UNIVERSITI TEKNOLOGI MARA

THE EFFECTIVENESS OF THE ERGONOMIC INTERVENTION PROGRAM AMONG FOUP HANDLERS IN KULIM, KEDAH: INTERVENTION STUDY

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

Faculty of Health Sciences

July 2017

DECLARATION BY STUDENT

Project entitled "The Effectiveness of the Ergonomic Intervention Program among FOUP Handlers in Kulim, Kedah: Intervention Study" 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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ACKNOWLEDGEMENT

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

Alhamdulillah, all praises to Allah S.W.T for the strength, blessing and for providing me this opportunity and granting me the capability in completing final year project. This thesis appears in its current form due to the assistance and guidance of numerous people. It has been a time of passionate learning for me, not only in the scientific arena, but also on a personal level. I would therefore like to offer my sincere thanks to all of them who have supported and helped me so much.

First and foremost, I would like to express my appreciation to my only supervisor Dr. Abdul Mujid bin Abdullah for his continuous support, patience, motivation, enthusiasm and immense knowledge. His guidance and ideas really help me up in all the time of research and writing of this thesis. His broad knowledge in ergonomic study really triggers me to have views and ideas in my ergonomic interventions study among the FOUP handlers.

Secondly, my deepest gratitude and deepest appreciation goes to my beloved parents and brother; Zuraida binti Mohd Ilias, Azahari bin Mohamed and Asyraaf Azahari for their endless love, prayers, encouragement, material and spiritual support in all aspects of my life.

Last but not least, I warmly thank and appreciate Entegris (Malaysia) Sdn. Bhd. who are willingly and approved me to do my intervention study there. Thank you very much.

TABLE OF CONTENTS

ABSTRACT

Introduction: Most of the final process of Front Opening Unified Pod (FOUP) in semiconductor industries involved manual handling such as repetitive task, awkward posture and prolonged standing. The objective of this study was to assess the effectiveness of the ergonomic program among Front Opening Unified Pod (FOUP) handlers in Kulim, Kedah. **Method:** An intervention study was conducted on 25 FOUP handlers. Recruitment of the respondents was based on volunteer basis and stratified random sampling. The workers who have past health problem and part time job were excluded from this study. Modified Nordic Musculoskeletal Questionnaire (MNMQ) was distributed to the respondents and direct observation measurement was used to identify their postural angle. Rapid Entire Body Assessment (REBA) used to assess the risk of getting MSDs among the FOUP handlers. SPSS was used for statistical analysis via chi-square test and repeated measures ANOVA to indicate the association of MSDs before and after intervention. **Result:** The most MSDs prevalence among the workers in past seven days before the intervention implemented were neck (55%), shoulder (40%) and upper waist (33%). After three month intervention, the MSDs problem such as neck, shoulder and lower back of among FOUP handllers shows significant association with postural angle. **Conclusion:** Neck, ower back, wrist required special attention as their prevalence were higher compared to other body parts. The awkward body posture of bending contribute to these musculoskeletal problem. As a result, decrease the prevalence of MSDs among the FOUP handlers and upsurge the efficiency the production. I conclude that a longstanding ergonomic interference (two months) produces a statistically significant decrease in musculoskeletal disorders, yet not after only one month.

Key words: MSDs, postural angle, intervention, FOUP handler