

UNIVERSITI TEKNOLOGI MARA

**ASSOCIATION BETWEEN SLEEP QUALITY AND
CHRONONUTRITION BEHAVIOUR AMONG
HEALTHCARE SHIFT WORKERS**

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ABSTRACT

Background: Shift work is justified as work schedule that can be fixed shifts and rotating shifts. Due to their unpredictable work hours and healthcare duties, shift workers in the healthcare industry are particularly affected regarding their sleep quality and chrononutrition behaviour. **Aim:** This study is conducted to determine the chrononutrition behaviour and assess the sleep quality among healthcare shift workers and to identify the association between chrononutrition behaviour and sleep quality in health care shift workers. **Method:** A cross-sectional study was conducted among healthcare shift workers at Hospital Al-Sultan Abdullah, UiTM Puncak Alam, Hospital Serdang, Selangor and Hospital Putrajaya, Wilayah Persekutuan Putrajaya. This study used a questionnaire involving socio-demographic data, the Pittsburgh Sleep Quality Index (PSQI) and Chrononutrition Profile Questionnaires (CPQ) as instruments. The collected data was analysed using Statistical Package for Social Studies (SPSS) software version 27.0. **Result:** The PSQI shows the sleep quality of the healthcare shift workers which 31.3% (n = 115) participants have good sleep quality and 66% (n = 243) participants have poor sleep quality. The CPQ found the eating window was good (71.7% (n = 264)), breakfast skipping was poor (40.9% (n = 150)), evening latency was fair (63.3% (n = 233)), evening eating was fair (63.6% (n = 234)), night eating was good (79.34% (n = 288)) and the largest meal (72% (n = 265)) was lunch among mostly the healthcare shift workers. This study revealed there is no association ($p = <0.05$) between sleep quality and chrononutrition behaviour. **Conclusion:** There is no statistical significance obtained from this study, due to the study's need a larger sample size. Sample size plays a significant role in the power of a study, by establishing a bigger sample, the capability of getting strong statistical power is improved. Therefore, further research must be conducted.

Keywords: Shift workers, Healthcare, Sleep quality, Chrononutrition behaviour

CHAPTER 1: INTRODUCTION

1.1 Research Background

Rotation of shift work is an important element of the healthcare industry because many employees including nurses, physicians, and other workers in the healthcare industry work on rotating schedules or at night (Barger et al., 2019). While being able to attend to patients at any time of the day is ideal to guarantee constant care, shift workers in the healthcare sector might undergo considerable deteriorations in their chrononutrition. The length and depth of one's sleep are key factors in determining the overall health and well-being of that person (Barsha & Hossain, 2020). Similarly, the timing of food intake, or chrononutrition behaviour, is becoming more widely acknowledged as a critical factor affecting metabolic health. The health of healthcare workers and the standard of care they deliver depend on their understanding of how shift work impacts sleep quality and chrononutrition behaviour.

Shift work schedules are classified into two distinct categories: fixed or rotating. Fixed shifts refer to a specific time in the schedule where a designated worker is responsible for being on duty. This schedule is repeated for a set period, such as consistently working in the afternoons or nights. Conversely, rotating shifts refer to a schedule in which the working hours vary based on the predetermined schedule set up by the department or individual in authority (Shan et al., 2018). The problem arises when the schedule is unfavourable for shift workers and has a detrimental effect on their health and the quality of care, they provide (Bani Issa et al., 2020). This can be caused by long working hours or shift schedules that disrupt the circadian rhythm or the internal body clock that regulates the sleep-wake cycle (Communicable Disease Control, 2020).