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Thoracic hyperkyphosis non invasively measured by general practitioners is associated with chronic low back pain: A cross-sectional study of 1364 subjects.

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Abstract

OBJECTIVE: The aim of this **study** was to examine the association between trunk sagittal posture and nonspecific **chronic low back pain** (CLBP) by evaluating plumb-line distances in **subjects** recruited in an everyday clinical setting.

METHODS: Of the **1364 subjects** recruited, 63.1% were female (mean age ± SD: 56.2 ± 16.8 years). **Subjects** were categorized into CLBP and control groups and were prospectively assessed over a 3-month period. They provided information about their daily activities and their history of CLBP. Prognostic factors were analysed using univariate and multivariate logistic regression analyses. A physical examination was performed to record demographic (i.e. age, height and weight) and **pain** characteristics, and the intensity of **pain** was assessed using a numerical visual analogue scale. Disability was assessed using the Roland-Morris Disability Questionnaire (RMDQ). A simple measure generally used for sagittal plane screening purposes during growth was also utilized.

RESULTS: Multivariate logistic regression analysis revealed that gender (OR = 1.70), RMDQ score (OR = 0.51) and **thoracic hyperkyphosis** (C7 + L3 at the plumb-line distance) (OR = 1.57) were **associated** with CLBP. The final regression model explained 85.6% (R^2 = 0.56; P < 0.001) of the variability.

CONCLUSIONS: General practitioners can clinically and easily assess trunk posture in **subjects** with **low back pain** to identify **subjects** at higher risk of CLBP.

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