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Predicting clinical outcomes of acute low back pain patients in the emergency department: A prospective observational Study

Low Back Pain (LBP) poses considerable socio-economic burden to healthcare system globally. Recently, the STarT Back Screening Tool (SBT) has been developed to help initial decision making in primary care settings. In this study, we aim to investigate whether the SBT could provide prognostic information for long-term clinical outcomes of acute LBP patients visiting the Emergency Department (ED). A prospective observational cohort study was conducted. Eligible patients consulting ED doctors with acute LBP were invited and administered the SBT at initial evaluation. Demographics and LBP-related clinical characteristics were either gathered from patients' case notes or self-reported via telephone interview. The clinical outcome was pain score which was collected at baseline, 6-week and 6-month follow-up. Prediction of pain score at 6-month was evaluated by using a multiple linear regression model. In the multiple linear regression analysis, SBT total score was identified as a significant predictor ($p < 0.05$) with coefficient of 0.125. Other independent predictors were age, employment status, LBP history, and 6-week pain score. Among all variables, 6-week pain score was the strongest predictor for 6-month pain score with coefficient of 0.500. The model achieved R^2 of 0.418 and adjusted R^2 of 0.401. A regression model built by integrating SBT total score, patient demographics and short-term pain score has shown predictive value in determining long-term pain for acute LBP patients presenting to the ED. This study concludes that SBT has the potential to provide prognostic information for LBP patients in the ED.

Biography

Celia Ia Choo Tan has over 30 years of experience as a Physiotherapist. She started many new clinical services, educational and research initiatives in Singapore, such as Singapore's First Postgraduate Allied Health Training Institute, College of Allied Health and the Movement Science Laboratory. She has been providing Consultation to the Ministry of Health, Singapore International Foundation and the World Confederation for Physical Therapy, Asia Western Pacific Committee and leading Singapore Physiotherapy Association as President for over 10 years. She is currently working as an Adjunct Professor of Curtin University, Honorary Fellow of Melbourne University and Visiting Professor of London South Bank University.

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