



PREVALENCE OF LOW BACK PAIN IN STANDING POSTURES IN PHYSIOTHERAPY WORKING PROFESSIONALS IN THE AGE GROUP OF 30-60

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ABSTRACT

Objectives: Healthcare workers have high rates of low back pain (LBP) related to handling patients. Ergonomic and personal risk factors result in LBP, but psychosocial factors can influence LBP disability.

Epidemiologic studies clearly indicate the role of mechanical loads on the aetiology of occupational LBP. Occupational exposures such as lifting, particularly in awkward postures; heavy lifting; or repetitive lifting are related to LBP. **Methods:** The study includes 100 working professionals in the age group of 30-60 years, among which 50 female and other 50 male physiotherapy working professionals which involved standing. For the survey, Questionnaires were self-administered at all. **Results:** Table 1 shows the group 31 to 40 years had maximum no of participant that is 18 male and 40 female. Table 2 shows the number of pain score was moderate was presented in 58 % of the participant was among these participants. **Conclusions:** In this observational study, physiotherapist lifting techniques usage predicted of Low Back Pain in professional physiotherapist. Other physical and psychosocial demands at work also contributed.

KEYWORDS : low back pain, long standing, physiotherapists working professionals

INTRODUCTION

Occupational low back pain (LBP) is an immense burden for both industry and medicine. Ergonomic and personal risk factors result in LBP, but psychosocial factors can influence LBP disability. Epidemiologic studies clearly indicate the role of mechanical loads on the aetiology of occupational LBP.

In most work settings, a physiotherapist will lift, bend, and walk often. They also use their hands and upper body during patient treatment. Risk of injury that comes with these tasks may be managed by making sure that the treatment is done properly and by using special devices that help with moving patients.

The nature of the work in a physiotherapy practice is physically demanding, and it involves repetitive tasks, high force manual techniques for treating patients, techniques that exert direct pressure on certain joints during treatment, awkward positioning of joints during certain manoeuvres and prolonged constrained postures.¹⁻³ These physical factors expose physiotherapists to various work-related musculoskeletal injuries.⁴ A paucity of information is available on the extent of this problem among physiotherapists because an enormous amount of research on WRMD among physiotherapist are available. Past studies have used lifetime prevalence, 12-month prevalence and one-week prevalence in measuring the magnitude of WRMDs among physiotherapists.⁵⁻⁷ Regardless of the time frame for recall, the prevalence of WRMDs has been found to be high, with the lifetime prevalence reported to be 40% to 91% and the 12-month prevalence to be in the range of 58% to 91% are the various injuries that have been reported as work-related injuries in physiotherapists.

In this study, the proportion of prolonged standing time during the working hours was high in participants. A fixed or constrained standing posture could be a risk factor for LBP. LBP also increased with prolonged standing when the workers were required to carry heavy work like passive movement, mobilization and transferring of patients their work activities. LBP increased with the proportion of prolonged standing time when the work required repetitive movements. These results indicate that exposure to risk factors that exacerbate the burden on the musculoskeletal system increase the presence

of LBP associated with prolonged standing, which is consistent with the results of previous studies.⁸

Aim:

To find out the prevalence of Low Back Pain in physiotherapy working professionals.

Objectives:

- To identify Low Back Pain in physiotherapy working professionals who predominantly use standing postures.
- To find difference between the gender in physiotherapy working professionals who predominantly use standing postures.

MATERIALS AND METHODS

The study includes 100 working professionals in the age group of 30-60 years, among which 68 female and other 32 male physiotherapy working professionals which involved standing. For the survey, Questionnaires were self-administered at all survey periods. Items included demographic characteristics (age, race, gender, marital status, years of education, height, weight), physical and psychosocial work exposures, recent medical history (prior back injury, chronic disease). We only included self-employed or regular workers. Working in clinic with at completion of age between 30 to 60 years. And both the genders with at least minimal back on the NPRS scale. Exclusion criteria for the study were individuals who were temporary workers, daily workers, or others. We further excluded participants who worked less than 40 hours per week. To meet the temporal conditions for prolonged standing to cause pain. workers currently employed for less than 1 year in the workplace were excluded. individuals having any serious cardiovascular, neurological, musculoskeletal complications.

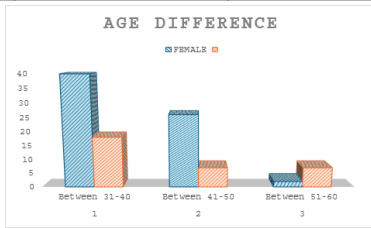
RESULTS

Table 1 presents the demographic information and occupational environmental characteristics of the participants. There were more female than male in the population, and the age range was 30–60 years.

Table 1

This table 1 shows the age wise distribution of participants with reference to different gender.

SR NO	Years	FEMALE	MALE
1	Between 31-40	40	18
2	Between 41-50	26	7
3	Between 51-60	2	7

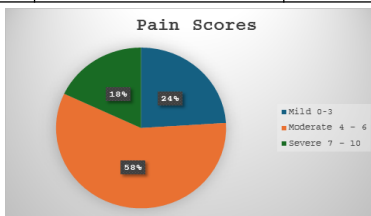


Graph 1 shows the age difference between male and female.

Table 2

On a scale from 0 to 10, where 0 is no pain and 10 is the worst pain you've experienced, at this moment. Compare the patient's acceptable level of pain to the patient's current self-report of pain to determine level of intervention.

SR NO	Pain	Scores
1	Mild 0-3	24
2	Moderate 4 – 6	58
3	Severe 7 – 10	18



Graph 2 shows the Numeric Pain Rating Scale has a range from 0 to 10.

There was total 100 participants in the study. Which were observed for prevalence of low back pain in long standing physiotherapist between the age group of 30 to 60 years. Both male and female was included in the study a then were divided into three groups 31 to 40 years, 41 to 50 years, and 51 to 60 years. The group 31 to 40 years had maximum no of participant that is 18 male and 40 female. The group 41 to 50 years had 7 male and 26 female. The group 51 to 60 years had 7 male and 2 female respectively.

Table 2 shows the NPRS scale from 0 to 10, where 0 is no pain and 10 is the worst pain you've experienced, at this moment. Compare the patient's acceptable level of pain to the patient's current self-report of pain to determine level of intervention. The number of pain score was mild was presented in 24% of the participant. The number of pain score was moderate was presented in 58 % of the participant. The number of pain score was severe was presented in 18% of the participant.

DISCUSSION

The above claim is supported by our study because the physiotherapists who reported LBP were involved in manual therapy techniques, such as mobilizations, manipulations, and massage, and lifting or transferring activities were the two most likely contributing factors. The findings of this study support those of previous studies,⁸ which identified lifting patients, transferring patients, and performing manual techniques as the top three problematic tasks that put physiotherapists at risk for injuries. It is also interesting to note that the high number of reports suggesting that manual therapy techniques are a contributor to LBP. There is a possibility that the results suggesting that manual therapy was a contributor to LBP among physiotherapists in this study were based on the stress to the spine due to prolonged standing while performing the task rather than the stress to the hands. We found that as the proportion of prolonged standing hours increased, the presence of lower extremity muscle pain

increased, and this was statistically significant true. In addition, there were demographic and working environment differences in the proportion of prolonged standing hours during work, and a relatively lower extremity muscle pain was found for stationary prolonged standing without exposure to additional musculoskeletal disease risk factors.

A few low back pain (LBP) measures have been associated with prolonged standing. In a study of bank tellers, Roelofs et al., (2002)⁹ reported low back discomfort with prolonged standing and Drury et al., (2008)¹⁰ reported that those who stand for long periods during the day reported significantly greater body parts discomfort compared to those who sit most of the day. Several studies have been conducted examining potential biomechanical indicators of risk of LBP due to prolonged standing. Researchers have suggested that risk of LBP is increased due to excessive co-activation of muscles involved in postural stability during prolonged standing (Nelson-Wong et al., 2008;¹¹). Specifically, Nelson Wong et al., (2008) postulated that prolonged standing results in a significant increase in co-activity of the gluteus medius (GM) muscles, a muscle group that serves to stabilize the pelvis during standing by abducting, medially rotating, and laterally rotating the thigh at the hip.

Age, height, and job tenure showed strong correlations with some measurements. Floor mats with increasing elasticity, decreased energy absorption and increased stiffness rated less discomfort and fatigue with prolonged standing. Standing on the soft surface produced less pain and discomfort, which was supported by several of the physiological and biomechanical measurements. King (2002)¹² and Orlando and King (2002) studied assembly line workers standing for 8h/d using different flooring conditions and comparing floor mats and insoles. Mats and wearing insoles were rated as more comfortable than standing on the hard floor. The use of shoe inserts is as the most comfortable floor mats and the greatest benefits from mats/shoe inserts may occur after several hours of prolonged standing.

Limitations

There were some limitations. First, we could not accurately ascertain the effects of prolonged standing time related to work activities alone. Second, the provision of safety interventions for work involving prolonged standing, such as floor mats, was not investigated.

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