



Sleep Deprivation among Malaysian Students and the Impacts on Their Academic Performances: A Case Study

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ABSTRACT

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Cognition;
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Comprehensive data;
Extracurricular activities;
Screen time.

University students typically lack sleep owing to academic, social, and personal stresses. Sleep deprivation affects academic performance, cognition, attendance, and well-being. Sleep deprivation trends among local students at an international institution are examined and how it affects their academic performance. It seeks to understand sleep deprivation and its effects on grades, attendance, cognitive abilities, and well-being. Six students answered this qualitative research voluntarily. To guarantee student diversity, responders were chosen selectively. Semi-structured interviews with surveys and in-depth questions were used to produce comprehensive data. Two months were spent collecting data. The data were analysed using thematic analysis to discover sleep deprivation patterns and variables. Results indicate a clear link between poor sleep and academic achievement. Academic burden, extracurricular activities, and screen time greatly affected students' sleep and night time practices. These variables affected their academic success, university involvement, and well-being. Understanding university student sleep deprivation patterns and causes might help create treatments and support services to mitigate its effects. These findings suggest that university policy should promote good sleep habits, regulate academic demands, and decrease screen time to improve student well-being and academic achievement.



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A. INTRODUCTION

Sleep deprivation is a prevalent issue among students in higher education, having a substantial influence on both health and academic performance. Many students find it challenging to juggle their academic responsibilities, social life, and personal obligations, leading to irregular sleep patterns and insufficient rest. Networking, part-time jobs, extracurricular activities, and schoolwork are all factors that add to the difficulty of receiving enough high-quality sleep. The progress in technology and the prevalence of digital distractions worsen these sleep issues. Although there is an increasing recognition of the need of sleep for cognitive function, memory consolidation, and psychological equilibrium, some students prioritise their academic commitments over obtaining sufficient sleep. Consequently, this common sleep deficiency has adverse consequences on academic achievement, mental well-being, and general quality of life. Gaining insight into the determinants of sleep loss and its prevalence among university students is essential for promoting their academic success and overall health. Adapting to the university lifestyle frequently disturbs established sleep patterns, leading to inadequate rest. This study

seeks to better understand the sleep habits of undergraduate students and their effects on academic performance and well-being. The study seeks to determine the incidence and causes of sleep deprivation and suggest tailored treatments and support services to establish an atmosphere that promotes academic performance and general growth by acknowledging the intricate relationship between these elements.

Multiple studies have continuously demonstrated a strong correlation between insufficient sleep among college students and detrimental effects on both their academic achievements and overall state of health. Establishing and adhering to appropriate sleep patterns is crucial for preserving optimal physical well-being and achieving academic excellence. Ali et al. (2023) discovered that the sleep hygiene behaviours of Qatari university students had a notable impact on the quality of their sleep. Similarly, Zahoor et al. (2023) found that undergraduate students in Islamabad, Pakistan have sleep disturbances as a result of lifestyle and environmental variables. Carpi et al. (2022) highlighted the significant influence of inadequate sleep quality on the psychological and physical health of college students, emphasising the need of assisting sleep-deprived students, especially in Malaysia, where comparable patterns are probable.

Sleep is essential for human health, growth, and well-being. Extensive research has shown the many advantages of sleep, especially in young infants and adults. Schlieber & Han (2021) emphasize the importance of sleep in the cognitive, emotional, and physical growth of young children. According to their findings, proper sleep helps with memory consolidation, emotional control, and general physical growth, indicating that instilling healthy sleep habits early in life is critical for long-term developmental success. In a wider sense, Mukherjee et al. (2013) present a thorough assessment of the relevance of good sleep in the overall population. The American Thoracic Society's statement emphasizes the importance of sleep for sustaining good health and performance. They advocate for prioritizing sleep hygiene in public health agendas because of its major influence on a variety of health outcomes, which includes cardiovascular health, metabolic control, and mental well-being. The authors advocate for more awareness and future study to better understand sleep's function in reducing chronic health problems. Schneider (2020) investigates the neuroprotective advantages of sleep from a neuroscience standpoint. According to his study, sleep promotes neuroplasticity and helps the body rid itself of metabolic waste. Schneider contends that these activities are critical for sustaining cognitive function and preventing neurodegenerative disorders. Long-term maintenance of brain health and performance depends critically on sleep's restorative properties, which include the renewal and repair of neural cells.

Sleep loss is a widespread problem affecting people across different age groups and cultures, as proven by new study results. In order to shed light on the pervasiveness of sleep-related issues throughout the lifespan, Madan Jha (2023) carried out research to determine the prevalence of sleep loss and sleep disorders in both young and elderly persons. The results highlight the need for focused treatments aimed at treating sleep problems in various age groups to promote general health and well-being. Furthermore, Naito et al. (2021) investigated the occurrence of sleep deprivation among Malaysian undergraduate students, emphasizing specific factors that contribute to sleep disruptions in this group. Their cross-sectional research discovered many linked variables, including academic burden, lifestyle behaviours, and electronic use, stressing the necessity of addressing these issues to reduce student sleep deprivation. Additionally, Awasthi et al. (2020) found a startlingly high incidence of sleep disruptions in this academic cohort when they looked at the prevalence of internet usage, poor sleep quality, and depressed symptoms among medical students. Their results illustrate the intricate connection between internet use,

mental health, and sleep quality, underlining the necessity for comprehensive therapies addressing several domains to manage sleep deficiency effectively. Together, these studies provide useful insights into the frequency of sleep loss across different groups and communities, stressing the importance of personalized treatments to promote good sleep habits and general well-being.

Many studies have been conducted on the effects of sleep deprivation on university students' academic performance, as shown by recent systematic reviews and meta-analyses. Suardiaz-Muro et al. (2020) did a comprehensive study analysing the association between sleep and academic performance in university students, combining data from several studies. Their review shows the constant link between quality of sleep and decreased performance in school across different student groups, stressing the importance of solving sleep problems to improve educational results. Similarly, Maheshwari & Shaukat (2019) studied the influence of poor sleep quality especially on the academic performance of medical students, demonstrating a strong negative association between sleep quality and academic results. Their research emphasizes the need of specific treatments to enhance medical students' sleep quality in order to maximize their academic performance. Additionally, a comprehensive review and meta-analysis on sleep disruption in medical students and its connection to poor academic performance was carried out (Seoane et al., 2020). Their results indicate the negative consequences of sleep deprivation on academic performance, emphasizing the need for comprehensive interventions to manage sleep disruptions and enhance student well-being. In general, these studies provide strong evidence of the unfavourable effects of sleep loss on academic success among university students, stressing the importance of valuing quality sleep and implementing effective treatments to support students' academic achievement.

A common problem impacted by many elements, sleep deprivation affects numerous groups including students, athletes, and sick children in particular. Developing efficient treatments to improve the quality of sleep depends on an awareness of these elements. During the COVID-19 outbreak, Melone et al. (2022) looked into how common and what kinds of things make college players less likely to get good sleep. Their cross-sectional investigation found that major causes of sleep loss increased stress levels, altered habits, and anxiety connected to the epidemic. Especially in high-performance groups like athletes, this research emphasizes how changes in daily routines and outside stresses affect sleep patterns. Kim et al. (2016) conducted research on the adult Korean population and discovered that both too little and too much sleep are connected to higher incidence of slips and falls. This study emphasizes the need of keeping a healthy sleep schedule as variations from ideal sleep length, either too much or too little, might negatively influence physical coordination and safety. Stress, insomnia, poor academic performance, and even suicidal ideation and attempts were some of the negative consequences studied by Kim et al. (2017) in relation to excessive use of energy drinks among teenagers. Their results imply that stimulant use, including that of energy drinks, may seriously interfere with sleep patterns, with negative effects on both physical and mental health. This emphasizes how young people's sleep deprivation is caused in part by their eating patterns. Examining the causes and consequences of sleep deprivation in hospitalized children, Vecchi (2020) found that key contributors to insufficient sleep were hospital practices, ambient noise, and medical procedures. This research emphasizes how institutional environments and procedural guidelines may seriously disrupt children's sleep, therefore affecting their health. A study by Fitzpatrick et al. (2021) looked at the pros and cons of delaying school start hours as a means to improve teens' sleep habits. Early starting times for school are clearly linked to teenage sleep deprivation, according to their studies;

delayed start times may improve sleep quality and length. This implies that managing sleep problems among teens might depend much on changes in policies in educational institutions. This research taken together show that stress, lifestyle choices, environmental factors, and institutional policies all affect sleep deprivation in some different ways. Dealing with these elements calls for a diverse strategy catered to the particular requirements of several people.

The practices and rituals that help you sleep well on a daily basis are called "sleep hygiene." Several studies have shown that good sleep hygiene has a big effect on the quality of sleep and health in general, especially for college students and adults. Iswari et al. (2023) did a study with health faculty students in Hindu Indonesia University to find out what they knew about and how they used changes to Balinese sleep hygiene. The results showed that students who followed standard sleep hygiene tips had better quality sleep. This study shows how important it is to use culturally appropriate sleep hygiene habits to get better sleep. In Khawaja et al. (2023) looked into the link between bad sleep hygiene, not getting enough sleep, and the effects these had on medical students. Their cross-sectional study showed that students who didn't take care of their sleep were more likely to not get enough sleep, which hurt their mental health and academic success. This shows how important good sleep habits are in school situations, where stress and workload are high. In 2023, during the COVID-19 outbreak, Zagaria et al. (2024) used an underlying change score model to look into how bad sleep hygiene habits led to more sleep problems. Their study showed that people with bad sleep hygiene had more problems sleeping during the pandemic. This shows how important it is to keep up good sleep hygiene, especially when there is a lot of stress and worry. Alanazi et al. (2023) looked into how good sleep hygiene affects the mental health and daily functioning of people in Tabuk City. Their cross-sectional study showed that bad sleep hygiene was strongly linked to worsening mental health and performance in the workplace. This shows how important good sleep habits are for general health. Also, Shriane et al. (2023) used the Delphi method to come up with agreed sleep hygiene standards for shift workers. Their study found certain good sleep habits that could lessen the bad effects that having an unpredictable work plan has on sleep quality. This study is especially useful for people who don't work normal hours because it shows how sleep hygiene habits can be changed to fit different lives and work schedules. All of these studies show that having good sleep hygiene is important for getting better sleep and being healthier generally. To help Malaysian students avoid not getting enough sleep and do better in school, following and sticking to good sleep habits could be very important.

The objective of this study is to determine the prevalence and root causes of sleep deficiency among university students in Malaysia, addressing a significant gap in the existing literature. This research aims to enhance students' academic achievement and general health by developing specific treatments and support services based on a comprehensive knowledge of the intricate connection between sleep habits, academic performance, and well-being. The findings will offer useful insights for university policies and practices, fostering a pleasant atmosphere for both academic and personal development.

B. METHODOLOGY

1. Research Design

The design of this research focuses on the qualitative method where all the qualitative data will be collected through semi-structured interviews with six participants, giving further information about the variables affecting the students sleeping routine and its effects on their academic achievement. The qualitative data will be thematically evaluated to provide a holistic understanding to the complex relationship between sleep deprivation and academic achievement among university students.

2. Sample of Study

In order to ensure the truthfulness and reliability of this research's findings and outcomes, interviews were done with the students from various backgrounds and majors. The selection method used for this study was purposive sampling. Each student who participated in the interviews had met the predetermined criteria for the respondent prior to the commencement of the research. The characteristics of the respondents are as follows: (a) full-time undergraduate students; (b) diagnosed with sleep deprivation; (c) in the 2nd or 3rd year of their study; (d) leaving on-campus; (e) different gender; and (f) different programme of study. In this research, there are six local students who voluntarily participate in this interview session as the respondents. The Table 1 below shows the respondents' backgrounds.

Table 1. Background of the Respondents

Respondents	Year of Study	Age	Gender	Programme of Study
1	3 rd year	21	Male	Bachelor of Media and Communication
2	2 nd year	21	Male	Bachelor of Media and Communication
3	3 rd year	24	Male	Bachelor of Economics
4	3 rd year	24	Male	Bachelor of Economics
5	3 rd year	24	Female	Bachelor of Early Childhood Education
6	3 rd year	24	Female	Bachelor of Elementary Education

3. Instruments

Interviews were done in two separate settings based on the convenience of the respondents. It may be a Google meet session or an in-person interview. The language used will also be determined by the responder, who may choose between English and Malay. All of the participants were given the opportunity to respond to the questions based on their own experience or opinions. This flexibility will allow the respondents to be more comfortable and transparent during the interview sessions. All interviews are videotaped and transcribed for evidential purposes, and the interview is conducted in an honest way. All respondents were given the identical set of questions that addressed two study goals. All those who were selected were willing to participate, and a full background check was conducted prior to their selection for interviews. Few interview sessions were carried out to obtain data or information for this research based on the questions asked to the chosen respondent. As a result, the interview with these six respondents was recorded,

transcribed, and organized in the order it occurred using thematic analysis. The list of interview questions that were asked are as follows:

- a. Can you please tell me about yourself, your sleeping patterns and bedtime routine?
- b. Do you experience any difficulty falling asleep or staying asleep? If yes, please elaborate what do you believe are the main reasons behind your insufficient sleep patterns?
- c. How long have you been experiencing this?
- d. Can you share any attempts or strategies you've made to cope with sleep deprivation while maintaining academic responsibilities?
- e. How would you describe your academic performance during the periods of adequate sleep?
- f. Have you noticed any changes in your academic performance (attendance, assignment deadline, etc.) during the periods of having sleep deprivation?
- g. What recommendations do you have for educational institutions to support students that are dealing with sleep deprivation?
- h. In your opinion, how can individuals better prioritize and manage their sleep in an academic setting?

4. Themes of Findings

An interview session was carried out to obtain data or information for this research based on the questions asked to the chosen respondent. As a result, the interview with these six respondents was recorded, transcribed, and organized in the order it occurred.

- a. Theme 1: Academic coursework and extracurricular commitments.
- b. Theme 2: Awareness of getting enough sleep.
- c. Theme 3: Declining class attendance.
- d. Theme 4: Time management strategies.

C. RESULTS AND DISCUSSION

1. Academic Coursework and Extracurricular Commitments

Four out of six respondents said that external circumstances including academic projects, courses, workload, and other daily activities interfered with their sleeping habits and bedtime routine.

- a. Respondent 1
"..recently my sleeping schedule and bedtime routine has been disturbed by a project called the Documentary and this cost me sleep deprivation.."
- b. Respondent 2
"..my sleeping pattern and bedtime routine, lately it is quite interrupting because of your class in studios and things also make me sleep a little bit late.."
- c. Respondent 3
"..sometimes I will sleep early and sometimes I will sleep late based on the workload and also anything that I have to do in a day.."
- d. Respondent 4
"..usually I will start to sleep around 3:00 a.m until 8:00 a.m depending on my workload.."

The thematic analysis shows that external influences like academic responsibilities and workload greatly disturb students' sleeping patterns and bedtime routines. The result of this study is supported or related with the earlier research article done by Nyamute et al. (2021), they said demands of academic coursework and extracurricular commitments were key factors to poor sleep quality and elevated degrees of burnout among the students.

2. Awareness of Getting enough Sleep

Despite being diagnosed with sleep deprivation, five out of six respondents reported having good academic results when they got enough sleep. It shows that they are well aware of the importance of getting enough sleep.

a. Respondent 1

"..alhamdulillah, I got the dean list for every semester.."

b. Respondent 2

"..so during my first year, I've got enough sleep because there is not much workload and I got the dean list and everything and I think that time I'm good.."

c. Respondent 3

"..actually when it comes to adequate sleep I manage to get a good result. Especially when it comes to the quiz and answering test because I have time to study and that's all.."

d. Respondent 4

"..usually like before this I'm a very good student and also I used to focus in the class, I also manage to get 3.7 and above and I also can manage everything before this.."

e. Respondent 6

"..I don't have any problem with my academics during the time I manage to get enough sleep, my academic performance tends to be better. I can focus and concentrate more on my studies.."

According to the theme analysis, respondents agree that getting enough sleep helps them do better in school. They reported good grades, effectively managing academic duties, doing well on exams, and being more active in class when they got enough sleep. The findings of this study is supported or associated with the previous research paper done by Toyong (2020), he said students who reported consistently getting sufficient sleep demonstrate higher levels of classroom engagement, better behaviour, and better academic performance.

3. Declining Class Attendance

Four out of six respondents claimed that sleep deprivation had an impact on their academic performance, especially their attendance.

a. Respondent 2

"..so yeah, this is the crucial part during this semester because especially for the attendance, I tend to go to class very late like one hour after the entrance time. So the lecturers also become mad at me and this is where it will bring a huge impact to my marks and also my examination as well.."

b. Respondent 3

"..this time I have very much trouble on this matter actually because when it comes to academic performance especially my attendance, my assignment deadline because I'm not getting enough sleep lately and this actually can affect my attendance. I always have problems finishing my assignments on time because of the disease.."

c. Respondent 5

"..maybe it only impacts my attendance. I think because if I do not get enough sleep I will tend to wake up late and then sometimes go to the class late.."

d. Respondent 6

"..I noticed that my attendance has been affected since I have difficulty sleeping at night. I often find myself working on assignments or doing something at night to make myself feel tired and I hope that I can fall asleep and consequently I sometimes oversleep and feel too exhausted to go to class.."

According to the theme analysis, respondents agree that sleep deprivation has a detrimental influence on numerous elements of academic performance, including attendance, grades, and the difficulty to concentrate in lectures. The results of this study are supported with a recent research work conducted by Axelsson et al. (2020), who said that sleep deprivation may have a negative impact on academic performance, with lower class attendance as one of the most noticeable repercussions.

4. Time Management Strategies

Four out of six respondents emphasized the importance of creating schedules, timetables, or to-do lists to effectively manage time and prioritize tasks.

a. Respondent 1

"..I think for this, especially students, they can make a timetable and take turns in doing the assignment. For example, for us I will do the editing in the first two hours and then my friend will come after to switch turns with me and these are some of the ways that the students can follow to better manage their time efficiently.."

b. Respondent 2

"..I think students can make a schedule to manage their time or manage their assignment and things so there will be enough time so they can track what is going on and what should be done.."

c. Respondent 3

"..for me students can actually help themselves better in arranging their own schedule especially when it's come to the academic setting we know that the students for sure they have a lot of workloads regarding to the academies so maybe they can make a to-do list for themselves and prioritize the better and the the the important one so that they can finish early and also having the good sleep after they manage their time.."

d. Respondent 4

"..maybe students can follow my strategies as I had shared just now to create a timetable or check list of what they want to do for the day.."

According to the theme analysis, respondents generally proposed strategies for time management, organizing objectives, and balancing social activities in order to better prioritize and regulate sleep in an academic context. The findings of this study have been supported by a recent study done by Kibeb sii & Chufi (2022), who found that individuals who used these tools had higher levels of work productivity, effectiveness, and overall performance than those who did not.

D. CONCLUSION AND RECOMMENDATIONS

The study shows a strong connection between university students not getting enough sleep and doing poorly in academics. Students' sleep habits are greatly affected by things outside of school, such as homework, extracurricular activities, and technology distractions. Getting enough sleep is very important for students to do better in school, which means getting better grades and participating in class. Not getting enough sleep also affects participation and health in general. The study makes strong arguments for giving students individualised support and management services. Universities should make it a priority to create a culture on campus that values good sleep habits and time management. Universities could set up support services for students who are having trouble sleeping. As part of these services, students should learn how to handle their time, deal with stress, and make the school a place where good sleep hygiene is valued. Adopting good time management skills, setting regular bedtime routines, and limiting screen time before bed can greatly enhance the quality of your sleep. So, universities should teach students about sleep as part of their orientation programmes and academic courses to make more people aware of how important sleep is for their health and academic performance. Universities can support students' academic success and general health by following these recommendations. This includes treating sleep deprivation as an important part of student health.

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