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Association between Body Mass Index and Degree of Disability in Patients with Chronic Low Back Pain: A Cross-sectional Study

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Background: Low back pain (LBP) is a common disorder, which contributes greatly to the degree of disability (DoD). Body Mass Index (BMI) has been identified as a significant contributory factor for LBP. Understanding the association between BMI and DoD among patients with chronic LBP is important to promote the maintenance of a healthy and active lifestyle.

Objectives: To determine the association between BMI and DoD in patients with chronic LBP in Sri Lanka.

Methods: A descriptive cross-sectional study was conducted in selected teaching hospitals in Sri Lanka under the convenience sampling method including chronic LBP patients who fulfilled the inclusion and exclusion criteria. Demographic characteristics including age, gender, and duration of back pain of the participants were collected using a self-administrated questionnaire. The BMI was calculated. The Oswestry Disability Index (ODI) values were used to interpret the DoD of chronic LBP patients. Data were analysed using SPSS version 20.0.

Results: The study included 212 participants comprised of 58.5% females and 41.5% males within the age range of 20-60 years. The mean values of age, BMI, ODI, DoD and duration of LBP were 45.9 (± 11.4) years, 24.8 (± 3.9) kgm⁻², 18.0 (± 6.0), 36.1 (± 12.2) % and 3.3 (± 4.4) years, respectively. A significant association was obtained between BMI and degree of disability ($p < 0.01$; $r = 0.22$). According to the DoD values of the study population, 10.8% patients had minimal disability and 60.4% patients had moderate disability while 28.8% patients had severe disability.

Conclusions: The study concluded that the DoD associated with the BMI among chronic LBP patients in Sri Lanka. Offering lifestyle modifications to normalize the BMI values could be important to reduce the DoD in chronic LBP patients.

Keywords: *Body Mass Index, Chronic low back pain, Oswestry Disability Index*