

**E-PROCEEDING HOTWEC 4.0**  
**RESEARCH TOWARDS IR 5.0**

**NURTURING  
HOSPITALITY,  
TOURISM AND  
WELLNESS WORLD**

**FHPK, UMK**



E-PROCEEDING

# RESEARCH TOWARDS IR 4.0

## ***Editors***

Velan Kunjuraman, PhD

Suchi Hassan, PhD

Ruzanifah Kosnin, PhD

Aifa Rozaini Mohd Radzol, PhD

**Copyright: Faculty of Hospitality, Tourism and Wellness, UMK, 2021**

All rights reserved. No part of this publication may be reproduced, stored in production transmitted in any form, whether electronic, mechanical, photocopying, recording or otherwise, without having permission from the Faculty of Hospitality, Tourism and Wellness Universiti Malaysia Kelantan.

No ISSN: 978-967-2229-34-6

Published by:

Faculty of Hospitality, Tourism and Wellness Universiti Malaysia Kelantan  
Kampus Kota, Pengkalan Chepa  
Karung Berkunci 36  
16100 Kota Bharu, Kelantan

# ACKNOWLEDGEMENT

It is our pleasure to present this volume consisting of selected papers based on poster presentations from the Hospitality, Tourism & Wellness Colloquium 4.0 2020, held on January 11 and 12, 2021 at the Universiti Malaysia Kelantan. The main colloquium objective is to explore, within the generative framework, different acquisition contexts, across a variety and between different components of the Hospitality, Tourism & Wellness fields with the theme was "Research Towards IR 5.0". The colloquium was organized and supported by the Faculty of Hospitality, Tourism and Wellness (FHPK), Universiti Malaysia Kelantan (UMK).

We would also like to extend our gratitude to the excellent work of our colloquium organizing committee which comprised of the following:

Khairil Wahidin Awang, PhD  
Ghazali Ahmad, PhD  
Roslizawati Che Aziz, PhD  
Mohd Fadil Mohd Yusof, PhD  
Marlisa Abdul Rahim, PhD  
Nor Dalila Marican, PhD  
Derweanna Bah Simpong, PhD  
Normaizatul Akma Saidi, PhD  
Velan Kunjuraman, PhD  
Siti Fatimah Ab Ghaffar, PhD  
Hasif Rafidee Hasbollah, PhD  
Nur Hafizah Muhammad, PhD  
Aifa Rozaini Mohd Radzol, PhD  
Suchi Hassan, PhD  
Siti Salina Saidin, PhD  
Ahmad Fahme Mohd Ali, PhD  
Nur Athirah Sumardi, PhD  
Ruzanifah Kosnin, PhD  
Bintang Handayani, PhD  
Naziatul Aziah, PhD  
Nor Syuhada Zulkefli, PhD  
Mazne Ibrahim  
Raja Norliana Raja Omar  
Hazyati Hashim  
Nur Aliah Mansor  
Nurzehan Abu Bakar  
Nurul Fardila Abd Razak  
Mohd Hafzal Abdul Halim  
Nor Maizana Mat Nawi  
Nur Azimah Othman  
Fadhilahanim Aryani Abdullah  
Abdullah Muhamed Yusoff

We would also like to acknowledge the excellent work of our conference reviewers of the original abstracts and the papers submitted for consideration in this volume for having so generously shared their time and expertise. Along with these individuals, we wish to thank our local colleagues and students who contributed greatly to the organization and success of the colloquium.

|    |   |     |
|----|---|-----|
| 33 | <b>UNDERSTANDING MOTIVATION FACTORS, EMPOWERMENT AND SUSTAINABILITY OUTCOMES OF HOMESTAY ENTREPRENEURS IN KELANTAN.</b>                                 | 353 |
|    | Rachel Teoh Wai Kei, Haswani Binti Rahmat, Mohamad Adam Bin Mohd Afandi, Nurul Azizah Binti Azizan & Velan Kunjuraman                                   |     |
|    | <b>WELLNESS</b>   |     |
| 34 | <b>A DETERMINING FACTORS OF STRESS DISORDER AMONG UMK VETERINARY STUDENT</b>  | 367 |
|    | Nur Fakhira Binti Mohd Asri, Nurul Nabilla Binti Mohd Saipul Lizam, Tanasilen A/L Arumugan, Wan Nur Afifah Binti Wan Mohd Yusuf                         |     |
| 35 | <b>DETERMINANTS OF DEPRESSION AMONG NURSING STUDENTS IN USM, KUBANG KERIAN, KELANTAN</b>  | 379 |
|    | Nurul Shafidah binti Shuhazi, Shahrul Nur Adila binti Shahrul Nizam, Siti Aishah binti Hambali & Siti Syarah binti Lub                                  |     |
| 36 | <b>EXPLORING THE ROLE OF NATURAL HOT SPRING IN THE CONTEXT OF WELLNESS TOURISM</b>  | 390 |
|    | Noraznieza Binti Nor Azhar, Noorfara Atika Binti Ithnan, Nor Suhada Binti Ahmad, Nur Alfazliyana Binti Mohd Zulkifli & Nor Dalila Binti Marican         |     |
| 37 | <b>FACTORS ASSOCIATED WITH CONFINEMENT CARE SERVICES UTILIZATION AMONG CUSTOMERS OF CONFINEMENT CARE SERVICE IN JOHOR</b>                               | 400 |
|    | Muhamad Kamal Awang, Fatin Najihah Ahmad Bajuri, Anis Ameera Nasha Mohd Hamdi & Mohammad Hafizul Amir Hamzah  |     |
| 38 | <b>FACTORS ASSOCIATED WITH UTILISATION OF PAP SMEAR SCREENING TEST AMONG WOMEN UNIVERSITI MALAYSIA KELANTAN (UMK) STAFF</b>                             | 409 |
|    | Aisyah Humaira Amirudin, Fatin Nabilah Mohd Nordin, Muhammad Hafizul Azim Johari & Nurfatina Kaharudin  |     |
| 39 | <b>FACTORS INFLUENCING HEALTH INFORMATION-SEEKING BEHAVIOUR ON THE WEBSITE AMONG UNIVERSITY MALAYSIA KELANTAN UNDERGRADUATE STUDENTS IN CITY CAMPUS</b> | 418 |
|    | Sevin Kumar Yathavan, Shahkilah Binti Mohd Shah, Sivanes Valaiyapathi & Teoh Yong Chun  |     |
| 40 | <b>FACTORS OF SKIPPING BREAKFAST INFLUENCING STUDENTS' LIFESTYLE AMONG UNIVERSITY MALAYSIA KELANTAN CITY CAMPUS STUDENTS</b>                            | 431 |
|    | Rinusha Raja, Rozilah Silap, Siti Afizah & Siti Rosnani   |     |
| 41 | <b>FACTORS THAT ASSOCIATED WITH DEPRESSION AMONG CHILDREN IN MALAYSIA</b>   | 455 |
|    | Busyra Ain Binti Muhammad Bakri, Darshini Nair A/P Vithiananthan, Noor Syahirah Binti Aziz, Nurul Fatimah Binti Taib.                                   |     |
| 42 | <b>FACTORS THAT ASSOCIATED WITH WELLNESS TOURISM IN MALAYSIA</b>  | 463 |
|    | Chan Pui Yee, Hooi Mei Qing, Jannu A/P Subramaniam & Mohamad Ridzuan Bin Zainuddin  |     |
| 43 | <b>FACTORS THAT INFLUENCE MALE STAFFS AND MALE STUDENTS (FHPK) UNIVERSITI MALAYSIA KELANTAN IN CHANGING TOBACCO CIGARETTES TO E-CIGARETTES</b>          | 471 |
|    | Nur Alia Suhaimah Binti Mohd Azlan, Nur Anisah Binti Mohd Yusof, Nur Nabilah Binti Kamaruddin, Nur Syafiqah Binti Ahmad Sukri                           |     |

|    |  |  |     |
|----|--|--|-----|
|    |  |  |     |
| 44 | <b>FACTORS THAT INFLUENCE THE INCREASING OF OBESITY AMONG UMK CITY CAMPUS STUDENTS</b>   |  | 484 |
|    | Fatin Anissa Binti Halim, Juvanna D/O Aston George Lange, Nazatul Roziana Binti Zainal Abidin & Thurga Nandini A/P Muthu Kumar                         |  |     |
|    |  |  |     |
| 45 | <b>FACTORS THAT INFLUENCE THE INTENTION OF PURCHASING BEAUTY PRODUCTS AMONG FEMALE CONSUMERS FROM LEADING DRUGSTORE IN TERENGGANU</b>                  |  | 495 |
|    | Sharimila A/P Pachimuthu, Wan Nurul Hidayah Binti Wan Awang & Wan Siti Aminah Binti Wan Shamsuddin, & Loke Ji Hao                                      |  |     |
|    |  |  |     |
| 46 | <b>FACTORS THAT INFLUENCE TOWARD STRESS AMONGST FEMALE STUDENTS YEAR 4 IN UNIVERSITY OF MALAYSIA KELANTAN, PENKALAN CHEPA</b>                          |  | 508 |
|    | Nur Isna Najiha Md Iskandar, Nurfarah Hanis Jamaluddin, Nur Haziqah Zulkifli & Nur Ezzah Syafiqah Rohaily @ Abd Rahman                                 |  |     |
|    |  |  |     |
| 47 | <b>KNOWLEDGE, ATTITUDE AND PRACTICE OF SKIN WHITENING PRODUCT AMONG FEMALE RESIDENTS AT COLLEGE TAMAN BENDAHARA</b>                                    |  | 518 |
|    | Aisyah Binti Azman, Muhamad Faisal Bin Ishak, Nik Liyana Nabihah Binti Nik Adnan & Noor Fadhiya Binti Rosdi  |  |     |
|    |  |  |     |
| 48 | <b>MOTIVATIONAL FACTORS THAT AFFECT THE VISIT INTENTION TO LOQOH WELLNESS AND SPA AMONG KOTA BHARU TOWN PUBLIC</b>                                     |  | 528 |
|    | Muhammad Syakir Abas, Nurul Asfarisna Izzaty Abdullah, Muvina Vijayakumaran & Nurul Auni Ramli Shariff   |  |     |
|    |  |  |     |
| 49 | <b>PREVALENCE, PREDICTORS AND TRIGGERS OF MIGRAINE HEADACHE AMONG FEMALE STUDENTS IN KEMUMIN RESIDENTIAL COLLEGE</b>                                   |  | 539 |
|    | Adlina binti Azmi, Arisa Arifah binti Kamaluddin, Azizah binti Zulkifli, Hasbi An Najihah binti Md Kasim & Muhammad Kama Syahril Azlan bin Kamaruzaman |  |     |
|    |  |  |     |
| 50 | <b>RISK FACTORS OF INSOMNIA DISORDER AMONG SCIENCE STUDENTS IN UNIVERSITY MALAYSIA KELANTAN</b>  |  | 550 |
|    | Nur Idayu Bt Kamaruddin, Nur Sufina Binti Azlan, Vinnoth Ganisan, Zul Akiqah Bt Mohd Noor  |  |     |
|    |  |  |     |
| 51 | <b>SPIRITUAL PERSPECTIVE AND MENTAL HEALTH STATUS AMONG WELLNESS STUDENTS AT UNIVERSITI MALAYSIA KELANTAN</b>  |  | 562 |
|    | Nur'ain Syazwani Binti Ruzaidi, Nor Syakirah Binti Mohd Shukri, Norsuhada Binti Shamsuri, Nor Amira Binti Mahiddin & Nor Dalila Marican                |  |     |
|    |  |  |     |
| 52 | <b>THE FACTORS CONTRIBUTING TO CHILDHOOD VACCINATION HESITANCY AMONG PARENTS IN KAMPUNG ASAM JAWA, BALING KEDAH.</b>                                   |  | 572 |
|    | Nur Amalia Sabrina Binti Sobri, Nur Anizatul Azna Binti Omar, Nur Ashikin Natasha Binti Musa, Nur Hazirah Binti Abdul Razak                            |  |     |
|    |  |  |     |
| 53 | <b>THE FACTORS OF UMK STUDENTS' VISIT INTENTION TO HALAL SPA IN KOTA BHARU</b>   |  | 582 |
|    | Ahmad Bukhori bin Che Mahmood, Muhammad Amirul bin Mohamed Azmi, Muhammad Fariz bin Mohd Puzi & Muhammad Hilman bin Idris                              |  |     |
|    |  |  |     |
| 54 | <b>THE FACTORS THAT INFLUENCING FAST FOOD CONSUMPTION BEHAVIORS AMONG UMK STUDENTS IN CITY CAMPUS</b>  |  | 593 |
|    | Ranjitha A/P Marathandi, Siti Najihah Binti Nordin, Siti Noornajiha Binti Mohd Najib, Tan Yee Yun & Dr. Nur Athirah Binti Sumardi                      |  |     |
|    |  |  |     |
| 55 | <b>THE INFLUENCE OF WORK STRESS TOWARD WORK PERFORMANCE AMONG WORKERS IN HUMAN RESOURCES NSK SEREMBAN 2, NEGERI SEMBILAN</b>                           |  | 607 |
|    | Syed Lukman Hakim bin Syed Mohd Noor, Olivia Michella A/P Johnson, Rabi'atul Adawiyah bt Helmeshah & Siti Noor Akmawati bt Ahmad                       |  |     |

|    |  |     |
|----|--|-----|
|    |  |     |
| 56 | <b>THE PERCEPTION OF ART THERAPY TO REDUCE A STRESS LEVEL AMONG UNIVERSITI MALAYSIA KELANTAN (UMK) STUDENTS</b>  | 618 |
|    | Nur Arina Abdul Rashid, Nur Shafiqah Nordin, Tri Julianti Yusof & Zafirah Che Zainol   |     |
|    |  |     |
| 57 | <b>THE PREVENTION, CONTROL AND EVALUATION RELATED TO HAND, FOOT, AND MOUTH DISEASE (HFMD) AMONG CHILD CAREGIVERS AT TAMAN KURNIA JAYA, PENGKALAN CHEPA, KELANTAN</b> | 629 |
|    | Adni Halianie Binti Adnan, Hanisah Binti Roslee, Kee Shu Wey, Loo Kar Wai  |     |
|    |  |     |
| 58 | <b>THE RELATIONSHIP BETWEEN CONSUMER BEHAVIOUR AND INTENTION TO PATRONIZE MUSLIM FRIENDLY SPA AMONG A COMMUNITY IN KOTA BHARU, KELANTAN</b>                          | 638 |
|    | Norhamizah binti Mohamad Abiah, Nor Syazleen binti Azahar, Nor Farhana binti Hadidi, Noorzatil Izni Adlini binti Saroni & Nor Dalila Marican                         |     |
|    |  |     |
| 59 | <b>THE RELATIONSHIP BETWEEN SELF-ESTEEM AND ACADEMIC PERFORMANCE AMONG STUDENTS OF UNIVERSITY MALAYSIA KELANTAN, CITY CAMPUS</b>                                     | 649 |
|    | Mai Husna Binti Mior Kamarul Bahrain, Fatin Aini Binti Kamarul Arriffin , Nurul Arifah Binti Suhaimi, Muhammad Shazzuan Bin Mohd Shaker                              |     |
|    |  |     |
| 60 | <b>FACTORS AFFECTING THE PURCHASE INTENTION AMONG UNDERGRADUATE STUDENTS TOWARDS FAST-FOOD RESTAURANTS IN EAST COAST MALAYSIA</b>                                    | 659 |
|    | Muhammad Nur Hilmi, Nurul Najihah, Nurul Nabilah & Thong Bei Yee   |     |

# Risk Factors of Insomnia Disorder among Science Students in University Malaysia Kelantan

Nur Idayu Bt Kamaruddin, Nur Sufina Binti Azlan, Vinnoth Ganisan, & Zul Akiqah Bt Mohd Noor

*Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan Corresponding email: [aziah.mr@umk.edu.my](mailto:aziah.mr@umk.edu.my)*

---

## ABSTRACT

Insomnia is a common sleep disorder that trigger a problem fall asleep, hard to stay asleep, or cause people to wake up too early and not be able to get back to sleep. The objectives of this study are to identify the factors of insomnia and to study the relationship between the risk factors and insomnia disorder among University Malaysia Kelantan Science Students. There are 320 Science students who have been randomly involves in the questionnaires conducted by the researcher. The elements analysis of the survey results revealed that the lifestyle of students, stress and phone usage strongly influences insomnia among Science students. Data analysis was conducted by using SPSS. This study provided numerical data about the lifestyle of students, stress, phone usage and insomnia among the Science students of University Malaysia Kelantan. Stress stated that the highest value of correlation. The findings which are the relationship between the lifestyle of students, stress and phone usage of the data are essential to improve the risk factors of insomnia among Science students of University Malaysia Kelantan. Based on research findings, it was found that all research objectives were achieved and all hypothesis were supported. Thus, lifestyle of students, stress and phone usage influence Science students in University Malaysia Kelantan to get insomnia.

**Keywords: Insomnia Disorder, Lifestyle of Students, Stress, Phone usage, Science Students**

---

## INTRODUCTION

Insomnia is a sleeping disorder in our lives where it is hard to sleep or stay asleep, even when a person has the opportunity to do so. The condition is primarily characterized by discontent with the duration or quality of sleep, and difficulties in initiating or sustaining sleep, along with severe anxiety and daytime disability. It may appear more frequently than not as a significant problem or may co-occur with other medical or psychological conditions, such as pain and depression (Morin, Drake, Harvey, Krystal, Manber, Riemann & Spiegelhalder, 2015). Excessive daytime sleepiness among adults has been demonstrated to be a public health issue (Zailinawati, Teng, Chung, Teow, Lee & Jagmohni, 2009). Studies show that insomnia affects 9.4% to 38.2% of university students (Haile, Alemu & Habtewold, 2017).

The search for new solutions to improve community health has been reflected in paying attention to lifestyle concepts, especially a healthy lifestyle. Lifestyle factors in later life largely determine human health. In any case, the way of life of youngsters particularly students are not quite the same as others since they are undoubtedly vulnerable and open to all curiosity and changes. The study period involves a lot of physical and mental resources, as the students have to split their time between classes, tests, and social life. Students are chosen because of the above-mentioned accessibility and responsiveness to change and fashion and because of the lifestyle aspect associated with studies (Jakubiec, Kornafel, Cygan, Gorska-Klek & Chromik, 2015). The change from adolescence to adulthood also coincides with the college years are a vulnerable time when young people make lifestyle decisions that continue in later adulthood and impact lifelong health (Deasy, Coughlan, Pironom, Jourdan & Mcnamara, 2014).



Besides, insomnia increases rapidly among students because they are exposed to multiple stressors in their studies. This study shows that the academic overload, pressure to strive for success, and future burdens that amend their sleep quality. Though persons that have family records such as depression or anxiety and also maybe lead to the factor of due to traumatic experiences (Goel, Sadeh-Sharvit, Trockel, Flatt, Fitzsimmons-Craft, Balantekin & Taylor, 2020). Based on Belingheri, Pellegrini, Facchetti, De Vito, Cesana and Riva (2020), the study shows that anxiety can be one of the risk factors in the future of anxiety. The relationship between anxiety (and depression) affects the insomnia among Science students because they think too much about their future and struggling to achieve their targets. Thus, the best results have shown that most of the Science students keep pressure to have a good achievement that can affect sleep quality and achieve insomnia. It is because performance in studies must be the priority than having a good sleep.

Smartphone usage has a direct impact on insomnia. As we know, smartphones are the most powerful source of information technology and communication. The researcher concluded that smartphone radiation can increase the species of reactive oxygen that is important for the development of metabolic and neurodegenerative diseases (Subramani Parasuraman, Yee, Chuon & Ren, 2017). Based on Alhassan, Alqadhib, Taha, Alahmari, Salam and Almutairi, (2018) smartphone addiction is a common problem among adults worldwide. It expresses itself in their phones' excessive use when engaging in a variety of activities such as learning, driving, social interactions and sleeping. It can be said that users of society are unaware of smartphone use addiction is a serious problem that can harm the thinking, behavior, tendencies, feelings and well-being of a person. It can be a risk factor especially for depression, loneliness, anxiety and sleep.

This study aims to identify the factors of insomnia among University Malaysia Kelantan Science Students. The target population of the study is the Science students of University Malaysia Kelantan.

There are two objectives of this research:

1. To identify the factors of insomnia among University Malaysia Kelantan Science Students.
2. To study the relationship between the risk factors and insomnia disorder among University Malaysia Kelantan Science Students.

### **Significance of the Study Students**

The results of the study are important because students will know the ways to avoid getting insomnia and able to apply the ways in daily routine to stay a healthy lifestyle. Thus, it gives the advantage to the students to improve their academics.

#### *University Malaysia Kelantan*

This study will benefit University Malaysia Kelantan as the subject to be studied. This institution will in the end know what are the important strategies and programs that needed when practicing insomnia among students to a daily healthy lifestyle.

#### *Future Researcher*

This research aims to contribute clearer information and address all new researchers' existence of information related to insomnia factors among students. This can help them investigate more on insomnia-related study.

## **LITERATURE REVIEW**

### **Insomnia**

Insomnia is an inability to sleep even if someone has a desire to sleep. Insomnia is a common sleep complaint, with 10% of adults in the general population experiencing insomnia disorder, defined as lasting longer than three months in insomnia disorder (POgei, 2020). Various factors involving insomnia disorders especially to young adults but very few are known. Most sleep experts agree that the adult sleep requirement is typically between 6 and 10 hours of sleep per 24-hour period with the majority of individuals requiring approximately 8 hours of sleep per day (Shakeel, 2019). Long-term insomnia is associated with an increased risk of major new-onset depression and perhaps an independent risk factor for heart disease, hypertension and diabetes, especially when combined with less than 6 hours of night's sleep (John Winkelman, 2015).

Insomnia is a common health problem experienced by Malaysians. According to the World Health Organization (2006), showing the life expectancy for women in Japan reached 86 years and the age of men is 79 years. While in the United States, the hope of life expectancies to women reach 83 years and the age of men 79 years. In Malaysia, life expectancy for women only reaches 79 years, and men are 69 years. In Malaysia, 33.8% of the general population were reported to have insomnia symptoms and 12.2% had chronic insomnia (Zailinawati, 2008). Due to academic demands and the high prevalence of insomnia disorder among science students, they are exposed to a lot of pressure. Napping in the lecture halls is common among science students, but the daily sleepiness rate in this group is less well documented (Teng, 2009). About one-third of the population had associated with impaired daily function and it has a significant impact on psychological well-being and daily functioning because of the insomnia disorder.

### **Lifestyle of students**

Lifestyle patterns define the well-being of an individual, and behaviours established early in life appear to continue throughout life. Lifestyle can be healthy or unhealthy, based on food preferences, level of activity, and general behaviour. In certain cases, students develop unhealthy lifestyle patterns to alleviate the burden of academic life. In several physical and psychological issues in students, the presence of stress can be blamed and attempts have been made to quantify their relationship to their positive or negative lifestyle choices (Jafari, 2018). Sleep is influenced by lifestyle and complex environmental factors. These are known as "sleep hygiene rules," which define the generally established set of behaviours that can promote sleep. Any of these rules on sleep hygiene are lifestyle-related, such as physical exercise, smoking habits, alcohol consumption and eating habits. Sleep is strongly controlled by the circadian rhythm whose pacemaker is established in the pineal gland and the effector of which is melatonin (Gianfredi, 2018). A chronic unsound lifestyle, including diabetes, obesity, and depression, is believed to be implicated in the onset and progression of diseases. Lifestyle diseases are not only the greatest threat to a healthy life span, but they also harm the national health expenditures (Sato, 2016).

### **Stress**

Insomnia also related to poor sleep quality because of science students some of them facing depression and psychological stress (Waqas, 2015). This study shows that most science students have different background culture that can cause of their performance in science fields. Although, they said that science fields are the most stressful field in education because of the high demand for academic performance and professional (Waqas, 2015). Because of that science students always facing stress and depression because they think a lot about their performance the next day. Otherwise, daily test can affect their sleep quality and can bring major disorders like insomnia (Waqas, 2015). That has been shown that science student always does some revision before they get to sleep but

their mind keeps using and never get rest. These symptoms can lead them to psychological stress and depression in their life.

### Phone usage

For teenagers and students, phones are necessary in their live and phone have made their lives more comfortable, easier, and safer but on the other hand, extreme use of mobile phones will lead to poor health which led to fatigue, stress, headaches, and sleep disturbance. By Kesari et al., radiation form the mobile phones would increase reactive oxygen species, which play an important role in the development of metabolic and neurodegenerative disease (Parasuraman, 2017). In their study, Sharma et al. (2019) stressed that the increasing use of mobile phones is adversely affecting daily activities as well as science student's studies. When we're talking about "nomophobia," or 'No Mobile Phone' (NMP) numbers, 66% of people in the UK are afraid of either losing or being separated from their phones, while 41 % of people own [1]. While the addiction to smartphone use in India, according to a meta-analysis, ranged from 39% to 44% as measured for fixed effects ( $P < 0.0001$ ) (Sharma et al., 2019).

### Research Hypothesis

In this study, there were three hypotheses related to identify the relationship between lifestyle of students, stress, phone usage and insomnia among the Science students of University Malaysia Kelantan.

H1: There is a relationship between the lifestyle of student and insomnia factor among Science student of University Malaysia Kelantan.

H2: There is a relationship between stress and insomnia disorder among Science students of University Malaysia Kelantan.

H3: There is a relationship between phone usage and insomnia disorder among Science students of University Malaysia Kelantan.

### Research Framework

A research framework has been conducted to investigate the connection between the relationship lifestyle of students, stress, phone usage and insomnia disorder among Science students in University Malaysia Kelantan. The independent variables are lifestyle of students, stress and phone usage. The dependent variable is insomnia disorder among Science students in University Malaysia Kelantan.

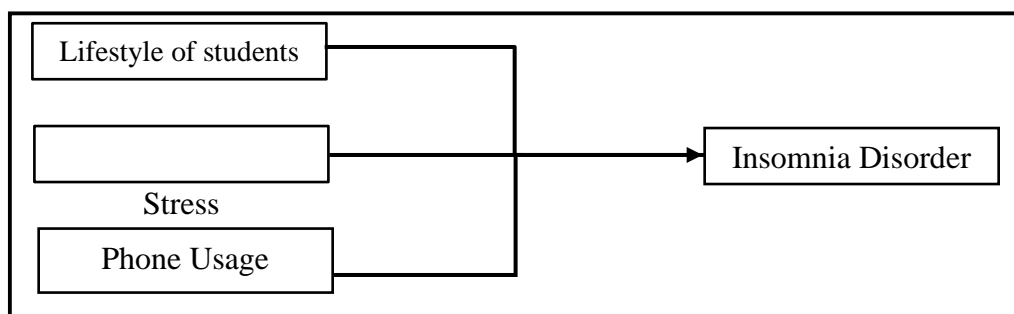


Figure 1: Conceptual framework of the relationship between lifestyle of students, stress and phones usage towards insomnia disorder among Science students of University Malaysia Kelantan.

## METHODOLOGY

### Research design

This study used the quantitative method. The survey comprises the data of age, gender, study profile, ethnicity, year of study, and so far. The questionnaires incorporate 3 sections, A, B and C which are connected with demographic variables, dependent variable, and independent variables. The amount of the respondents that will be selected from this study are around 320 respondents from Science students in University Malaysia Kelantan.

### Data collection

The data collection method used in this study is a questionnaire. The data collection is the main analysis for getting a result of the problems. This research will use the quantitative approach based on research questions and research objectives according to previous studies. This questionnaire was distributed to Science students of University Malaysia Kelantan to have a judgment of insomnia factors that affect science students.

Before making the questionnaire to respondents, the information was briefly about the study of insomnia among students through media social such as WhatsApp. The online questionnaires will be sent via WhatsApp to all Science students of University Malaysia Kelantan. The students will get an explanation for a few information to avoid misunderstanding with the questionnaire. There are 320 respondents were involved among 1928 Science students. The respondents must answer all the questions given and the researcher will get random answer from the questionnaires.

### Sampling

Sedgwick. P (2013) describes there are two types of sampling methods that can be used to recruit research participants -random sampling (sometimes referred to as probability sampling) and non-random sampling (sometimes known as a non-probability). In this study, the researchers use convenience sampling in non-probability sampling by considering the time factor for both the survey and the population. The researchers decide to uses (Robert V. Krejcie, 1970) as a model of this study.

$$S = \frac{x^2 N p (1 - p)}{e^2 (N \cdot 1) + X^2 p (1 - p)}$$

n = sample size (320)

N = population size (1928)

E = the degree of accuracy expressed as proportion

(0.05)  $x^2$  = chi-square of freedom 1 and confidence 95%

(3.841) p = proportion of population (if unknown, 0.5)

### Data analysis

An instrument that is used in analysing the data is a statistical tool or otherwise called Statistical Package Social Science (SPSS) version 24. SPSS information will translate into measurements, for example, mean, variance, standard deviation and the reliability test. Three data types of data analysis were descriptive statistic, reliability test and Pearson correlation.

## FINDINGS

The study was conducted to identify the factors of insomnia among University Malaysia Kelantan Science Students. The focus of this study is to analyse the relationship between the risk factors and insomnia disorder among University Malaysia Kelantan Science Students. In this case, primary data was undertaken which is a set of questionnaires that were used to get feedback from respondents. According to Krejcie and Morgan (1970), based on the table rule of thumb that was developed, the number of sample is 320 respondents were selected.

Based on Table 1, it shows that there are 210 (65.6%) respondents which are represented female meanwhile 110 (34.4%) respondents represented male. It shows that female respondents higher compared with male respondents in this research. The outcome of the respondent's age group is shown in the table above. The most contributed respondents come from 19 to 23 years old with a result of 258 respondents with 80.6% and followed by the 24 to 28 aged group with 62 respondents (19.4%). Based on Table 1 above, the greatest amount of our respondents is Malay which is 205 with 64.1%, followed by Indians which is 60 with 18.8 percent of respondents. Then, 43 respondents which are Chinese with 13.4% and only 3.7% of total respondents are from other races of respondents. Table 1 shows 6 respondents are married with a result of 1.9%. Then, there are 314 respondents are single which 68.4 percent. Table 1 indicates the respondent's nationality. There are 314 (98%) respondents which are represented Malaysian meanwhile 6 (2%) respondents represented other nationality. Table 1 shows the respondents according to the Science Faculty in University Malaysia Kelantan, City Campus and Jeli Campus. It shows the highest percentage of respondents of 100 students which equals 31.20% are from FIAT Faculty while FBKT, FSB and FPV are 50 (15.6%) respondents, 86 (26.9) respondents and 84 (26.3%) respondents respectively. Table 1 also shows show the respondents according to their year of study. It shows the highest number of respondents with 98 (30.60%) students from 2nd year while the second-highest number of respondents is 90 (28.10%) students from 4th year. Meanwhile, there are 1st year and 3<sup>rd</sup>-year students which are 39 (12.20%) respondents and 76 (23.70%) respondents respectively and followed by the least number of respondents from 5th year with 17 (5.40%) students.

Table 1: Respondent Profiles

| <b>Profile</b>  |                      | <b>Frequency</b> | <b>Percent (%)</b> |
|-----------------|----------------------|------------------|--------------------|
| Gender          | Female               | 210              | 65.6               |
|                 | Male                 | 110              | 34.4               |
| Age             | 19-23                | 258              | 80.6               |
|                 | 24-28                | 62               | 19.4               |
| Race            | Chinese              | 43               | 13.4               |
|                 | Indian               | 60               | 18.8               |
|                 | Malay                | 205              | 64.1               |
|                 | Others               | 12               | 3.7                |
| Nationality     | Malaysian            | 314              | 98.1               |
|                 | Others               | 6                | 1.9                |
| Marital Status  | Married              | 6                | 1.9                |
|                 | Single               | 314              | 98.1               |
| Faculty         | FPV                  | 84               | 26.3               |
|                 | FIAT                 | 100              | 31.2               |
|                 | FSB                  | 86               | 26.9               |
|                 | FBKT                 | 50               | 15.6               |
| Year of Studies | 1 <sup>st</sup> year | 39               | 12.2               |
|                 | 2 <sup>nd</sup> year | 98               | 30.6               |
|                 | 3 <sup>rd</sup> year | 76               | 23.7               |
|                 | 4 <sup>th</sup> year | 90               | 28.1               |
|                 | 5 <sup>th</sup> year | 17               | 5.4                |

## Descriptive Analysis

This study involved 320 respondents and it analysed the mean and standard deviation for the dependent variable which is insomnia disorder and independent variables which are lifestyle of students, stress and phone usage of the questionnaire.

Table 2 shows the number of respondents, the mean of the dependent variable and the independent variables. The mean of the dependent variable that is insomnia disorder is 1.9125 and the standard deviation is 0.96579. For the independent variables, phone usage is the highest mean which is 3.8441, and followed by stress and lifestyle of students are 3.5119 and 2.9428 respectively.

Table 2 also shows the standard deviation of dependent and independent variables. The standard deviation of dependent variable which is insomnia disorder is 0.96579. The highest standard deviation among independent variable is stress which is 0.83553 and followed by phone usage and lifestyle of students which are 0.72456 and 0.63459 respectively.

Table 2: Descriptive Statistics

| Variables             | N   | Mean   | Standard Deviation |
|-----------------------|-----|--------|--------------------|
| Insomnia              | 320 | 1.9125 | 0.96579            |
| Lifestyle of Students | 320 | 2.9428 | 0.63459            |
| Stress                | 320 | 3.5119 | 0.83553            |
| Phone Usage           | 320 | 3.8441 | 0.72456            |

## Reliability Analysis

Table 3 shows the result that the pilot test has been done to 30 respondents before the researcher distributed a questionnaire through the online survey method to 320 respondents. The result of the reliability analysis of instruments was measured using Cronbach's Alpha.

Table 3 conclude all the variables of Cronbach's alpha for pilot data were above the value of 0.4. The alpha value of reliability analysis for the dependent variable insomnia disorder among Science students of University Malaysia Kelantan construct was 0.919. Next, the alpha value of the reliability coefficient for the independent variable lifestyle of students construct was 0.465. Furthermore, the alpha value of the reliability coefficient for the stress was 0.591. Then, the alpha value of the coefficient of reliability for the construct of phone usage was 0.706.

From Table 3 also, it can conclude all the variables of Cronbach's alpha for actual data were above the value of 0.7. Therefore, the result shown is excellent reliable and it can be accepted in the analysis of this. For the dependent variable insomnia disorder construct, the alpha value of reliability measurement is 0.943, which is good and acceptable. Thus, this outcome indicates that reliability is acknowledged. Moreover, for independent variable lifestyle of students, the alpha reliability coefficient value is 0.764 which is in good range, which means that reliability has been acknowledged. Other than that, the reliability coefficient Cronbach's alpha for the stress is 0.885. This is often accepted in the range of goods. Next, 0.848 is the alpha value of the reliability coefficient for the construction of phone usage. This is in good range that indicates that the accuracy was approved. The reliability test was conducted on the independent variables to check the internal consistency of the measurement instrument. The Cronbach Alpha for all variables scales were in range of 0.70 to 0.943. Overall, the reliability test for the entire questionnaire was accepted. Thus, the questionnaire can be used for this study.

Table 3: Reliability Analysis

| Variables             | Number of Items | Cronbach's Alpha (Pilot Data) | Cronbach's Alpha (Actual Data) |
|-----------------------|-----------------|-------------------------------|--------------------------------|
| Insomnia Disorder     | 11              | 0.919                         | 0.943                          |
| Lifestyle of Students | 10              | 0.465                         | 0.764                          |
| Stress                | 10              | 0.591                         | 0.885                          |
| Phone Usage           | 10              | 0.706                         | 0.848                          |

### Pearson Correlation Analysis

The correlation was used in this study is to describe the relationship of the two variables in terms of strength of the relationship. The value of Pearson's correlation analysis is refer to the strength of association categories according to Akoglu (2018). The result indicated that for stress has moderate relationship between insomnia ( $r=0.538$ ,  $n=320$ ,  $p<0.01$ ) and followed by phone usage ( $r=0.492$ ,  $n=320$ ,  $p<0.01$ ) suggested a moderate correlation between insomnia among Science students of University Malaysia Kelantan. Last but not least, lifestyle of students has small but definite relationship which is ( $r=0.456$ ,  $n=320$ ,  $p<0.01$ ).

Table 4: Correlation Coefficient

|                       |                     | Lifestyle Of Students | Insomnia |
|-----------------------|---------------------|-----------------------|----------|
| Lifestyle Of Students | Pearson Correlation | 1                     | .456**   |
|                       | Sig. (2-tailed)     |                       | .000     |
|                       | N                   | 320                   | 320      |
|                       |                     | Stress                | Insomnia |
| Stress                | Pearson Correlation | 1                     | .538**   |
|                       | Sig. (2-tailed)     |                       | .000     |
|                       | N                   | 320                   | 320      |
|                       |                     | Phone Usage           | Insomnia |
| Phone Usage           | Pearson Correlation | 1                     | .492**   |
|                       | Sig. (2-tailed)     |                       | .000     |
|                       | N                   | 320                   | 320      |

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

## DISCUSSION AND RECOMMENDATION

### Discussion

The researcher had identified that stress has the highest value of correlation ( $r=0.538$ ) and the significant value was less than 0.01. Based on the result, there was a significant positive moderate relationship between stress and insomnia disorder among Science students of University Malaysia Kelantan. Thus, this result shown that hypothesis one was supported. Based on Goel et al, 2020 stated



that the academic overload, pressure strive for success, and future burdens that amend their sleep quality.

Next, the researcher also has identified that lifestyle of students has the lowest value of correlation ( $r=0.456$ ) and the significant value was less than 0.01. Based on the result, there was a significant positive moderate relationship between lifestyle of students and insomnia disorder among Science students of University Malaysia Kelantan. Thus, this result shown that hypothesis two was supported. Thus, Jafari, 2018 stated that lifestyle can be healthy or unhealthy, based on food preferences, level of activity, and general behaviour.

Besides that, phone usage has the value of correlation ( $r=0.492$ ) and the significant value was less than 0.01. Based on the result, there was a significant positive moderate relationship between phone usage and insomnia disorder among Science students of University Malaysia Kelantan. Thus, this result shown that hypothesis three was supported. According to the Alhassan et al., 2018 users of society are unaware of smartphone use addiction is a serious problem that can have a negative impact.

### **Recommendation**

Stress has the highest value of correlation coefficient which is 0.538 and this result show that the stress has the moderate relationship with the insomnia disorder. Science students have to manage their stress in their academic to reach good result on their academic. Furthermore, future researcher can be more explored whether the relationship between lifestyle of students, stress and phone usage influencing insomnia disorder of university students.

### **CONCLUSION**

This study was to determine the risk factors of insomnia among Science students of University Malaysia Kelantan. For this study, risk factors insomnia was influenced by lifestyle of student, stress and phone usage. Therefore, risk factors of insomnia was represented by Science students of University Malaysia Kelantan which is a dependent variable. In addition, there are three independent variable which is lifestyle of student, stress, and phone usage. Those independent variable and dependent variables were analyzed by Pearson Correlation Coefficient. It showed that the dependent variable influenced by independent variables. Then the result shows the correlation between lifestyle of student, stress and phone usage is highly significant. In conclusion, the finding of this study proven that there is relationship between lifestyle of student, stress, phone usage and the risk factors of insomnia among Science students of University Malaysia Kelantan.

## REFERENCES

- Akoglu, H. (2018). User's guide to correlation coefficients. *Turkish journal of emergency medicine*, 18(3), 91-93.
- Alhassan, A. A., Alqadhib, E. M., Taha, N. W., Alahmari, R. A., Salam, M., & Almutairi, A. F. (2018). The relationship between addiction to smartphone usage and depression among adults: a cross sectional study. *BMC psychiatry*, 18(1), 148.
- Belingeri, M., Pellegrini, A., Facchetti, R., De Vito, G., Cesana, G., & Riva, M. A. (2020). Self-reported prevalence of sleep disorders among medical and nursing students. *Occupational Medicine*, 70(2), 127-130.
- Deasy, C., Coughlan, B., Pironom, J., Jourdan, D., & Mcnamara, P. M. (2014). Psychological distress and lifestyle of students: implications for health promotion. *Health promotion international*, 30(1), 77-87.
- Gianfredi, V., Nucci, D., Tonzani, A., Amodeo, R., Benvenuti, A. L., Villarini, M., & Moretti, M. (2018). Sleep disorder, Mediterranean diet and learning performance among nursing students: inSOMNIA, a cross-sectional study. *Ann Ig*, 30(6), 470-81.
- Goel, N. J., Sadeh-Sharvit, S., Trockel, M., Flatt, R. E., Fitzsimmons-Craft, E. E., Balantekin, K. N., ... & Taylor, C. B. (2020). Depression and anxiety mediate the relationship between insomnia and eating disorders in college women. *Journal of American college health*, 1- 6.
- Haile, Y. G., Alemu, S. M., & Habtewold, T. D. (2017). Insomnia and its temporal association with academic performance among university students: a cross-sectional study. *BioMed research international*, 2017.
- Jafari, Y. (2018). Stress and lifestyle choices among international LSMU students.
- Jakubiec, D., Kornafel, D., Cygan, A., Gorska-Klek, L., & Chromik, K. (2015). Lifestyle of students from different universities in Wroclaw, Poland. *Roczniki Państwowego Zakładu Higieny*, 66(4).
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Morin, C. M., Drake, C. L., Harvey, A. G., Krystal, A. D., Manber, R., Riemann, D., & Spiegelhalter, K. (2015). Insomnia disorder. *Nature Reviews Disease Primers*, 1(1), 1- 18.
- Sato, M., Ito, H., Sugimoto, H., Tanioka, T., Yasuhara, Y., Locsin, R., & King, B. (2016). Relationship between lifestyle, quality of sleep, and daytime drowsiness of nursing students of University A. *Open Journal of Psychiatry*, 7(1), 61-70.
- Sedgwick, P. (2013). *Convenience sampling*. *BMJ*, 347(oct25 2), f6304–f6304. doi:10.1136/bmj.f6304

- Sharma, N., Advani, U., Sharma, L., Jain, M., Sharma, K., & Dixit, A. M. (2019). Pattern of mobile phone usage among medical students. *International Journal of Academic Medicine*, 5(2), 118.
- Subramani Parasuraman, A. T. S., Yee, S. W. K., Chuon, B. L. C., & Ren, L. Y. (2017). Smartphone usage and increased risk of mobile phone addiction: A concurrent study. *International journal of pharmaceutical investigation*, 7(3), 125.
- Waqas, A., Khan, S., Sharif, W., Khalid, U., & Ali, A. (2015). Association of academic stress with sleeping difficulties in medical students of a Pakistani medical school: a cross sectional survey. *PeerJ*, 3, e840.
- Zailinawati, A. H., Teng, C. L., Chung, Y. C., Teow, T. L., Lee, P. N., & Jagmohni, K. S. (2009). Daytime sleepiness and sleep quality among Malaysian medical students. *The Medical journal of Malaysia*, 64(2), 108-110.
- Zailinawati, A. H., Mazza, D., & Teng, C. L. (2012). Prevalence of insomnia and its impact on daily function amongst Malaysian primary care patients. *Asia Pacific family medicine*, 11(1), 9.