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Relationship between Sleep Quality and Functional and Psychological Symptoms in Patients with Chronic Low Back Pain

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Abstract: Background: Low back pain (LBP) is a disabling disorder that affects many domains of patients' life including physical and psychological domains. Understanding factors that are associated with LBP could help to guide the assessment and management of LBP. While studies have investigated the relationship between pain and sleep quality in people with LBP, little is known about the relationship between sleep quality and the functional and psychological symptoms of LBP. Purpose: The aim of this study was to investigate the relationship between sleep quality and the functional and psychological symptoms of LBP. We hypothesized that reduced sleep quality would be significantly associated with increased physical disability, fear avoidance, somatization, depression, and anxiety symptoms in people with chronic LBP. Methods: Patients with chronic LBP (>3 months) who were scheduled for lumbar spine surgery of laminectomy and/or fusion were recruited. Subjects were eligible for inclusion in this study if they were 18 years of age or older and could understand written and spoken English. They were excluded if they had (1) spinal tumor or infection, (2) spine trauma that caused movement limitation, (3) significant head trauma, (4) psychiatric disorders or severe memory problems reported by the patients, or (5) any neurological disease that affected their cognition and/or movement. One week before the surgery, patients completed the following questionnaires: Pittsburgh Sleep Quality Index (PSQI), Oswestry Disability Index (ODI), Fear-Avoidance Beliefs Questionnaire (FABQ), Modified Somatic Perception Questionnaire (MSPQ), Beck Anxiety Inventory (BAI), and Beck Depression Inventory (BDI). Mean scores were calculated and Spearman's rank correlation coefficient test was used to investigate the correlation between PSQI and the physical and psychological symptoms. Significance level was set at $p < 0.05$. Results: A total of 52 patients (60.98 ± 13.60 years age; 50%