

Work demand and Prevalence of Work-Related Musculoskeletal Disorders: A Case Study of Pakistan Aviation Maintenance Workers

Authors : Muzamil Mahmood, Afshan Naseem, Muhammad Zeeshan Mirza, Yasir Ahmad, Masood Raza

Abstract : The purpose of this research is to analyze how aviation maintenance workers' characteristics and work demand affect their development of work-related musculoskeletal disorders (WMSDs). Guided by literature on task characteristics, work demand, and WMSDs, data is collected from 128 aviation maintenance workers of private and public airlines. Data is then analyzed through descriptive and inferential statistics. It is found that task characteristics have a significant positive effect on WMSDs and an increase in tasks performed by aviation maintenance workers leads to increase in WMSDs. Work demand did not have a significant effect on WMSDs. The task characteristics of aviation maintenance workers moderates the relationship between their work demand and WMSDs. This reveals that task characteristics of aviation maintenance workers enhance the effect of work demand on WMSDs. The task characteristics of aviation maintenance workers are challenging and unpredictable. Subsequently, WMSDs are prevalent among aviation maintenance workers. The work demand of aviation maintenance workers does not influence their development of WMSDs. Pakistan Civil Aviation Authority should minimize the intensity of tasks assigned to aviation maintenance workers by introducing work dynamisms such as task sharing, job rotation, and probably teleworking to enhance flexibility. Human Resource and Recruitment Department need to consider the ability and fitness levels of potential aviation maintenance workers during recruitment. In addition, regular physical activities and ergonomic policies should be put in place by the management of the Pakistan Civil Aviation Authority to reduce the incidences of WMSDs.

Keywords : work related musculoskeletal disorders, ergonomics, occupational health and safety, human factors

Conference Title : ICSEHFE 2022 : International Conference on Safety, Ergonomics and Human Factors Engineering

Conference Location : Budapest, Hungary

Conference Dates : August 30-31, 2022