

Work-related Musculoskeletal Disorders in Physical Therapists: A Cross-sectional Study

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Introduction

Work-related Musculoskeletal Disorders (WMSDs) remain a major occupational health concern across numerous professions, including those within the healthcare sector. Among healthcare professionals, physical therapists are notably at high risk due to the physical nature of their work. Tasks such as repetitive motion, manual therapy, lifting patients, prolonged static postures, and awkward body positioning are inherent to their daily responsibilities. These biomechanical stressors contribute significantly to the development of musculoskeletal disorders, which can impair function, reduce work capacity, and lead to chronic pain, potentially resulting in reduced productivity or even early retirement from the profession. Despite growing awareness, WMSDs in physical therapists are still under-recognized, and preventive strategies remain inconsistently implemented. This study aims to assess the prevalence, risk factors, and potential implications of work-related musculoskeletal disorders among physical therapists through a cross-sectional approach. Musculoskeletal disorders encompass a wide range of conditions that affect muscles, tendons, ligaments, joints, and nerves. For physical therapists, the most commonly affected regions include the lower back, neck, shoulders, wrists, and hands [1].

Description

The physical demands of their roles, such as applying force during manual therapy or supporting patients with limited mobility, increase the likelihood of developing repetitive strain injuries. Moreover, the cumulative exposure to these risk factors over time leads to acute injuries and chronic conditions, contributing to long-term discomfort and reduced quality of life for practitioners. In addition, psychosocial stressors such as high workload, time pressures, and emotional strain from patient care may exacerbate physical symptoms or reduce the body's resilience to injury. In this cross-sectional study, data were collected from a diverse sample of licensed physical therapists working across various clinical settings, including hospitals, private practices, rehabilitation centers, and community-based facilities. The study population included practitioners with varying years of experience, ranging from early-career professionals to those with decades in practice. Participants were invited to complete a detailed questionnaire designed to assess demographic variables, work environment characteristics, frequency and nature of physical tasks performed, history of musculoskeletal symptoms, perceived causes of injuries, coping mechanisms, and attitudes toward injury prevention and workplace ergonomics [2].

Preliminary findings revealed that a substantial proportion of respondents over 70% reported experiencing at least one work-related musculoskeletal symptom within the previous 12 months. The most commonly reported regions

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Received: 01 February, 2025, Manuscript No. cmcr-25-164119; **Editor assigned:** 03 February, 2025, Pre QC No. P-164119; **Reviewed:** 14 February, 2025, QC No. Q-164119; **Revised:** 22 February, 2025, Manuscript No. R-164119; **Published:** 27 February, 2025, DOI: 10.37421/2684-4915.2025.9.361

of discomfort were the lower back (52%), neck (44%), and shoulders (38%). These findings align with previous literature highlighting the mechanical demands placed on these areas during physical therapy practice. A significant portion of therapists also reported symptoms in the wrists and hands, likely related to manual mobilization techniques and repetitive movements. Notably, many respondents indicated that their symptoms had developed gradually over time, rather than being associated with a single, acute event. Further analysis identified several key risk factors for the development of WMSDs. The frequency of patient handling, particularly in settings where therapists worked with dependent or bariatric patients, was positively correlated with reports of back and shoulder pain [3].

Manual therapy techniques involving repetitive or forceful hand movements were associated with wrist and hand discomfort. Therapists working in environments with limited access to assistive equipment, such as patient lifts or adjustable treatment tables, were more likely to report musculoskeletal symptoms. Inadequate staffing, leading to increased patient loads and insufficient time for rest or proper body mechanics, was also a recurring theme. Psychosocial factors emerged as important contributors to musculoskeletal health. Participants who reported high levels of job stress, emotional fatigue, and perceived lack of control over their schedules were more likely to experience chronic pain symptoms. These findings suggest that addressing physical risk factors alone may be insufficient, and a more holistic approach—including organizational and psychological interventions—may be needed to reduce the incidence of WMSDs. An important observation was that many physical therapists continued working despite experiencing significant discomfort, often due to a sense of duty to their patients or concerns about professional reputation. This phenomenon, known as presenteeism, can lead to worsening of symptoms and longer recovery times [4].

Alarming, some participants reported modifying their treatment techniques or avoiding certain interventions altogether to cope with pain, which may impact patient care outcomes. Moreover, a notable percentage of respondents indicated that they had never formally reported their injuries, suggesting underreporting and lack of institutional support or awareness around occupational health policies. The study also explored participants' knowledge and use of injury prevention strategies. While most therapists demonstrated a good understanding of ergonomic principles, only a portion reported consistently applying these principles in daily practice. Barriers included lack of time, non-ergonomic clinic layouts, resistance from patients to the use of assistive devices, and perceived ineffectiveness of certain precautions. Continuing education on safe body mechanics and injury prevention was found to be sporadic, with some therapists indicating that they had not received formal training since completing their academic programs. Interestingly, therapists with more years of experience generally reported fewer injuries, possibly due to the development of adaptive techniques, improved efficiency, or more autonomy in controlling work conditions [5].

Conclusion

In conclusion, this cross-sectional study reinforces the high prevalence of work-related musculoskeletal disorders among physical therapists and underscores the multifactorial nature of these conditions. Physical workload, ergonomic

deficiencies, psychosocial stressors, and organizational dynamics all contribute to injury risk. While many therapists continue to work despite pain, this approach is unsustainable and may compromise both provider and patient outcomes. Promoting a culture of safety, providing adequate resources and training, and adopting a comprehensive, system-wide approach to occupational health are critical steps in addressing this issue. Future research should focus on longitudinal outcomes, intervention effectiveness, and the integration of technological solutions to support safer and more sustainable clinical practice in physical therapy. By acknowledging the challenges faced by physical therapists and proactively addressing them, the profession can move toward a healthier, more resilient workforce capable of delivering high-quality rehabilitative care.

Acknowledgement

None.

Conflict of Interest

No conflict of interest.

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How to cite this article: Goh, Julia. "Work-related Musculoskeletal Disorders in Physical Therapists: A Cross-sectional Study." *Clin Med Case Rep* 9 (2025): 361.