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Internet addiction and sleep quality on academic stress among university students

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Internet addiction, sleep quality, academic stress, university students, internet

Abstract

The purpose of this study to assess the relationship between internet addiction and sleep quality on academic stress among university students. A quantitative method with a correlational design was used. 108 university students from a public university aged 19 to 30 years old were involved in this study. The study was conducted using paper-and-pencil and online survey method with a total of $N = 108$ ($n = 73$ females, $n = 35$ males) participated in this study through convenience sampling. The researchers applied the Internet Addiction Test, Pittsburgh Sleep Quality Index, and Perception of Academic Stress Scale for collecting the data. Both descriptive and inferential analysis by using Pearson Correlation Coefficient findings were used in this study. This study proved that there is a significant relationship between Internet Addiction and Academic stress ($r = .342$, $p < .001$) and also a significant relationship between Sleep quality and Academic stress ($r = .309$, $p < .01$).

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INTRODUCTION

Students at university confront a variety of issues that contribute to their stress while studying. The majority of students in higher education institutions reported a drop in academic performance as a direct result of elevated levels of academic stress (Rathakrishnan et al., 2021). Academic stress might result from a variety of factors such as peer pressure, examinations, assignments, parents' and teachers' expectations, and most of all is poor time management. According to Rathakrishnan et al. (2021), academic stress is a contributing factor in the difficulties that university students encounter as they experience culture shock as a result of their failure to adapt to the university's learning and teaching structure, as well as the university's social environment which affects their mentality. Hence, academic stress has a negative outcome in which the students achieve low academic performance and mental issues. According to Ramachandiran and Dhanapal (2018), 37 % of private university students, aged 21 and above, experience high levels of stress. They found that university life is stressful for students' life. In addition, the students' mindset is causing stress because they need to accomplish a high Cumulative Grade Point Average (CGPA) in order to gain a better job when they graduate. This mindset will eventually affect the mental and emotional condition of the students because of the expectations of university life, resulting in academic stress among university students.

Previous study by Nnaemeka et al. (2022) found that academic stress that experienced among university students were related to internet addiction and academic procrastination. Based on the study, university

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students, who engaged more with internet or overdependence to the internet experienced less academic stress. The students used the internet as to alleviate the stress and also the feeling of burnout despite from the purpose of using internet for academics. The majority of students used the internet for shopping, gaming, social networking, also for dating. Other than that, the study revealed that students who experienced high academic stress, also experienced high for academic procrastinations. This can be related with quality of sleep. When the students, who had high in academic procrastination, would suffer with sleeping problems because of late in doing tasks, assignments and sometimes the students did not sleep in few days. The students, who were procrastinator, always low in self-discipline in time management which in resulted to low in academic performance. Plus, the students also is no well-managed in sleeping efficiency and low sleep quality which affects their academics.

Internet Addiction is a popular issue among young adults specifically among university students. According to the Malaysian Communications and Multimedia Commission (MCMC), which conducted the Internet Users Survey (IUS) in 2020 which showed that 23.4% of internet users were university students who have degrees and diplomas. They use the internet mostly for academic purposes and entertainment. They always find article research for assignments, use websites to find additional knowledge for their study, use academic apps, edit apps for editing videos, listen to music for entertainment, watch entertainment apps for watching dramas and movies, and others. When students overuse the internet, they usually do not focus and fully concentrate on their studies, which results in academic stress (MCMC, 2020). The prevalence of IA among medical students in Malaysia was found to be 29.2%, which is lower than the rate found in a previous study among dental students in Malaysia using an internet addiction test, which was 36.9%, and another study among allied health students, which was 31.8% (Radeef & Faisal, 2018). In other countries such as Saudi Arabian and Egypt also revealed significant numbers of university students who had IA, 67.5% (Hasan & Abu Jaber, 2019) and 39.62% (Mahmoud et al., 2022) respectively.

These problems can be explained which internet addicts are at risk for psychological maladjustment. Stressed-out university students may turn to the internet and their smartphones for relief. Based on the research, stressed students have been found to use the internet, especially online video gaming as a coping mechanism. Thus, if a student's stress is not well managed, they may spend more time on the internet and their smartphones, potentially leading to a true addiction (Ismail et al., 2020). Aside from that, the majority of university students choose or prefer caffeine, such as coffee, to keep them awake while completing assignments, projects, or other tasks. As a result of their poor sleep quality, they develop sleeping problems or sleep disorders. Sleeping time is shortened compared to usual, resulting in insomnia. As a result, it has an impact on their academics, causing them to feel bloated and stressed (Tien-Ngu et al., 2017).

Other explanation to these problems can be explained from Jaafar et al. (2022) which debated university students always expressed fatigue, burnout, and depression because of the expectations and requirements of academics. The students suffer with mental health and emotional disruptions. When the students experience these feelings, the students chose to spent on internet in long hours or durations to overcome it. Plus, the

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students experienced sleep disruptions because of sitting in front of computer to completed the assignments, projects, discussions with friends and also playing the games. In the end, the students suffer from sleeping problems, stress, and internet addiction. Another study by Loh et al. (2022) also found when the students had high psychological stress, the addiction towards gaming and surfing internet also high. The issues for students were time management and stress management. When the students had good in time management, the assignments, projects, and other tasks could be completed early. Also, when the students practiced the stress coping strategies with themselves and acknowledged the level of stress, they would manage the academic stress efficiently. Hence, they can get efficient sleep and high in self-management.

Sleep is essential and important for university students. The students need to have good sleep, in order to have high concentration and sharpen their minds. As relates to academic achievement, sleep is a crucial factor for students. When the students have good sleep quality, they are able to achieve good academic performance. According to the findings, good sleepers may have less anxiety, better body health, and feel more motivated when studying (Rathakrishnan et al., 2021). University students also nowadays get fewer hours of sleep than the recommended eight hours per night. A significant prevalence of poor sleep quality was found among Germany university students which is 49% (Schmickler et al., 2023), also from other countries, 56.1% at Turkey (Yilmaz et al., 2017), 70% at Jordan (Alghwiri et al., 2021), and 31% at China (Li et al., 2020). The majority of students who have poor sleep will experience high stress (Nurismadiana & Lee, 2018). Sleep deprivation is concerning because irregular sleep cycles are associated with poor academic performance, and poor sleep quality is associated with increased stress. According to Usmani et al. (2021), the quality of sleep is affected by a variety of factors, including social life, general health status, and environmental factors. They mentioned the duration of good sleep is about 8.5 to 9.5 hours of sleep per night for those aged 10 to 17, and 7 to 9 hours for those over the age of 18.

Internet addiction and sleep quality is the strongest predictor of the level of stress experienced by a person. The individual who experienced a high addiction to the internet and poor sleep will experience a high level of stress. The individual uses the internet for entertainment and gaming which causes addiction despite academic purposes. Besides that, an inappropriate amount of sleep is low academic performance due to low critical thinking and concentration. However, some students were not affected by internet addiction and poor sleep quality because they managed to adjust and overcome it in a better way. Unfortunately, these students are minor, and it needs to enlarge the population of students regarding these issues. A few researchers focused on the association between internet addiction and sleep quality that is faced by university students. Other than that, the researchers also discovered the causes and consequences of university students who experienced high academic stress. There have been limited concerns on correspondence between internet addiction and academic stress, as well as between sleep quality and academic stress among university students. Hence, this research intends to identify the prevalence of internet addiction among university

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students, to examine the relationship between internet addiction and academic stress, and also to examine the relationship between sleep quality and academic stress among university students. Therefore, this study has two hypotheses:

$H_1$1: There is a significant relationship between internet addiction and academic stress among university students.

$H_1$2: There is a significant relationship between sleep quality and academic stress among university students.

METHOD

Research Design

Quantitative and correlational research design is used in this study. This research uses correlational aims to identify the relationship between Internet Addiction and Sleep quality on academic stress respectively and see if they influence each other. Then, this research used the survey method (Jhangiani et al., 2019). The questionnaires are distributed in order to collect data from multiple groups and are being administered via paper-pencil test and online by distributing the printed form of the questionnaire and Google Form to the participants. A cross-sectional design is used in this study in which the participant will only be required to participate in the research for a limited time and will not be monitored for an extended period of time (Setia, 2016).

Research Respondents

There were 108 undergraduate students aged 19 to 30 years old participated, with 73 females (67.6%) and 35 males (32.4%). A total of 108 university students were recruited by using convenience sampling through the online survey and in printed format. The printed questionnaires were handed out in front of faculties and the library. Meanwhile, for the online questionnaire, the links to Google Forms were sent to the participants through communication platforms, such as WhatsApp, Telegram, and the university's official email. The informed consent was provided to participants to ensure voluntary participation. Participants who completed the questionnaire agreed to participate in the study.

Instrumental Development

There were three instruments to measure the variables used in this study. The first instrument is the Internet Addiction Test (IAT) (Young, 1998) and the translation of the Malay language (MVIAT) (Guan et al., 2015). These measures were used to examine the level of internet addiction and its effects on daily routine, social life, productivity, sleeping patterns, and feelings. The scale consists of 20 items based on 6 domains which are salience, excessive use, neglecting work, anticipation, lack of control, and neglecting social life. Overall, the internal consistency of the IAT that is used in the study is 0.89 Cronbach's alpha which is suitable for college and university students (Young, 1998). MVIAT has a validated and good internal consistency,

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Cronbach's alpha = 0.91, and the concurrent validity with Compulsive Internet Use Scale, Pearson's correlation = 0.84, p <0.001.

The second measure was the Pittsburgh Sleep Quality Index (PSQI) (Buysse et al., 1989) and the Malay version of PSQI (PSQI-M) (Farah et al., 2019) which permission was obtained from the author. These instruments were used to measure sleep quality and the scale consists of 19 items based on seven component scores, notably subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, and daytime dysfunction. The PSQI's current reliability was excellent (Cronbach's alpha of 0.91) which is able to assess the quality of sleep (Buysse et al., 1989). PSQI-M has acceptable internal consistency with Cronbach's alpha is 0.74 and convergent validity with ESS-M, significantly correlated with sleep disturbance r = 0.35, p = 0.002 and daytime dysfunction r = 0.48, p = 0.007.

In order to measure the stress levels among university students, the Perception of Academic Stress Scale (PAS) (Bedewy & Gabriel, 2015) was administered to the participants. This scale has 18 items based on three domains: academic expectation subscale (4 items), workload examination subscale (8 items), and student academic self-perception subscale (6 items). The questionnaire was translated and back-translated by two experts in Bahasa Malaysia and English. As a whole, the internal consistency of the PAS scales included in the survey is 0.70 Cronbach's alpha, which is regarded as acceptable (Bedewy & Gabriel, 2015).

Data Analysis

The result of this study was conducted using IBM SPSS Statistics version 27 in two processes involved in assessing the data quality which were descriptive and inferential analysis. Descriptive analysis was used to analyze the participant's demographic information. such as age, gender, courses, and current semester are analyzed using descriptive statistics. Inferential analysis was measured by using Pearson Correlation Coefficient is used to look into the relationship between the independent variables and dependent variable.

Ethics Consideration

Ethics approval for this study was obtained from the Human Research Ethics Committee Sultan Idris Education University (UPSI) with reference number: 2022-0715-02. Informed consent was provided to clarify the study objective and all procedures involved. The participants were informed and explained the advantages and disadvantages of participating in the study. It is also stated that participants' identities are protected and that only the researcher is aware of the confidentiality of the data. Despite this, their participation is entirely voluntary, and they are free to leave the study at any time without any compound. Participants were required to read and comprehend all of the information provided.

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RESULTS AND DISCUSSION

The normality test was performed by using Kolmogorov-Smirnov test for these three variables to indicated the data distributions. For internet addiction, the normality test is D (108) = .067, $p > 0.05$, which revealed the normal distributions. Also, for academic stress, the variable shown similar result, normal distributions, D (108) = .062, $p > 0.05$. However, the variable for sleep quality is not in normal distributions, D (108) = .156, $p < 0.05$

Table 1 shown the summarization of demographic information such as gender, age, current semester, duration of daily internet use and the purpose of daily internet use.

Table 1. Demographic information on participant's gender, age, courses, current semester and duration of daily internet use

Demographic		**Frequency (*f*)**	**Percent (%)**
Gender	Male	35	32.4
	Female	73	67.6
Age	19	4	3.7
	20	11	10.2
	21	16	14.8
	22	17	15.7
	23	28	25.9
	24	19	17.6
	25	8	7.4
	26	2	1.9
	27	2	1.9
	28	1	0.9
Courses			
ISM	Psychology	19	17.6
	Software Engineering	6	5.6
	Islamic Financial Economy	2	1.9
	Social Communication	4	3.7
	Digital game Designing	4	3.7
	Financial Administration	1	0.9
	Theatre Arts	4	3.7
ISMP	Counselling	5	4.6
	Special Education	2	1.9
	TESL	8	7.4
	Financial Management	1	0.9
	Chemistry	7	6.5
	Early childhood Education	1	0.9
	Computer	3	2.8

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	Science Malaysia Education	1	0.9
	Physics	4	3.7
	Malay language Education	5	4.6
	Biology	6	5.6
	Islamic Education	2	1.9
	History	2	1.9
	Geography	5	4.6
	Mathematics	4	3.7
	Sports Science	3	2.8
	Arabic Language	3	2.8
Current Semester	1	12	11.1
	2	9	8.3
	3	16	14.8
	4	17	15.7
	5	8	7.4
	6	12	11.1
	7	12	11.1
	8	22	20.4

Note. *M*=Mean, *SD*=Standard Deviation

Based on Table 1, majority of the participants are female with 73 participants (67.6%) and 35 male (32.4%) participating in this study. 28 (25.9%) of the participants aged 23 years old (*M*=22.59, *SD*=1.81). Followed by 19 (17.6%) participants aged 24 years old and only one participant aged 28 years old. Most of the participants are Psychology students, 19 (17.6%) and currently in Semester 8, 22 (20.4%) that actively participated in the study and only 8 (7.4%) participants are from Semester 5.

This study examines the duration of daily internet use among university students in UPSI and it was analysed by using SPSS software. The result shows that the majority of the participants use the internet more than 9-12 hours daily. 61 (56.5%) of the participants spend 9-12 hours and another 20 (18.5%) participants spend 1-4 hours and another 19 (17.6%) participants spend 5-8 hours daily. There were also two participants who answered spend more than an hour on the internet daily. The result was summarised in Figure 1 below.

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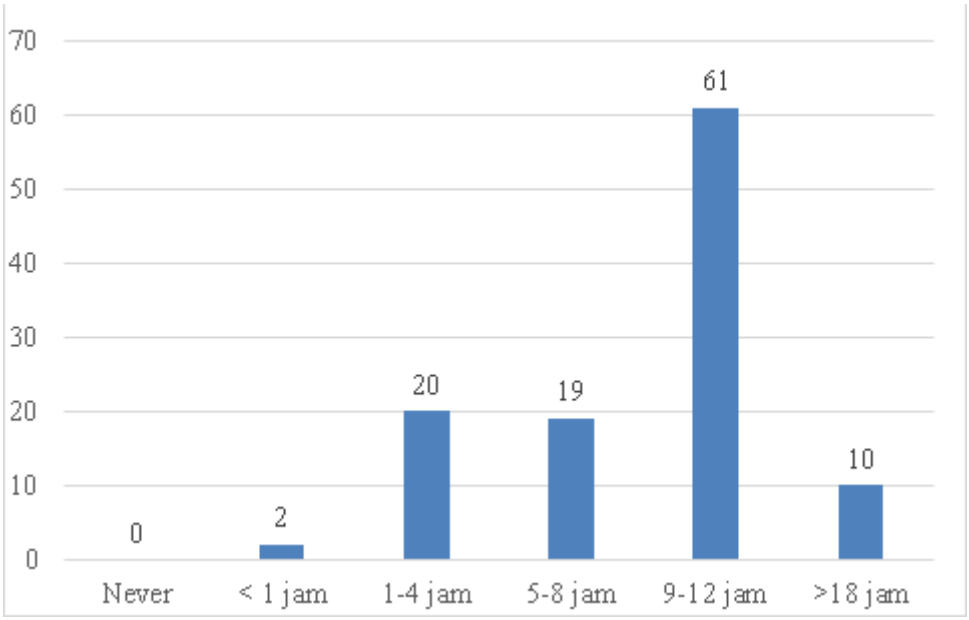

Figure 1. Duration of daily internet use

This study also examines the purpose of daily internet use among university students in UPSI and it was analysed by using SPSS software. Figure 2 revealed the majority of the participants answered the purpose of daily internet use was for social media (n = 104), text communication (n = 100), and web surfing (n = 97). Meanwhile, only 90 participants choose e-mail when using the internet daily. The least purpose of daily internet use was games (n = 64).

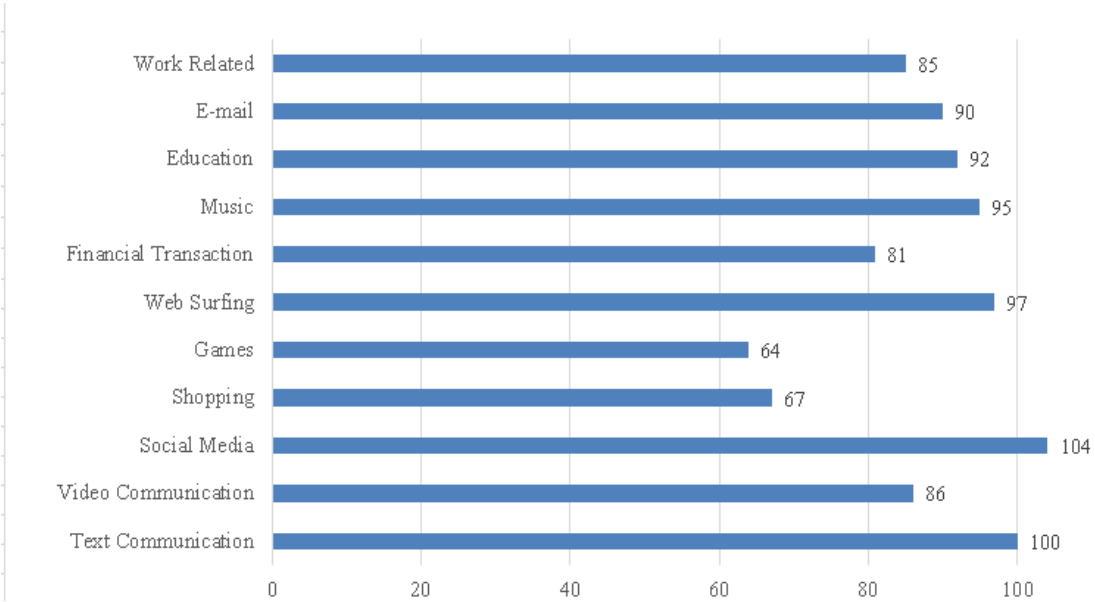

Figure 2. Purpose of daily internet used

After conducting the inferential analysis using Pearson Correlation, the results from IBM SPSS Statistics 27 showed there is a significant relationship between internet addiction and academic stress among university students.

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Prevalence of Internet Addiction, Sleep Quality, and Academic Stress

Table 2. Prevalence of participants with Internet Addiction

	Frequency (*f*)	**Percent (%)**
Not addicted	15	13.8
Having internet addiction symptoms	93	86.1
Total (N)	108	100

Based on Table 2, the prevalence of internet addiction was found, 93 (86.1%) of the participants considered having internet addiction. Also, the remaining 15 (13.8%) are not considered to have internet addiction.

Table 3. Prevalence of participants with Sleep Quality

	Frequency (*f*)	**Percent (%)**
Not severe difficulty	108	100
Having severe difficulty	0	0
Total (N)	108	100

Table 3 shows the total of participants that considered having bad quality of sleep. Based on the result, 108 (100%) of the participants were categorized as not having severe difficulty in sleeping or having good sleep quality.

Table 4. Prevalence of participant with Academic Stress

	Frequency (*f*)	**Percent (%)**
Low perception of Academic stress	15	13.8
High perceptions of Academic stress	93	86.1
Total (N)	108	100

Table 4 showed the total of participants who considered having a high perception of academic stress. Based on the result, it was stated that 93 (86.1%) of the participants considered having a high perception of academic stress. Also, the remaining 15 (13.8%) are considered to have a low perception of academic stress.

Relationship between Internet Addiction and Academic Stress

The hypothesis that was being tested in this study is :

$H_0$1: There is no significant relationship between internet addiction and academic stress among university students.

$H_1$1: There is a significant relationship between internet addiction and academic stress among university students.

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Table 5. Pearson correlation between Internet Addiction and Academic Stress

		Internet Addiction	Academic Stress
Internet Addiction	Pearson correlation	1	.342**
	Sig. (2-tailed)		<.001
	N	108	108
Academic Stress	Pearson correlation	.342**	
	Sig. (2-tailed)	<.001	
	N	108	108

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

Table 5 shows there is a significant relationship between internet addiction and academic stress at the 0.01 level with two-tailed (r = .342, p < .001). Hence, $H_1$1 was accepted.

Relationship between Sleep Quality and Academic Stress

$H_0$2: There is no significant relationship between sleep quality and academic stress among university students.

$H_1$2: There is a significant relationship between sleep quality and academic stress among university students.

Table 6. Pearson correlation between Sleep Quality and Academic Stress

		Sleep Quality	Academic Stress
Internet Addiction	Pearson correlation	1	.309**
	Sig. (2-tailed)		.001
	N	108	108
Academic Stress	Pearson correlation	.309**	
	Sig. (2-tailed)	.001	
	N	108	108

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

Table 6 shows there was a significant relationship between sleep quality and academic stress at the 0.01 level with two-tailed (r = .309, p <.01). Hence, $H_1$2 was accepted.

The result showed that the prevalence of internet addiction (IA) in this study is 86.1% in which more than half of the students are internet addicted (n=93). This is because of their status as digital natives and their environment that is full of technology. They were already familiar with the use of the internet for searching information and academic purposes in university. However, when the students felt overwhelmed with academic stress and pressure, they were becoming overdependence towards the internet for relieving stress. This finding is consistent with the previous study by Hasan and Abu Jaber (2019) found that 110 out of 163 students or 67.5% scored higher than 50 on the IA scale. However, the IA level is more affected by the first and second-year students.

Aside from that, more females participated in this survey which showed that females are more active or have access to the internet than male (n=73). In the holistic, the male is more on the internet than females. However, according to Treceñe (2020), 10.8 % of female students had more access to the internet for receiving

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emails, surfing websites, academic purposes, and social media compared to male students who spent more time online gaming and chatting.

Internet addiction is significantly more prevalent among younger Internet users than among older Internet users. The result of this study found that IA is from the age of 23 years old. Ismail et al. (2020), 23 years old were among the young adults (*n*=28). The previous study mentioned young adults aged 15 to 24 spent the most time on the internet in Malaysia (Ismail et al., 2020). The reason being, they mentioned the reason was because seeking and reforming the personality and establishing new connections hence, university students are more vulnerable to internet and smartphone addiction.

Regarding their duration of daily internet use, the majority of the participants spent more than 9 hours in their daily internet use (*n*=61). In the study of Sonia et al. (2022), they found more than half of students spend 7-12 hours on the internet. They also mentioned that students who used the internet for more than 5 hours per day were 2.64 times more likely to develop internet addiction. The greater the daily internet use, the greater the risk of developing an internet addiction.

Based on the result of the purpose of daily internet use, the top most of the participants answered social media, text communication, and web surfing as their purposes of daily internet use. The participants most likely consume the internet for social media (*n*=104) This is because students primarily used social media to share information about fun and entertainment. The students checked their social media before doing anything else and spent 30 to 60 minutes per day doing so. The reason why they always check social media is to alleviate their stress and distract themselves from getting in the mood to do something (Bashir et al., 2021). Aside from that, a previous study found that internet users were more likely to use the internet for online gaming and online communication with friends. Students with IA used internet access more frequently for chat and games (Mahmoud et al., 2022). However, in this study, gaming was placed at 11 out of 11 purposes of daily internet use provided by the researcher in the questionnaire. Meanwhile, online communication with friends was placed at 2 out of 11. It can be explained based on the individual differences. By means, every individual has different choices and interests for their use of the internet on a daily basis.

Based on the inferential analysis outcome, there is a significant relationship between internet addiction and academic stress. This finding is supported by a previous study by Ismail et al. (2020) who found that internet addiction is a psychological disturbance and predictor of negative emotions, one of which was psychological stress. Meanwhile, Zhang et al. (2022) believe that university students have young people's digital distractions for example computer games and online surfing in order to get rid of their stress and it is a way to avoid reality problems. This can be explained by the students trying to overcome their stress from any significant factors as university students for example such as assignments, research projects, education, online classes, online surfing for information, and others that could be related to using the internet for entertainment and relieve stress such as playing online or video gaming.

Other than that, this finding is also supported by the General Strain theory that was developed by Agnew (2001) which states stressors increase the probability of negative emotions and to take corrective action, crime

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is one possible response. This can be related to the study by which when an individual experiences an outstanding level of stress, they tend to distract themselves from their emotions through obsessive internet use.

This finding is also consistent with D'Souza et al. (2018), who found Internet addiction was highly and positively correlated with stress. This result may be explained by the fact that the participants engaged in uncontrolled use of the internet daily to overcome the stress because of the high expectations from parents, and teachers, many assignments, fear of failure, etc. The researcher also explained that they intend to use the internet to relieve stress at first, but it becomes uncontrollable and addictive after a while. In this study, the result showed the participants last year were more likely to be internet addicted due to assignments and final year projects in which they used more internet for searching the information and the fact that they were always on the laptop screen more than other students. Therefore, H1 is supported.

For the second hypothesis, the result showed there is a significant relationship between sleep quality and academic stress. This finding is consistent with Jeon (2021) that found sleep quality was associated with academic stress. The former mentioned that Korean university students, especially nursing students developed sleep problems and sleep disturbances and at worse, they had insomnia. This is because nursing students have many subject courses and alternate with clinical practices compared to other courses. The students had limited time to rest and had deep sleep to restore their own energy. Furthermore, researchers found more than half of the students suffer from sleep problems and it affects their mental health and academic performance. This also can be related to the fact that the students had low concentration, worsened memory, bad or risky decision making, and lack of energy, and in the end the students experienced health and mental problems in which the students did not have the ability or strong will in academics (Rathakrishnan et al., 2021).

The finding by Ramachandiran and Dhanapal (2018) also agreed that sleep had a relationship with academic stress. They found more than half of Malaysian university students experience sleep disorders because of stress from academics. 45 (67.5%) respondents experienced insomnia, 20 respondents (29.8%) experienced snoring while sleeping, and only 3% experienced obstructive sleep apnea. Most of the respondents had difficulty falling asleep. This is the same in this study in which most of the participants took 15 to 30 minutes to fall asleep when they answered the question that was being asked in the survey about the duration they took to fall asleep. Based on the Restorative theory developed by Oswald (1976), sleep is required for the rejuvenation and restoration of the physiological processes that keep the body and mind healthy and fully functional. He clarified that rapid eye movement sleep is critical for restoring mental functions because it focuses on the role of REM sleep in cortical regeneration and formation, which is involved in learning, focused attention, and emotional functions. Therefore, sleep has a relation with academics and if the students have poor sleep quality, they also have poor learning and will experience academic stress.

Basically, the majority of university students experience sleep problems and sleep disturbances resulting in poor sleep quality. This is because many times were consumed in completing assignments, projects, classes, and examinations. Another factor could be caffeine intake, loss of nutrition, and rare exercises that contributed to poor sleep quality (Wang & Bíró, 2021). However, in this study, all the participants (n=108) had good sleep

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quality. Even though they were university students and were content with many academic activities, projects, and assignments juggled with curriculum and sports, they did not have sleep problems. This might be because they consumed less coffee intake, had nutrition in which they consumed nutrition-balanced diets, regularly exercised, and took care of their sleep time. A positive lifestyle also contributed to having a good quality of sleep (Wang & Bíró, 2021).

Other than that, this study also found that 93 of the participants had a high perception of academic stress. This can be explained because of stress management and the mindset of achieving good academic performance. When the students were unable to manage and arrange the times very well, they experienced high stress levels. In fact, if the students were procrastinators, they were easily experiencing stress. Also, the students who had poor mindsets in achieving success in academics had low self-esteem and self-confidence in achieving good academic performance (Nnaemeka et al., 2022). Hence H_2 is supported.

In this study, the result showed more than half of the students had symptoms of internet addiction (n=93) in which represent as significant numbers to acknowledge. This result increases the awareness and alertness of the prevalence of IA and considered to limit the daily internet usage. Thus, the students able to avoid their potential to involved in internet addiction and use the internet for important things and only spend short time for entertainment. Next, the exposure of duration of daily internet use makes the participants recognize their consumption of internet of daily life. Sometimes, when we use internet in daily, we did not aware how long we consume the internet usage. In being said that the participants well informed their duration of internet usage and changed the time limitation so that they did not being overdependence or being compulsive towards internet. The result showed that majority of participants answered 9-12 hours of the duration so, they may change or reduce the usage less than 9 hours. Lastly, the result also showed that internet addiction and sleep quality does affect the academic stress. This finding gave the insight to the students to have high self-control towards the academic's pressure. University students should perform better in time management in order to adjust the time spent on internet and sleeping time so that they able to achieve the balanced time in managing the self to avoid the stress.

There were several limitations found through process of this research. First, this study purposed towards only one university. This can be affecting the results as the accurate data is not achieved. The study should conduct in the large-scale study in which the study involved public university and private university in Malaysia. Large scale of study benefited more reliable and stronger result because of the small margins error and lower standard deviation. Second, there were unbalanced number of participants based on the gender differences. There were 73 females and 35 males participated in this study. The unbalanced of the number of gender able to affect the result and data as it affects the result from duration and purpose of daily internet usage. This is because the duration of consumption and purpose is difference between genders. Commonly, male is more likely use the internet for online gaming and consume more than 4 hours while for females is more likely use social media frequently and consume more than 5 hours. In being said, different genders had

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different interest of consumption and difference of the duration of internet. So, the result may be not accurate as there was a gender bias.

CONCLUSION

In conclusion, based on the study more than half of the participants experience the overdependence of internet use without them being aware of that. Also, the result shown they still had good-quality sleep even though they had internet addiction. However, majority of the participants suffer from academic stress, which it affects their academic performance. In addition to that, this study found the majority of the participants spent 9 hours on daily internet use for many reasons and the most important purpose is for entertainment, which is spent on social media. The exposure to the duration of daily internet use makes the participants recognize their consumption of the internet in daily life. Other than that, this study proved that there is a relationship between internet addiction and academic stress among university students. This shows that the students overdependence on the internet when they experience high stress in academics in order to escape from reality for a while. However, the study to this relation is still lacking in Malaysia. Same goes to the study of relationship between sleep quality and academic stress which also is still lacking in Malaysia specifically for university students as they experienced stress more than other ages. This study is significant as it contributed to a better understanding of the students who experienced high levels of stress and was able to assist them in overcoming it.

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