

ABSTRACT

THE RELATIONSHIP BETWEEN PHYSICAL WORKLOAD AND MANUAL MATERIAL HANDLING WITH THE RISK OF LOW BACK PAIN (LBP) AMONG MANUAL HANDLING WORKERS AT THE ANIMAL FEED RAW MATERIAL SUPPLIER WAREHOUSE OF CV WAHYU JAYA

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Abstract

Manual handling workers at the Feed Raw Material Supplier Warehouse of CV. Wahyu Jaya are involved in repetitive lifting and transferring activities that may contribute to physical workload and the risk of Low Back Pain (LBP). This condition indicates the need to assess physical workload and material manual handling in relation to the risk of LBP among workers. This study aimed to analyze the relationship between physical workload and material manual handling with the risk of LBP among manual handling workers at the Feed Raw Material Supplier Warehouse of CV. Wahyu Jaya. This study used an analytical observational design with a cross-sectional approach involving 31 workers selected through simple random sampling. Physical workload was measured using Cardiovascular Load (CVL), material manual handling using the NIOSH Revised Lifting Equation (RNLE), and the risk of LBP using the Oswestry Disability Index (ODI). Data were analyzed using the Spearman Rank test with $\alpha=0.05$. The results showed a weak positive relationship between physical workload and the risk of LBP ($p=0.029$; $r=0.393$). Meanwhile, material manual handling was not significantly associated with the risk of LBP and showed a very weak relationship ($p=0.794$; $r=0.049$). Workers are recommended to apply ergonomic lifting techniques, optimize rest periods, and perform muscle stretching to reduce fatigue and the risk of LBP.

Keywords: *physical workload, material manual handling, Low Back Pain, CVL, RNLE*