a “benchmark disability” ($\geq 40\%$).^[7] A disability certificate is required to get benefits from several government schemes including as pensions, rail concessions, income tax deductions, health insurance and financial aid for housing, work, and education. Remarkably, in 2010, just 35% of people with impairments held a certificate.^[8,9]

Studies on disability in the Indian setting have mostly disregarded the examination of trends or patterns concerning disability certificates and use of services linked to these official certifications. There has never been a study done on trends or patterns concerning clinical and epidemiological profile of musculoskeletal patients in tribal region of Jharkhand. The main aim of this study was to determine the clinical and epidemiological characteristics of patients with musculoskeletal disabilities who visited the physical medicine and rehabilitation (PMR) outpatient department (OPD) of a tertiary care center in a Jharkhand tribal area.

MATERIALS AND METHODS

Study design

This was a retrospective study.

Study setting

The present study was conducted at Department of PMR, All India Institute of Medical Sciences, Deoghar, Jharkhand which is a tertiary care hospital. Based on 4 years of records (2021–2024) of PMR department, the study sought to evaluate, characterize the pattern and profile of patients who were seeking for treatment were included. All clinical and demographic profile were documented in an OPD register that the PMR outpatient service’s nursing officer kept up to date.

Sample size

A total of 2174 patients visited the PMR OPD during this period. Patient’s age, gender, availing which type of PMR service, their diagnosis, provided referral services and distance from which patients visited to our OPD were accessible parameters, whose data were extracted and then de-identified in an Excel sheet.

SPSS version 23.0 (IBM Statistical Package for the Social Sciences (IBM SPSS) version 23.0) was used for statistical analysis. Only descriptive analysis was carried out on study data, i.e., frequency and percentage.

Ethical considerations

Ethical approval was obtained from the Institute Ethical Committee (AIIMS-DEO/RC-IEC-Full Committee/2024-April/76 on dated 09.04.2024). In accordance with the Declaration of Helsinki, anonymity and confidentiality of each study participant was guaranteed.

RESULTS

Total 2174 patients who visited the PMR OPD, their mean age was 43.48 years. Majority (51%) of the patients were female, and majority (87%) of the patients in the PMR department received physiotherapy and occupational therapy [Table 1].

In the PMR department, out of 2174 patients, most of them were suffering from the upper limb disease (36%) and lower limb disease (36%), followed by lumbosacral pain (15%), cervical pain (10%), and neurological condition (3%) [Figure 1].

PMR department provided referral service to 3% medicine patients, 2% dermatology patients and 1% surgery, ENT and ophthalmology patients respectively [Figure 2].

In the PMR department, majority (66%) of the patients visited around 50 km to reach to OPD. About 25% of patients visited around 51–100 km to avail the PMR OPD service, and only 9% of patients visited more than 100 km [Figure 3].

DISCUSSION

This study analyzed the clinical and epidemiological characteristics of patients with musculoskeletal disabilities who visited the PMR OPD of a tertiary care center in a tribal area of Jharkhand. The study showed that majority of the patients were female and were seeking physical therapy and occupational therapy.

The majority of patients presented with upper limb disorders and lower limb disorders, which is consistent with previous studies.^[10] This could be attributed to the physically demanding nature of work, inadequate ergonomics, and lack of safety

Table 1: Biodemographic variables (n=2174)

Variables	Options	Frequency (%)
Age (years)	Mean \pm SD	43.48 \pm 16.99
Gender	Male	1083 (49)
	Female	1091 (51)
PMR service	Physiotherapy	156 (7)
	Physiotherapy+occupational therapy	1939 (87)
	Physiotherapy+prosthetics	8 (0.5)
	Intervention therapy	15 (1)
	Intervention therapy+electrotherapy	1 (0.5)
	Occupation therapy	16 (1)
	Occupation therapy+prosthetics	1 (0.5)
	Prosthetics+orthotics	36 (2)
	Other treatment	2 (0.5)

PMR: Physical medicine and rehabilitation, SD: Standard deviation

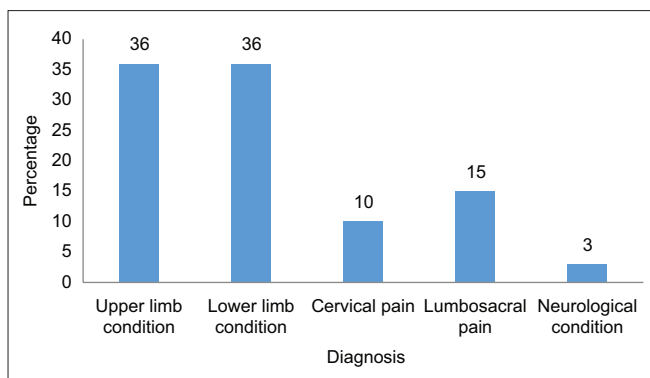


Figure 1: Physical medicine and rehabilitation department patient's diagnosis

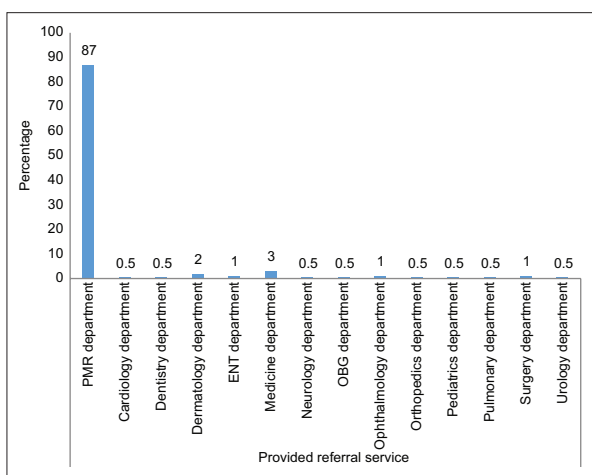


Figure 2: Physical medicine and rehabilitation department provided referral service

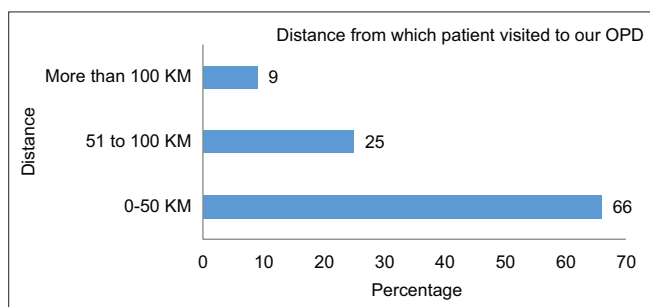


Figure 3: Distance from which patient visited to physical medicine and rehabilitation department

practices in the tribal region. Musculoskeletal conditions such as back pain, neck pain, and joint disorders are common among the general population, and their high prevalence can be attributed to sedentary lifestyles, lack of physical activity, and poor posture.^[11]

The geographic accessibility of health services is a crucial factor in rural and tribal regions, where people often have to travel long distances to access care.^[12] The majority of patients in this study traveled around 50 km to reach the PMR OPD, indicating the importance of establishing rehabilitation services closer to the community.

Limitations of the study include its retrospective nature and the lack of detailed clinical information, which could have provided more insights into the specific musculoskeletal conditions and their severity.

The present study is limitation of pattern, biodemographic profile and occurrence of musculoskeletal disorders in the tribal population of four year's services provided by PMR department at tertiary care facility of Jharkhand.

CONCLUSIONS

The analysis of trends or patterns regarding disability certificates and the utilization of services associated with these official certifications has been largely ignored in studies on disability in the Indian context. Research on the clinical and epidemiological characteristics of musculoskeletal patients in Jharkhand's tribal areas has never been conducted. Individuals' everyday activities, social engagement, and general quality of life can all be significantly impacted by physical limitations. Understanding the epidemiological elements of disability is crucial because it makes it possible to keep an eye on the spread of endemic diseases, their covert prevalence, and the chain of transmission's maintenance, all of which are indicators of the caliber of medical care provided.

Recommendations

There is no prior research on the clinical and epidemiological features of musculoskeletal patients in Jharkhand's tribal communities. Physical restrictions may have a substantial influence on people's daily activities, social interactions, and overall quality of life. It is essential to comprehend the epidemiological components of disability, because doing so enables monitoring of the endemic diseases' spread, their hidden prevalence, and the preservation of the chain of transmission, all of which are markers of the quality of medical care rendered.

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Conflicts of interest

There are no conflicts of interest.

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