

Prevalence and Risk Factors of Work-Related, Non-Specific Low Back Pain Among Physiotherapists in Ahmedabad City

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ABSTRACT

Introduction: Low back pain (LBP) is the major public health problem across the world. Physiotherapy professionals are more prone to work related LBP because they are linked to major physical efforts such as transfers and patient handling manoeuvres, uncomfortable or prolonged working positions, trunk flexion and rotation movements and reactions to a fall or unexpected movement by the patient. LBP is a multifactorial condition. Various factors like, personal, biomechanical, psychosocial and organisational are associated with work related LBP among physiotherapists.

Methodology: A link to an online self-questionnaire was sent to physiotherapists working in Ahmedabad city since last 12 months. The various patterns of practice were compared with regard to the prevalence of LBP, the total number of days with LBP during last 12 months, and the degree of exposure to organisational, biomechanical and psychosocial risk factors.

Results: The result was carried out by using Microsoft excel. Results showed that there is 95% prevalence of work-related low back pain among physiotherapists specifically, those working since last 12 months. The mean score of NPRS was 7.

Conclusion: There is significant prevalence of work-related low back pain among physiotherapists in Ahmedabad city.

Keywords: physiotherapists, work-related, low back pain, Ahmedabad city

INTRODUCTION

Lower back pain (LBP) is a significant public health issue. It primarily impacts individuals who are employed. Healthcare workers are not exempt either: paramedics, dentists, physiotherapists, occupational therapists, and nurses can all be affected. LBP, the most common occupational health condition among physiotherapists, and the risk factors linked to it are significant concerns for the practitioners' quality of life as well as the standard and security of patient care. ⁽¹⁾

The most common cause of impairment and incapacity to work is low back pain (LBP). Among physiotherapists, LBP is the most common musculoskeletal condition (MSD), more common than problems with the neck/thorax, shoulder, wrist/hand, and thumb. ⁽¹⁾ Rarely can a specific cause of low back pain be identified; thus, most low back pain is termed non-specific. ⁽⁷⁾

Work-related musculoskeletal complaints (WRMSC) result in significant economic burdens on both individuals and society. Health care workers, particularly those in direct patient care roles, face notably high

rates of WRMSC. ⁽¹⁵⁾ Nurses have consistently reported a high prevalence of musculoskeletal issues, particularly in the lower back, over several decades. ^(8,9) Similarly, despite their training in injury prevention methods, studies over the past decade have shown that physical therapists also experience a high frequency of musculoskeletal complaints. ⁽¹⁰⁾

Chronic low back pain is a multifaceted condition, influenced by various physical, psychological, and social elements that contribute to more challenging recovery and extended disability. ⁽⁴⁾ Various studies suggest different physiotherapy approaches to treat LBP. ^(5,13)

Research on the general population indicates that both men and women experience similar rates of LBP. However, the occurrence of LBP varies with age. Women tend to show a higher prevalence as they age, whereas men typically experience a peak incidence around the age of 40. ^(11,12) Researchers also found that complaints of LBP typically arise within the initial four to five years of starting a professional career. ⁽¹⁴⁾

A complex illness, LBP is apparently influenced by 37 % of the risk due to occupational factors. Biomechanical aspects associated with physiotherapy have been comparatively well-characterized. Major physical exertion (transfers and patient handling maneuvers, for example), uncomfortable or extended work positions, trunk flexion and rotation movements, and reactions to a fall or an unexpected movement by the patient are associated with the highest risks for physiotherapists. ⁽⁶⁾ Physiotherapists who have just graduated and female physiotherapists seem to be more susceptible to LBP in terms of personal variables. On the other hand, there hasn't been much research done on the psychosocial and organizational elements linked to work-related LBP in physiotherapists. No comparable study has, however, been conducted among Ahmedabad's physiotherapists. ⁽²⁾

MATERIALS & METHODS

This observational study was conducted among physiotherapists residing in Ahmedabad, Gujarat, India. Ethical clearance has been taken from the ethical committee of the institute. Subjects were selected according to the inclusion criteria. A link to an online self-questionnaire was sent to physiotherapists working in Ahmedabad city since last 12 months. The various patterns of practice were compared with regard to the prevalence of LBP, the total number of days with LBP during last 12 months, and the degree of exposure to organizational, biomechanical and psychosocial risk factors.

➤ Inclusion criteria:

1. Registered physiotherapists who had regularly treated patients in last 12 months
2. Physiotherapists who had worked in Ahmedabad
3. Physiotherapists willing to participate in study.

➤ Exclusion criteria:

- 1) 1)Physiotherapists who had other jobs.
- 2) 2)Physiotherapists who had changed their type of practice.
- 3) 3)Questionnaire with uninterpretable answers.

A survey of 108 physiotherapists was conducted using a questionnaire. ⁽¹⁾ The questionnaire comprised four sections. The first section enabled us to select physiotherapists who met the inclusion criteria and to collect data on their age, sex and the following practice variables: employment status, practice setting, the type of disorders primarily treated and the clinical specialty.

The second section of the questionnaire focused on the LBP. If the respondents experienced LBP in the previous 12 months, he/she had to specify the total number of days with pain, whether a specific cause had been diagnosed, whether the LBP was

primarily related to his/her professional activity, etc.

The third and fourth sections contained questions on the participants' perceived working conditions. On a numerical scale ranging (NPRS) from 0 (never/not at all/positive perception) to 10 (always/extremely/negative perception), the participants had to rate their occupational exposure to the biomechanical risk factors mentioned in the literature and to psychosocial/organizational risk factors in the workplace.

STATISTICAL ANALYSIS

The result was carried out by using Microsoft excel version 2016. Data was collected by circulating 35 item online questionnaire of work-related, non-specific low back pain among physiotherapists. Results were analyzed for 3 different factors using pie-chart method.

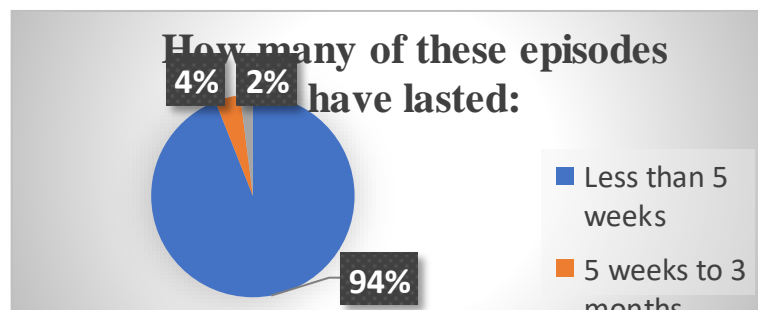
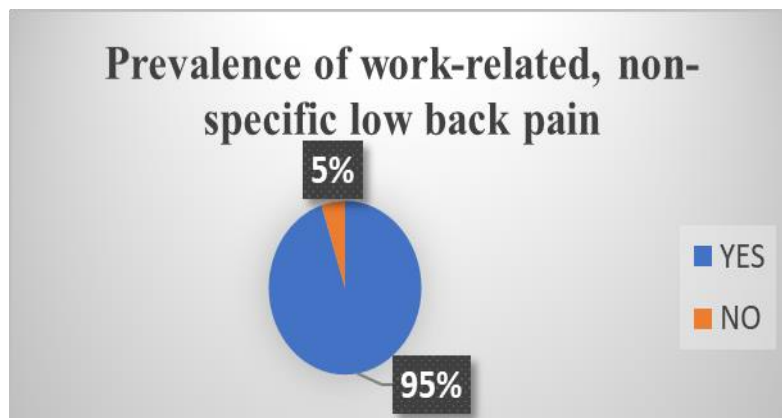
RESULT

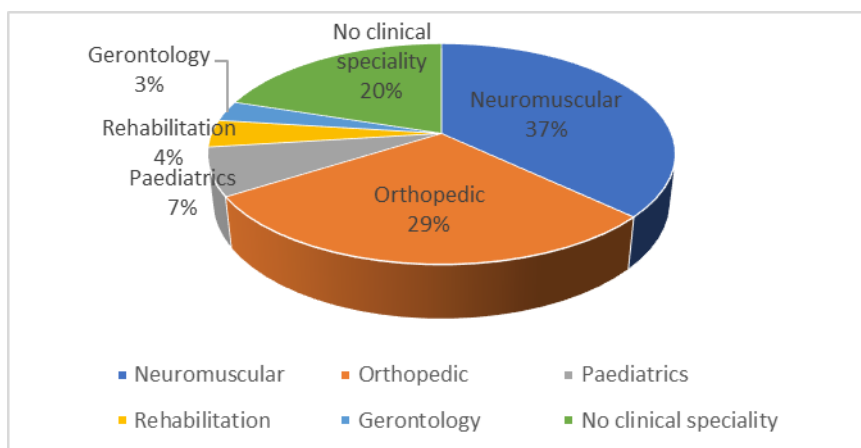
Result showed that there is 95% prevalence of work-related low back pain among physiotherapists specifically, those working since last 12 months. The mean score of NPRS was 7.

Personal factor: The prevalence did differ significantly by sex (31% among males, 69% among females). The prevalence of low back pain was higher among those who primarily treated neuromuscular disorders (37%) and orthopedic disorders (29%).

Biomechanical factor: 94% of participants rated that these episodes of low back pain had lasted less than 5 weeks; 4% rated that it had lasted 5 weeks to 3 months; and only 2% rated it had lasted more than 3 months.

Psychosocial factor: 42% of participants with low back pain rated that they often feel stressed at work.





DISCUSSION

The present study showed that prevalence of work-related, non-specific LBP among physiotherapists in Ahmedabad city is high (95%). Of our respondents, prevalence is high among female physiotherapist and physiotherapists who has treated neuromuscular disorders. Majority of respondents rated that these episodes have lasted less than 5 weeks. Additionally, we noted that there is high prevalence of LBP among physiotherapists who feel stressed at work.

Baptiste pellissier et al (2023) conducted study among physiotherapists working in France, where they concluded that there is 40.4% of prevalence and the risk of LBP in physiotherapists appears to depend on the mode of practice in general and the clinical specialty in particular. They did not find any significant difference in prevalence between males and females. ⁽¹⁾

Asdrubal Falavigna, Alisson Roberto teles et al (2011) conducted study comparing prevalence of low back pain among physiotherapy students and medical students. This cross-sectional study concluded that physiotherapy students reported higher prevalence of low back pain when compared with medical students. ⁽²⁾

Darja Rugelj (2003) conducted study on low backpain and other musculoskeletal problems among physiotherapists. The study demonstrates that out of 133 respondents, life time prevalence of low back pain is high as 73.7%. They assessed the possibility that work with heavily

dependent patients is the triggering factor for low backpain but their study results showed that there was no significant difference in frequencies of appearance of low backpain between the two groups. ⁽³⁾

CONCLUSION

Prevalence of work-related, non-specific LBP among physiotherapists in Ahmedabad city is very high (95%), which has minimal or short-term impact on their work. Study also showed that physiotherapist working in neuromuscular specialty, female physiotherapists and therapists who often feel stressed at work had higher prevalence of LBP. Study also concluded that there is significant correlation between stress and LBP. Therefore it is suggestive that the psychosocial factor and its impact on LBP in working physiotherapists cannot be neglected. Understanding these disparities will require further in-depth investigations. Thanks to its general approach, this study constitutes a first step towards characterizing risk factors for LBP among physiotherapists and could be used as a basis for more targeted research, such as a human factors analysis of risk factors, opportunities for prevention, and ways of reducing the risk of work-related, non-specific LBP among physiotherapists. This study has some limitations that the research is done across the Ahmedabad city, Further research with a larger sample size and with different years of clinical experience from different zones of Ahmedabad can be done.

Declaration by Authors

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