

UNIVERSITI TEKNOLOGI MARA

**WORK-RELATED UPPER LIMB DISORDER
ASSESSMENT AMONG CONSTRUCTION WORKERS
AT SULTAN ISMAIL PETRA AIRPORT**

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the degree of Bachelor in Environmental Health and Safety (Hons.)**

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Declaration by Student

Project entitled "Work-Related Upper Limb Disorder Assessment among Construction Workers at Sultan Ismail Petra Airport" is a presentation of my original research 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 research and discussions. This project was done under the guidance of Ms. Siti Rohana Mohd Yatim as Project Supervisor and Ms. Farah Ayunie Shafie as Co-Supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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Abstract

Work-Related Upper Limb Disorder Assessment among Construction Workers at Sultan Ismail Petra Airport Kota Bharu Kelantan

Mohd Faiz Mohd Samsuddin

Work-related Upper Limb Disorders (WRULDs) are impairments of bodily structures such as tendons, ligaments, nerves, muscles caused by work. Airport Runway extension involves the premiss, fencing, drainage, meteorology station and helipad that cause ergonomic risk factor at construction such as improper lifting, bending, overreaching, over weight lifting, prolonged standing and awkward posture. These ergonomic risk factors will lead to ULDs symptom such as at neck, shoulder, upper back, lower back, elbow/forearm and hand/wrist problem. This study was performed among construction workers at Sultan Ismail Petra Airport, Purposive random sampling technique has been carried out to choose 52 male workers involving five types of work. Modified Nordic Musculoskeletal Questionnaires (NMQ) has been used to study the prevalence of ULDs. Rapid Upper Limb Assessment (RULA) method was used for the evaluation of the exposure to risk factors associated with work-related upper limb disorder. Photograph and video recording has been done for quality control purposes as well avoiding informative bias. SPSS version 17.0 was used in this study. Most of the workers get the ULDs symptom at neck 49(27%), shoulder 46(25%), lower back 41(22%), hand/wrist 18(10%), upper back 19(10%) and elbow/forearm 11(6%). The highest score of 7 are recorded in premiss work (10 workers), followed by drainage work (4 workers), fencing work (3 workers), helipad work (2 workers) and meteorology station work (1 worker). The highest mean of RULA score recorded for premiss work (6.67) which categorized in Action level 3 (medium risk) in which required further investigation and changes soon. Results shows a significant association between types of work and RULA score ($p < 0.05$). There is also significant association between risk factor and body part affected ($p < 0.05$). The types of work and risk factor can affect symptoms of ULDs such as neck, lower and upper back region of the body. There is a high RULA score and prevalence symptom of ULDs in construction workers.

Keywords: Upper Limb Disorders, construction worker, risk factors, RULA, NMQ