

UNIVERSITI TEKNOLOGI MARA

**THE INVESTIGATION OF WORK-
RELATED MUSCULOSKELETAL
DISORDERS (WMSDs) AMONG
FOOD DELIVERY RIDERS:
PREVALENCE AND RISK FACTORS**

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ABSTRACT

Introduction: Food delivery riders are one of the occupations that rely on motorcycles as their primary mode of transportation. The constant use of motorcycles exposes riders to any potential risk factors while riding their motorcycles, which could lead to work-related musculoskeletal disorders (WMSDs). **Objectives:** The purpose of this research was to investigate the relationship between ergonomic risk factors and the prevalence of work-related musculoskeletal disorders (WMSDs) among food delivery riders. **Methodology:** A cross-sectional study was chosen and tool used in this study is a Self-Administered Questionnaire towards 206 participants. **Result:** The most prevalent of WMSDs within the past 7-days was low back (38.6%), followed by shoulders (17.3%) and upper back region (11.7%). The WMSDs ergonomic risk factors exposed to participants were hand/finger gripping (97.5%), body posture (95.9%) and repetitive movement (94.4%). There were significant association between the vibration and low back region ($X^2 = 4.998$, $p = 0.031$) and followed by association between pressure/stress with low back ($X^2 = 12.121$, $p = <0.001$) and relationship between riding position and neck region ($X^2 = 5.828$, $p = 0.047$). **Conclusion:** Prevalence of WMSDs have significant relationship with ergonomic risk factors among food delivery riders.

Keyword: Work-Related Musculoskeletal Disorders, Food Delivery Riders

CHAPTER 1

INTRODUCTION

1.1 Background

Living in an urban environment has resulted in a frantic society. However, living in a city is still in demand due to work opportunities and quick access to any services, such as online services. Online shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser or a mobile app. The demand for online services in cities is substantially greater than in suburbs and rural areas because in cities, there is more internet coverage, the convenience stores and restaurants are also near to the residential areas, offices and more. Online services or online shopping in this context focus on food delivery.

Work-Related Musculoskeletal Disorders (WRMSDs), also known as Cumulative Trauma Disorders (CTDs), are described as poor optimisation, and functioning of several joints, muscles, tendons, nerves, and bones as a result of the workplace. WMSDs can be caused by arm and hand movements such as bending, straightening, gripping, holding, twisting, clenching, and reaching. They can also affect the legs, hips, ankles, and feet when doing activities that require leg movement. Prolonged sitting and awkward body posture all play a role in the development of WMSD.