

**UNIVERSITI TEKNOLOGI MARA**

**THE PREVALENCE OF MUSCULOSKELETAL  
DISORDERS AMONG OIL PALM PLANTATION  
WORKERS IN SELANCAR, PAHANG**

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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 Prevalence of Musculoskeletal Disorders among Oil Palm Plantation Workers in Selancar, Pahang” is a presentation of my original work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative project and discussions. This project was done under the guidance and supervision of Mr. Nasaruddin bin Abd. Rahman as supervisor and Dr. Farah Ayuni binti Sahafea@Shafie as coordinator. This project has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirements for the awarding of Bachelor in Environmental Health and Safety (Hons).

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*In the name of Allah, The Most Gracious, The Most Merciful.*

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## ABSTRACT

**Introduction:** Work-related musculoskeletal problem is norm among agricultural workers, particularly for those who are involved in labor-intensive work and also always known as the most common non-fatal type injuries. **Objective:** The aim of this study is to investigate the risk factors of Work-Related Musculoskeletal Disorders (WRMDs) among oil palm plantation workers. **Methodology:** A cross sectional study was implemented among 52 of OPP workers. For data collection, Extended Nordic Musculoskeletal Questionnaire (NMQ-E) was used to determine the prevalence of MSDs among participants by direct interview while Borg's CR-10 Scale used to measure the perceived exertion. Video recording method was used to record the entire body movement and postures during working session and Rapid Entire Body Assessment (REBA) was used to assess the postural MSD risks. Lastly, SPSS version 23 was used for statistical analysis to indicate the association between MSD risk factors with the one-year prevalence of MSD reporting by using Chi-Square Test. **Result:** The highest prevalence of MSD reported for past 12 months was at lower back (44.2%), followed by (36.5%) reported pain on neck and shoulders (30.8%). There were two MSD risks factors that significantly associated with MSDs symptoms reported for 12 months which were physical activity ( $p=0.047$ ) and perceived exertion ( $p=0.000$ ). **Conclusion:** Lower back, neck and shoulders problem required special attention as their prevalence were higher compared to other body parts. The awkward body posture, repetitive movement and manual handling contribute to these musculoskeletal problems. Ergonomic interventions must be focused on reducing the exposure to ergonomic risk among workers.

Keywords: *MSD risk factors, postural angle, oil palm plantation workers*