

The Relationship between Personal, Psycho-Social and Occupational Risk Factors with Low Back Pain Severity in Industrial Workers

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Abstract : Introduction: Occupational low back pain (LBP) is one of the most prevalent work-related musculoskeletal disorders in which a lot of risk factors are involved that. The present study focuses on the relation between personal, psycho-social and occupational risk factors and LBP severity in industrial workers. Materials and Methods: This research was a case-control study which was conducted in Kurdistan province. 100 workers (Mean Age \pm SD of 39.9 ± 10.45) with LBP were selected as the case group, and 100 workers (Mean Age \pm SD of 37.2 ± 8.5) without LBP were assigned into the control group. All participants were selected from various industrial units, and they had similar occupational conditions. The required data including demographic information (BMI, smoking, alcohol, and family history), occupational (posture, mental workload (MWL), force, vibration and repetition), and psychosocial factors (stress, occupational satisfaction and security) of the participants were collected via consultation with occupational medicine specialists, interview, and the related questionnaires and also the NASA-TLX software and REBA worksheet. Chi-square test, logistic regression and structural equation modeling (SEM) were used to analyze the data. For analysis of data, IBM Statistics SPSS 24 and Mplus6 software have been used. Results: 114 (77%) of the individuals were male and 86 were (23%) female. Mean Career length of the Case Group and Control Group were 10.90 ± 5.92 , 9.22 ± 4.24 , respectively. The statistical analysis of the data revealed that there was a significant correlation between the Posture, Smoking, Stress, Satisfaction, and MWL with occupational LBP. The odds ratios (95% confidence intervals) derived from a logistic regression model were 2.7 (1.27-2.24) and 2.5 (2.26-5.17) and 3.22 (2.47-3.24) for Stress, MWL, and Posture, respectively. Also, the SEM analysis of the personal, psycho-social and occupational factors with LBP revealed that there was a significant correlation. Conclusion: All three broad categories of risk factors simultaneously increase the risk of occupational LBP in the workplace. But, the risks of Posture, Stress, and MWL have a major role in LBP severity. Therefore, prevention strategies for persons in jobs with high risks for LBP are required to decrease the risk of occupational LBP.

Keywords : industrial workers occupational, low back pain, occupational risk factors, psychosocial factors

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