

**PHYSIOTHERAPIST AND WORK-RELATED MUSCULOSKELETAL DISORDERS: A  
REVIEW**

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Injuries and illnesses sustained in the workplace are a major global source of ill health and disability. Worldwide, an estimated two million men and women die each year as a result of work-related injuries or illnesses and a further 268 million nonfatal workplace injuries result in time off work. It is also estimated that there are 160 million new cases of work-related illness each year. Further, eight percent of the global burden of disease from depression is currently attributed to occupational risks (International Labour Organisation, cited in World Health Organisation [WHO] 2010.<sup>[1]</sup>

Previous reports regarding the incidence of work related musculoskeletal disorders (WRMD) indicate that physiotherapy (also known as physical therapy) and occupational therapy are two professions that are at high risk. Studies amongst physiotherapists (PT) have revealed as many as 91% experience WRMD during their career with recurrence rates of up to 88%. It has also been reported that 80% of PT experience symptoms in at least one body area over a 12 month period. One in six PT have been reported to change their area of speciality or leave the profession as a result of pain or injury.<sup>[2,3]</sup>

Musculoskeletal disorders are injuries or dysfunctions that affects muscles, bones, nerves, tendons, ligaments, joints, and cartilages. Musculoskeletal disorders include spinal discs, sprains, strains, tears, soreness, pain, carpal tunnel syndrome, hernias, and connective tissue injuries.

According to the National Institute for Occupational Safety and Health (NIOSH), several epidemiological studies have demonstrated evidence of a causal relationship between physical exertion at work and several factors have been associated with WMSD such as repetitive movement's excessive force, awkward postures, prolonged sitting and standing.<sup>[2]</sup>

The physically demanding nature of work tasks and clinical demands are believed to contribute to this high incidence of WRMD amongst therapists. This physically demanding nature has been observed to result in the adoption of awkward postures, such as bending and twisting (2) Work-related musculoskeletal disorders (WMSDs) are common in jobs requiring manual handling, heavy lifting, and/or repetitive motions. Even though PTs may have more in depth knowledge and receive more training on proper body mechanics, they

perform many of the same physically demanding and repetitive tasks completed by nurses, being exposed to some of the same occupational risks. In addition, PTs perform specific tasks, which are also physically taxing such as manual therapy. For example, thumb pain has been found to be common among PTs performing manual therapy.<sup>[3,4,5]</sup>

As per study one on Australian physiotherapist it has been seen that One hundred and sixty-one of the 460 non-respondents (35%) returned the brief questionnaire related to thumb problems. Half of these (50%) reported thumb problems at some point in their life, comparable to the lifetime prevalence found for respondents to the full questionnaire (65%). showing that work related injuries are very common in on eor another physiotherapist A high, repetitive workload and performing passive accessory movements or soft tissue techniques were the work-related factors most commonly associated with thumb problems<sup>[5]</sup> and the same findings were also documented by Cromie et al (2000) other studies did not find gender a risk factor for thumb pain/discomfort (Caragianis 2002, Snodgrass et al 2003, Wajon and Ada 2003). While age was not associated with a higher risk of thumb problems in either this study or that of Wajon and Ada (2003).<sup>[5]</sup>

Hospital-based practitioners attend to patients with complex medical conditions, requiring Assistance with transfers, gait training, and activities of daily living (ADL) training. Outpatient therapists attend to patients with more mobility who may require manual therapy and splint fabrication, which carry a separate set of risks. Pediatric therapists may practice in school systems, interacting with an environment designed for typically developing children, not those with disabilities<sup>[6]</sup> leading to one or another musculoskeletal injuries as per his/her

job demands to go for repeated stress over joints and soft tissues.

PTs work in different practice settings such as hospitals, nursing homes, outpatient clinics and patient/client homes. Each setting requires different skills and imposes different biomechanical demands on the PTs' musculoskeletal system. It is possible that WMSDs prevalence varies by specialties and settings. However, little is known about the rates of WMSDs in PTs practicing in different specialties.<sup>[3]</sup>

The common activities that found to be linked with various WMSD and WRI, Are Patient transfers, repositioning and patient lifting. And manual therapy joint mobilization soft tissue manipulations, passive movements are the most consistently cited tasks associated with WMSDs among physiotherapist.<sup>[7,8]</sup>

It has been seen that these injuries to physiotherapists occurred both gradually & because of repeated transfers over short span of time and more suddenly when a patient behaved in an unexpected way (carpal tunnel syndrome ,grabbed the patient, stumbled, or moved in an unexpected direction).<sup>[6,7]</sup>

Physiotherapist undertake a variety of work activities and are exposed to a range of hazards and risks associated with a higher chance of WMSD development Several factors have been associated with WMSD such as repetitive motion, excessive force, awkward and/or sustained postures, prolonged sitting and standing.

In health care, previous research has reported that health care workers are reluctant to report injuries, and as such compensation data are likely to under-represent actual injury rates.<sup>[9,10]</sup>

Glover and colleagues suggested that WMSD prevalence and risk factors identified by individuals may vary due to inconsistencies in the definitions of WMSDs used in the studies.

Definitions of WMSDs ranged from a more general description such as "a job-related ache or pain or discomfort" to the more specific stating "a report of WMSD rated at least 4/10 on visual analogue scale and lasting more than 1 week or presenting more than once a month". This variation makes comparisons of WMSD prevalence rates difficult and may, in part, explain the large variance in prevalence rates reported across studies.<sup>[11,12]</sup>

Results from the current review suggest that physiotherapists may experience a WMSD in their career. High risk factors associated with the development of a WMSD include being a younger therapist, having fewer years of experience, and being exposed to higher levels of manual and repetitive tasks. More researches, which employs consistent outcome measures to improve

the ability to draw meaningful comparisons across studies. While research supports the complex multifactorial nature of WMSD development the high prevalence rates found in this review suggest a need for more effective WMSD risk reduction interventions. In order to achieve this, accurate identification of all the relevant hazards and risks for AHPs is required, suggesting a direction for future research.

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