PREVALENCE OF INSOMNIA AND ITS ASSOCIATION WITH SOCIAL MEDIA USAGE AMONG UNIVERSITY STUDENTS IN SELANGOR, MALAYSIA, 2018

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ABSTRACT

Insomnia is an arising common health problem in Malaysia. There are many factors contributed to insomnia in young adults but very few are known. Increasing usage of social media may be one of the contributing factors to insomnia along its association with the sociodemographic factors. The objective of this study was to measure the prevalence of insomnia and to study its association with usage of social media and sociodemographic factors among university students. A cross-sectional based questionnaire was conducted among 445 students aged 18-30 years old in a private university in Selangor from July to August 2018. The questionnaire consisted of three parts to assess insomnia, social media usage and some socio-demographic factors. The age of the respondents ranged from 19 to 33 years old and the majority was relatable to insomnia (69%). The frequency of accessing social media was significantly associated with insomnia (p value=0.005). The time of the day of accessing social media mostly was significantly associated as well with insomnia, especially evening (p value=0.02), night time (p value=0.01) and before sleeping time (p value=0.04). The use of gadgets (phones/laptops/tablets) before sleeping at night also showed significant association with insomnia (p value=0.003). The sociodemographic factors (gender, age, race, income, relationship and living status) showed no significant association with insomnia. As a conclusion, the most influential factors that significantly associated to insomnia among students in a private university were the frequency of accessing social media, time of social media usage (the evening, night and before sleeping), and the usage of gadgets before sleeing on bed.

***Keywords**: Insomnia; social media; university students*

ABSTRAK

Insomnia adalah masalah kesehatan umum yang timbul di Malaysia. Ada banyak faktor yang berkontribusi terhadap insomnia pada orang dewasa muda tetapi sangat sedikit yang diketahui. Peningkatan penggunaan media sosial dapat menjadi salah satu faktor yang berkontribusi terhadap insomnia beserta hubungannya dengan faktor sosiodemografi. Tujuan dari penelitian ini adalah untuk mengukur prevalensi insomnia dan untuk mempelajari hubungannya dengan penggunaan media sosial dan faktor sosiodemografi di kalangan mahasiswa. Sebuah kuesioner berdasarkan cross-sectional dilakukan di antara 445 siswa berusia 18-30 tahun di sebuah universitas swasta di Selangor dari Juli hingga Agustus 2018. Kuesioner terdiri dari tiga bagian untuk menilai insomnia, penggunaan media sosial dan beberapa faktor sosio-demografi. Usia responden berkisar antara 19 hingga 33 tahun dan mayoritas berhubungan dengan insomnia (69%). Frekuensi mengakses media sosial secara signifikan terkait dengan insomnia (nilai p=0.005). Waktu untuk mengakses media sosial sebagian besar terkait secara signifikan dengan insomnia, terutama sore (p value=0.02), malam hari (p value=0,01) dan sebelum waktu tidur (p value=0.04). Penggunaan gadget (ponsel/laptop/tablet) sebelum tidur di malam hari juga menunjukkan hubungan yang signifikan dengan insomnia (nilai p = 0,003). Faktor sosiodemografi (jenis kelamin, usia, ras, pendapatan, hubungan dan status hidup) tidak menunjukkan hubungan yang signifikan dengan insomnia. Sebagai simpulan, faktor yang paling berpengaruh yang secara signifikan terkait dengan insomnia di kalangan mahasiswa di universitas swasta adalah frekuensi mengakses media sosial, waktu penggunaan media sosial (sore, malam dan sebelum tidur), dan penggunaan gadget sebelum tidur di tempat tidur.

***Kata kunci**: Insomnia; media sosial; mahasiswa universitas*

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INTRODUCTION

Mobile technology and social media has profoundly changed the landscape of our lives. Since its appearance, social media become highly popular among adolescents and adults. Insomnia is a sleep disorder that regularly affects many people worldwide. In short, individuals with insomnia find it difficult to fall asleep or stay to sleep. The effects can be devastating. Insomnia commonly leads to day time sleepiness, lethargy and general feeling of being unwell, both mentally and physically. Many factors are found to be associated with insomnia. Social media usage contribution to insomnia is hardly known since very little study was done. Insomnia is one of the sleep disorders when someone has sleep difficulty, tends to stay up late without sleep or no sleep restoration despite having opportunity to sleep, associated with daytime malfunctioning for at least 4 weeks duration (Cunnington et al 2013). It is also associated with poor performance at work, lack of concentration and weakened memory, which can cause increased rates of abseenteism, higher rates of motor vehicle accident and injury at the workplace (Yohannes et al 2017).

The most common risk factors associated with insomnia include demographic details, such as female gender (LeBlanc et al 2009). A study made in Sweden by Thomée et al (2012) showed that overuse of online communication was more likely to cause sleep disturbances and stress among women.

A study done in Japan by Ikeda and Nakamura (2014) evidenced that among Japanese high school students, it was found that long hours of mobile phone use was associated with short sleep time and fatigue. A study in South Korea found that nearly 72% of South Korean children aged 11-12 years spend 5.4 hours a day on mobile phones, 25% of those children were considered addicts to smartphones (Jeong et al 2016).

A study by Cain and Gradisar (2010) in Australia concluded that evening use of electronic media, such as television and computers by adolescents is associated with a delayed bedtime and a reduction in total sleeping time. In another study, there was report showing that the use of cell phones and computers while in bed is associated with delayed sleep times (Brunborg et al 2011). A survey study by Nathan and Zeitzer (2013) in California pointed an association between mobile phone use and daytime sleepiness in high school students in California. A study in Switzerland by Lemola et al (2015) discovered that excessive usage of social media is a risk factor for insomnia in adolescents. The study concluded that electronic media use positively associated with sleeping difficulties (Lemola et al 2015).

The aim of this study was to measure the prevalence of insomnia and to determine its association with usage of social media and sociodemographic factors among university students.

MATERIALS AND METHODS

This cross-sectional questionnaire-based study was conducted among 445 students from a private university in Shah Alam. The approval for ethics was obtained from Management and Science University, and the copyright for permission of using the screening instruments for insomnia and how social media affect sleep quality questionnaire in the study were requested prior to the study. All the respondents had been explained regarding the study being conducted and about the confidentiality of their participation. A written consent form was also given to all respondents.

The questionnaire consists of three parts. Part one consisted of socio-demographic data of the respondents such as age, race, gender, faculty, marital status, total household income and living status. Part two is a continuous variable to assess the social media usage amongst the respondents. Socio-demographic data and social media usage were obtained via a self-administered questionnaire. Part three consists of the questionnaire, which provides a screening instrument for insomnia and how social media affect sleep quality.

In part two, the questionnaire consists of 5 items evaluating the use of social media amongst the respondents in terms of frequency, time spent, the time of the day of accessing social media, whether morning (8am-12pm), afternoon (12pm-3pm), evening (4pm-7pm), night (8pm-12am), or before sleeping as well as the use of the gadgets (laptop/tablets/ cellphone) and the type of social media use like media (Facebook, Instagram, Whatsapp, Twitter, Telegram, Youtube, Tumblr, Wechat, Pinterest, LinkedIn, Google+ and others).

Part three consists of 16 self-rated questions regarding insomnia and other sleep disorders. The 16 self-rated questionnaires were obtained from Behavioral Health Virtual Resource in 2018. The insomnia screening questionnaire is a screening tool used to guide for the clinical evaluation of insomnia.

Data obtained were entered and analysed using Statistical Package for Social Sciences (SPSS) program 23.0 version software. Descriptive statistics were used

to project the collected results to show the prevalence of insomnia. Chi square test and independent t-test were used to study the association between insomnia with social media usage and socio-demographic factors. A p value of <0.05 was considered to be statistically significant.

RESULTS

In total, 445 university students aged 18-30 years old participated in this study with a response rate of 98.9% (445/450). It was seen that most of the respondents were female (67.0%), Malay (55.5%), from SESS faculty (23.6%), not in a relationship (72.4%), and majority living with others (76%). The highest access to social media happened during the night time as 66.7% of them access it at that time between 8pm-12 midnight. Whereas, the least time of access was at morning between 8am-12pm in 24% of respondents.

The prevalence of insomnia among the respondents was 69%. It was found that there was significant association between insomnia and frequency of social media use with p value of 0.005 as seen in Table 2. The more the frequency access social media applications, the more odds to have insomnia.

Insomnia also showed significant associations with the time of the day (evening, night and before sleeping) of the frequently access to social media as shown in Table 3. The morning and afternoon time access to social media showed no significant association with insomnia. The use of gadgets (laptop, tablet or handphone) on bed just before sleeping also showed significant association with insomnia with p value of 0.003. For the age, sex, race, relationship status and living status, those aspects did not show significant association with insomnia.

DISCUSSION

This study showed that 69% of the students were having insomnia. This was consistent with others who found that about 60% of the students suffer from a poor sleep quality (Lund et al 2010). Yohannes et al in 2017 found 61.6% of the Debre Berhan University students suffering from insomnia, and it was also associated with poor performance at work, lack of concentration and weakened memory, which can cause increased rates of abseenteism, higher rates of motor vehicle accident and injury at the workplace (Zailinawati et al 2012).

A significant association between insomnia and the frequency of using social media and the use of gadgets before sleeping in this study was similar to what was found in a study in Switzerland which discovered that excessive usage of social media is a risk factor for insomnia in adolescents. That study concluded that electronic media use positively associated with sleeping difficulties (Lemola et al 2015). There was report which stated that the use of cell phones and computers while in bed is associated with delayed sleep times (Brunborg et al 2011). A study in Belgium found the same results. The mobile phone usage in bed at night negatively impacts sleep outcome (Exelmans & Van 2016). A survey study by Nathan and Zeitzer (2013) in California also showed an association between mobile phone use and daytime sleepiness in high school students in California.

The results of significant association between insomnia and the evening and night usage of social media were consistent with Cain and Gradisar's (2010) finding in a study done in Australia which concluded that evening use of electronic media is associated with a delayed bedtime and a reduction in total sleep. Besides, a study conducted in South Australia revealed that social media usage at night affects their sleep duration. Total of 1237 students responded and the study reported that non-optimal sleep duration on weekdays was much as 71% and on weekends was as much as 53%. One out of five respondents complained late bedtime due to using social media (King et al 2014).

Table 1. Frequency distribution of the socio-demographic characteristics

Variables		Frequency	Percentage
Sex	Male	147	33.0
	Female	298	67.0
Race	Malay	247	55.5
	Chinese	22	4.9
	Indian	153	34.5
	Others	23	5.2
Relationship status	Single	322	72.4
	In a relationship	133	27.6
Living status	Alone	107	24.0
	With others	338	76.0

Table 2. The association between insomnia and frequency of social media usage

Variables	Insomnia		P value	95% Cl
	Yes	No		
	Mean± SD	Mean± SD		
Frequency of social media usage (times)	35.27± 45.46	25.62± 28.59	0.005	1.755-18.271

Table 3. The association between insomnia and the time of the day most frequently access social media

Time of use	Insomnia		X2	P value
	Yes (%)	No (%)		
Evening				
Yes	107 (76.4)	33 (23.6)	5.28	0.02
No	200 (65.6)	105 (34.4)		
Night				
Yes	216 (72.7)	81 (27.3)	5.83	0.01
No	91 (61.5)	57 (38.5)		
Before sleeping				
Yes	180 (72.9)	67 (27.1)	3.91	0.04
No	127 (64.1)	71 (35.9)		
Using gadget in bed before sleeping				
Yes	289 (71)	118 (29)	9.07	0.003
No	18 (47.4)	20 (52.6)		

Otherwise, there was no significant association between insomnia and age, household income, gender, race, faculties in the university, marital status and living status. However, this was not in agreement with various studies that said otherwise. A study by LeBlanc et al (2009) said that the most common risk factor associated with insomnia includes demographic details, such as female gender (LeBlanc et al 2009, Barker 2009). Epidemiologic research has suggested that divorced individuals, particularly women, have higher rates of sleep disturbance than their married counterparts (Troxel et al 2010).

CONCLUSION

There was high prevalence of insomnia among the university students with significant association to social media use in terms of frequency of access the social media and the time of the day most frequently access social media, especially evening, night and before sleeping.

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