

UNIVERSITI TEKNOLOGI MARA

**THE PREVALENCE OF MUSCULOSKELETAL
PAIN AMONG COLLEGE STUDENTS DURING
THE CORONAVIRUS DISEASE (COVID-19)
MOVEMENT CONTROL ORDER**

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ABSTRACT

During the COVID-19 Movement Control Order (MCO), all physical (face-to-face) teaching and learning activities have been changed to an online approach (distance learning). This sudden change has affected the health of students, especially eye problems and MSDs. This study aims to find the prevalence of musculoskeletal pain among college students during the Coronavirus disease (COVID-19) Movement Control Order. A cross-sectional study was conducted among 128 students who experienced online distance learning (ODL) using self-administered questionnaire at google form. Ergonomic risk factors in this study recorded the time spent on electronic devices more than 6 hours (96.1%), the purpose of using the electronic device on educational activities (97.7%), the time spent in a sitting position more than 8 hours per day (70.5%), type of environment typically in bedroom (52.7%), workstation setup with chairs and table (79.8%), sitting position when using the electronic devices (72.9%), low physical activity (76.0%), and 4-7 times number of walking days per week for at least 10 minutes (64.3%). The most prevalent of MSDs was lower back (62.0%) and followed by neck and shoulder area (54.3%), wrist and upper back (38.0%) and knees (22.5%). There were also significant association between purposes for using an electronic device (for educational purpose) with knees pain ($\chi^2=15.284$, $p<0.001$), and wrists or hand pain ($\chi^2=9.306$, $p=0.010$) as well as workstation setup with neck pain ($\chi^2=10.742$, $p=0.030$). Findings from this study have addressed the need for appropriate preventive measures such as having the right equipment such as chair that provides lumbar support, apply the correct way to position the keyboard and computer screen which is parallel to the eye level as well as taking a frequent micro breaks from their sitting to minimize the negative effects of ODL on students' health and seek medical treatments following the musculoskeletal disorders experienced by students.

Keywords: *Movement control order (MCO), online distance learning (ODL), musculoskeletal disorder (MSD), ergonomic risk factors, working posture.*

CHAPTER 1

INTRODUCTION

1.1 Background

Musculoskeletal disorder (MSD) can be described as any muscular injury or pain experienced to the human support system that can occur after damage to any muscular and nervous system, such as bones, muscles, ligaments, blood vessels, and tendons. MSD can fall into three categories such as inflammatory or non-inflammatory disorders, whether it is limited to the musculoskeletal system, or it can also affect another system in the body, and whether the disorder affects a specific body part (Moodley et al., 2020). In addition to that, MSD can cause negative impacts on student's daily performance as these disorders can affect the ability, well-being, productivity, efficiency, and effectiveness of work quality and work performance, as well as leading to restrictions on conducting normal activities of students (Senarath et al., 2021).

On 11 March 2020, World Health Organization (WHO) declared COVID-19 a pandemic since the number of cases reported internationally has significantly increased (Cucinotta & Vanelli, 2020). The widespread of COVID-19 viruses has caused many adverse effects on several sectors including the academic area. Academic learning had shifted from face-to-face learning to online learning sessions, where students were devoted to more hours on electronic gadgets for learning purposes such as attending online classes and completing assignments. These have caused an increase in the prevalence of musculoskeletal pain, especially in the neck with other risk factors that contribute to the pain (Tan Yea Huey, 2021).