

Development of Ergonomic Intervention in Manual Material Handling to Prevent Work Related Musculoskeletal Disorder

Ryan Jeffrey P. Curbano
Department of Industrial Engineering
Lyceum of the Philippines Laguna
Makiling, Calamba, Laguna
ryanjeffrey.curbano@lpulaguna.edu.ph

Abstract

The study aimed to develop an ergonomic intervention in manual material handling to prevent work related musculoskeletal disorder. This study also identifies the demographic profile of the respondents and it has found out that the most of the respondents were 31-40 years old, 1-5 years in service in the warehouse, and with an average of 56-60 kgs. The researcher evaluated the manual material handling activities and the results revealed that individual capacity and training had highest composite mean. The level of physical discomfort experienced was also determined. The results showed that lower part had the highest composite mean and experienced moderate pain, while the upper part had the lowest composite mean and experienced moderate pain. The (NIOSH) was used as ergonomic tools to assess the manual material handling and the result had composite lifting index of 1.33 which means that the lift grouping is risky Furthermore, The study also revealed that there is a significant relationship of lower and upper body discomfort and demographic profile and of the respondents who perform manual material handling task. And based on the findings of the study, the researchers recommend ergonomics intervention plan to improve the manual material handling activities.

Keywords

Ergonomics, discomfort, musculoskeletal disorder, intervention, upper body.

Biographies

Ryan Jeffrey P. Curbano is currently full time faculty and program head of Industrial Engineering in Lyceum of the Philippines Laguna. Mr. Curbano holds a Bachelor of Science degree in Industrial Engineering from Batangas State University and Master of Science in Industrial Engineering and Management from Polytechnic University of the Philippines. He is a Professional Industrial Engineer and ASEAN Engineer Registered. He taught courses in operations research, ergonomics, industrial quality control and engineering economy. He was recently awarded as Most Outstanding Faculty of College of Engineering.