



**Faculty of Cognitive Sciences and Human Development**

**THE DIFFERENCE IN SLEEP QUALITY BETWEEN HUMAN-  
ANIMAL CO-SLEEPING AND NON CO-SLEEPING AMONG  
WORKING MALAYSIANS.**

**Sobhana A/P Subramaniam**

**Bachelor of Psychology (Honours)**

**2022**

UNIVERSITI MALAYSIA SARAWAK

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Final Year Project Report

Masters

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Sobhana A/P Subramaniam (71675)

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DR VOON SIOK PING  
KB04645, PA04067  
Lecturer (Psychology Programme)  
Faculty of Cognitive Sciences and Human Development  
UNIVERSITI MALAYSIA SARAWAK

Date:           30 June 2022          

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DR VOON SIOK PING  
KB04645, PR04067  
Lecturer (Psychology Programme)  
Faculty of Cognitive Science and Human Development  
UNIVERSITI MALAYSIA SARAWAK

(Date) 30 June 2022

Current Address:

No 148, Jalan Ainsdale 3/8, Persiaran Ainsdale Timur, Bandar Ainsdale, 70200, Seremban, Negeri Sembilan.

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**THE DIFFERENCE IN SLEEP QUALITY BETWEEN HUMAN-ANIMAL CO-SLEEPING AND NON CO-SLEEPING AMONG WORKING MALAYSIANS**

SOBHANA A/P SUBRAMANIAM

This project is submitted  
in partial fulfilment of the requirements for a  
Bachelor of Psychology with Honours

Faculty of Cognitive Sciences and Human Development  
UNIVERSITI MALAYSIA SARAWAK  
(2022)

The project entitled **‘The Difference In Sleep Quality Between Human-Animal Co-Sleeping And Non Co-Sleeping Among Working Malaysians’** was prepared by **Sobhana A/P Subramaniam (71675)** and submitted to the Faculty of Cognitive Sciences and Human Development in partial fulfillment of the requirements for a Bachelor of Psychology with Honours

Received for examination by:



DR VOON SIOK PING  
KBI4645, PPO4957  
Lecturer (Psychology Programme)  
Faculty of Cognitive Science and Human Development  
UNIVERSITI MALAYSIA SARAWAK

---

(Voon Siok Ping)

Date:

30 June 2022

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## ACKNOWLEDGEMENT

Firstly, I would like to thank my supervisor, Dr Voon Siok Ping, for all her support and guidance throughout the entire process. Your kind words and constant encouragement kept me going even when I was feeling doubtful of my work. You reassured me that all my efforts would not go to waste and you put me back on the right track whenever I felt lost.

Second, I would like to express my gratitude to my friends who were there for me during my toughest moments while completing this paper. All of you have never failed to allocate some time for me when I needed to speak to someone and you've all been an amazing emotional support system for me.

Next, I would like to thank my parents and siblings for everything they have done up till today. To my parents, thank you for accepting my career dreams and for keeping in touch with me from time to time. Being apart from family has its cons and I miss home at times, but you make things a little easier and bearable for me. To my siblings, thank you for looking after me and guiding me when I needed help for this paper. Being the youngest sibling, I'm glad and happy that I have two amazing older siblings who I can depend on.

Not forgetting my pet cats Ash and Snow, for being the very foundation of this study and for brightening up my days when I feel down. I feel my stress drifting away when I see your faces every day.

Last but not least, thank you to everyone who provided valuable data for my study and for sharing my questionnaire to increase the number of participants. I hope that this study will be able to benefit my juniors, fellow researchers, or to anyone who needs it. I thoroughly enjoyed each moment, the ups and downs, during the process of completing this paper. Once again, thank you.

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## **ABSTRACT**

This study aimed to investigate the presence of differences in sleep quality between working Malaysians who co-sleep and do not co-sleep with their pets. Good sleep quality is very scarce among the working class in Malaysia due to the effects of globalisation in the country, added by high levels of job insecurity and power-distance culture in Malaysia, which leads to the community overworking themselves. Therefore, in an attempt to regulate sleep cycles and reduce the risk of developing sleep disorders, the general objective of this study is to investigate the overall sleep quality from co-sleeping with pets among working Malaysians. In a sample of 150 participants collected via distribution of online questionnaires, the Independent T-Test data and reviews of the responses from the participants show that there is a difference in sleep quality, specifically that sleep quality is indeed higher among individuals that co-sleep with pets. In short, all objectives of the study are met and further interventions involving co-sleeping with animal companions to combat sleep deprivation should be implemented.

Keywords: Sleep quality, Co-sleeping, Pets, Working Individuals

## ABSTRAK

Kajian ini bertujuan untuk menyiasat perbezaan kualiti tidur antara individu Malaysia yang bekerja yang tidur bersama dan tidak tidur bersama haiwan peliharaan mereka. Kualiti tidur yang baik amat kurang dalam kalangan kelas yang bekerja di Malaysia berikutan kesan globalisasi di negara ini, ditambah pula dengan tahap ketidakjaminan pekerjaan dan budaya jarak kuasa yang tinggi di Malaysia, yang menyebabkan komuniti bekerja secara berlebihan. Oleh itu, dalam usaha mengawal selia kitaran tidur dan mengurangkan risiko menghidap penyakit tidur, objektif umum kajian ini adalah untuk menyiasat kualiti tidur apabila tidur bersama haiwan antara rakyat Malaysia yang bekerja. Dalam sampel 150 responden yang dikumpul melalui pengedaran soal selidik dalam talian, data *Independent T-test* serta penyemakan maklum balas peserta menunjukkan perbezaan dalam kualiti tidur, khususnya bahawa kualiti tidur sememangnya lebih tinggi dalam kalangan populasi yang tidur bersama haiwan peliharaan. Ringkasnya, semua objektif kajian telah tercapai dan intervensi lanjut yang melibatkan tidur bersama dengan haiwan untuk mencegah kekurangan tidur harus dilaksanakan.

Kata kunci: (Kualiti tidur, Tidur bersama, Haiwan peliharaan, Individu yang bekerja)

## **CHAPTER ONE**

### **INTRODUCTION**

This chapter provides an overview and discusses the main ideas of the study. It addresses what this study is going to investigate, in terms of demonstrating the flow of the study, formulating the problem statement and hypothesis, and gives some ideas of what this study hopes to find out.

#### **1.0 Introduction**

In Asian countries, glorification of overworking is a common phenomena, where working overtime is encouraged and dark undereye circles seem to be a sign that one is hardworking and reliable. To top it off, the existence of a “hustle-mania” culture among the younger workers have formed unrealistic expectations and goals to obtain money and afford luxuries all before the age of 30 among the generation z and upcoming generations (Sleep Deprivation - The, 2020). However, with the increasing cases of working overtime, sleep deprivation and reports of insomnia have skyrocketed. While most interventions for sleep disorders include more independent or unaccompanied solutions, such as meditating, exercising, finding ways to reduce stress etc, a more active and partnered solution has not been explored and suggested more often. Therefore, this study will traverse on the efficiency levels of incorporating more animal companion interventions, mainly with human-animal co-sleeping, in hopes of providing a broader spectrum in the case of decreasing the onset of sleep-related issues.

#### **1.1 Background of study**

Sleep disorders and irregular sleep patterns are one of the most common health issues among Malaysians. According to the World Sleep Association, over 53% of working Malaysians do not achieve the minimum seven hours sleep requirement whereby about 51%

of them suffer from work- related stress. A recent study conducted in Malaysia by Chan et al. (2021) regarding the prevalence and factors of insufficient sleep among working adults reveals that in a sample of 11,356 Malaysians, 54.7% reported getting less than seven hours of sleep regularly. Not only that, every 9 out of 10 Malaysians have insomnia to a certain degree in addition to other sleep disorders (Nur Haziqah, 2020). In Malaysia, about 35% of the population suffer from symptoms of insomnia while 12.2% have chronic insomnia (Mustapha, 2018). In another study by Zailinawati, Mazza & Teng (2012) regarding the prevalence of insomnia and its impacts on adult daily functioning, 60% among 2049 Malaysian adults reported having symptoms of insomnia, 38.9% experienced insomnia for more than three times per week, 28.6% had chronic insomnia which affected daytime functioning and the remaining 30.7% reported insomnia without daytime impairment. Obstructive Sleep Apnea (OSA) is surprisingly another common sleep disorder among Malaysians. According to the Ministry of Health Malaysia, the estimated prevalence of OSA among the general population is between 2% and 4%, while its prevalence among adult men are at 9% and adult women at 4%. Insomnia is described as recurrent inability to fall asleep and comes in two forms; acute and chronic (Holloway, 2021). Acute insomnia is sleeplessness for three to four days per week for up to three months while chronic insomnia lasts for more than three months. Holloway also writes that OSA on the other hand, is a block in the airway due to the contraction of muscles in the throat. This blockage of air flow causes snoring or gasping, hence OSA is extremely dangerous as it tends to mask itself behind the harmless snoring. In short, the evidence points to the fact that Malaysians in general experience extremely poor sleep quality.

Poor sleep quality is highly associated with decreased quality of life, and research has shown that disrupted sleep cycles negatively impacts one's life in many ways. According to Tan (2018), sleep deprivation eventually will also lead to diminished performance at the



workplace, head and body aches, disturbed concentration and memory, mood swings and in some severe cases, depression, anxiety and increased stress levels. This is supported by Zailinawati, Mazza & Teng's study in 2012 where among the participants that reported daytime disturbance due to insomnia, 47.8% and 36.5% of them displayed symptoms of anxiety and depression respectively. The tendency for them to lose focus due to insufficient sleep and get involved in road accidents also increased. Meanwhile, Italian psychiatrist Professor Dr Laura Palagini associates good sleep, balanced diet and regular exercise as the three foundations of quality health and that a disruption in sleep cycles can interfere with cognitive functioning and emotional regulation which in turn impairs our decision-making process (Mustapha, 2018). Not only that, there have been links between deprived sleep and its effects on behaviour. As described by clinical psychologist Jessie Foo, emotional disturbance and reactivity are interrelated with a lack of sleep. Some of the most common behaviours displayed by people with insomnia include aggression, impulsiveness and increased suicidal tendencies. Others include physical impairments such as increased onsets of headaches, hypertension and heart attacks (Zailinawati, Mazza & Teng, 2012). It is safe to say that these impairments in cognitive functioning and overall behaviour will take a toll on one of the most important populations in the country that depend on decision-making, proper behaviour etc, which is the working population.

Just as how work demands can affect one's sleep-cycle, inadequate sleep can in turn affect one's performance at work. Hui and Grandner (2015) found that employees who experienced sleep disturbances were more frequently absent from work, had higher costs of healthcare and displayed lower work performance. They write that insufficient sleep is one of the eight major behaviours displayed by employees that should be prevented at workplaces in order to improve work wellness and productivity, as according to a recent World Economic Forum. Another study by McKibben et al., (2004) found that depleted sleep quality was

associated with disrupted work performance and impaired everyday functioning, further strengthening the relationship between insufficient sleep and decreased productivity at work. Hui and Grandner (2015) attribute decreased work productivity with inability to fulfill demands related to management, output, physical job and mental and interpersonal demands. Another study on impacts of sleep on work productivity and safety further contributes that disrupted sleep cycles have increased the chances of fatigue, sleepiness and decreased work performance among employees, followed by impairments in affective reactivity or irritability, overall motivation, subjective effort, workplace accidents and performance on various tasks requiring vigilance and complex cognitive functioning (Pilcher & Morris, 2020). Hence, the overall effects of insufficient sleep are evidently detrimental to the human mind and body, posing threats to one's life-span, mental health, behavior and attitude and overall quality of life. Moreover, it is clear that poor sleep quality will decrease their quality of life, thereby reducing their performance in the workforce and ultimately leading to a decline in the economic stability of the country.

Due to this, the Malaysian government has taken some measures to combat the rise in insomnia, OSA and other sleep disorders in respect to having generally poor sleep. In 2011, the Medical Development Division of the Ministry of Health (MoH) Malaysia released a write-up on Standards of Sleep Facility in MoH. This book contains information ranging from some of the potential causes of poor sleep and sleep disorders, standard requirements of the following: sleep facilities, personnel such as clinicians in charge, sleep specialists and certified sleep technicians, equipment such as polygraph and Positive Airway Pressure (PAP) Therapy etc. This book was written with the specific purposes of determining the epidemiology of sleep-related disorders among Malaysians and to raise awareness on the impacts of sleep disorders and for it to gain recognition as a public health issue and ultimately as “a part of the national agenda”. Furthermore, on the MoH MyHEALTH Official Portal,

there is a section dedicated to sleep disorders which include some of its causes and followed by treatment plan suggestions such as referring to a doctor or going for behavioral therapy such as sleep therapy. Others include rehabilitation methods such as sleep hygiene techniques. Some examples include setting some pre-sleep rituals like avoiding heavy meals before bed and taking warm milk (Farahida, 2012). Not only that, according to several institutions such as the American College of Physicians (ACP), Academy of Sleep Medicine (AASM) and National Institution of Health (NIH) have claimed that one of the highly recommended intervention plans is Cognitive Behavioral Therapy for Insomnia (CBT-I) (Qaseem et al., 2016; Sateia et al., 2017; Taylor & Pruiksma, 2014 as cited in Oon, 2021). CBT-I, as explained by Newsom (2020), focuses on helping the client to identify behaviours, feelings and emotions and thoughts that may be leading to the symptoms of insomnia. A CBT-I provider will then attempt to reframe or rewire these false constructs and promote a more conducive mindset for improved sleep.

## **1.2 Problem Statement**

Although there are a few interventions implemented by the government of Malaysia to treat and prevent poor sleep quality and sleep related disorders, these interventions are still not widely practiced enough within the country. Furthermore, numerous studies have pointed out that some of the major contributions to insufficient sleep are due to unhealthy habits and behaviours that are practiced by the individuals themselves. Tan, S.C., (2018) writes that some of the factors that contribute to difficulty falling asleep include unhealthy lifestyle and sleep habits, environmental issues (such as excessive noise, bright lighting, etc) and prolonged use of electronic gadgets. Other factors that can be associated with less sleep include psychological distress, such as, the presence of mental illnesses, a smoking habit, presence of children, usage of mobile devices in the bedroom, and overall poor lifestyle habits (Chan et al., 2021). Hence, these studies point out the fact that regardless of the

number of interventions that may be implemented in the country, ultimately, in order to reduce the prevalence of sleep disorders and overcome poor sleep quality, individuals must practice healthier lifestyles and proper self-care habits in order to experience better sleep quality. However, the Malaysian working population is unable to practice these self-care habits due to insufficient time and capability due to high workplace-related stress.

It is evident that the working culture in most Asian countries such as Malaysia can be described as hectic and stress-inducing due to the high demands of the workplace. According to Tee (2020), the Department of Statistics Malaysia reported in 2016 that due to an increase in knowledge-based work and globalisation, up to 83.8% of Malaysians work for more than 40 hours per week. In another research that studied the impact of job demands, motivational characteristics and social support in an organisation on psychological strain in Malaysian employees, the results showed that job demands and a lack of motivation are positively associated with anxiety and depression while social support did not affect their psychological condition. This was related with the high culture of collectivism and power-distance in Malaysia in addition to most employees feeling a sense of job insecurity at their workplace (Pantik, 2012). Job insecurity is described as the lack of confidence that one's employment is secure, thus employees tend to work overtime in order to secure their placement at the workplace. All of these factors lead to an increase in psychological strain and more time spent at work, thus preventing them from achieving the required 7 hours of sleep per night.

However, even though adequate sleep quantity is not able to be achieved, sufficient sleep can still be acquired if one has good sleep quality. Sleep quality is attributed to certain features such as how long it took them to fall asleep, how many times they woke up during the night, and how rested they felt when they woke up (Pilcher, Ginter, & Sadowsky, 1997). One is able to secure good sleep quality by tackling some of the main causes of insomnia, which is by practicing healthier habits and maintaining overall quality of life, which include

exercising regularly, reducing screen-time of electronic devices before bed, finding ways to reduce stress levels etc. Therefore, one method of which its effectiveness is countless proven to improve quality of life is by obtaining a pet, or an animal companion. In a study by Li et al., (2017) regarding the overall health status among a sample of full-time working Malaysian pet owners and non-pet owners, their results revealed that the individuals who were highly attached to their pets had significantly better perceived mental health and perceived stress compared to non-pet owners. They further explained that the contributing factors that led to these findings was possibly due to the social support and emotional connection that is formed between pet owners and their pets, which can help alleviate stress levels. Shoesmith et al., (2021) also reported that physical activity was encouraged and promoted due to pet ownership, as animals appeared to improve mobility, increase exercise participation, and promote nature engagement among owners. Hence, it is clear that animal companionship can tackle almost all the factors contributing to poor sleep quality, which can therefore decrease the occurrence of sleep deprivation among the working population.

However, while many studies regarding animal companionship and increased mood, promoting physical exercise, reduced symptoms of mental health conditions etc have been conducted in Malaysia, studies on co-sleeping between animals and humans to directly improve sleep quality have yet to be executed in the country. Hence, there are limited studies regarding the direct effects of co-sleeping in Malaysia on the sleep quality of the working population. As the prevalence of sleep disturbances and disorders among Malaysians are increasing annually, it is crucial that more studies are conducted on the methods to regulate sleep cycles and reduce the risks of developing sleep disorders. As a result, the current study is aimed at investigating the difference in sleep quality among working Malaysians who co-sleep and do not co-sleep.

### 1.3 Research Objectives

#### 1.3.1 General Objective

This study aims to investigate the overall sleep quality from co-sleeping with pets among working Malaysians.

#### 1.3.2 Specific Objectives

The specific objectives for this study are;

1. To determine the difference in sleep quality between co-sleeping with pets and not co-sleeping among working Malaysians.
2. To investigate the effects of co-sleeping with pets on sleep quality among working individuals.

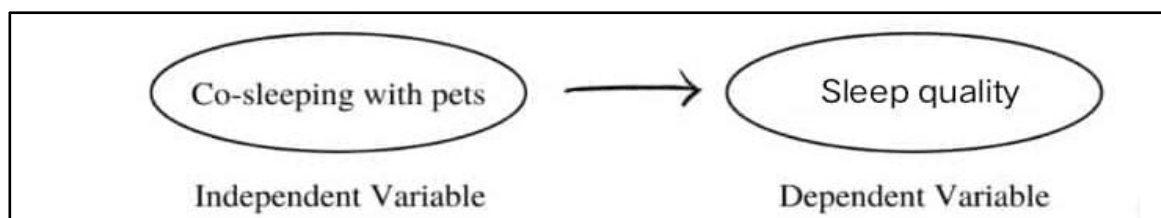
### 1.4 Research Questions

1. What is the difference in sleep quality in working Malaysians when co-sleeping and non co-sleeping with pets?
2. How does co-sleeping with pets affect the sleep quality among working Malaysians?

### 1.5 Research Hypothesis

The hypothesis for this study is that there is a difference in overall sleep quality among co-sleepers and non co-sleepers.

### 1.6 Conceptual Framework



*Figure 1: Conceptual Framework*

### 1.7 Significance of Study

By diverging into the study on regulation of sleep patterns with the aid of pet co-

sleeping from a Malaysian perspective, this study promotes understanding of its occurrence to a certain extent in Asian cultures. The data gathered from working individuals in the country will make a good addition to the various methods to promote good quality sleep in order to improve overall performance in Malaysia's workforce. With the results and information collected from the research, it can serve as a foundation for more widespread and creative methods to improve sleeping habits and prevent severe sleep deprivation. Furthermore, it can promote animal adoption and cultivate more loving traits in Malaysians. Animal therapy in workplaces and universities can be implemented in order to help reduce the stress levels of working students and company workers, which in turn can also lead to improved sleep.

## **1.8 Definition of Terms**

### **1.8.1 Sleep quality**

#### **Conceptual definition**

Sleep quality is defined as an individual's overall satisfaction of sleep, attributed by the duration taken to fall asleep, the frequency of mid-sleep wakefulness and feeling of restfulness post-awakening (Pilcher et al., 1997).

#### **Operational definition**

In this study, sleep quality was measured by the Pittsburgh Sleep Quality Index (PSQI). It consists of 19 self-rated questions that measure the quality of sleep over the past one month, with a range of 0 to 3 per question. The highest global PSQI score is 21 while the lowest score is 0. Higher scores indicate poor sleep quality while lower scores indicate good sleep quality. According to Backhaus et al., (2002) the test-retest reliability of PSQI is 0.87 while its sensitivity and specificity of 98.7 and 84.4 respectively, indicate that it is a valid marker of individuals with insomnia and other sleep-related disorders. Meanwhile, the

Cronbach alpha score of PSQI is 0.83 (Smyth, 2012). Hence, PSQI is a valid and reliable test that can be used to measure sleep quality.

### **1.8.2 Human-animal co-sleeping**

#### **Conceptual definition**

The term co-sleeping can be referred to as room sharing or when more than one entity is occupying the same room space (C.J. Andre et al., 2020). Goldberg & Keller (2007) define co-sleeping as when two entities are close enough to each other to be able to exchange at least two sensory stimuli, which includes touch, movement, hearing, sight and smell. Hence, human-animal co-sleeping refers to at least one human and one animal companion sleeping in the same room as each other and can also include bed-sharing. Considering the fact that countless studies have reported the benefits of animal interaction and ownership to the owner's mental, physical and overall psychological well-being, which are among some of the factors that can lead to improved sleep quality, studies on the direct approach of co-sleeping and its effects on sleep quality are scarce. Hence, this research aims to study the effects of human-animal co-sleeping on sleep quality of the Malaysian working population.

#### **Operational definition**

The sample of participants chosen for the study are working Malaysians who own pets. The participants were divided into two categories: those who co-sleep and those who do not co-sleep with their pets. The segregation was achieved by including in the Google Form questionnaire this question, "Do you co-sleep with your pet?". Participants who answered "Yes" were directed to the next section on co-sleeping. In this section, the questions include, "Does your pet sleep in the same bed as you?", "Does your pet sleep in the same room as you? (For example, you sleep on your bed and your pet sleeps on their bed/on the floor but you are both sleeping in the same room)", "How often do you co-sleep with your pet?" and "How