UNIVERSITI TEKNOLOGI MARA

THE RELATIONSHIP BETWEEN POSTURAL ANGLES AND WORK-RELATED MUSCULOSKELETAL DISORDERS AMONG OIL PALM FACTORY WORKERS

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Project submitted in fulfillment of the requirements for
the degree of
Bachelor in Environmental Health and Safety
(Hons.)

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DECLARATION BY STUDENT

Project entitled "The Relationship Between Postural Angles and Work-Related Musculoskeletal Disorders Among Oil Palm Factory Workers" is a presentation of my original research work. Whenever contributions of others are involved, every effort is made to indicate this clearly, with due reference to literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Project Supervisor, Dr. Abdul Mujid Bin Abdullah. It has been submitted to the Faculty of Health Sciences in partial fulfilment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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ABSTRACT

Introduction: Musculoskeletal disorders (MSDs), which also known as Cumulative Trauma Disorders (CTDs), is defined as injuries and disorders of nervous system and soft tissues. Work-related musculoskeletal disorders are strongly related to workplace physical factors. Agriculture workers are exposed to ergonomic risk factors like manual handling, repetitive movements, heavy lifting and awkward posture. **Objective:** The objective of the study is to investigate the relationship between the postural angles and the prevalence of work-related musculoskeletal disorders (WMSDs) among workers at Oil Palm Factory, Paloh, Kelantan. **Methodology:** A cross-sectional study was conducted on the relationship between postural angles and WMSDs among oil palm factory workers using purposive sampling method. A digital camera was used together with tripod to record the videos of the participants for each worker and focused on the whole-body posture while performing job tasks. The degree of entire body movement and postural angles during performing their works were analyzed from the videos using protractor and guided by REBA worksheet. **Result:** There were no significant associations between postural angles based on REBA score for neck, trunk, legs, upper arms, lower arms and wrist and hand, and WMSDs among oil palm factory workers as all *p-value* are higher than 0.05. Based on the findings, for neck, X^2 (1.721, N=48) = 0.423, p>0.05, trunk, X^2 (1.894, N=48) = 0.388, p>0.05, legs, X^2 (3.680, N=48) = 0.159, p>0.05, upper arms, X^2 (4.575, N=48) = 0.102, p>0.05, lower arms, X^2 (1.796, N=48) = 0.407, p>0.05, and lastly wrist/hand, X^2 (0.179, N=48) = 0.914, p>0.05. However, there was a significant association between job scope and REBA score (p = 0.01). **Conclusion:** Postural angles have no significant relationships with work-related musculoskeletal disorders among oil palm factory workers.

Keyword: *Postural angles, Work-Related Musculoskeletal Disorders, REBA*