

UNIVERSITI TEKNOLOGI MARA

**THE INFLUENCE OF PHYSICAL
AND PSYCHOLOGICAL
COMPONENTS ON DENTAL
EXTRACTION TASK AMONGST
DENTAL UNDERGRADUATES**

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MSc

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Background: The Malaysian Dental Council has endorsed dental extraction as a mandatory occupational performance requirement for a dental undergraduate must be proficient in. Thus, acquisition of clinical skills amongst dental undergraduates in performing dental extraction within educational period is particularly demanding. Despite the vast research in the scope of dental extraction, there were several questions relating to dental extraction skills demands remain unanswered. Previous study failed to address the skills required on dental extraction for dental undergraduates. **Aims:** This study demonstrated an initial attempt by a captivating coordinated effort between two health disciplines; occupational therapy and dentistry in exploring the contributing factors that might influence occupational performance namely, dental extraction amongst dental undergraduates. This study also aimed to address to what extent the hand characteristics, psychological components, and musculoskeletal risk factors have impact on the clinical competency amongst dental undergraduates in performing chairside dental extraction. **Methods:** This quantitative study was conducted at Faculty of Dentistry, Universiti Teknologi MARA (UiTM) Sungai Buloh, Malaysia. Data were obtained from 154 dental undergraduates in clinical year (3rd to 5th). Data collection was done from December 2017 to February 2018. This study revealed: how the dental undergraduates view their general psychological condition through Depression Anxiety Stress Scale assessment (DASS-21) and Dental Environment Stress questionnaire (DES); express their level of musculoskeletal discomfort through Extended Nordic Musculoskeletal Questionnaire (NMQ-E); the dental undergraduates' hand characteristics through hand anthropometry measurements, hand dexterity assessment and hand strength assessment; and the evaluation of dental undergraduates' whole body postural musculoskeletal disorders risks associated with dental extraction task through Rapid Entire Body Assessment (REBA). The clinical competency amongst dental undergraduates in performing dental extraction task was evaluated by oral and maxillofacial surgery (OMFS) surgeons using the clinical competency test. **Results:** The results add to growing body of literature that the effectiveness of dental extraction skill amongst dental undergraduates could be influenced by few components of hand anthropometry, which were middle finger length ($p=0.046$), wrist thickness ($p<0.001$), wrist width ($p=0.017$), wrist flexibility ($p=0.0014$) and right hand dexterity ($p=0.025$). This study provided further evidence on the non-ergonomic posture amongst dental undergraduates, which is inversely correlated with clinical competency in dental extraction ($p<0.001$). Over and above this, the study has obtained satisfactory result that there is no reciprocal relation between general psychological issue and clinical competency in performing dental extraction amongst dental undergraduates in Faculty of Dentistry, UiTM Sungai Buloh. **Conclusion:** Despite the scarce literature on this area of study, the researcher believes this study could be a springboard for future research. Further investigations on different populations of dental undergraduates from public and private universities in Malaysia would enhance the results. This study has provided meaningful and enjoyable experiences to both occupational therapy and dentistry. The current study also has contributed to the acknowledgement of the role and essential value of occupational therapy within the healthcare team by disseminating the knowledge and skills to other healthcare disciplines.

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