

UNIVERSITI TEKNOLOGI MARA

**WORK-RELATED
MUSCULOSKELETAL DISORDER
(MSD) AMONG FACULTY OF
HEALTH SCIENCES STUDENTS IN
PUNCAK ALAM, SELANGOR**

NAJWA BINTI AB. KARIM

Project submitted in fulfilment of the requirements for
the degree of

**Bachelor in Environmental Health and Safety
(Hons.)**

Faculty of Health Sciences

January 2023

ACKNOWLEDGEMENT

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

Assalamualaikum and Alhamdulillah, all praise to Allah S.W.T The Supreme Lord of the Universe. Peace and blessing to Nabi Muhammad S.A.W., all prophets and their families. I praise Allah S.W.T. for the strength and His blessing in completing my study.

Thousands of thanks and love to my parents Mr. Ab. Karim Bin Ab. Samad and Mrs. for their support and encouragement through thick and thin of my study. My deepest gratitude and appreciation to my dearest supervisor, Dr. Hairul Nazmin Bin Nasruddin who spent his time and efforts in guiding and advising from the beginning till the end of research journey. Not to forget, I would like to thank all the lecturers in Centre of Environmental Health and Safety Studies, Faculty of Health Sciences who always share their thoughts, knowledge and advice throughout my study in UiTM Puncak Alam. Only God can reward all of you with goodness.

My sincere thanks and appreciation goes to all the staff from the centre of study and laboratory management who gave their full cooperation and assisted me in many ways throughout my study. A special thanks to my friends from HS243 who always give me support and motivation while completing my study. May our friendship lasts forever. Lastly, I would like to thank everyone who involved directly and indirectly in this study. Thank You.

TABLE OF CONTENTS

TITLE PAGE	
DECLARATION BY STUDENT	ii
INTELLECTUAL PROPERTIES	iii
APPROVAL BY SUPERVISOR	vi
ACKNOWLEDGEMENT	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xi
LIST ABBREVIATIONS	xii
ABSTRACT	xiii
ABSTRAK	xiv
CHAPTER 1 : INTRODUCTION	1
1.1 Background	2-3
1.2 Problem Statement	3
1.3 Research Objectives	3
1.3.1 General Objectives	3
1.3.2 Specific Objectives	3
1.4 Scope of Study	4
1.5 Significant of Study	4
CHAPTER 2 : LITERATURE REVIEW	5
2.1 Background	5
2.2 Work-related musculoskeletal disorder	5
2.2.1 The musculoskeletal system	5-6
2.2.2 The musculoskeletal disorder	6
2.2.3 The causing factors of musculoskeletal disorder	7
2.2.4 Symptoms of musculoskeletal disorder	7
2.3 WMSD among students involve in ODL	8
2.3.1 Effect of Covid-19 towards the learning approach	8

ABSTRACT

The Musculoskeletal disorder (MSD) are a major and the most prevalent occupational health problem especially among students. This research was done to determine the prevalence of MSD among health sciences students in Puncak Alam, Selangor along with to assess the ergonomic level of students' working posture. A cross-sectional observational study was carried out with a sample of 116 university students using questionnaire. Observation was made to assess the ergonomic risk using Rapid Upper Limb Assessment (RULA) tool. Descriptive, and Chi square analysis were performed. The result found that the highest reported discomfort or pain was in the neck (62.1%). The RULA score of the students range from 3 to 6 with the majority (78.4%) of the students had the score of 4 which is low risk and it require further investigation and changes may be needed. There was no significant correlation found between MSD and posture of the students. MSD is a great problem in any environment; thus, more future studies need to be done to get more accurate data and use them to create prevention strategies, eventually reducing the prevalence and effect of MSD to students.

Keywords: *musculoskeletal, MSD, RULA, health sciences students, prevalence, ergonomic*

CHAPTER 1

INTRODUCTION

1.1 Background

According to the Centers for Disease Control and Prevention (CDC), musculoskeletal disorder is strain or injuries to the musculoskeletal system, muscles, nerves, tendon, ligaments, joints, cartilage, and spinal discs. Musculoskeletal disorder (MSD) is a major problem in occupational health (Luan et al., 2018). And it is also prevalent among students. The World Health Organization (2021) stated that approximately 1.71 billion people in the whole world have musculoskeletal disorders. And 568 million people experience low back pain, the highest burden among other musculoskeletal disorders.

This disorder can negatively impact daily life because it can affect the efficiency, productivity, and performance of an individual. Thus, restricting students from their normal activities. MSDs may cause pain to the upper extremities, like fingers, shoulder, arm, wrist, and neck. It also can cause pain in the lower extremities, the most common is back pain (Vaghela & Parekh, 2017). A study found that 64.8% of students had MSD (Hendi et al., 2019). And the most common pain or discomfort experienced by students is in the shoulder, neck, and lower back segments (Senarath et al., 2021).