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PREVALENCE OF REDUCED THORACIC EXPANSION AMONG PROLONGED MOTORCYCLE RIDERS.

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Background: Thoracic expansion is a crucial indicator of chest wall mobility and respiratory efficiency. Reduced thoracic expansion can limit lung function and affect breathing efficiency. Prolonged motorcycle riding often involves a sustained forward-flexed posture, vibration exposure, and restricted trunk movement, which may contribute to decreased chest wall mobility. Despite these occupational demands, limited data exist on thoracic expansion among prolonged motorcycle riders.

Purpose: To assess the prevalence of reduced thoracic expansion among individuals engaged in prolonged motorcycle riding.

Methods and Materials: A prevalence study was conducted among 226 professional motorcycle riders in Pondicherry using a convenient sampling method. Participants aged 20–50 years who rode for more than 5 hours per day for at least two years were included. Thoracic expansion was measured using an inch tape by recording the difference between maximal inspiration and expiration at the chest level. Data were analyzed descriptively to determine the prevalence of normal and reduced thoracic expansion.

Results: The mean thoracic expansion among the study population was 2.77 ± 1.02 cm, which is below the normal reference range (3–5 cm). 46.02% of the participants demonstrated reduced thoracic expansion (1–2 cm), while 53.98% had normal values (3–5 cm). The highest prevalence of reduced expansion was observed in the 30–40 years age group. Prolonged flexed posture and occupational strain were likely contributing factors.

Conclusion: Nearly half of the prolonged motorcycle riders exhibited reduced thoracic expansion, indicating compromised chest wall mobility. The findings highlight the need for postural correction exercises, ergonomic interventions, and regular respiratory assessments to improve thoracic flexibility and prevent long-term respiratory and musculoskeletal complications.

Keywords: Thoracic expansion, Motorcycle riders, Posture, Respiratory function, Chest wall mobility.