



Faculty of Medicine and Health Sciences

**RELATIONSHIP BETWEEN SMARTPHONE ADDICTION AND SLEEP
QUALITY AMONG UNIMAS UNDERGRADUATES NURSING
STUDENTS**

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70951

Bachelor of Nursing with Honours

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QUALITY AMONG UNIMAS UNDERGRADUATES NURSING
STUDENTS**

This graduation exercise is submitted in partial fulfillment of requirement for the degree of
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Grade: A-

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Final Year Project Report

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ABSTRACT

Introduction: The rapid development in technologies which creates lots of tools and smartphones is one of them. However, despite the benefits in exchanging information and communication, excessive dependency may lead to smartphone addiction. This results in poor sleep quality particularly among younger generations. For example, nursing students.

Objective: The main objective of this study is to assess the prevalence of smartphone addiction among UNIMAS undergraduate nursing students. Whereas the second objective is to determine sleep quality of UNIMAS undergraduate nursing students. While the third objective is to assess the relationship between smartphone addiction and sleep quality among UNIMAS undergraduate nursing students. **Method:** This study used a quantitative, descriptive cross-sectional study that uses self-administered questionnaires to collect the data among a simple random sample of 161 student nurses. The data was analyzed using Spearman Correlation. **Result:** Most of the respondent's age range between 19 to 25 years old ($M=21.59$, $SD= \pm 1.25$). The prevalence of smartphone addiction among UNIMAS undergraduate nursing students was found by almost half of the UNIMAS undergraduate nursing students. Whereas more than half of respondents were discovered to be considered at high risk of serious sleep problems or poor sleep quality. There was a significant positive correlation between smartphone addiction and sleep quality.

Keywords: Sleep quality, nursing students, addiction, smartphone.

ABSTRAK

Pengenalan: Perkembangan pesat dalam teknologi yang penciptaan banyak peralatan dan telefon pintar adalah salah satu darinya. Walau bagaimanapun, walaupun terdapat faedah dalam bertukar-tukar maklumat dan komunikasi, kebergantungan berlebihan boleh menjurus kepada ketagihan telefon pintar. Ini mengakibatkan kualiti tidur yang kurang baik terutamanya dalam kalangan generasi muda. Contohnya, pelajar kejururawatan.

Objektif: Objektif utama kajian ini adalah untuk menilai kelaziman ketagihan telefon pintar dalam kalangan pelajar kejururawatan sarjana muda UNIMAS. Manakala objektif kedua adalah untuk menentukan kualiti tidur pelajar kejururawatan sarjana muda UNIMAS. Manakala objektif ketiga adalah untuk menentukan hubungan antara ketagihan telefon pintar dan kualiti tidur dalam kalangan pelajar kejururawatan sarjana muda UNIMAS. **Kaedah:** Kajian ini menggunakan kajian kuantitatif, deskriptif keratan rentas yang menggunakan soal selidik yang dijalankan sendiri untuk mengumpul data dalam kalangan sampel mudah rawak 161 pelajar jururawat. Data dianalisis menggunakan Korelasi Spearman. **Keputusan:** Kebanyakan responden dalam lingkungan umur diantara 19 hingga 25 tahun ($M=21.59$, $SD= \pm 1.25$). Kelaziman ketagihan telefon pintar dalam kalangan pelajar kejururawatan sarjana muda UNIMAS didapati hampir separuh daripada pelajar kejururawatan sarjana muda UNIMAS. Manakala lebih separuh daripada responden didapati dianggap berisiko tinggi mengalami masalah tidur yang serius atau kualiti tidur yang lemah. Terdapat korelasi positif yang signifikan antara ketagihan telefon pintar dan kualiti tidur.

Kata Kunci: Kualiti tidur, pelajar kejururawatan, ketagihan, telefon pintar

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List of Acronyms

MCMC	Malaysian Communications and Multimedia Commission
SPAI	Smartphone Addiction Inventory
UGT	Uses and Gratification Theory
NS	Novelty seeking
HA	Harm avoidance
PSQI	Pittsburgh Sleep Quality Index
SQS	Sleep Quality Scale

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CHAPTER 1: INTRODUCTION

Section 1.0: Introduction

This chapter presents the study's background, statement of problems, research questions, research goals, importance of the study, definition of terms, operational definitions and summary of the chapter.

1.1 Background of The Study

Smartphone addiction is characterized as a condition involving the uncontrollable overuse of mobile devices. This condition is typically measured based on how frequently users utilize their smartphones or how much time they spend online overall during a specific period of time (Wigmore, 2018). With smartphone dependence leading to an unhealthy lifestyle, sleeping issues and poor sleep quality have grown more common in this era of globalization (Wang et al., 2019). Technology has advanced to the point where everyone now views smartphones as fantastic tools that people are beginning to use to replace everything while also offering additional purposes such as information, education, entertainment, games, communication, and much more. Due to smartphone's great characteristics that make peoples' life more convenient and portable to bring everywhere and across all generations. Therefore, it can be considered that everyone across all generations start to use a smartphone due to smart features that make people's lives more

comfortable compared to the other things. Due to all these capabilities that are offered by smartphones, people are prone to get addicted to spending more time on their smartphone.

When the eyes are closed, the body is at rest, and the mind is unconscious, this is generally referred to as sleep in the context of living beings. Whereas the definition of sleep quality is a person's level of pleasure with every component of their sleep experience (Nelson, 2022). Period of sleep, sleep effectiveness, sleep quiescence and wake up following the beginning of sleep are the four components that make up sleep quality. In simple words, sleep quality focuses more on quantifying how well peoples' sleep to determine either people having a good sleep quality or poor sleep quality. Additionally, social obligations, environmental circumstances, physiological issues, and psychological considerations may contribute to effects of sleep quality. Some people suffer from poor sleep quality over years which can progress to other chronic or acute health problems. Around the world, it is estimated that between 7% and 19% of adults do not get enough sleep, 40% do so at least once a month, and a persistent sleep issue affects between 50 million and 70 million Americans (Single Care Team, 2022). However, Malaysia discovered that more than 53% of its workforce sleeps less than the recommended seven hours per day and that at least 51% experience stress at work, and that about 35% have some form of sleeping disturbance. (Malek, 2020).

However, prior research showed that women are more likely than males to become dependent on their smartphone because of how they use it such as for camera, music and

education while males were more likely to use smartphones for socializing, listening to music and playing games (Dr. Vaidya et al.,2016). In other words, women are more expected to become dependent toward smartphones, which might result in issues related to sleep quality. Due to poor sleep quality caused by smartphone dependence, numerous health problems may develop such as insomnia, vision problems, wrist or hand pain and much more since they may not get a good quality of sleep (Kwon et al., 2013). Even though smartphones have numerous advantages, it also brings a negative effect on the people worldwide. These negative effects include physical, psychological and physiological related problems (Randler et al., 2016).

Being nursing students, therefore they are also struggling with these problems related to smartphone addiction and poor sleep quality. They frequently spend lots of time on their smartphone for entertainment, gaming, social connection and notably for educational purposes, which may develop smartphone addiction and in the same time leads to sedentary lifestyle, physical activity decline and also affect their sleep quality. Majority of the nursing students will become nurses who will care for their patients and clients in future. So it is crucial for them to understand how smartphone addiction and sleep quality is related to nursing. Nurses are essential in promoting restful sleep and helping patients or clients avoid sleep problems and the effects of smartphone addiction. Given the difficulties that smartphone addiction has caused in people's lives today, it is vital to spread awareness in order to enhance people to come out with great and effective strategies for overcoming and preventing peoples from getting addicted toward smartphones.

1.2 Statement of Problems

The main implications of smartphone addiction on students nowadays are psychological and physical issues, and these effects are progressively getting worse. Students who experience this problem may develop problems related to sleeping quality and quantity, which could result in other health issues. According to Robinson in 2022, smartphone addiction will have a profoundly negative impact on people's lives by increasing feelings of isolation and sadness, escalating worry, building up stress, and making it harder to concentrate. The smartphone overuse among the younger generation has been gradually increasing particularly in tertiary education. Previous research found that 75.6 percent of people aged 21 to 25 years old showed signs of smartphone addiction (Parasuraman et al., 2017). This is a result of how frequently students use their smartphones for communication, entertainment, educational material, and much more. Even though smartphone features give lots of benefits and make students' lives easier, drawbacks that directly or indirectly harm students and other people draw more attention to and understanding of smartphone addiction.

According to Malaysian Communications and Multimedia Commission (MCMC) in 2014, it reported approximately 1.5 billion smartphone users worldwide, and that among 2401 smartphone users, around 71.4 percent continued to check their device even when there were no incoming calls or notifications. Due to smartphone features and apps, students have a tendency to spend a lot of time using them, which puts them at risk for poor sleep quality and the development of sleeping disorders. In addition, roughly 51.5 percent of smartphone users demonstrated that their devices are crucial to their lives (MCMC,

2014). Prior studies revealed that 25.6 percent of college students use their smartphone which influences how well they sleep (Star, 2018). Additionally, several studies documented the consequences of smartphone addiction towards health especially on physical and psychological aspects which may cause the students to have poor academic performance, unable to focus well, neglect their health and may develop into various health problems. For nursing students, it is important to have good critical judgment, good concentration and a healthy body and mind in order to perform well in academic, clinical settings and to provide care for those in need. It is important to care for themselves before they care for other people because they are the future face of nursing itself. According to studies, smartphone addiction and restless sleep are strongly correlated. Which has led to an increase in sleep disorders, sleeping issues, and sleep disturbances. All of this is more likely to affect the students.

Despite the fact that smartphone addiction and poor sleep quality are strongly correlated, yet lots of individuals are unaware of their addiction towards smartphones, which might develop into negative impacts due to the smart features and apps that are offered by smartphones. According to Khan in 2016, students are more likely to use their smartphones before going to bed, which prolongs their sleep period and may prevent them from getting adequate sleep. This results in students getting less than seven hours of sleep each day, which is not appropriate. The nursing students need to understand and be aware about the negative impacts of smartphone addiction in order to promote a healthy life, provide good care and at same time for early prevention before it develops into the worst health condition. To investigate the connection between smartphone addiction and sleep

quality, numerous studies have been conducted. However, only a few studies have been carried out among undergraduate nursing students and healthcare professionals worldwide. Moreover, UNIMAS nursing students' prevalence and impacts of smartphone addiction on sleep quality is also not known. The conduct of this study will be an eye opener and at the same time raise awareness and attention regarding this matter. In addition, early awareness and early detection of this smartphone addiction is very crucial to create early strategies and implementations which are able to confront and cope before these problems become out of control in future.

1.3 Research Question

1.3.1 What is the prevalence of experiences on smartphone addiction among UNIMAS

undergraduate nursing students'?

1.3.2 What is the sleep quality among UNIMAS undergraduate nursing students'?

1.3.3 What is the correlation between smartphone addiction and sleep quality status among UNIMAS undergraduate nursing students?

1.4 Research Objectives

1.4.1 To assess the prevalence of experiences on smartphone addiction among UNIMAS

undergraduate nursing students’.

1.4.2 To determine the sleep quality among UNIMAS undergraduate nursing students’.

1.4.3 To determine the correlation between smartphone addiction and sleep quality

status among UNIMAS undergraduate nursing students.

1.5 Significance of Study

The findings of this research can be used to understand the prevalence of smartphone addiction and sleep quality among UNIMAS undergraduate nursing students as well as the relationship between smartphone addiction and sleep quality. Baseline data on smartphone addiction and sleep quality among UNIMAS nursing students can be obtained by evaluating the prevalence of smartphone addiction, sleep quality, and the connection between smartphone addiction and sleep quality. Hence, the result from this study would provide evidence related to smartphone addiction and sleep quality among nursing students. If the prevalence and relationship of smartphone addiction and sleep

quality were neglected, it could lead to various health problems especially psychological and physiology of mankind in the future and affect nurses' careers. It is crucial to provide awareness regarding smartphone addiction and sleep quality to those who have never experienced it as well as to the future nursing students who will be in the clinical field in future as a nurse.

Besides, since there are few recent studies on the prevalence and connection between smartphone addiction and poor sleep quality, particularly among nursing students and healthcare workers, the results of this study can be used to further research or as a reference for future research in Malaysia. These study findings would provide the baseline data and preventive measures once the prevalence and relationship between smartphone addiction and sleep quality among UNIMAS undergraduate nursing students have been reported. It is essential to implement early awareness, prevention and education regarding smartphone addiction, especially among students, because the majority of nurses are less aware of the detrimental effects that smartphone addiction has on their ability to sleep.

1.6 Definition of Term

The terms below are defined in order to better comprehend this study:

a) Smartphone Addiction

Smartphone addiction is characterized as a problem involving uncontrollable overuse of mobile telephones, which is typically assessed by the frequency of user access to their device and the total amount of time they spend online within a specific time period (Wigmore, 2018). The Smartphone Addiction Inventory scale (SPAI) will be used to assess the level of addiction towards the smartphone in this study. The Smartphone Addiction Scale consists of 4 factors and 26 items which include obsessive behavior, functional degradation, withdrawal, and smartphone tolerance. The Smartphone Addiction Inventory scale (SPAI) will be used to assess the intensity and severity of the addiction towards smartphones in the last few months. The measurement labels on this Smartphone Addiction Inventory scale (SPAI) range from 1 to 4. 0 represents strongly disagree, while 4 represents strongly agree.

b) Sleep Quality

A person's satisfaction with all aspects of their sleep experience, which includes four factors: sleep effectiveness, sleep latency, waking after sleep start, and sleep duration, is referred to as their sleep quality. (Nelson et.al, 2022). The Sleep Quality Scale will be used to evaluate and quantify the quality of sleep. The Sleep Quality Scale contained 28 items that involved six domains of sleep quality which are restoration after sleep, daytime symptoms, problems beginning and maintaining sleep, sleep satisfaction and difficulty walking. The measurement labels on this Sleep Quality Scale range from 0 to 4. 0 represents a few times, while 3 represents almost always.

c) Nursing Student

According to the International Council of Nurses (2022), nursing is described as an important component of the healthcare system that enhances health, prevents illness and cares for psychology and physiology ill and disabled individuals of all ages in health care settings. Whereas the term "student" refers to those who have enrolled in educational institutions in order to acquire particular knowledge and abilities under the direction of lecturers and instructors (Wikipedia, 2022). Furthermore, in this study, a nursing student is defined as a person who has spent four years enrolled in the Bachelor of Nursing with Honors programme at UNIMAS.

1.7 Operational Definition

a) Smartphone Addiction

The Smartphone Addiction Inventory scale (SPAI) will be used to assess the level of addiction towards the smartphone in this study. The Smartphone Addiction Scale consists of 4 factors and 26 items which include obsessive behavior, functional degradation, withdrawal, and smartphone tolerance. In this study, Smartphone Addiction Inventory scale (SPAI) will be used to assess the intensity and severity of the addiction towards smartphones in the last few months of UNIMAS undergraduate nursing students.

b) Sleep Quality

The Sleep Quality Scale will be used to evaluate and quantify the quality of sleep. The Sleep Quality Scale contained 28 items that involved six domains of sleep quality which are restoration after sleep, daytime symptoms, problems beginning and maintaining sleep, sleep satisfaction and difficulty waking. In this study, Sleep Quality Scale will be used to evaluate and explore the quality of sleep among UNIMAS undergraduate nursing students.

1.8 Summary

This chapter provides an overview of the study, starting with a discussion on the background of smartphone addiction and sleep quality. It also addresses the problem statement, highlighting the limited research conducted on the prevalence and relationship between smartphone addiction and sleep quality among undergraduate nursing students in Malaysia. The research objectives and research questions of the study are outlined as well. Moreover, this chapter emphasizes the purposes and significance of conducting the current study. The literature review relevant to this research will be presented in Chapter 2.