



A survey to determine the level of low back pain and disability in small scale apparel retailers in South Mumbai using Oswestry Low Back Pain Disability Index

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Abstract

Background: Low back pain (LBP) is one of the most prevalent health conditions and is influenced by a combination of psychological, muscular, neurological, social, environmental and occupational factors. In working populations, occupational activities and sustained or awkward postures may contribute to discomfort in the lumbosacral, buttock and leg regions and may affect quality of life and work activities. Retail workers, particularly those involved in small-scale apparel retail, may be exposed to prolonged standing, bending, lifting, and carrying, reaching and repetitive movements during their working day. These physical demands make LBP an important occupational health concern. The present study was undertaken to determine the level of LBP and disability among small-scale apparel retail workers in South Mumbai using the Oswestry Low Back Pain Disability Index (ODI), a condition-specific measure used to assess functional disability associated with low back disorders.

Methods: A cross-sectional descriptive survey was conducted among 139 small-scale apparel retail workers from apparel retail shops in South Mumbai (Saffron Market) using convenience sampling. Participants were included if they were small-scale apparel retail workers aged 20–40 years, had at least one year of work experience, worked for a minimum of eight hours per day, and worked in South Mumbai. Participants with a recent injury, trauma or accident, recent spinal surgery or lumbar radiculopathy, non-cooperation, or lack of consent were excluded. Institutional ethics approval was obtained, the study procedure was explained and informed written consent was taken. Demographic information was collected through interview. Participants reporting LBP were further assessed for disability using the Oswestry Disability Index. The collected data were entered into Microsoft Excel and descriptive analysis was used to summarize the findings. The ODI was selected because the blackbook describes it as an established measure of low-back functional disability, with reported high test–retest reliability and construct validity.

Results: A total of 139 participants were included in the primary analysis. Of these, 53 participants (38.1%) reported low back pain, while 86 participants (61.9%) reported no low back pain. Among the 53 participants with LBP, the mean ODI score was 3.83 ± 5.40 , with scores ranging from 0 to 19. According to the ODI classification used in the study, 39 participants (73.6%) had no disability, 10 (18.9%) had mild disability and 4 (7.5%) had moderate disability. Therefore, 14 of the 53 participants with LBP (26.4%) demonstrated some degree of disability, whereas 39 (73.6%) had no disability. The study therefore identified LBP in more than one-third of the participating apparel retail workers, while the level of functional disability among those reporting LBP was generally low.

Conclusion: The study found that low back pain was present in 38.1% of small-scale apparel retail workers in South Mumbai. Although a considerable proportion of workers reported LBP, most affected participants did not demonstrate disability according to the ODI, with 73.6% classified as having no disability, 18.9% mild disability and 7.5% moderate disability. The mean ODI score of 3.83 ± 5.40 further indicated a generally low level of functional disability among workers reporting LBP. These findings highlight the relevance of early identification, ergonomic awareness and preventive physiotherapy strategies in small-scale apparel retail settings. However, because the study was cross-sectional and used convenience sampling, the findings describe the study population and do not establish causal relationships or allow full generalization to all apparel retail workers.

Keywords: Low back pain, Oswestry Disability Index, apparel retailers, occupational health, musculoskeletal disorders, physiotherapy, South Mumbai

Introduction

Low back pain is considered one of the most prevalent health conditions globally and is influenced by a combination of psychological, muscular, neurological, social and environmental factors. In the working environment, awkward or sustained postures may contribute to acute or chronic discomfort involving the lumbosacral and related regions and may affect an individual's quality of life and ability to perform work activities. Workers may encounter LBP as a consequence of the demands of their working life, with prolonged sitting, standing or

maintenance of a standard posture contributing to physical strain. Because work occupies a substantial part of daily life, occupational musculoskeletal symptoms can have consequences not only for the individual worker but also for work participation and productivity.

Workers in retail and logistics may be exposed to a combination of physical demands such as lifting, bending, carrying, reaching, prolonged standing and repetitive movements. In small retail outlets, these activities may occur repeatedly throughout the working day and may be performed with limited ergonomic support. Such

occupational demands are relevant to LBP because the condition is multifactorial and may be influenced by physical and occupational exposures as well as individual and psychosocial factors. The need for attention to LBP in retail workers is therefore important from an occupational health and physiotherapy perspective, particularly where workers continue their duties despite symptoms.

The present study focused specifically on small-scale apparel retail workers in South Mumbai. The need for the study was based on the concern that retail workers may experience LBP that can interfere with work activities, while there was limited specific information in the blackbook regarding the level of disability associated with LBP among retail workers in Mumbai. Apparel retail work may involve prolonged standing, handling garments, moving stock, bending, reaching and repetitive activities. Determining both the occurrence of LBP and the functional effect of pain is important because the presence of pain does not necessarily indicate the same degree of functional limitation. Assessment of disability can therefore provide additional information about how LBP affects the worker's function.

The Oswestry Disability Index was used in the study to determine the level of disability among participants reporting LBP. The blackbook describes the ODI as an important and established outcome measure for assessing functional disability related to low back disorders. Fairbank and Pynsent reported high test–retest reliability for the ODI, while Vianin reported evidence supporting its construct validity in comparison with other measures of disability due to LBP. The Hindi version of the ODI has also been evaluated in the Indian population, providing additional support for use of the measure among Hindi-speaking individuals. Use of a condition-specific disability measure was therefore relevant to the present objective, which was not limited to identifying LBP but also aimed to determine the extent of functional disability among affected workers.

The aim of the present study was to determine the level of low back pain and disability among small-scale apparel retail workers in South Mumbai using the Oswestry Low Back Pain Disability Index. The study used a cross-sectional design with convenience sampling and included 139 workers who fulfilled the specified inclusion criteria. By documenting the occurrence of LBP and the level of disability among those affected, the study provides baseline information for this specific occupational population. The findings may help physiotherapists and other healthcare professionals recognize the relevance of early screening, ergonomic awareness, appropriate body mechanics and preventive strategies in small-scale retail settings. At the same time, the cross-sectional design and convenience sampling require the findings to be interpreted as descriptive information rather than evidence of causal relationships between occupational exposures and LBP.

Conclusion

The present study found that 38.1% of small-scale apparel retail workers in South Mumbai reported low back pain. Among the participants reporting LBP, 73.6% had no disability, 18.9% had mild disability and 7.5% had moderate

disability according to the ODI classification used in the study. The mean ODI score was 3.83 ± 5.40 , indicating that functional disability was generally low among affected workers. Thus, although LBP was present in a considerable proportion of the study population, most participants with LBP did not experience substantial functional disability. The findings support the importance of early identification of symptoms, ergonomic awareness and preventive physiotherapy strategies in small-scale apparel retail workers. However, the cross-sectional design and convenience sampling limit causal interpretation and generalizability.

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