



The Relationship between Central Obesity, Sleep Duration, and Energy Adequacy with Fatigue among Female Worker in PT Galaxy Surya Panelindo

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Abstract

Work fatigue is a problem that often occurs in female workers. The higher risk of fatigue among female workers is caused by several factors including nutritional status, energy adequacy level, and sleep duration. Central obesity status is associated with a decrease in the maximal oxygen capacity (VO_2 max) that triggers work fatigue. Sleep is related to the recovery time of the body's vital organs, while energy is needed for various body metabolisms. This research was aimed to analyze the relationship between central obesity, energy adequacy, and sleep duration with work fatigue in female workers at PT Galaxy Surya Panelindo. This study used a cross-sectional research design with a sample of 50 female production workers at PT Galaxy Surya Panelindo. The sampling technique used random sampling method. Data was collected by measuring waist circumference and hip circumference, Semi Quantitative Food Frequency Questionnaire (SQFFQ), Subjective Self Rating Test (SRRT), and sleep duration. There was no relationship between sleep duration and work fatigue ($p=0.951$). However there was a relationship between central obesity status ($p=0.001$), energy adequacy level ($p<0.001$) and work-nutrition fatigue. Multivariate analysis found that the nutritional status of central obesity increase the risk to experience work fatigue by 2.78 times, where as the level of energy sufficiency that is not in accordance with the needs, both excessive and insufficient, can increase work fatigue by 3.14 times. The nutritional status of central obesity and inadequate energy fulfillment, both excess or deficiency when compared to needs, can increase work fatigue. Therefore, the prevention of work fatigue can be done by implementing a healthy lifestyle and eating a balanced diet as needed.

Author Keywords

Female workers, Work fatigue, Central obesity, Energy sufficiency level, Sleep duration

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