THE FACTOR THAT INFLUENCES SLEEP QUALITY AMONG STUDENTS' UNIVERSITI MALAYSIA KELANTAN, CITY CAMPUS

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LIST OF SYMBOLS AND ABBREVIATIONS

ABBREVIATIONS

N	Population size
S	Sample size
CBT	Cognitive Behavioral therapy
MSLT	Multiple Sleep Latency Test
MWT	Maintenance of Wakefulness Test
BMI	Body Mass Index

ABSTRACT

The purpose of this study is to review the factors that influence the sleep quality among students at University Malaysia Kelantan, City Campus. The factors that influence sleep quality among students at University Malaysia Kelantan, City Campus are lifestyle, mental health, social factors, and physical factors. A cross- sectional study was conducted among students from Faculty of Hospitality, Tourism and Wellness (FHPK) at University Malaysia Kelantan, City Campus. The sociodemographic data were obtained from a simple random sampling that took 365 respondents, age range from 18 to 30 years and above, including both genders. All participants completed six sections of questionnaires. Questionnaires was evaluated to identify the quality of sleep among students of University Malaysia Kelantan, City campus. Analyses were conducted with Statistical Package Social Sciences (SPSS) version 26. There are many studies that have been identified to be classified according to investigating factors of sleep quality. Physical factors and lifestyle are healthy factors that improve sleep quality, while mental health and social factors reduce sleep quality. University students are exposed to different risk factors for sleep quality.

Keywords: Sleep Quality, Lifestyle, Mental Health, Social, and Physical Factors

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter discusses the background of the study, problem statement, research objectives, research questions, the scope of the study, the significance of the study, and finally the definition of terms of the dependent variable and independent variables.

1.2 BACKGROUND OF STUDY

According to research, sleep is a crucial mental state for preserving vitality and regaining physiological function. The quality of sleep has a significant influence on health and is regarded as a major public health issue. (Ruiz-Zaldibar et al., 2022). According to (Nelson et al., 2022), there are five factors that influence sleep quality which are sleep disruption, actual sleep, or how long it takes for someone to go from being awake to falling asleep, sleep duration in 24 hours, and waking after sleep onset, or how long it takes for someone to become fully awake. Sleep efficiency is the ratio of total sleep time to total time in bed.

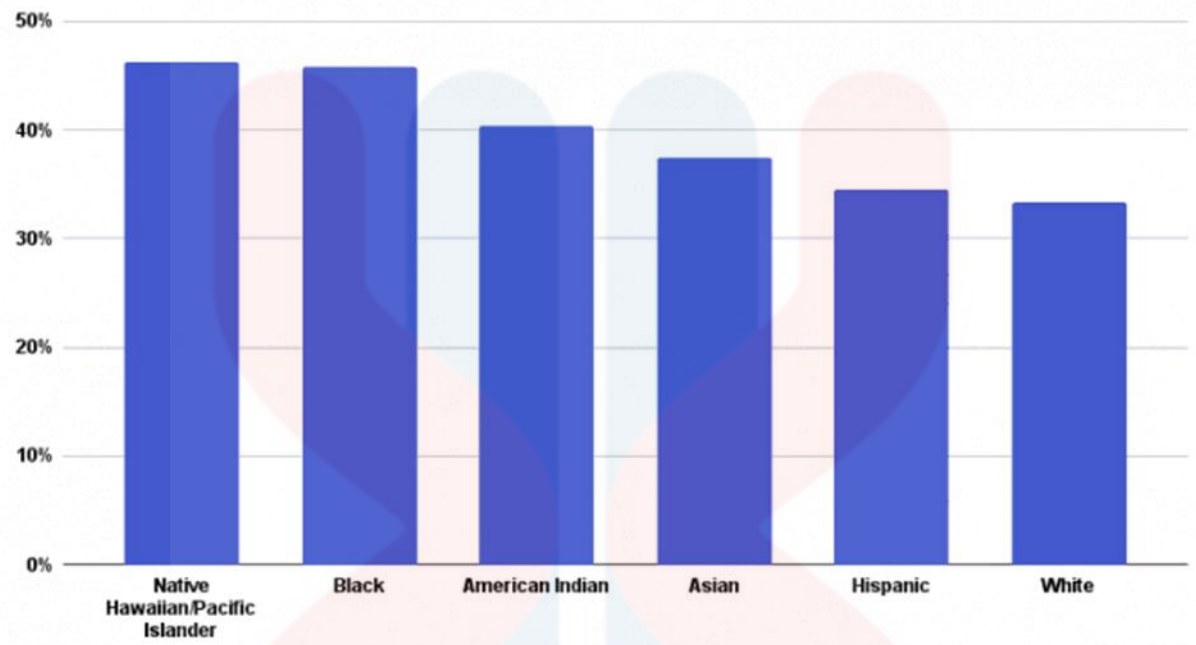
Getting an adequate amount of sleep is a good measure of one's overall health, including both mental and physical well-being. However, studies have shown a link between inadequate sleep quality, as indicated by a bad subjective sense of sleep, sleep start timings, shorter sleep, and difficulties balancing sleep and daily activities, and psychiatric disorders like stress, panic, and cognitive challenges, as well as decreased physical health, premature aging, and lower productivity at work (Chandler et al., 2022).

One of the demographics with the highest rates of sleep-related issues is university students. The main factors contributing to poor sleep quality among university students are both insufficient sleep and sleep disorders. It has been seen over time that this group's weekly sleep pattern is characterized by little sleep during the week and plenty of sleep during the weekend. Due to this dysregulation, they develop a syndrome of the delayed stage of sleep, which is characterized by trouble feeling sleepy at a particular hour of the night that is socially acceptable and difficulty waking up without assistance in the morning. Educational failure, cognitive, emotional, and psychological problems, as well as increased drug and alcohol use, have all been linked to this syndrome (Chandler et al., 2022).

According to (Wang and Bíró, 2021) sleep length is a significant factor in determining sleep quality. Short sleep durations are common in the United States (72.7%), with children aged 6 to 12 reporting sleep durations of less than 9 hours ; less than 8 hours for teenagers aged 13 to 18, and less than 7 hours for adults aged 18 to 60). In a recent study, sleep duration was examined among students from 26 low-, middle-class, and high-income areas. The prevalence of sleep durations of ≤ 6, 7-8, and ≥ 9 h was found to be 39.2, 46.9, and 13.9%, respectively. Morning fatigue and issues with starting and maintaining sleep, both of which are aspects of disturbed sleep, are the primary indicators of worse sleep quality. Additionally, about half of all college students experience a bad quality of sleep, and sleep issues are widespread within this demographic. Generally, it can be said that college students are increasingly having problems with poor sleep quality.

Based on Figure 1.1, shows By race and ethnicity, those who report to get less than seven hours of sleep exhibit clear differences: Native Hawaiians and Pacific Islanders made up 46.3% of the population, followed by Blacks (45.7%), American Indians (40.4%), Asians (37.5%), Hispanics (34.5%), and Whites (33.4%).

Figure 1.1: Insufficient sleep by race and ethnicity (less than seven hours)



Source: sleepfoundation.org (2023)

Previous research has highlighted the impact of insufficient sleep on health and performance which signal it needs further investigation (Gates, et al., 2018; Hafner, et al., 2017). Serious insomniacs are seven times more likely than regular sleepers to experience accidents at work (Leger, et al., 2002; Schwab, 2022). Additionally, according to Rogers et al. (2004), nurses who work 12.5-hour shifts report committing more crimes than those who work 8.5-hour shifts. The primary goal of this study is to determine the factors that influence students' quality of sleep at University Malaysia Kelantan, City Campus.

1.3 PROBLEM STATEMENT

Quality sleep really matters in every aspect of everyday routine. A person with an inadequate amount of sleep may face a variety of problems such as disturbance in the body's

biological clock, health issues such as weight- gain, migraine, insomnia, hypertension, skin issues, etc. Moreover, a student with a lack of sleep quality leads to some emotional imbalance such as frequent mood swings, overthinking, depression, and anxiety. Due to increased academic and social pressure, erratic schedules, and other circumstances, students are more susceptible to sleep disorders and deprivation. The social lives of college students frequently involve events and things that make it difficult to get a decent night's sleep. University life is distinguished by a significant amount of freedom with little oversight (Wang and Biro, 2019).

Numerous studies have revealed that medical students suffer from significant rates of poor sleep quality, which range from 19.17% to 57.5% among university students. Doctors and educators need to pay attention to the significant detrimental effects that lack of sleep has on physical and mental health (Fuentes-Senise, & García-Corpas, 2023), academic performance, and quality of life for kids. There haven't been many in-depth studies on the quality of sleep among university students, especially in University Malaysia Kelantan, City Campus.

The aim of this research is to identify the factors that influence sleep quality among students at University Malaysia Kelantan, City Campus.. There are certain issues that have a strong relationship with the sleep quality of the students. There are factors such as lifestyle, mental health, social factors, and physical factors that influence the quality of sleep among students of University Malaysia Kelantan, City Campus.

In the era of technology, everyone's life has undergone substantial change. The normal, unhealthy lifestyle leads to malnutrition, a poor diet, smoking, binge drinking, drug misuse, anxiety, and other illnesses. People today also deal with entirely new issues. For instance, two rapidly evolving new IT developments that gravely endanger people's physical and mental health are the internet and virtual communication networks. The issue is excessive and improper usage of technology. (Farhud, 2019). In this study, we will identify how closely this lifestyle factor influences the quality of sleep among students.

The phrase "mental health" describes a person's whole emotional, psychological, and social wellbeing. How effectively a person can deal with daily obstacles is a popular criterion for determining their degree of mental health. People with good mental health can make decisions, utilising their resources, and giving back to their communities. It's common to mix up the terms "having a mental illness" and "being mentally ill." However, the term "mental health" refers to a person's general state of mind regardless of whether they have a psychiatric disorder (Holmes, 2022). In this study, the researcher will determine the correlation between mental health and quality of the sleep among the students.

The social aspects of health are the aspects of a person's life that influence their health and well-being. They include a person's ability to access healthcare, education, a secure place to live, and nourishing food, as well as political, social, and cultural factors. (Sherrell, 2021). Socioeconomic position, education, access to healthcare, and physical and occupational conditions are just a few examples of social determinants of health. Social determinants of health must be addressed if health is to improve and persistent disparities in health and healthcare are to be reduced (Artiga & Hinton, 2018). The researcher can analyse the relationship between the social factor and quality of sleep among students by conducting this study.

Back pain, neck pain, and arthritis are all common sources of trouble. Fatigue is a feeling of being weary or sleepy, but it can also be physical, mental or both. People who experience fatigue feel so exhausted that it interferes with their regular activities. Overwhelming fatigue can be brought on by a variety of diseases and drugs as well as a poor diet and insufficient sleep. Sleeping pills treat insomnia by treating you to feel drowsy and relaxed. Side effects are possible with sleep medications, even natural ones like melatonin. Other non-drug treatments, such as cognitive behavioural therapy (CBT), are more effective at enhancing sleep. In this

study, the researcher establishes the physical factors that affect the quality of sleep among students.

A main responsibility of a student who continues further studies at University Malaysia Kelantan, City Campus is to excel in their academic performance and be active in campus activities. Now, the problem arises if a student is not having a good quality of sleep throughout the day; is it capable for them to perform well in their undertakings? An inadequate amount of sleep will be obstacles for them to focus and fully execute their goals, tasks, classes, extracurricular activities, etc. So, the factors that influence sleep quality among students at University Malaysia Kelantan, City Campus should be fully discovered to enhance the overall performance of the student, university, and the younger generation. The uniqueness of this study is that the researcher analyses the lifestyle and physical factors more in detail compared to the previous study. Other than that, the researcher also focused on one university which is University Malaysia Kelantan, City Campus which will give more significant results compared to previous study.

1.4 RESEARCH OBJECTIVES

1. To identify the relationship between lifestyle and sleep quality among students at University Malaysia Kelantan, City Campus
2. To analyze the relationship between mental health and sleep quality among students at University Malaysia Kelantan, City Campus
3. To analyze the relationship between social factors and sleep quality among students at University Malaysia Kelantan, City Campus
4. To identify the relationship between physical factors and sleep quality among students at University Malaysia Kelantan, City Campus

1.5 RESEARCH QUESTIONS

1. To identify the relationship between lifestyle and sleep quality among students at University Malaysia Kelantan.
2. To analyze the relationship between mental health and sleep quality among students at University Malaysia Kelantan, City Campus.
3. To analyze the relationship between social factors and sleep quality among students at University Malaysia Kelantan, City Campus.
4. To identify the relationship between physical factors and sleep quality among students at University Malaysia Kelantan, City Campus.

1.6 SCOPE STUDY

The purpose of this study is to determine the variables that affect students at University Malaysia Kelantan, City campus in terms of their sleep quality. Students' sleep patterns and quality are impacted by several things. Therefore, by carrying out this research, the researcher can pinpoint those factors and find better ways to address them. During this research, a person's lifestyle, mental health, social factors, and physical issues will be considered. The respondents of this study are students of University Malaysia Kelantan, City Campus, by the age of 20 to 24. The range of sleeping quality that the researchers are experimenting with in this research is 14 weeks of every semester. The research design that the researcher used for this study is survey research via questionnaire method.

1.7 SIGNIFICANCE OF STUDY

The purpose of this study is to shed new light on this evidence through an investigation of the relationship between lifestyle, mental health, social factors, physical factors, and quality of sleep among university students. The health authorities will also play an appropriate role as this study has opened the minds and opportunities for the food industry as well as the public to do detailed research based on the factors available to serve as a guide in the study.

The results of this study will contribute to new understanding in the field and will give government officials or policy makers helpful information for creating an intervention or a campaign that targets university students by concentrating on key factors that affect sleep quality. As a result, it will serve as a wake-up call for improving the health and wellbeing of the next generation.

The study also greatly helps parents guide their children from an early age so that they can control and treat their sleep quality problems. Parents can help their children realize the importance of getting quality sleep is like telling the virtues of having enough sleep. The explanations and messages given by parents are always a memory of them. This is because the first person that children trust and close to parents. Therefore, parents need to play a role by providing appropriate education and messaging to children.

This study will benefit students to gain awareness to make the right sleep choices and practices so that they will stay fresh and avoid pain. Choosing the right sleep and eating will have a better effect on students because by knowing the factors and causes of sleep quality problems they will be able to help them overcome them. Continuing will help them to be more focused and enthusiastic in their studies. That will make students stronger, able to receive information delivered quickly and be able to process information faster. Students who have knowledge of the factors that cause their sleep quality to be disrupted and the impact on themselves will give students the advantage of treating them from experiencing the problem.

1.8 DEFINITION OF TERMS

1.8.1 SLEEP QUALITY

According to Nelson, Davis & Cobbert (2021), the quality of a person's sleep is determined from how satisfied they are with each part of their sleep experience. The four qualities of optimal sleep are efficiency, latency, duration, and waking following sleep onset. There is a strong correlation between sleep quality and results for both physical and mental health.

Sleep quality varies over the course of a person's life due to both biological and social influences. Both short and long sleepers exhibit elevated risk for a variety of health consequences, albeit the underlying causes vary (Bercovitz & Daniel, 2022).

1.8.2 LIFESTYLE

The social, political, economic, cultural, and religious environment in which a person lives has an impact on their way of life. An individual's way of life is how they choose to live at a specific time and location in their community. Along with their interests, activities, and dietary habits, it also contains people's regular behaviours and job responsibilities. (Farhud, 2019).

Nowadays, life has changed significantly for everyone. The effects of the usual, unhealthy lifestyle include malnutrition, a poor diet, smoking, excessive drinking, drug misuse, anxiety, and other symptoms.

In addition, people today face brand-new difficulties. For instance, the internet and virtual communication networks, two fast developing new IT technologies, gravely endanger people's

physical and psychological health. Overuse and inappropriate use of technology are the problem (Farhud, 2019).

1.8.3 MENTAL HEALTH

Mental health encompasses emotional, behavioural, and cognitive wellbeing. All that matters is how people behave, feel, and think. The term "mental health" can also refer to the absence of a mental disorder (Felman & Melegrito, 2022). A person's emotional, psychological, and social well-being are all referred to as their mental health. How effectively a person can deal with daily obstacles is a popular statistic for evaluating their mental health. People with good mental health are able to make decisions, use their resources effectively, and give back to their communities. People frequently conflate having a mental illness and having poor mental health. (Holmes, 2022).

1.8.4 SOCIAL FACTOR

The social aspects of health are the aspects of a person's life that have an impact on their health and well-being. The ease with which one can acquire healthcare, education, a safe place to live, and nutritious food are among them. They also include political, social, and cultural factors (Sherrell, 2021). The social determinants of health include factors including socioeconomic position, education, access to healthcare, and physical and occupational conditions. Social determinants of health must be addressed if health is to improve and persistent disparities in health and healthcare are to be reduced. (Artiga & Hinton, 2018).

1.8.5 PHYSICAL FACTOR

Physical factor is a condition where factors that affect biological, internal, or external factors in the body. The mechanism of a complex human body system can bring various challenges, discomfort, and side effects if the researcher doesn't take care of it properly. The examples of physical factors that the researcher is going to investigate in this research are pain, fatigue, and sleep medication.

Pain is defined as an unpleasant feeling, such as one that throbs, aches, or pinches. Pain can lower the quality of your sleep by making it harder for you to fall asleep or causing you to wake up in the middle of the night.

The most common causes of suffering include arthritis, backaches, and neck pain. If you experience pain that keeps you from falling asleep, invest in a mattress with the highest level of support so that your spine maintains a healthy alignment. Proper spine alignment is one of the best ways to prevent pain from arising or increasing. Joint discomfort is a prevalent symptom of arthritis. So a mattress with pressure-relieving materials like memory foam ought to be helpful for them (Zwarensteyn, 2022).

Being weary or sleepy is only one aspect of fatigue. People who experience fatigue feel so exhausted that it interferes with their regular activities. Overwhelming fatigue can be brought on by a variety of diseases and drugs. Fatigue can also result from a poor diet, insufficient sleep, and too little or too much physical exercise. Physical, mental, or a combination of the two can all contribute to fatigue, which is a persistent feeling of exhaustion or weakness. Anyone can be affected by it, and most adults will eventually become tired.

Sleeping pills treat insomnia by treating you to feel drowsy and relaxed. Sleeping drugs work to treat insomnia by lulling you to sleep and relaxing you. Side effects are possible with sleep medications, even natural ones like melatonin. Throughout the day, you could have

daytime confusion or sleepiness. Some people even move or eat while they sleep (parasomnia). Other non-drug treatments, such as cognitive behavioural therapy (CBT), are more effective at enhancing sleep.

1.9 SUMMARY

The researcher provides a summary of the study on the variables affecting students' quality of sleep at University Malaysia Kelantan's City Campus in this chapter. In this research, numerous factors have been discovered. The researcher also discusses the study's background, problem description, research objectives, and research questions. In this research, the significance of the study and the definition of terms are also included.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter discusses the factors that influence sleep quality among students at University Malaysia Kelantan, City Campus. This chapter is designed to classify the dependent

and independent variables of our research topic. There are four independent variables listed in the literature review on the topic of study 'factors influence sleep quality among students at University Malaysia Kelantan, City Campus.' This chapter will explain the dependent variable, independent variables, relationship between dependent and independent variables, hypothesis, conceptual framework, and summary of the chapter.

2.2 DEPENDENT VARIABLE2.2.1 DEFINITION OF SLEEP QUALITY

Sleep deprivation and inadequate sleep quality are problems for global health. Lack of sleep has significant detrimental impacts on one's health. The quality of a person's sleep is determined by how satisfied they are with each aspect of their sleep experience. The four qualities of good sleep are efficiency, latency, duration, and waking following sleep onset. Poor sleep causes sickness and negative health consequences. The need of restful sleep must be highlighted by nurses and doctors due to the serious consequences of insufficient sleep. (Nelson, Devis & Corbett, 2021). Sleep latency, sleep waking, alertness, and sleep efficiency are the four factors that are typically measured to determine the quality of sleep.

Sleep latency represents the amount of time it takes you to fall asleep. If you fall asleep within 30 minutes or less of when you go to bed, your sleep may be of high quality. The amount of time it takes for someone to fall asleep after turning out the lights is known as sleep latency or sleep onset latency.

A healthy individual takes between 10 and 20 minutes to fall asleep on average. While everyone's sleep patterns are unique, a sleep latency of under eight minutes is extremely brief (Pacheco, 2022). Depending on how sleepy they are, a single person can have varying sleep latency. For instance, if someone tries to fall asleep earlier than usual, they can wake up later. They take longer to fall asleep since they are less exhausted. On the other hand, A person who

stays up later than normal is more likely to fall asleep quickly since they are more worn out. The multiple sleep latency test (MSLT), the maintenance of wakefulness test (MWT), and polysomnography are three popular sleep tests that gauge sleep latency. Sleep walking, known as parasomnia includes sleepwalking. Parasomnias are irregular sleeping patterns. The acts that take place during parasomnia episodes are aberrant because parasomnia straddle the line between sleep and alertness. Depending on what stage of the sleep cycle they happen in, several types of insomnia can be identified. Sleepwalking typically occurs in stage III of the sleep cycle, also referred to as deep sleep, during non-REM (NREM) sleep. Sleepwalking is categorized as an NREM disorder of arousal, along with other parasomnias such as sleep talking, confessional arousals, and sleep terrors. Sleepwalking's effects could be harmful to one's health. If a person falls or bumps into something while running or walking, they could get hurt. It can be dangerous to use sharp instruments incorrectly or try to drive while experiencing an episode. Violence can be harmful to both the sleepwalker and others.

Wakefulness is a condition where a person who is awake and exhibiting cogent cognitive and behavioral responses to their environment is in a state of wakefulness, which is a daily recurrent brain state. The opposite of sleep, which occurs when most external signals are not processed by the brain, is being awake. The higher the synchronous firing rates of cerebral cortex neurons, the longer the brain has been awake. It has been demonstrated that neurons fire less quickly and synchronously after extended periods of sleep.

The loss of glycogen stored in the astrocytes, which provide energy to the neurons, is another consequence of wakefulness. According to studies, one of sleep's fundamental purposes is to restore this glycogen energy source. The human internal clock is frequently referred to as circadian rhythm. Its cycle lasts roughly 24 hours. The homeostatic sleep drive interacts with this cycle to produce a single waking phase during the day and nonstop sleep at night. When this cycle is disturbed, our sleep is dispersed over a 24-hour period, leading to sleep issues.

Types of circadian rhythm disorder are delayed sleep phase, advanced sleep phase, irregular sleep-wake, non-24-hour sleep-wake, jet lag, and shift work sleep (Suni, 2022).

Sleep efficiency measures the proportion of total time spent in bed that is used for sleeping. It is computed by adding Stages N1, N2, N3, and REM sleep, dividing by the overall amount of time spent in bed, and multiplying by 100 (Shrivastavava et al., 2014). Above 85%, sleep efficiency is regarded as good; below this, insomnia is frequently referred to. The optimal range is 90% or above. Having said that, improved sleep efficiency does not imply that you are getting enough sleep. This is so that your sleep needs can't be considered by sleep efficiency. Your sleep need, which is set genetically, is the amount of sleep that your body needs each night (like height or eye color). Over the course of your lifetime, your specific sleep needs will change. Daytime sleepiness may result from insufficient sleep. More significantly, it might exacerbate sleep. Sleep debt can result from not getting enough sleep while you're in bed, just like it might from staying up too late or waking up too early (Rise, 2021). The causes of poor sleep efficiency are sleep latency and sleep fragmentation. There are also several ways to improve sleep efficiency such as being smart about light exposure, doing exercise during daytime, avoiding caffeine and alcohol in the evening, and preparing a good sleeping environment (Kahn, 2021).

The pace of modern life can frequently be so rapid that you rarely have time to stop and relax. It can provide the idea that getting a good night's sleep is a short retreat but getting adequate sleep is important for maintaining good health, just like with nutrition and exercise. Your emotions, health, and cognitive function all improve when you get adequate sleep. Lack of regular, good-quality sleep increases the risk of acquiring several illnesses and disorders. Heart disease, stroke, dementia, and obesity are a few of these. Concentration, performance, and productivity all depend on sleep. After a bad night of sleep, it is usual for employees to

make more mistakes at work. Depression and insufficient sleep are related. Lack of sleep is also bad for your mental health (Fletcher, 2023).

2.3 LIFESTYLE

Lifestyle refers to a person's or a group's habits, attitudes, interests, moral standards, economic status, etc. that collectively define their way of life. A person's lifestyle is their way of life at a selected timeframe and place in their community. It includes people's routine behaviors and tasks related to their professions, interests, and diet. In recent years, researchers' interest in lifestyle as a crucial component of health has increased. The WHO estimates that 60% of the factors influencing a person's health and quality of life are related to their way of living. In our research, lifestyle has a significant impact on how well students sleep.

This is because a group of students came out from different backgrounds, characters, living activities etc. So, our study will analyze how the variety of lifestyle patterns correlates with the sleep quality of the students. There are a few aspects that will be discussed in this lifestyle determinant.

Smoking and alcohol drinking are habits which is widely executed by the modern generation. The decisions that students make are influenced by peer pressure, cheap student pubs, and the independence of living away from home. Stress-related situations were when smoking was most therapeutic (Nichter, Carkoglu & Tern,2019). Addiction treatment methods may be especially beneficial in social situations and when students are under a lot of stress (Deliens T, 2015).

Participating in physical activities is a form of healthy lifestyle. A healthy lifestyle includes exercise as part of the treatment of general health issues. A balanced diet and ongoing

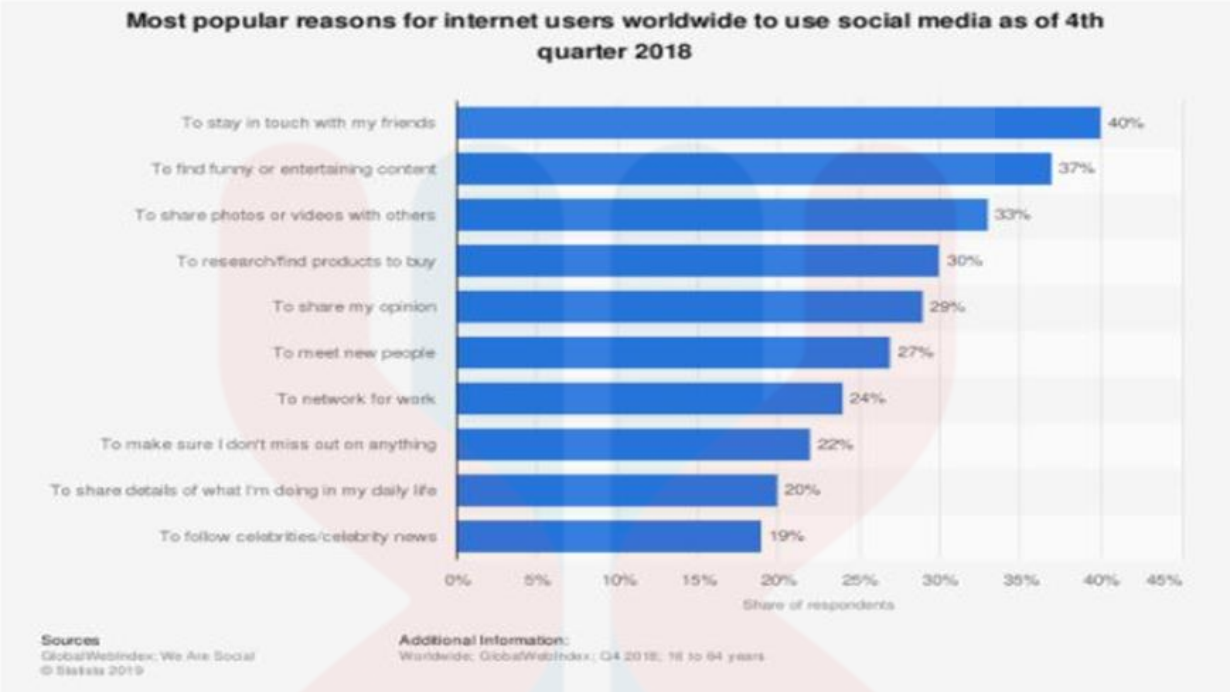
exercise are good for your health. According to certain studies, happiness and an active lifestyle are related. Exercise has numerous advantages for college students. It is without a doubt valuable to them. It benefits the brain directly by boosting memory, increasing engagement in learning, and sharpening focus. (LaChaille, 2011)

Unhealthy eating habits are a common negative lifestyle that is being practiced by university students. Staying apart from family makes some students feel lazy and uncomfortable in preparing their own meals. So, they will find some unhealthy alternatives to junk food, fast food, and snacks rather than healthy meals. Hence, this will end up in unhealthy food addiction, unwanted cravings, etc. Night eating and night junk is commonly practiced by university students especially during burning the midnight oil for their assignments. This leads to unhealthy body weight and higher, lower body mass index (BMI). In urbanized cultures, a poor diet and its effects, such as obesity, are prevalent health issues (Wells,2016).

Excessive media use habits are also related to unhealthy lifestyles. Young people's addiction to social media is a significant problem that has had devastating outcomes. While regularly using a smartphone and monitoring social media is acceptable, excessive use reduces efficiency (Simplilearn,2022).

Problematic internet use can cause emotional instability, loneliness, and relationship issues as well. Other than that, excessive nighttime use can affect the biological clock of the body too. Figure 2.1 shows the most popular reasons for internet users worldwide to use social media as of 4th quarter 2018.

Figure 2.1: The most popular reasons for internet users worldwide to use social media as of 4th quarter 2018.



2.4 MENTAL HEALTH

Mental health is a state of mental well-being that supports individuals in managing the stresses of life, realizing their potential, succeeding in their studies and careers, and giving back to their communities. The World Health Organization (WHO) indicates that poor mental health outcomes, early death, abuses of human rights, and losses to the global and national economies are all caused by mental health issues (World Health, 2019).

According to WHO Director-General Dr. Tedros Adhanom Ghebreyesus, the 13th General Programme of Work (GPW13), which covers 2019–2023, has designated mental health for immediate implementation. Acting now will help communities and individuals achieve the highest degree of health, which is only possible when people's rights to maintain their mental health and well-being are guaranteed, and their mental health is given the attention it deserves. This is so that everyone can have the best possible mental health and well-being, which is what the WHO Special Initiative for Mental Health aims to achieve. (World Health, 2022)

In addition to the absence of mental diseases, having good mental health entails engaging in proactive behaviors including maintaining general health and contributing positively to the community. The psychological and physiological condition of anxiety has cognitive, bodily, emotional, and behavioural elements. This state, which is often disruptive and tends to stimulate efforts to minimize the cause of anxiety, may divert a person from pursuing positive goals and enhancing one's life and the lives of others. Depression is a serious medical condition that affects many people and can have a considerable impact on one's feelings, thoughts, and behaviours. The effects of depression, which are similar to the effects of anxiety, ultimately reduce a person's capacity to function in their personal and professional lives (Cheval, 2022).

Therefore, mental health problems have become a concern among university students due to the dramatic increase in mental health care. This is due to the stressful or difficult transition from a high school student to a university student. Students in universities across the world are susceptible to mental health problems. All students' sleep quality is undoubtedly harmed by mental health issues such as depression, psychiatric disorders, perceived stress, and anxiety. According to studies, female students in the first year of their degree have a higher prevalence than male students. The most common mental disorder among university students in several nations, including Spain, England, Australia, and the United States, is depression. For instance, first-year female students in Canada and the United States experience twice as many cases of depression (14% and 7%, respectively) as first-year male students (Zhang, 2022).

Additionally, anxiety disorders are one of the most common types of mental health issues among college students, according to the Anxiety and Depression Association in America, 2018. They displayed 75% of the 40 million people. Americans who have had their anxiety diagnosed claim to have had their first episode by the age of 22. Male and female students experience harassment anxiety at about the same rates. This demonstrates that

depression and anxiety are common among college students. It was discovered that a brief academic course, academic failure, and emotional variables in the previous six months were the main causes of worry. This anxiety issue among university students can impair their cognitive and learning capacities and increase their risk of substance addiction, physical disease, and hazardous sexual activity.

Even though stress is not a recognized mental illness, it is one of the risk factors that most often contributes to or is linked to mental illness. Due to the variety of academic, social, and personal problems that university students face, stress is one of the most prevalent risk factors for mental illness. The American College Health Association reports that 36% of all students are mentally exhausted in 2019, despite 36% of American residents attending universities. For instance, Jizan University in Saudi Arabia's study of medical students found that stress was prevalent among them (71.9%), with women reporting higher levels of stress (77%) than men (64%). Long study sessions, stressful tests, crammed schedules, psychological issues, family issues, financial situation, lack of amusement on campus, and the educational system itself are the main causes of perceived stress among students. This can deliver a clear message to university officials, instructors, and healthcare professionals about issues linked to mental health illnesses that are typically raised by university students, especially female students.

2.5 SOCIAL FACTOR

Socioeconomic status, education, the availability of healthcare, and physical and work circumstances are some examples of social determinants of health. If health is to improve and enduring inequities in health and healthcare are to be decreased, health-related social factors must be addressed (Artiga & Hinton, 2018). The social and environmental variables of sleep could be a reason why some people have better health and well-being than others. Explaining

the social elements that affect sleep also enables individuals—from parents to policymakers—to enhance sleep patterns through initiatives that concentrate on social and environmental hazards to sound sleep.

Before altering the participants' sleep schedules or lengths, many studies investigating the connection between sleep, memory, and learning employ scenarios with a specific memory task to gauge the impact of sleep on the subjects' performance. College students may not always be able to directly link the memory and learning activities they are required to perform or the changes in their sleep habits to these situations (Mander BA, Santhanam S, Salatin JM, Walker MP,1965). Despite these drawbacks, this research shed light on how sleep affects memory, learning, and potential academic success in students (Stickgold R, James L, Hobson JA, 2000).

2.6 PHYSICAL FACTOR

Physical factors explain pain, fatigue, and sleep medication intake among students at the university. The quality of sleep is important, and poor sleep quality contributes to pain, tiredness, and the use of sleep medication. Pain is a feeling of discomfort that is often caused by extreme stimuli or injuries such as slashing of the toes, burning fingers, or putting vinegar on the wound. Pain is unpleasant sensory and emotional experiences related to the possibility of damage of tissues. Tiredness or fatigue among students. It is closely related to the way of life such as nutrition, adequate rest time, and physical activity. If the body is too tired or there is not enough rest and sleep, then the individual is unable to pay attention and focus on what is done. Sleep medicine is a category of sedatives that act on the central nervous system and help to overcome sleep difficulties. Many of the students often use sleep medications to make them sleep without any distractions. Physical health is especially important in life. It is the responsibility of the individual to know the importance of physical and mental health (Hannah

G Lund, brain D reider, Annie B Whiting, J Roxanne Prichard 2010).

2.7 RELATIONSHIP BETWEEN INDEPENDENT VARIABLES AND DEPENDENT VARIABLE

2.7.1 RELATIONSHIP BETWEEN LIFESTYLE AND SLEEP QUALITY

Every student has their own type of lifestyle according to their preferences. Some have their own principles, their own disciplinary attitude where they have organized everything a day before or pre plan really works. Whereas some of them have a go with a flow attitude where they do not plan anything and rush the day with their daily routines. So, this lifestyle brings differences in sleep routine and of a student. Most students relied on their careers to make most key decisions before they entered college.

University Students must decide when to go to bed and wake up, when to eat, when to exercise, whether to join social groups or other on-campus activities, and whether to adopt the adventurous lifestyle that is prevalent on most college campuses (Willms, 2018).

University students are also influenced by their alcohol usage, with some reducing their caloric intake to increase their level of intoxication or prevent becoming sick while drinking. University students who admitted to drinking are more likely to have overslept and stayed up later weekends than they did during the week. Higher alcohol use among university students was associated with shorter nightly sleep, later bedtimes, and longer gaps between workday and weekend bedtimes. This clearly shows it affects the sleep quality of students (Galombos et al., 2019).

College students' willingness to engage in physical activity is mostly determined by their own drive, time management skills, lack of free time, adjustment to college life,

embarrassment-aversion, and involvement in sports organizations Students whoever active in physical activities during the daytime will have a high quality of sleep compared to students who are inactive in sports activities at the campus. The duration of physical activity, the types of physical activity, and the intensity of the physical activity play an important role in having quality sleep among students (LaCaille et al., 2015).

College students' eating patterns vary as well and are frequently influenced by frequent restaurant trips, a rise in the consumption of fast food and convenience foods, and a reduction in the number of meals made at home. According to research, college students who have trouble sleeping tend to eat fewer calories overall. The health, sensory, price, natural content, familiarity, sensory appeal, and ethical considerations of foods were less important to college students who were sleep deprived. However, choosing food based on mood and convenience stayed the same. There is a chance that college students who are sleep-deprived will make fewer healthful eating choices than those who get the recommended amount of sleep.
This clearly shows there is a strong relationship between the eating habits, lifestyle, and sleep quality of university students (Wells et al., 2016).

2.7.2 RELATIONSHIP BETWEEN MENTAL HEALTH AND SLEEP QUALITY

Inadequate sleep duration and quality are among the main determinants of mental health disorders. The circadian cycle, which controls the melatonin and cortisol levels as well as the sleep-wake cycle, can be used to explain the relationship between sleep patterns and mental health conditions. Changes in cortisol levels brought on by circadian cycle disruptions may be a factor in stress-related dysregulation linked to physical and mental problems. (Schäfer et al., 2022).

At the individual and community levels, sleep difficulties and mental health issues both pose a significant financial burden on public health. Sleep and mental health are strongly intertwined, and they may even have mutually beneficial consequences, according to growing psychological and physiological data. Historically, mental health issues have been linked to sleep difficulties. Current research indicates that sleep issues or disorders can contribute to the emergence of various mental health issues as well as the maintenance of those that already exist, despite the fact that this is not contentious. More specifically, growing research suggests that sleep issues are the underlying cause of mood disorders and depression and that these issues affect circadian rhythms, which may worsen the initial sleep issue. The emergence of numerous new mental health issues may result from this cycle of disease (Merrill, 2022).

Therefore, it is no longer possible to dismiss this mental health issue, which negatively affects the quality of sleep, particularly for students. This issue also results from the fact that for many university students, attending college can be a stressful period that negatively impacts their mental health. Sleep issues are widespread and associated with worse mental health according to research even in young individuals and college students. (Chandler et al., 2022)

In addition, an increase in morningness-eveningness questionnaire (MEQ) scores, particularly in the morning, has decreased sleep time, enhanced sleep quality, and concurrently improved mental health through sleep quality. The significance of bettering sleep quality for enhancing students' mental health is discussed in this investigation. There is evidence that evening-type teenagers experience higher symptoms of insomnia, have trouble going asleep and staying asleep, and that the symptoms of anxiety and sleeplessness are related to adolescent mental health in different ways.

Although MEQ and mental health were related, sleep characteristics did not play a mediation impact. But this study makes it abundantly evident that controlling students'

circadian cycles is necessary to enhance the quality of their sleep and support their mental health. It has been demonstrated that circadian rhythms affect the quality of sleep and mental wellness. Studies using path analysis have identified the same mediator traits as the association between depressive symptoms, little sleep, and poor sleep quality. In this study, the association between sleep duration and mental health was completely mediated by sleep quality. (Tokur-Kesgin & Kocoglu-Tanyer, 2021)

However, the imbalance in behavioral help-seeking may prevent students from being willing to acknowledge that they require psychological care for certain mental problems. It makes sense to assume that the rates of mental health problems among college students are higher than those reported in the literature now. There is now substantial data supporting a link between good mental health and adequate sleep in both directions. Based on these findings, it is possible that sleep issues are related to mental health issues, and it has also been demonstrated that poor mental health might influence the quality of one's sleep. Therefore, the significance of mental health in connection to sleep quality needs to be given more consideration.

Interventions to enhance mental health status are highly advised considering the mounting research demonstrating how poor mental health affects the quality of sleep. (Wang & Bíró, 2021)

2.7.3 RELATIONSHIP BETWEEN SOCIAL FACTOR AND SLEEP QUALITY

Over a century has been spent researching the connection between sleep and cognitive performance. A well-conducted sleep study on healthy adults found that obtaining more sleep is linked to an array of improved cognitive abilities, including better learning and memory.

The association between academic performance and reported sleep metrics collected by students in the comfort of their own homes has demonstrated that these advantages go beyond the walls of the lab.

Along with its effects on memory consolidation, lack of sleep has also been linked to diminished attention and cognition. Studies on sleep deprivation in controlled settings have shown that it not only impacts cognitive performance but also raises the risk of weariness and drowsiness. The cognitive capacities of someone who has been up for 17 hours are equivalent to those of someone whose blood alcohol level is 0.05% (Dawson, D. & Reid, K. Fatigue,1997). According to self-report surveys utilized in sleep studies carried out in the comfort of people's homes, chronically terrible sleepers have far more issues during the day with weariness, drowsiness, and reduced cognition compared to consistently good sleepers (Alapin, I. et al, 2016).

Academic achievement and taking naps are connected. Lack of sleep has been linked to issues with concentration and attention in the classroom (Orzech, K. M., Salafsky, D. B. & Hamilton,2011). There is a correlation between longer, higher-quality slumber and better academic achievement, including grades and study effort, according to the majority of studies examining how sleep duration and quality affect academic performance.

Similarly, inconsistent sleeping habits have an impact on academic achievement. Sleep inconsistency sometimes referred to as "social jet lag," is the irregularity of sleep pattern and/or length from day to day. It typically shows up as sleep debt during the week and oversleeping during the weekend. Teens and young adults who stay up late yet are constrained by demanding morning schedules occasionally have the most erratic sleep patterns. Teenagers with more erratic sleeping habits perform badly in school (Díaz-Morales, J. F. & Escribano, C, 2013).

2.7.4 RELATIONSHIP BETWEEN PHYSICAL FACTORS AND SLEEP QUALITY

According to past studies, Physical activity is any activity of the body that improves or maintains the health of the body and is getting enough sleep. It is done for a variety of reasons, including increasing self-resilience to stay focused, avoiding pain, being able to control tiredness as well as fatigue and being able to avoid the use of sleep medications. This is because the quality of sleep is important among students, especially students at the university, and poor sleep quality contributes to illness and poor health outcomes such as fatigue. It is very important for students to know the benefits and benefits of having enough sleep during the day.

Even though it hurts, pain serves a necessary protective purpose for survival. It can be used to alert people to current or potential tissue damage and to prod them on to change potentially damaging behaviours. In addition, because pain is a distinct, subjective experience, it is influenced by a variety of elements, including social, cultural, psychological, sensory, genetic, and others. Afferent fibres carry the signal from the peripheral nociceptors that are depolarized by painful stimuli (such as mechanical, thermal, or chemical stimuli) to the dorsal horn of the spinal cord, where it may undergo signal alteration before reaching the supraspinal areas. Such environmental factors have an impact on both peripheral and central processes in the pathophysiology of perceived acute pain intensity.

Nociceptive sensations can be perceived as pain of varied intensities depending on the context of the threat because numerous brain regions analyze the information received from outside the brain in light of various danger-related features (such as sensory, awareness, memory, and emotional).For instance, depending on where they are, descending pain modulation circuits can either support or decrease nociceptive input. Through this process, top-down contextual and

dynamic factors (including perceived threat, anxiety, mood, and pain-memories) can influence pain and, as a result, the perception of pain.

It has been suggested that a mismatch between information from peripheral sensors indicating the health of the tissues (no acute tissue injury) and how this information is processed in the brain is the cause of the persistent perception of pain, a characteristic of chronic pain syndromes. Acute pain, however, clearly has a protective role (perceived pain reflecting threat to the tissues). Considering this, pain may no longer be a required defensive reaction and may instead turn into an overly protective reaction. It may also be triggered by heightened sensitivity unrelated to tissue pathology.

Fatigue can affect judgment, short-term memory, attention span, and concentration, among other things. Any worker, in any profession or sector, can be severely affected by high levels of fatigue, which has negative effects on both worker safety and physical health. More sensitive than normal - when your level of mental energy is low, mental exhaustion can frequently feel like depression. You might be concerned that nothing will change. Then you might become enraged at individuals you believe are to blame for your exhaustion (Ezati et al 2020).

Sleep Medication. This study has pointed to a steady rise in sleeping problems and the prescription of sleeping medication in industrialized nations. Issues with falling asleep, staying asleep, having poor-quality sleep, and not getting enough sleep are all symptoms of insomnia and other common sleep disorders. Although there is mounting evidence linking physical, psychological, and socioeconomic factors to sleep issues and the use of sleep medications, over-indebtedness has not yet been considered in any of the prior studies. For both mental and physical well-being and efficient operation, sleep is a must be essential. Education level and employment situation, in contrast to excessive debt, were not significantly linked to the usage

of sleep aids. In addition to sociodemographic factors like female sex and age above 29, the presence of a psychological disorder and lower subjective health were all associated with the use of sleep aids (Warth et al. 2019)

2.8 HYPOTHESIS

The hypothesis for this research is to see if there are any significant differences between the independent variable and dependent variable.

Hypothesis 1: There is a significant relationship between lifestyle that influence sleep quality among student universities in University Malaysia Kelantan, City Campus.

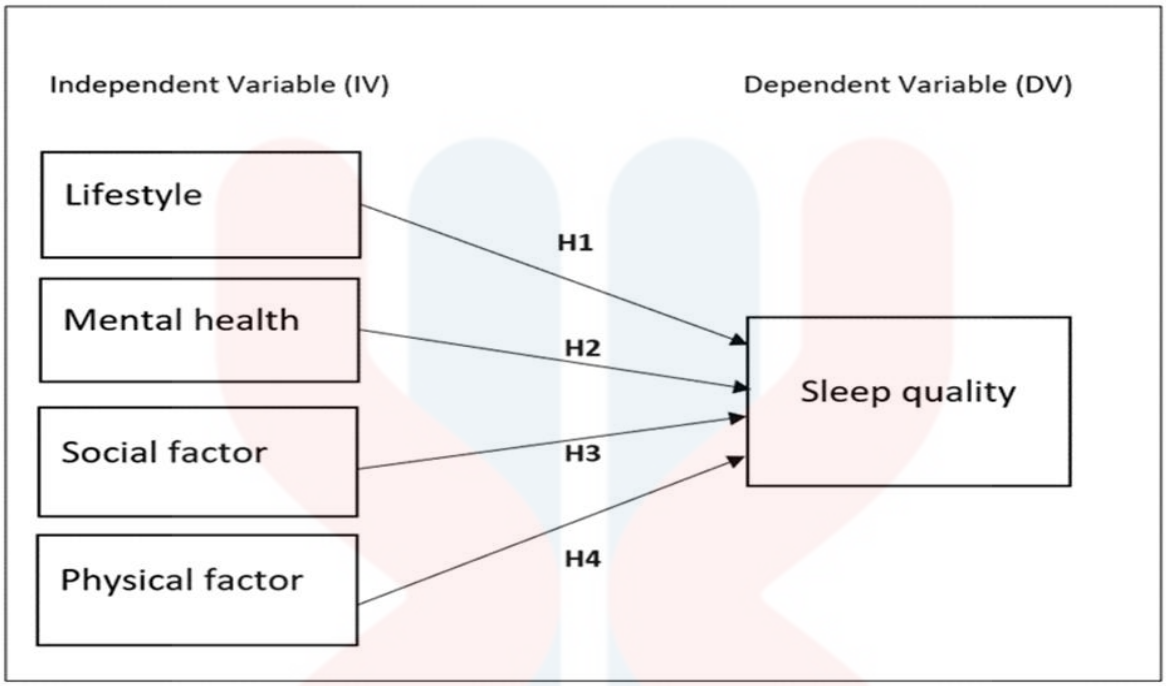
Hypothesis 2: There is a significant relationship between mental health influencing sleep quality among university students at University Malaysia Kelantan, City Campus.

Hypothesis 3: There is a significant relationship between social factors that influence sleep quality among student universities in University Malaysia Kelantan, City Campus.

Hypothesis 4: There is a significant relationship between physical factors that influence sleep quality among student universities in University Malaysia Kelantan, City Campus.

2.9 CONCEPTUAL FRAMEWORK

Figure 2.2: Conceptual framework



The link between the study's independent variables (IV) and dependent variables (DV) is depicted in the above figure. The concerns that result in the factors impacting sleep quality are carried out by the independent variables (IV). Essentially, there are four (4) independent variables (IV) in this study, consisting of lifestyle, mental health, social factors, and physical factor. Where, each independent variable (IV) will bring an impact on the underlying variable (IV), which is sleep quality.

Based on numerous previous studies, this study will try to find out the effect of lifestyle, mental health, social factors, and physical factors on the sleep quality of students at University Malaysia Kelantan, City Campus. Researchers benefit significantly from the results of the current research by receiving help in completing our papers. It serves as a guide to back up and strengthen this study's foundation and dependability going forward.

2.10 SUMMARY

In this chapter, the researcher has discussed lifestyle, mental health, social factors, and physical factors as the independent variable while quality sleep is the dependent variable. The relationship between every independent variable and dependent variable had been explained in the conceptual framework.

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

This chapter discusses the research design, population, sample size, sampling method, data collection procedure, research instrument, and data analysis.

3.2 RESEARCH DESIGN

The research design is a part of a plan that outlines the procedures and techniques for gathering data for this project. It is a framework for the research project. This study will employ a quantitative approach. Questionnaires will be utilized to conduct a survey in this investigation. Therefore, the sample will be tested by selecting a place as a sample, which will comprise university students from University Malaysia Kelantan, City Campus, Students will be chosen as delegates to provide input on the factors that influence sleep quality among students at University Malaysia Kelantan, City Campus. Questionnaires shall be used as a research tool in descriptive research. The questionnaire will be designed to collect all the data required for the study's objectives.

3.3 POPULATION

The population appears to be a distinct group of persons, which may include a nation or a collection of people who have similar features. A population may also refer to an individual group that can be identified by at least one comparable attribute for data gathering and analysis purposes. A population in survey data is the total group of people that are utilized as a statistical sample for the research. The target demographic for this study is students of University Malaysia Kelantan, City Campus (UMK) who are affected by sleep quality.

The researchers performed a survey in this study to discover the elements that impact students' engagement in sleep quality at the university, such as lifestyle, mental health, social factors, and physical factors. Three campuses of University Malaysia Kelantan, City Campus were situated at Jeli, Kota Bharu, and Bachok. University Malaysia Kelantan City Campus students are the study's target demographic. Statistics show that there are 11413 students enrolled in the University of Malaysia Kelantan overall. The department of wellness, tourism, and hospitality at University Malaysia Kelantan City Campus, where the researcher selected a total of 2800 persons from Fakulti Hospitaliti, Pelancongan dan Kesejahteraan (FHPK).

3.4 SAMPLE SIZE

Sampling is defined as the selection of several sections of the population based on an assessment or conclusion involving the entire population. Both the sample size and the total number of participants in the sample can be assessed in market research. Statistically having the correct sample (Qualtrics, 2020). This research was done by taking information from the respondents to fill in the questionnaire conducted at UMK City Campus. For this research, the population from the sample was obtained from the following group of respondents or participants, all UMK City Campus students from Fakulti Hospitaliti, Pelancongan dan Kesejahteraan (FHPK).

Referring to the sample measurement table by Krejcie & Morgan (1970), a total of 100 respondents will be randomly selected from the student population from Fakulti Hospitaliti, Pelancongan dan Kesejahteraan (FHPK) at the UMK City Campus. Researchers use the UMK student population because it is suitable for researchers to get respondents to what factors influence sleep quality among students at UMK City Campus.

Table 3.1: Krejcie & Morgan Table

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

3.5 SAMPLING METHOD

Non-probability sampling and probability sampling approaches have been used in this section to meet the purpose of the study. In the sampling method, it consists of two methods which are probability sampling consisting of stratified, simple, and clustered sampling. While non-probability sampling consists of several groups, facilities, and sampling.

Whereas in this case researchers have chosen one of the best probability sampling approaches that is quite beneficial for saving time and resources is simple random sampling.

This method can be trusted to get proof that each person in the population was chosen at random, solely by chance.

Age, sex, locality, and other factors are sampled based on clusters of demographic data. This makes it incredibly simple and straightforward for survey authors to gain conclusions from the responses. It is the most used sampling method since it is quick, simple, and reasonably priced.

3.6 DATA COLLECTION PROCEDURE

A variation of methods of data collection has been suggested in the study. The knowledge for this study was obtained from primary sources. Primary data are data collected effectively from primary sources by research groups that have used questionnaires. Primary data is the best type of information since it is obtained straight from the original where the survey results were obtained. The questionnaire used in this study was created using Google Forms. The questionnaire is applied to all students from year 1 to year 3 at University Malaysia Kelantan, City Campus.

3.7 RESEARCH INSTRUMENT

The tool for collecting data will be questionnaires. Depending on the type of questions asked, questionnaires can be categorized as either quantitative or qualitative methods. Quantitative techniques are used to assess the responses produced by closed-ended questions with multiple choice options. The information needed to complete this study was gathered via the questionnaire. A questionnaire is a tool for acquiring information that asks participants to give written or verbal responses to a set of questions. Because the researchers are currently engaged in an online learning programme, this will be their tool.

Additionally, because the respondents are pressed for time, creating an online consultation to conduct an interview with them will take less time.

Multiple-choice questions of the questionnaire variety are used in this study. Options are presented to respondents for them to choose from. Multiple-choice questions have the disadvantage that if there are too many alternatives, the questionnaire becomes complicated and complex and makes it difficult for respondents to respond.

This questionnaire is set up by itself to take undergraduate students' declaration of the difficulty and the quantity of data they will get. The survey form consists of two parts. The first part is entitled "Respondents' Profile" as it includes the name, age, race, religion, current year of studying and education level. The second part will be questions regarding the factors such as lifestyle, mental health, social factors, and physical factors that influence the quality of sleep. The questionnaires will then be authorized by researchers to practice in gathering their information. The purpose of the survey was to regulate their opinions on homework completion.

Table 3.2: Likert Scale

1	**2**	**3**	**4**	**5**
Strongly Disagree	**Disagree**	**Neither / Nor Disagree**	**Agree**	**Strongly Agree**

Table 3.3: Items to measure lifestyle towards Sleep Quality

SECTION A: LIFESTYLE (INDEPENDENT VARIABLE 1)

ITEM	**1**	**2**	**3**	**4**	**5**
(Absorbed and Adapted from Wang & Biro, 2020)					
1) Is smoking regularly effect the duration of sleep?					
2) Using media such as phone, laptop, tabs for long hours effect the satisfaction of sleep every day?					
ITEM *(Absorbed and Adopted from Nurismadiana et al., 2018)*					
3) Are you involving in extracurricular activities regularly?					
4) Are you craving for high calorie food regularly?					
ITEM *(Absorbed and adapted from Sato et al; 2017)*					
5) Is that a drastic changes in body weight in past 1 year?					

Table 3.4: Items to measure mental health towards sleep quality

SECTION B: MENTAL HEALTH (INDEPENDENT VARIABLE 2)

ITEM	***(Absorbed and Adapted from Wang & Biro, 2020)***	**1**	**2**	**3**	**4**	**5**
1)	Do you feel the anxiety feel regularly?					
	ITEM (*Absorbed and adapted by Eleftheriou et al; 2021*)					
2)	Are you having headache more regularly?					
3)	How frequent you had experience panic attack during sleep time?					
4)	Do you experience anger more regularly?					
5)	Does feeling sad make you sleep late?					

Table 3. 5: Items to measure socials factors towards sleep quality

SECTION C: SOCIAL FACTORS (INDEPENDENT VARIABLE 3)

ITEM *(Absorbed and Adapted from Wang & Biro, 2020)*	1	2	3	4	5
1) Is that you overthink about your studies make you feel awake for long hours?					
ITEM *(Absorbed and adopted from Yigitalp & Ayidin, 2021)*					
2) Are you going late to class regularly?					
ITEM (*Absorbed and adopted by Burgard and Ailshire, 2019)*					
3) Are financial issue of family makes you have poor sleep quality every day?					
4) Is that financial strain includes difficulty covering daily expenses lead to poor quality of sleep?					
5) Is that interpersonal interaction such as aggressive behaviour affect sleep quality?					

Table 3.6: Items to measure physical factors towards sleep quality

SECTION D: PHYSICAL FACTOR (INDEPENDENT VARIABLE 4)

ITEM *(Absorbed and Adapted from Wang & Biro, 2020)*	1	2	3	4	5
1) Do you have back pain regularly and it effects the sleeping pattern?					
2) Are you consuming sleep medication regularly to get an enough sleep every day?					
ITEM *(Absorbed and adopted from Yigitalp & Ayidin, 2021)*					
3) Are you having any chronic illness which disturb your sleeping routine?					
ITEM (*Absorbed and adopted by Zambelli et al; 2021)*					
4) Are you having musculoskeletal pain more regularly?					
5) Do you have any neuropathic disease that disturbs your sleep?					

Table 3.7: Items to measure sleep quality

SECTION D: SLEEP QUALITY (DEPENDENT VARIABLE)

ITEM *(Absorbed and Adopted from Nurismadiana et al., 2018*	**1**	**2**	**3**	**4**	**5**
1) Are you having excessive daytime sleepiness?					
ITEM (*Absorbed and Adopted from Hilde M et al; 2018)*					
2) My sleep quality is good everyday					
3) My sleep was refreshing					
4) My sleep was restless					
5) I had difficulty on falling sleep					

3.8 DATA ANALYSIS

Data analysis is a technique that uses logic and statistics in a methodical way to summarize, retrieve, and analyze data to explain and exhibit it. When extracting inductive conclusions from the data, it is feasible to separate the signal, the phenomenon of interest, from the noise, statistical fluctuations by employing various analytical procedures. The purpose of data analysis also includes extracting significant information from the data and using that analysis to support conclusions. In research methods, primary and secondary data are used. Primary data is information that a researcher has gathered from the original sources, such as

interviews and surveys. On the other hand, secondary data is information that has been gathered from sources that have already been published. The researcher employed the Statistical Package for the Social Science (SPSS) in this study as well. A group of software applications have been combined to become SPSS. The fundamental use of this programme is the evaluation of social science-related empirical data. Thisdata can be used for data mining, surveys, and market research. With the aid of the statistical data acquired, researchers may swiftly comprehend the market's desire for products and can modify their tactics accordingly. In essence, SPSS first saves and organizes the supplied data before organizing the data set to generate the needed output. The manner that SPSS is set up makes it possible to accommodate a wide variety of variable data formats. Additionally, SPSS is a cutting-edge programme that is mostly utilized by researchers to assist them in quickly processing essential data. Although working with data is a difficult and time-consuming procedure, the programme can manage data more effectively with the aid of specific strategies. This approach is used to analyze, transform, and produce recognizable patterns between different data variables.

Researchers will use SPSS version 26.0 to create tables for data entry and analysis. Therefore, researchers can collect data for industrial research data collection to perform descriptive analysis, reliability tests, and correlation tests.

3.8.1 DESCRIPTIVE STATISTIC

Descriptive statistics are used to describe the fundamental properties of the analysis's data. They provide a succinct summary of the analysis and the actions performed. They serve as the foundation for almost all quantitative analyses of the data when combined with straightforward graphical analysis. The use of descriptive statistics is required to offer observable, factual explanations. There can be a lot of measurements in a research sample, or several people may measure on any scale. Large amounts of data can be rationally simplified with the aid of descriptive statistics. Each descriptive statistic distils the complex information into a concise

definition. Two techniques which is descriptive analysis and inferential analysis are used to analyze the data collected. Descriptive analysis will be used to define the demographic profile, which includes the proportion, frequency, mean, and average of respondents. The range of the mean table is used to determine the likelihood that respondents would agree or disagree with the claim made in the questionnaire. While a descriptive analysis only requires a straightforward quantitative representation of the data that was gathered. By doing this, researchers can better grasp the experiment or data supplied and get a better understanding of the data's context.

The level of agreement in Sections B, C, and D will be characterized using descriptive analysis. It allows researchers to present data in an efficient manner while also providing simple clarification.

3.8.2 RELIABILITY TEST

Reliability analysis is mentioned to the fact that a scale should reliably reflect the structure by measuring. Reliability analysis will be used by the researcher when two inspections under research that are equivalent to all the conditions will measure the equivalent outcome. The reliability analysis procedure will calculate the number that will be used commonly to measure the scale reliability and give information regarding an individual's item in the scale. The importance of the reliability test will make instructional and evaluation decisions about the factors that influence sleep quality among students at University Malaysia Kelantan (UMK), City Campus.

Figure 3.1: Rule of Thumb Cronbach’s Alpha

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

3.8.3 CORRELATION TEST

Bivariate analysis that assesses the direction and degree of the relationship between two variables is called correlation. The correlation coefficient's value ranges from +1 to -1 depending on the strength of the association.

A value of ±1 represents the full degree of correlation between the two variables. As the correlation coefficient value gets closer to 0, the relationship between the two variables will get weaker. The direction of the association is indicated by the coefficient's sign; a + sign indicates a positive relationship, and a - sign indicates a negative relationship. In this study, the standard correlation metric is Pearson's correlation. This makes it simpler for us to run correlations. One of the key analyses that can determine the strength of the linear relationship between two variables: independent variables (IV) and dependent variables (DV) that are quantitative in character (at least interval scale) is the Pearson Correlation Analysis. Figure 3.2: Rule of Thumb in Correlation Coefficient Size

Size of Correlation	Interpretation
.90 to 1.00 (−.90 to −1.00)	Very high positive (negative) correlation
.70 to .90 (−.70 to −.90)	High positive (negative) correlation
.50 to .70 (−.50 to −.70)	Moderate positive (negative) correlation
.30 to .50 (−.30 to −.50)	Low positive (negative) correlation
.00 to .30 (.00 to −.30)	negligible correlation

The strength of a coefficient that has a very high positive or negative correlation is between 0.90 and 1.00 or (- 0.90 to – 1.00). The correlation analysis size inside the table is 1.00, suggesting that now the strength of the relationship will be beautifully high associations. If the coefficient levels are between 0.70 to 0.90 or (-0.70 to -0.90), it will state that there will be a high positive or negative correlation. When the correlation level lies on 0.50 to 0.70 or (-0.50 to – 0.70), it means there will be moderate positive or negative correlation. When the size is between 0.30 to 0.50 or negative (-0.30 to -0.50), it is considered to have a low positive or negative correlation. Lastly, when the correlation size is 0.00 to 0.30 or (-0.00 to – 0.30), it will be negligible correlation or no correlation.

3.9 SUMMARY

Through this chapter, the researcher will be clearer about the study that has been determined according to study design, population, sample size, sampling method, data collection procedure, research instruments and data analysis consisting of descriptive statistics, reliability test and correlation test. From this study, the researcher may also know how to use research design and work as well as other components. This chapter also explains how questionnaires were conducted and how the questionnaires could be used in this study.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 INTRODUCTION

This chapter outlines the findings of the examination of the data gathered from the 365 respondents' survey. Descriptive analysis, a reliability test, and Pearson's correlation analysis all served as the foundation for the findings. At the end of this chapter, the findings of this study were discussed.

4.2 RESULTS OF DESCRIPTIVE ANALYSIS

4.2.1 DEMOGRAPHIC ANALYSIS

In this study, there were a total of seven questions asked in Section A, such as gender, age, marital status, race, religion, educational level, and year of education.

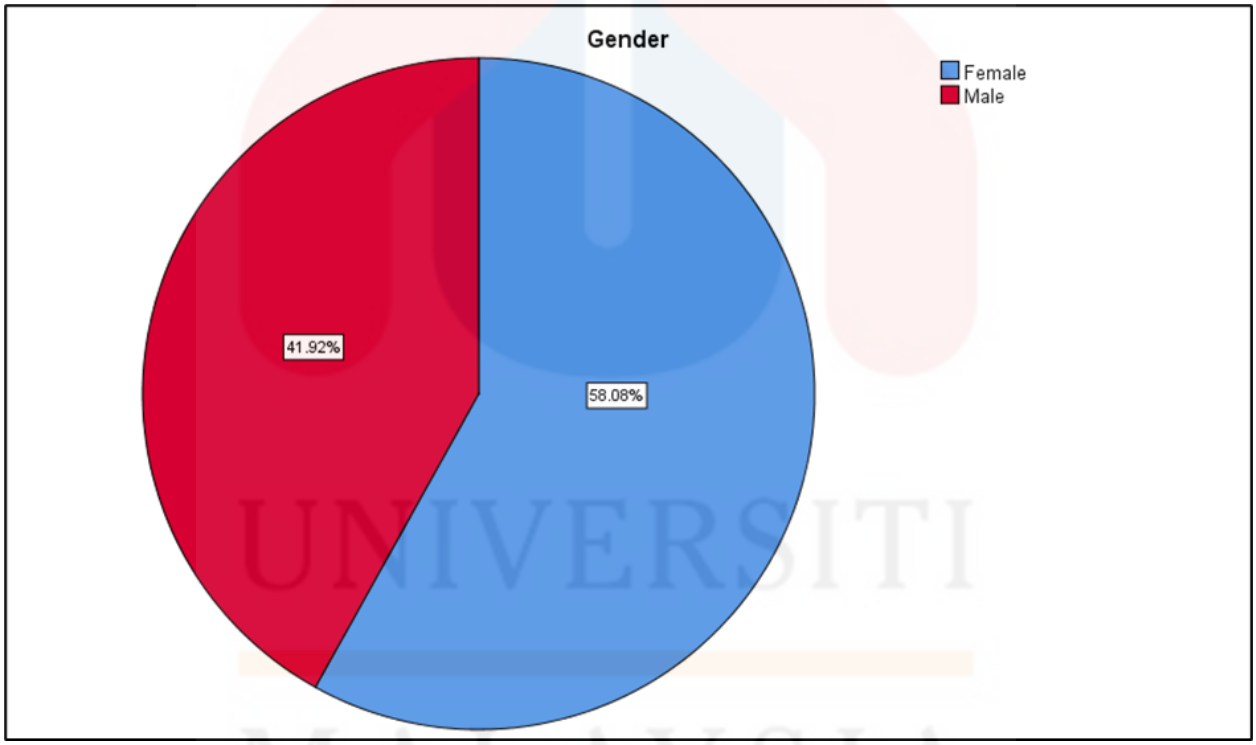
4.2.1.1 GENDER

The gender distribution of all 365 respondents who participated in the data collection is shown in Table 4.1. Table 4.1 and Figure 4.1 both depict how the respondents in this study were split by gender. The majority of respondents, 58.1% (N=212), were female, while the minority, 41.9% (N=153), were male.

Table 4.1: The Gender of Respondents

Gender	Frequency (N)	Percent (%)
Male / Lelaki	212	58.1
Female / Perempuan	153	41.9
Total / Jumlah	365	100

Figure 4.1: The Percentage of Gender



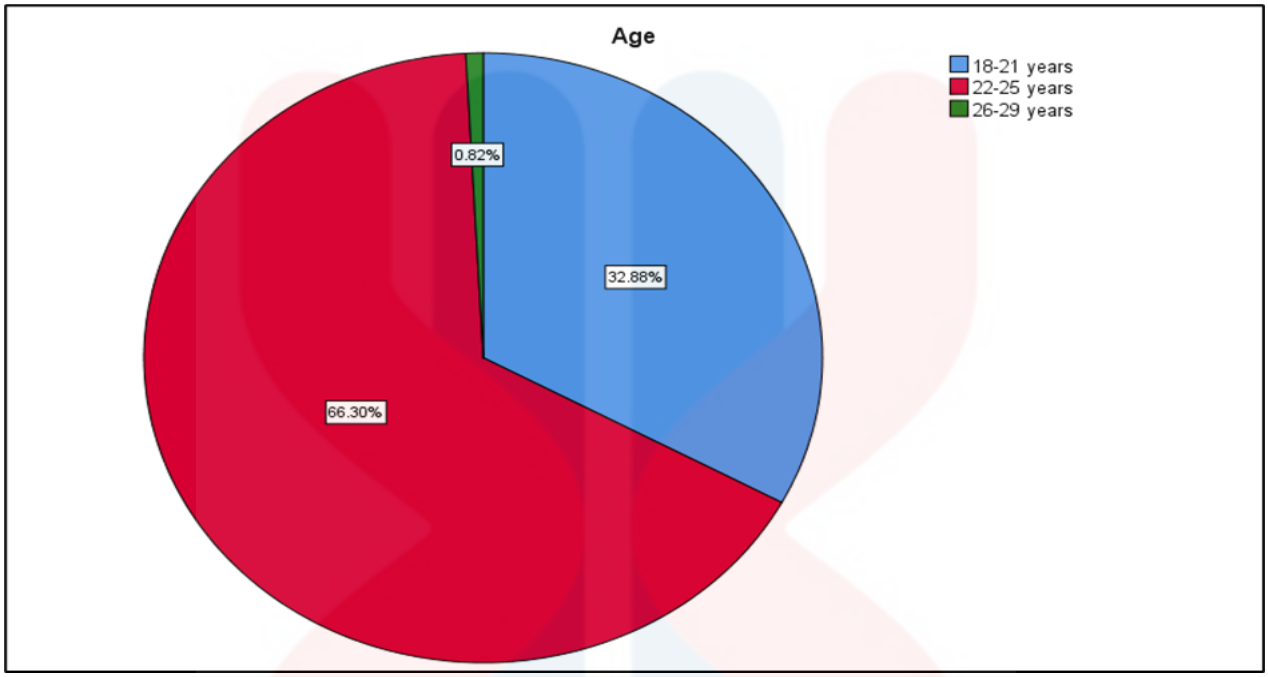
4.2.1.2 AGE

The age distribution of the 365 respondents who participated in the data collection is shown in Table 4.2. There are four age categories based on Table 4.2 and Figure 4.2. According to the study's findings, 66.3% (N=242) of the study's total 365 respondents are in the age range of 22 to 25 years old. The age group between 18 and 21 years old, which comprises 32.9% of the total (N=120), comes in second. Meanwhile, there is 0.8% (N=3) of the group aged around 26-29 years and no data group for the age category that is under the age of around 30 years and above.

Table 4.2: The Age of Respondents

Age	Frequency (N)	Percent (%)
18-21 years old / 18-21 tahun	120	32.9
22-25 years old / 22-25 tahun	242	66.3
26-29 years old / 26-29 tahun	3	0.8
30 years and above / 30 tahun dan ke atas	0	0
Total / Jumlah	365	100

Figure 4.2: The Percentage of Age



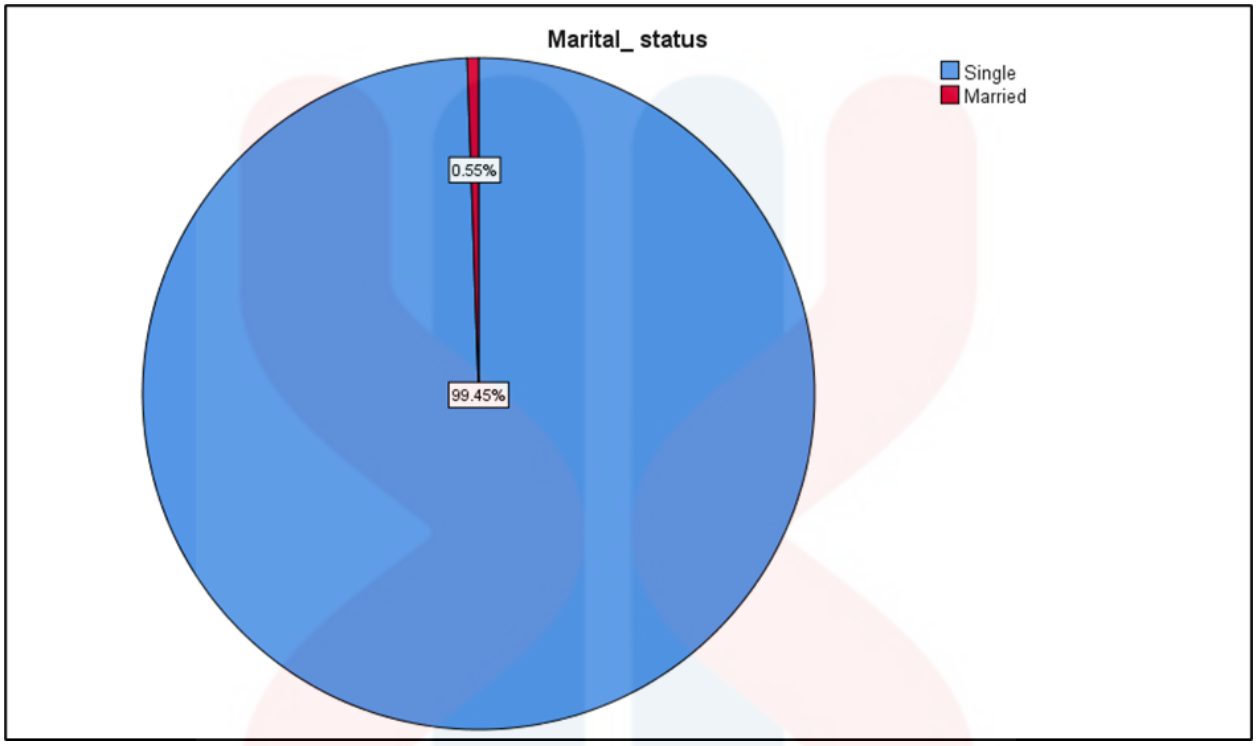
4.2.1.3 MARITAL STATUS

The distribution of married respondents, who made up a total of 365 respondents for the data collection, is shown in Table 4.2. Table 4.3 and Figure 4.3 show that a total of 99.5% (N=363) of respondents identified as single. However, just 0.5% (N=2) of all respondents, or married people, were recorded at the time of the study.

Table 4.3: The Marital Status of Respondents

Marital status	Frequency (N)	Percent (%)
Single / Bujang	363	99.5
Married / Berkahwin	2	0.5
Total / Jumlah	365	100

Figure 4.3: The Percentage of Marital Status



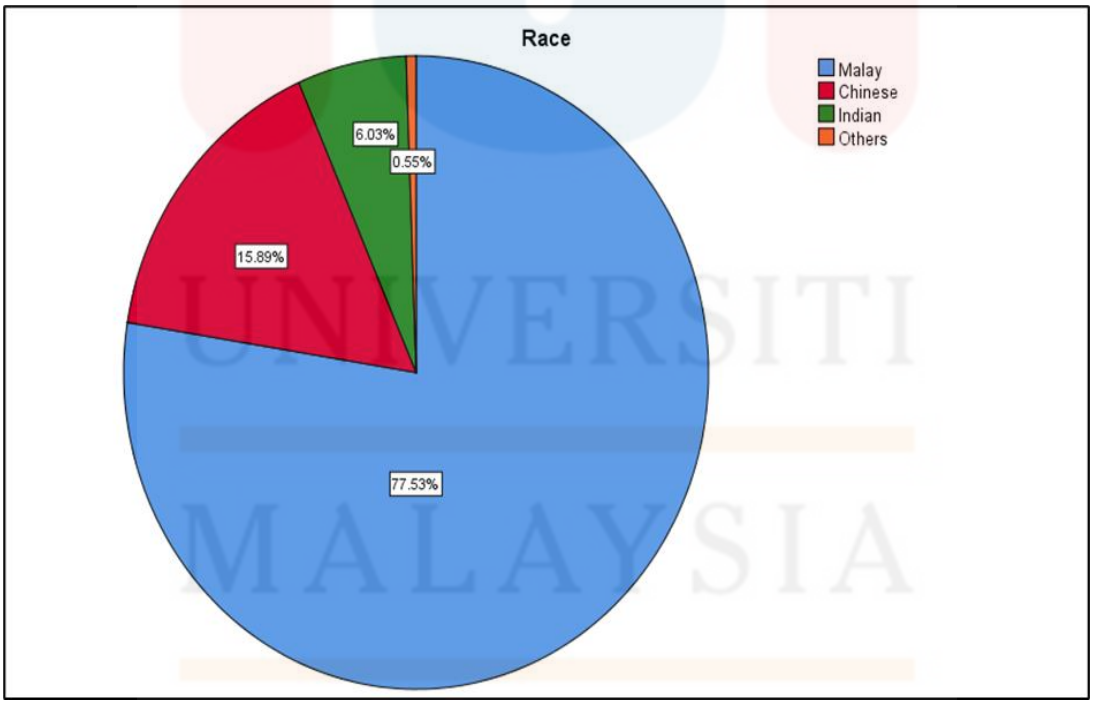
4.2.1.4 RACE

The distribution of respondents by race is shown in Table 4.4 and Figure 4.4. Malay respondents made up the majority of the study's participants with 77.5% (N=283), followed by Chinese participants with 15.9% (N=58), and Indian participants with 6.0% (N=22). Other races were Bumiputera Sarawak and Iban, which made up 0.5% (N=2) of the total respondents.

Table 4.4: The Race of Respondents

Race	Frequency (N)	Percent (%)
Malay / Melayu	283	77.5
Chinese / Cina	58	15.9
Indian / India	22	6.0
Others / Lain-lain	2	0.5
Total / Jumlah	365	100

Figure 4.4: The Percentage of Race



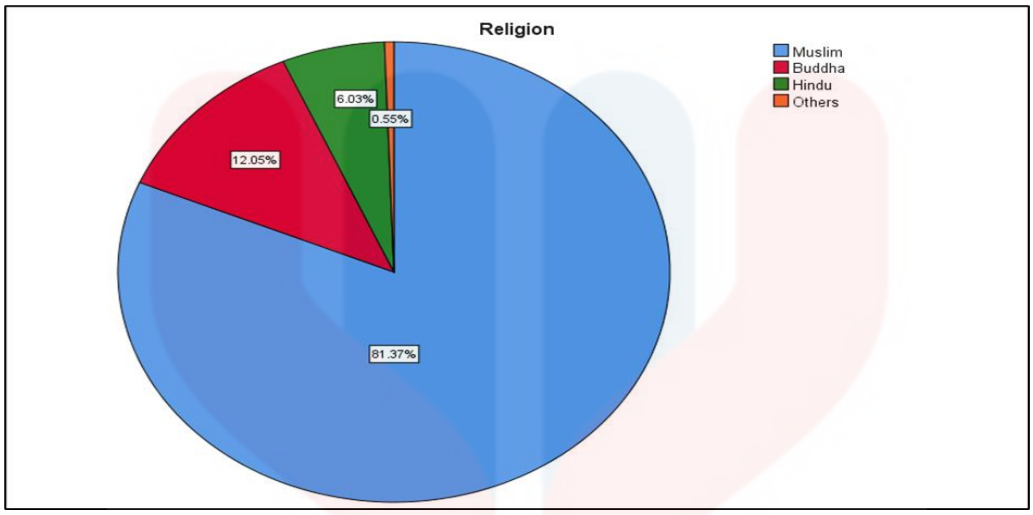
4.2.1.5 RELIGION

Table 4.5 and Figure 4.5 show the respondents' religious distribution in this study. The results of the study show that most respondents are Muslim, which consists of 81.4% (N=297) of the total 365 respondents. Followed by Buddha consisting of 12.1% (N=44) and Hindus comprising 6.0% (N=22). Meanwhile, there are other religions which are 0.5% (N=2) of all respondents in this study.

Table 4.5: The Religion of Respondents

Religion	Frequency (N)	Percent (%)
Muslim / Muslim	297	81.4
Buddha / Buddha	44	12.1
Hindu / Hindu	22	6.0
Others / Lain-lain	2	0.5
Total / Jumlah	365	100

Figure 4.5: The Percentage of Religion



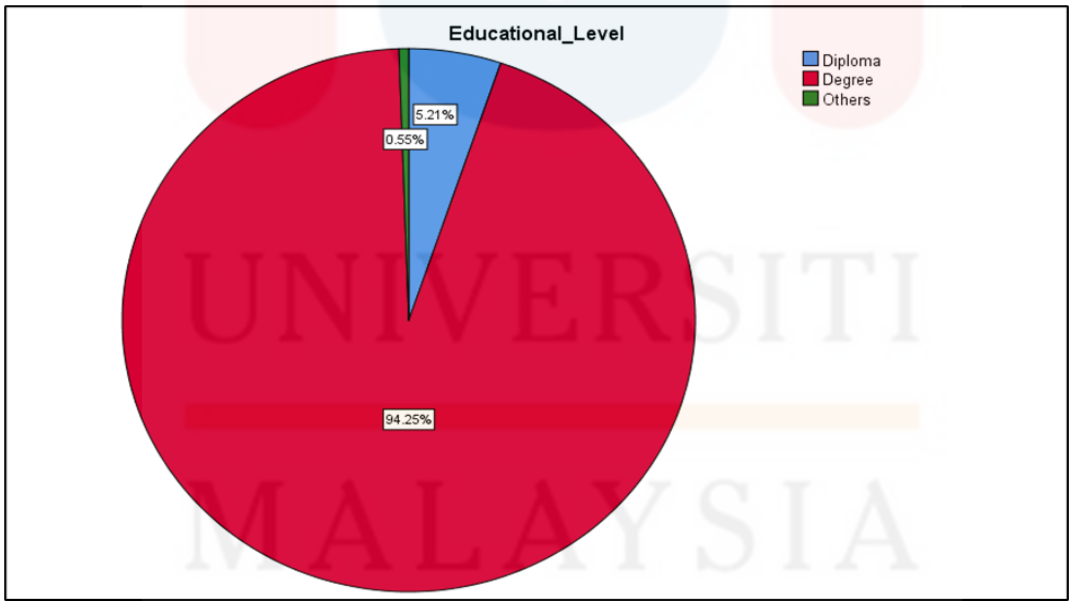
4.2.1.6 EDUCATIONAL LEVEL

Table 4.6 and Figure 4.6 represent the educational level of 365 respondents. The highest level of education among respondents is a bachelor's degree with 94.2% (N=344) respondents. Diploma is the second highest level of study with 5.2% (N=19) of respondents. Meanwhile, there are 0.5% (N=2) of respondents who have other levels of study.

Table 4.6: The Educational Level of Respondents

Educational Level	Frequency (N)	Percent (%)
Diploma / Diploma	19	5.2
Degree / Ijazah Sarjana Muda	344	94.2
Master / Ijazah Sarjana	0	0
Others / Lain-lain	2	0.5
Total / Jumlah	365	100

Figure 4.6: The Percentage of Educational Level



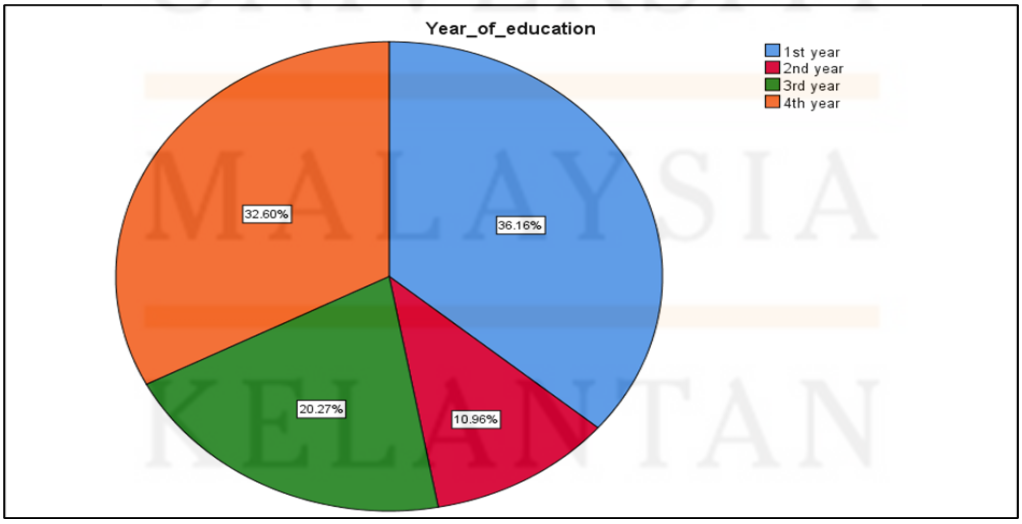
4.2.1.7 YEAR OF EDUCATION

Table 4.7 and Figure 4.7 represent 365 years of study respondents. The highest year of education among respondents is Year 1 with 36.2% (N=132) of respondents. Year 4 is the second highest year of education with 32.6% (N=119) of respondents. Whereas there are 20.3% (N=74) respondents from Year 3 and 11.0% (N=40) respondents from Year 2.

Table 4.7: The Year of Education Respondents

Year of Education	Frequency (N)	Percent (%)
1st year / Tahun 1	132	36.2
2nd Year / Tahun 2	40	11.0
3rd Year / Tahun 3	74	20.3
4th Year / Tahun 4	119	32.6
Total / Jumlah	365	100

Figure 4.7: The Percentage of Year of Education



4.2.2 Independent Variables and Dependent Variable

Descriptive analysis consists of frequency distribution, means and standard deviations based on a Five (5) Likert scale which values: (1 = Strongly Disagree; 2 = Disagree; 3 = Neither; 4 = Agree; 5= Strongly Agree) were calculated for all independent variable of lifestyle, mental health, social factors, and physical factors. While, for dependent variables, items of sleep quality were measured using the same type of Five Likert Scale that ask for Strongly Disagree, Disagree, Neither, Agree and Strongly Agree.

4.2.2.1 Lifestyle

Table 4.8 shows the frequency, mean and standard deviation for the items used to measure the Lifestyle. The mean ranged for Lifestyle is from 3.04 to 3.95 and standard deviation is from 0.863 to 1.145 There were five (5) questions measured with the highest mean of 3.95 for the item L1 and L2 on the statement 'Is smoking regularly affect the duration of sleep?' and 'Does using media such as phones, laptops, tabs for long hours affect the satisfaction of sleep every day?'. There was a total of 229 respondents (62.7%) who strongly agreed and agreed for item L1 and 243 respondents (66.6%) for item L2. Meanwhile, the lowest mean was item L3 with 23.04 on the statement 'Are you involved in extracurricular activities regularly?'.

A total number of 85 respondents (23.3%) chosen strongly disagreed and disagreed on item L3. The mean values for the two (2) remaining items, which L4 and L5 were 3.80 and 3.60 respectively.

Table 4.8: Descriptive Statistic for Lifestyle

No.	Item Description	Frequency						
		SD	D	N	A	SA	Mean	Std. deviation
L1	Is smoking regularly affect the duration of sleep?	5 1.4%	2 0.5%	129 35.3%	100 27.4%	129 35.3%	3.95	0.923
L2	Does using media such as phones, laptops, tabs for long hours effect the satisfaction of sleep every day?	6 1.6%	20 5.5%	96 26.3%	108 29.6%	135 37.0%	3.95	1.000
L3	Are you involved in extracurricular activities regularly?	12 3.3%	73 20.0%	186 51.0%	75 20.5%	19 5.2%	3.04	0.863
L4	Are you craving for high calorie food regularly?	5 1.4%	25 6.8%	111 30.4%	121 33.2%	103 28.2%	3.80	0.973
L5	Are you experiencing drastic changes in body weight in the past 1 year?	11 3.0%	57 15.6%	104 28.5%	88 24.1%	105 28.8%	3.60	1.145

4.2.2.2 Mental Health

The frequency, mean, and standard deviation for the items used to measure mental health are shown in Table 4.9 above. The standard deviation for mental health is between 0.899 and 0.989, and the mean range is between 2.74 and 3.24. There were five (5) questions measured, and item MH5, which asked "Does feeling sad make you sleep late?" had the highest mean (3.24). 165 respondents (45.2%) of the 322 that responded strongly agreed and agreed with item MH5 in the survey. The statement "How often have you had panic attacks while you were sleeping?" was measured using MH3 items, and the mean score for those items was the lowest at 2.74. A total of 146 respondents (40.0%) disagreed and strongly disagreed with item MH3 in the survey.. The mean values for the other three (3) items for MH1, MH2 and MH4 were 3.18, 3.11 and 3.13 respectively.

Table 4.9: Descriptive Statistic for Mental Health

No.	Item Description	Frequency						
		SD	D	N	A	SA	Mean	Std. deviation
MH1	Do you feel the anxiety regularly?	15 4.1%	62 17.0%	164 44.9%	90 24.7%	34 9.3%	3.18	0.961
MH2	Are you having headaches more regularly?	14 3.8%	69 18.9%	162 44.4%	102 27.9%	18 4.9%	3.11	0.899

MH3	How often you had experience panic attacks during sleep time?	42 11.5%	104 28.5%	136 37.3%	74 20.3%	9 2.5%	2.74	0.990
MH4	Do you experience anger more regularly?	14 3.8%	69 18.9%	156 42.7%	109 29.9%	17 4.7%	3.13	0.902
MH5	Does feeling sad make you sleep late?	14 3.8%	77 21.1%	109 29.9%	139 38.1%	26 7.1%	3.24	0.989

4.2.2.3 Social Factors

The frequency, mean, and standard deviation for the items used to measure the Social Factors are displayed in Table 4.10. The standard deviation for social factors is between 0.949 and 1.098, while the mean range is between 2.61 and 3.87. Item SF1 on the statement "Is it that you overthink your studies that makes you feel awake for long hours?" had five (5) questions with the highest mean of 3.87. A total of 219 respondents (59.8%) strongly agreed and agreed with the statement in question 1 (SF1). Item SF2 on the question "Are you going late to class regularly?" had the lowest mean, 2.61. On question SF2, a total of 162 respondents (44.4%) selected disagreed and strongly disagreed. The mean values for the three (3) remaining items which were SF3, SF4 and SF5 were 3.38, 3.43 and 2.94 respectively.

Table 4.10: Descriptive Statistic of Social Factors

No.	Item Description	Frequency						
		SD	D	N	A	SA	Mean	Std. deviation
SF1	Is that you overthink your studies which make you feel awake for long hours?	3 0.8%	15 4.1%	128 35.1%	100 27.4%	119 32.4%	3.87	0.949
SF2	Are you going late to class regularly?	70 19.2%	92 25.2%	127 34.8%	61 16.7%	15 4.1%	2.61	1.098
SF3	Are financial issues of the family make you have poor sleep quality every day?	17 4.7%	47 12.9%	123 33.7%	135 37.0%	43 11.8%	3.38	1.006

SF4	Is that financial strain includes difficulty covering daily expenses leading to poor quality of sleep?	13 3.6%	51 14.0%	122 33.4%	124 34.0%	55 15.1%	3.43	1.021
SF5	Is that your interpersonal interaction such as aggressive behaviour affect sleep quality?	13 3.6%	114 31.2%	139 38.1%	80 21.9%	19 5.2%	2.94	0.939

4.2.2.4 Physical Factors

The frequency, mean, and standard deviation for the items used to measure the Physical Factors are displayed in Table 4.11. Physical Factors have a mean range of 2.44 to 3.75 and a standard deviation of 1.013 to 1.148. The item PF1 on the statement "Do you often suffer from back pain, and it affects your sleep pattern?" had five (5) questions with the highest mean of 3.75. In all, 202 respondents (55.3%) indicated they strongly agreed or agreed with item PF1. On the question "Are you frequently consuming sleep medications to get enough sleep each night?" item PF2 had the lowest mean, 2.44. On item PF2, a total of 183 respondents (or 50.1%) selected disagreed and strongly disagreed. The mean values for the three (3) remaining items, which were PF3, PF4 and PF5 were 2.60, 2.86 and 2.57 respectively.

Table 4.11: Descriptive Statistic of Physical Factors

No.	Item Description	Frequency						
		SD	D	N	A	SA	Mean	Std. deviation
PF1	Do you often suffer from back pain, and it affects your sleep pattern?	8 2.2%	21 5.8%	134 36.7%	95 26.0%	107 29.3%	3.75	1.013
PF2	Are you consuming sleep medication regularly to get enough sleep every day?	100 27.4%	83 22.7%	117 32.1%	50 13.7%	15 4.1%	2.44	1.148
PF3	Are you having any chronic illnesses which disturb your sleeping routine?	60 16.4%	109 29.9%	126 34.5%	58 15.9%	12 3.3%	2.60	1.043
PF4	Are you having musculoskeletal pain more regularly?	46 12.%	81 22.2%	126 34.5%	101 27.7%	11 3.0%	2.86	1.052

PF5	Do you have any neuropathic disease that disturbs your sleep?	72 19.7%	101 27.7%	112 30.7%	71 19.5%	9 2.5%	2.57	1.086

4.2.2.5 Sleep Quality

The frequency, mean, and standard deviation for the factors used to assess sleep quality are displayed in Table 4.12. The standard deviation for sleep quality is between 0.956 and 1.071, while the mean range is between 2.98 and 3.54. The item SQ2 on the statement "My sleep quality is good every day" had the highest mean of 3.54 out of the five questions that were measured. On the issue SQ2, a total of 188 responders (51.5%) agreed and strongly agreed. The statement "My sleep was restless" in item SQ4 had the lowest mean, 2.98. On question SQ4, a total of 107 respondents (29.3%) selected to disagree and strongly disagree.. The mean values for the three (3) remaining items which SQ1, SQ3 and SQ5 were 3.12, 3.53 and 3.21 respectively.

Table 4.12: Descriptive Statistic of Sleep Quality

No.	Item Description	Frequency						
		SD	D	N	A	SA	Mean	Std. deviation
SQ1	Are you always excessively sleepy during the day?	39 10.7%	34 9.3%	170 46.6%	90 24.7%	32 8.8%	3.12	1.052
SQ2	My sleep quality is good every day.	13 3.6%	24 6.6%	140 38.4%	130 35.6%	58 15.9%	3.54	0.956
SQ3	My amount of sleep is sufficient.	13 3.6%	40 11.0%	126 34.5%	113 31.0%	73 20.0%	3.53	1.042
SQ4	My sleep was restless.	29 7.9%	78 21.4%	147 40.3%	95 26.0%	16 4.4%	2.98	0.984
SQ5	I had difficulty falling asleep.	22 6.0%	71 19.5%	120 32.9%	111 30.4%	41 11.2%	3.21	1.071

4.3 RESULTS OF RELIABILITY TEST

The reliability test results are displayed in Table 4.13. All of the questionnaires used for this study shown high internal consistency, as seen by Cronbach's alpha coefficients, which ranged from 0.296 to 0.821. Lifestyle, mental health, social factors, physical factors, and quality of sleep were all considered in the reliability analysis (0.633, 0.821, 0.668, 0.751, and 0.296). The outcome of Cronbach's Alpha has demonstrated that the coefficient produced from the Likert-Scale is reliable when measuring the variables that affect lifestyle, mental health, social factors, and physical factors. However, it has been shown for this study that it is not reliable for variables which influence sleep quality.

Table 4.13: Reliability Analysis

Variables	**Cronbach's Alpha**	**No of items**
Lifestyle	0.633	5
Mental health	0.821	5
Social factors	0.668	5
Physical factors	0.751	5
Quality sleep	0.296	5

4.4 RESULTS OF INFERENTIAL ANALYSIS

4.4.1 Bivariate Analysis

The results of the bivariate analysis conducted on the items for each variable are shown in this section along with their respective frequency distribution, means, and standard deviations. The five (5) Likert scale with the following values was used to measure all of the independent variables and dependent variable items: Strongly Disagree (SD), Disagree (D), Neither nor Disagree (N), Agree (A), and Strongly Agree (SA).

4.4.2 Pearson Correlation Analysis

The relationship between lifestyle and sleep quality among students of University Malaysia Kelantan, City Campus is low positive correlation because the Pearson Correlation value of lifestyle and sleep quality among students of University Malaysia Kelantan, City Campus is 0.315. As shown Table 4.12 that 0.30 to 0.50 can be interpreted as low positive correlation. In addition, the effect of lifestyle on sleep quality was statistically significant at 0.0000% level as stated in Table 4.13.

The relationship between mental health and sleep quality among students of University Malaysia Kelantan, City Campus is low positive correlation because the Pearson Correlation value of mental health and sleep quality among students of University Malaysia Kelantan, City Campus is 0.450. As shown Table 4.12 that 0.30 to 0.50 can be interpreted as low positive correlation. In addition, the effect of mental health on sleep quality was statistically significant at 0.0000% level as stated in Table 4.13.

The relationship between social factors and sleep quality among students of University Malaysia Kelantan, City Campus is low positive correlation because the Pearson Correlation value of mental health and sleep quality among students of University Malaysia Kelantan, City Campus is 0.483.

As shown Table 4.12 that 0.30 to 0.50 can be interpreted as low positive correlation. In addition, the effect of mental health on sleep quality was statistically significant at 0.0000% level as stated in Table 4.13.

The relationship between physical factors and sleep quality among students of University Malaysia Kelantan, City Campus is low positive correlation because the Pearson Correlation value of mental health and sleep quality among students of University Malaysia Kelantan, City Campus is 0.531. As shown Table 4.12 that 0.30 to 0.50 can be interpreted as low positive correlation. In addition, the effect of mental health on sleep quality was statistically significant at 0.0000% level as stated in Table 4.13.

Table 4.12: Table of Pearson's Correlation Coefficient

Size of Correlation	**Interpretation**
0.90 to 1.0 (-0.90 to -1.0)	Very high positive (negative) correlation
0.70 to 0.90 (-0.70to -0.90)	High positive (negative) correlation
0.50 to 0.70 (-0.50 to -0.70)	Moderate positive (negative) correlation
0.30 to 0.50 (-0.30 to -0.50)	Low positive (negative) correlation
0.00 to 0.30 (-0.00 to -0.30)	Little if any correlation

Table 4.13: Results of Pearson Correlation Analysis

Pearson Correlation	Sleep Quality	Lifestyle	Mental Health	Social Factor	Physical Factor
Sig (2-tailed)		.000	.000	.000	
Sleep Quality	1				
Lifestyle	0.315	1			
Mental Health	0.450	0.292	1		
Social Factor	0.483	0.471	0.615	1	
Physical Factor	0.531	0.140	0.559	0.487	1

** Correlation is significant at the 0.01 level (2- tailed)

4.5 DISCUSSION BASED ON RESEARCH OBJECTIVES

One of the key analyses that measures the strength of the linear relationship between the independent variable (IV) and dependent variable (DV) is the Pearson Correlation Coefficient analysis. The purpose of this analysis is to determine whether there are any relationships between the dependent variable (students' sleep quality at University Malaysia Kelantan, City Campus) and the independent variables (lifestyle, mental health, social factor, and physical factor). If the correlation existed, the researchers would need to decide the strength and direction of association between the variables.

Hypothesis 1: Lifestyle

H_{oa} – There is no relationship between lifestyle and sleep quality among students of University Malaysia Kelantan, City Campus.

H_{1a}- There is a relationship between lifestyle and sleep quality among students of University Malaysia Kelantan, City Campus.

4.5.1 To determine relationship between lifestyle and sleep quality among students of University Malaysia Kelantan, City Campus.

Table 4.14: Pearson Correlation of Lifestyle and Sleep Quality among students of University Malaysia Kelantan, City Campus.

Correlations			
		Sleep Quality among students of University Malaysia, City Campus	**Lifestyle**
Sleep Quality among students of University Malaysia, City Campus	Pearson Correlation	1	.315**
	Sig. (2 – tailed)		.000
	N	365	365
Lifestyle	Pearson Correlation	.315**	1
	Sig. (2 – tailed)	.000	
	N	365	365

**Correlation is significant at the 0.01 level (2-tailed)

A person's lifestyle is influenced by the social, political, economic, cultural, and religious environment in which they live. The manner of life of an individual is their way of living at a specific time and location in their community. Along with their interests, activities, and dietary habits, it also contains people's regular behaviours and job responsibilities (Farhud, 2019).

Table 4.14 showed the Pearson Correlation Coefficient with a significant value and 365 proof. The p-value is 0.0000, below the significance threshold of 0.01. As a result, this study accepts the alternative hypothesis H1a for Hypothesis 1 and rejects the null hypothesis, Hoa.

The correlation coefficient of 0.315 indicated a less positive correlation when defining the association between students at University Malaysia's City Campus' lifestyle and sleep quality.

Hypothesis 2: Mental Health

H_{oa} – There is no relationship between mental health and sleep quality among students Of University Malaysia Kelantan, City Campus.

H_{1a} - There is a relationship between mental health and sleep quality among students Of University Malaysia Kelantan, City Campus.

4.5.2 To determine relationship between mental health and sleep quality among students of University Malaysia Kelantan, City Campus

Table 4.15: Pearson Correlation of Mental Health and Sleep Quality among student of University Malaysia Kelantan, City Campus.

Correlations			
		Sleep Quality among students of University Malaysia, City Campus	**Mental Health**
Sleep Quality among students of University Malaysia, City Campus	Pearson Correlation	1	.450**
	Sig. (2 – tailed)		.000
	N	365	365
Mental Health	Pearson Correlation	.450**	1
	Sig. (2 – tailed)	.000	

	N	365	365

**Correlation is significant at the 0.01 level (2-tailed)

Mental health encompasses emotional, behavioural, and cognitive wellbeing. All that matters is how people behave, feel, and think. The term "mental health" can also refer to the absence of a mental disorder (Felman & Melegrito, 2022). Mental health refers to a person's emotional, psychological, and social well-being. A popular metric for assessing the state of someone's mental health is how well they can cope with everyday challenges. People with sound mental health can make choices, making use of their assets, and giving back to their communities. Having a mental illness and having poor mental health are frequently confused. However, the term "mental health" refers to a person's overall mental well-being, regardless of whether they have a psychiatric disorder (Holmes, 2022)

Table 4.15 showed the Pearson Correlation Coefficient having a significant value and 365 respondents. The p-value is 0.0000, below the significance level of 0.01. As a result, this study accepts the alternative hypothesis H1a for Hypothesis 1 and rejects the null hypothesis, Hoa. The correlation coefficient of 0.450 indicated a lower positive association when defining the relationship between students at the University of Malaysia's City Campus's mental health and sleep quality.

Hypothesis 3: Social Factor

Hoa – There is no relationship between social factor and sleep quality among students University Malaysia Kelantan, City Campus.

H1a- There is a relationship between social factor and sleep quality among students Of University Malaysia Kelantan, City Campus.

4.5.3 To determine relationship between social factor and sleep quality among

students of University Malaysia Kelantan, City Campus

Table 4.16: Pearson Correlation of Social Factor and Sleep Quality among student of University Malaysia Kelantan, City Campus

Correlations			
		Sleep Quality among students of University Malaysia, City Campus	**Social Factors**
Sleep Quality among students of University Malaysia, City Campus	Pearson Correlation	1	.483**
	Sig. (2 – tailed)		.000
	N	365	365
Social Factors	Pearson Correlation	.483**	1
	Sig. (2 – tailed)	.000	
	N	365	365

**Correlation is significant at the 0.01 level (2-tailed)

The social aspects of health are the aspects of a person's life that have an impact on their health and well-being. The ease with which one can acquire healthcare, education, a safe place to live, and nutritious food are among them. They also include political, social, and cultural factors (Sherrell, 2021). The social determinants of health include factors including socioeconomic position, education, access to healthcare, and physical and occupational conditions. Social determinants of health must be addressed if health is to improve and persistent disparities in health and healthcare are to be reduced. (Artiga & Hinton, 2018).

Table 4.16 displayed Pearson Correlation Coefficient, significant value and the number of cases is 365. The p-value is 0.0000, which is less than the significant level 0.01. Therefore, this study rejects the null hypothesis H_{oa} then accept the alternative hypothesis H_{1a} for Hypothesis 1.

The correlation coefficient of 0.483 suggested a lower positive correlation define the relationship between social factors and Sleep Quality among students of University Malaysia, City Campus.

Hypothesis 4: Physical Factor

Hoa – There is no relationship between physical factor and sleep quality among students Of University Malaysia Kelantan, City Campus.

H1a- There is a relationship between physical factor and sleep quality among students Of University Malaysia Kelantan, City Campus.

4.5.4 To determine relationship between physical factors and sleep quality among students of University Malaysia Kelantan, City Campus

Table 4.17: Pearson Correlation of Physical Factor and Sleep Quality among students Of University Malaysia Kelantan, City Campus

Correlations			
		Sleep Quality among student of University Malaysia, City Campus	**Physical Factors**
Sleep Quality among students of University Malaysia, City Campus	Pearson Correlation	1	.531**
	Sig. (2 – tailed)		.000

	N	365	365
Physical Factors	Pearson Correlation	.531**	1
	Sig. (2 – tailed)	.000	
	N	365	365

**Correlation is significant at the 0.01 level (2-tailed)

Pain is defined as an unpleasant feeling, such as one that throbs, aches, or pinches. Pain can lower the quality of your sleep by making it harder for you to fall asleep or causing you to wake up in the middle of the night. The most common causes of suffering include arthritis, backaches, and neck pain. If you experience pain that keeps you from falling asleep, invest in a mattress with the highest level of support so that your spine maintains a healthy alignment. Proper spine alignment is one of the best ways to prevent pain from arising or escalating. Joint discomfort is a prevalent symptom of arthritis. So a mattress with pressure-relieving materials like memory foam ought to be helpful for them (Zwarensteyn, 2022).

Table 4.17 showed the Pearson Correlation Coefficient with a significant value and 365 examples. The p-value is 0.0000, below the significance value of 0.01. As a result, this study accepts the alternative hypothesis H1a for Hypothesis 1 and rejects the null hypothesis Hoa. The correlation coefficient of 0.531 indicated that physical characteristics and sleep quality among University of Malaysia, City Campus students were moderately positively correlated.

4.6 SUMMARY

This chapter discussed the data analysis used by researchers to analyze the data collected using descriptive analysis, reliability analysis, univariate analysis, and Pearson correlation analysis. Conclusion of this research are discussed in the next chapter which is about limitations and recommendations.

CHAPTER 5

CONCLUSION

5.1 INTRODUCTION

This chapter will be discussed the previous chapters' findings research objective is as follows:

1. There is a significant relationship between the lifestyle that influences sleep quality among students of University Malaysia Kelantan, City Campus.
2. There is a significant relationship between mental health influencing sleep quality and sleep quality among students of University Malaysia Kelantan, City Campus.
3. There is a significant relationship between social factors that influence sleep quality and sleep quality among students of University Malaysia Kelantan, City Campus.
4. There is a significant relationship between physical factors that influence sleep quality and sleep quality among students of University Malaysia Kelantan, City Campus.

Following the research questions for this study:

1. What is the relationship between lifestyle and sleep quality and sleep quality among students of University Malaysia Kelantan, City Campus?
2. What is the relationship between mental health and sleep quality and sleep quality among students of University Malaysia Kelantan, City Campus?
3. What is the relationship between social factors and sleep quality and sleep quality among students of University Malaysia Kelantan, City Campus?
4. What is the relationship between physical factors and sleep quality and sleep quality among students of University Malaysia Kelantan, City Campus?

5.2 RECAPITULATION OF THE FINDINGS

The purpose of this study was to investigate the relationship between learning adaption and sleep quality among University Malaysia Kelantan, City Campus students. The primary focus of this study is on the variables affecting students at University Malaysia Kelantan's City Campus's sleep quality. The link allows the researchers to understand how each component may relate to a student's lifestyle, mental health, social aspects, and physical factors. The questionnaire that the researchers created for the respondent is the basis for the results presented in Chapter 4. All the sections of the questionnaire's total of 30 questions were included. The demographic details of the respondents, including their gender, age, marital status, race, and level of education, are the main focus of Section A. Section A of the study's independent variables (IV) focuses on lifestyle; Section B on mental health; Section C on social factors; Section D on physical factors; and Section E on physical elements; while Section F of the study's dependent variables (DV), which is an adjustment in sleep quality, does the same.

The gender distribution of a total of 365 respondents was collected from the data collection. The gender distribution of respondents in this research is shown in Table 4.1 and Figure 4.1. Most of the respondents were female with 58.1% (N=212) while the minority were male which consisted of 41.9% (N=153).

In the first independent variable (IV) the frequency, mean and standard deviation for the items used to measure the Lifestyle. The mean range for Lifestyle is from 3.04 to 3.95 and the standard deviation is from 0.863 to 1.145. There were five (5) questions measured with the highest mean of 3.95 for the item L1 and L2. The geographical, economic, political, cultural, and religious setting in which a person lives has an impact on their way of life. A person's lifestyle is their way of life at some specific time and place in their surroundings. It includes people's routine behaviours and duties at work, as well as their interests, pastimes, and dietary habits. (Farhud, 2019).

Mental Health is the second independent variable (IV) in this study showing the frequency, mean and standard deviation for the items used to measure Mental Health. The mean range for Mental Health is from 2.74 to 3.24 and the standard deviation is from 0.899 to 0.989.

There were five (5) questions measured, and item MH5, which asked "Does feeling sad make you sleep late?" had the highest mean (3.24). 165 respondents (45.2%) of the 322 that responded strongly agreed and agreed with item MH5 in the survey. The statement "How often have you had panic attacks while you were sleeping?" was measured using MH3 items, and the mean score for those items was the lowest at 2.74. A total of 146 respondents (40.0%) disagreed and strongly disagreed with item MH3 in the survey. The three (3) additional components' respective means for MH1, MH2, and MH4 were 3.18, 3.11, and 3.13. Mental health includes all aspects of cognitive, behavioural, and emotional wellness. All that matters is how people behave, feel, and think. The absence of a mental condition is sometimes meant when the phrase "mental health" is used (Felman & Melegrito, 2022).

Next for independent variable (IV) shows the frequency, mean, and standard deviation for the items used to measure the Social Factors. The mean range for Social Factors is from 2.61 to 3.87 and the standard deviation is from 0.949 to 1.098. There were five (5) questions measured with the highest mean of 3.87 for item SF1 on the statement ‘Is that you overthink your studies which make you feel awake for long hours?'. There was a total of 219 respondents (59.8%) who strongly agreed and agreed on the item SF1. Meanwhile, the lowest mean was item SF2 with 2.61 on the statement 'Are you going late to class regularly?’. A total number of 162 respondents (44.4%) chosen strongly disagreed and disagreed on item SF2. The mean values for the three (3) remaining items which were SF3, SF4 and SF5 were 3.38, 3.43 and 2.94 respectively. The elements in a person's life that affect their health and wellbeing are known as social aspects of health. They include political, social, and cultural aspects, as well

as the ease with which one may obtain healthcare, education, a safe place to live, and nourishing food. Sherrell, 2021).

For the next part, show the frequency, mean, and standard deviation for the items used to measure the Physical Factors. The mean range for Physical Factors is from 2.44 to 3.75 and the standard deviation is from 1.013 to 1.148. There were five (5) questions measured with the highest mean of 3.75 for item PF1 on the statement ‘Do you often suffer from back pain, and it affects your sleep pattern?'. There were 202 respondents (55.3%) who strongly agreed and agreed on item PF1. Meanwhile, the lowest mean was item PF2 with 2.44 on the statement 'Are you consuming sleep medication regularly to get enough sleep every day?'. A total number of 183 respondents (50.1%) chosen strongly disagreed and disagreed on item PF2. The mean values for the three (3) remaining items which were PF3, PF4, and PF5 were 2.60, 2.86, and 2.57 respectively.

The physical factor is a condition where factors that affect biological, internal, or external in the body. The mechanism of a complex human body system can bring various challenges, discomfort, and side effects if the researcher doesn't take care of it properly.

Lastly, the dependent variable (DV) is the Sleep Quality among students of University Malaysia Kelantan, City Campus, the frequency, mean, and standard deviation for the items used to measure the Sleep Quality. The mean range for Sleep Quality is from 2.98 to 3.54 and the standard deviation is from 0.956 to 1.071. There were five (5) questions measured with the highest mean of 3.54 for the item SQ2 on the statement ‘My sleep quality is good every day'. There was a total of 188 respondents (51Five (5) questions were greed on the item SQ2. Meanwhile, the lowest mean was item SQ4 with 2.98 on the statement 'My sleep was restless'. A total number of 107 respondents (29.3%) chosen strongly disagreed and disagreed with item SQ4. The mean values for the three (3) remaining items which SQ1, SQ3, and SQ5 were 3.12,

3.53, and 3.21 respectively. The aim of this research is to identify the factors that influence sleep quality among students of University Malaysia Kelantan, City Campus. There are certain issues that have a strong relationship with the sleep quality of the students. There are factors such as lifestyle, mental health, social factors, and physical factors that influence sleep quality among students of University Malaysia Kelantan, City Campus.

5.3 LIMITATIONS

Despite various attempts to assure the success of the study's conduct, a few flaws were discovered that serve as a barrier to this examination. Because of this, it's essential to understand constraints and learn from them to continuously improve research quality. The capacity of this study to finish the research was constrained by several factors, including time limits on data collecting and questionnaire distribution. Finding the study materials or data required for this investigation was made more challenging by this constraint. Due to restrictions among student colleges, researchers must narrow the scope of their study and the geographic emphasis to correctly collect the desired data.

One of the study's flaws is the way the data was collected. An online survey is the only tool utilized to collect data for the analysis. This is because what the participants knew was of a limit, making it difficult for the researcher to collect information through interviews. The disadvantage of using an online survey is that the researcher cannot verify if the information provided by the respondent is correct. Additionally, a respondent may take a long time to finish an online survey, which would impede the process of obtaining data.

Another drawback is that since SPSS cannot be used to analyze the data, researchers suffer psychologically when the system cannot be used. This is a result of the researchers' incapacity. Therefore, researchers must acquire knowledge on their own, which requires time.

Researchers therefore have limited skills when analyzing the data and need additional time to comprehend how to analyze and interpret the data.

Finally, the attitude of the responder hinders the ability of the investigators to complete the analysis. It took the researchers about a month to distribute the survey on social media sites like WhatsApp and others to get responses.

The researchers must be very flexible to communicate with the targeted respondents because it is hard to predict their behavior or reaction. However, because many of the consumers generously commit, the process of getting their response proceeds well.

5.4 RECOMMENDATION FOR FUTURE RESEARCH

Studying this topic is quite interesting. For students in the future to have a better understanding of linked subject fields, they offer some recommendations for those who will follow them. This advice and suggestions may help future research by other academics.

First, the respondents' categorization could be changed to exclude people from a certain region near Kota Bahru, Kelantan. The questionnaire that was previously sent garnered 365 responses. This can help us understand how sleep quality, mental health, social factors, physical factors, and lifestyle factors are related. The scope of the questionnaire may also be widened, and it might not simply be limited to the students in Kota Bahru, Kelantan. The results of the questionnaire will be more detailed and precise if this is done.

Second, future studies should give questionnaires more time to circulate so that researchers may find people who are better suited and equipped to respond. For instance, with a sample size of 365 respondents, it is difficult to finish data collecting in a short amount of time. Afterward, researchers may clarify the questions or the goal of the study to respondents if they have any difficulties comprehending. To prevent responders from just giving the questions and answers, this is crucial. The researchers may need to offer additional clarity and explication to obtain more accurate and trustworthy data.

The last piece of guidance for potential researchers is to become familiar with analysis tools like SPSS, which is what we do. SPSS (a statistical tool for the social sciences) was used to analyze the replies, or as we might refer to them, the specifics of the respondents' input. Because there are no recommendations for the most effective methods of data analysis, learning how to utilize SPSS requires a lot of study. The assessment assumes a significant role after the data have been summarized and analyzed. The analytical system that will be utilized for future researchers' study should be properly reviewed and understood.

5.5 SUMMARY

In this chapter, researchers look at how learning adaption, a factor that affects students' sleep quality at University Malaysia Kelantan, City Campus. A cross-sectional analysis's primary flaws were the fact that there was usually no proof of a temporal link between exposure and outcome, difficulties in drawing generalizations, and possibility for bias in data collecting. It was proposed that this study make use of several methodologies, data collection strategies, and languages.

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