



THE EXCESSIVE USE OF SOCIAL MEDIA AND ITS RELATIONSHIP TO INSOMNIA AMONG NURSING STUDENTS

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ABSTRACT	Keywords
<p>Social media is online media used to interact and exchange information with other people. Excessive use of social media can negatively impact, one of which can make a person's sleep patterns change, causing insomnia. Insomnia is a condition characterized by a disturbance in the amount, quality, or time of an individual's sleep. This study aimed to analyze the relationship between the excessive use of social media and insomnia among nursing students. This research method was correlational quantitative with a cross-sectional design. The sampling technique used was convenience sampling with a sample size of 207 participants. Data analysis used the chi-square test. The results showed 102 participants (49.3%) actively used social media, and 105 participants (50.7%) were not actively using social media, 103 participants (49.8%) experienced insomnia, and 104 participants (50.2%) do not experience insomnia. This study demonstrated a significant relationship between the excessive use of social media and insomnia among nursing students (p-value 0.01). Therefore, this research can provide information to students to optimize the use of social media to support the learning process and improve students' sleep quality.</p>	<p>Insomnia, Nursing students, Social media</p>

INTRODUCTION

The development of knowledge and technology has progressed as well as the development of the internet. The internet makes it easy for everyone to access information more quickly and efficiently and communicate or do various things with anyone and anywhere without the time and place limits (Syamsuudin et al., 2015). One of the new forms of the internet is social media which has become part of the lifestyle for various activities, such as online transactions and tools used for educational or business purposes. Therefore, social

media has a vital role in changing a person's lifestyle through communication and interaction. In addition, technology has shown rapid development where we can access social networks anytime and anywhere (Siddiqui dan Singh, 2016).

Social media users have reached 3.48 billion people; this is an increase of nine percent from 2018. In other words, 47% of the world's total population of 7.53 billion people use social media. Data from the Indonesian Internet Network Providers Association (2017) found that internet users were 143.26 million people (54.68%) in

Indonesia. Most internet users in Indonesia are in Java, with 86,339,350 people (65%). There are three types of internet content that internet users most widely use, social media (129.2 million), entertainment (123.4 million), and news, with 127 million (APJII, 2019). In America, social media platforms have become a part of the structure of life. Most Americans use social media and check their accounts at least daily (Abroms, 2019).

Many social networking sites allow people from various parts of the world to communicate and interact at a low cost compared to using the telephone. One of the positive impacts of social media is that it makes it easier to find and disseminate information. However, the adverse effect of using social media is health problems (Levenson et al., 2016). Other adverse effects are fatigue, decreased energy, mood disturbances, and reduced cognitive functions, such as impaired attention, concentration, and memory (American Academy of Sleep Medicine, 2014). In addition, the excessive use of social media has made many people suffer from depression and insomnia (Adam, 2020; Lemola et al., 2015). For many people, young and old alike, sleeping with a phone in the bedroom is commonplace. This is one of the most common pre-sleep activities between sleeping and falling asleep. While it may feel relaxing to lie in bed and check the news feed, the reality is that this constant connectivity can have a substantial adverse effect on our sleep (Woods & Scott, 2016).

An epidemiological study states that excessive use of smartphone causes health problems such as headaches, fatigue, impaired concentration, sleeplessness, and hearing problems (Takao, 2014). A study found that many teens spend time on screen-based activities (such as social media, surfing the web, watching TV, and playing games). These sleep problems were later associated with an increase in insomnia

symptoms (Li et al., 2019). Sleep deprivation affects as many as 72% of high school students and 70% of adults use electronic devices in the bedroom or bed. The longer a person uses gadgets at night, the harder it is to fall asleep (Bhat et al., 2018; Wheaton et al., 2018).

Insomnia is a condition when a person experiences disturbances in the amount, quality, or sleep time (Nurdin et al., 2018). Adolescent, especially students, are more likely to stay up late, and have shorter sleep duration on weekdays, delayed sleep with long sleep on weekends (Adam, 2020). A study among university students in Selangor, Malaysia, found that the prevalence of insomnia among the respondents was 69%. There was a significant association between insomnia and social media frequency use (Abdalqader et al., 2018). The data obtained from 20 nursing students show that all the students are active users, such as Facebook, Instagram, WhatsApp, and Line. Fifteen participants said they had difficulty sleeping and felt sleepy during the day. They use social media before bedtime, and they often sleep later than 01.00 am and wake up later than 07.00 am. They also feel back pain, headaches, colds, and stress because of college assignments. These data can be the basis for overcoming insomnia in students by knowing the relationship between the excessive use of social media and insomnia in nursing students.

METHOD

The research method used is quantitative with a cross-sectional design to find the relationship between the independent variable (the excessive use of social media) and the dependent variable (insomnia). The population in this study was 429 nursing students. The sample determined through the sample calculation is

207 respondents. The research was conducted in May - June 2019. The sampling technique used convenience sampling, where samples are taken from people who are easy to contact or reach. The inclusion criteria are active users of social media and have accounts on various social media, respondents who filled out the consent form and were willing to participate in the research process. The exclusion criteria are students who refuse to be a participant.

The questionnaire consists of two parts. Part 1 consisted of the time or intensity of using social media amongst the participants with yes-no questions. Participants are actively used social media if the score was > 7 and not actively using social media if the score was <7. Part 2 consisted of questions regarding sleep time, insomnia symptoms, and factors causing insomnia with yes-no questions. Participants experienced insomnia if the score was > 4 and did not experience insomnia if the score was <4.

To identify the validity and reliability of the scale, the questionnaire was tested on 35 students. Researchers tested the validity by using the Pearson product-moment correlation formula. Next, the researcher conducted a reliability test using Cronbach's Alpha formula; 20 questions were declared valid ($r_{count} < r_{table} = 0.344$). The reliability was (0.767), which indicates the scale has a high stability degree that can be relied on in this conducting study.

All respondents had been explained about research objectives, methods, and benefits regarding the study being conducted and the confidentiality of their participation. A written consent form was also given to all respondents. The data analysis used was chi-square to determine the association between the excessive use of social media and insomnia. This research has received approval from The Research Committee

Ethics Faculty of Nursing Universitas Pelita Harapan.

RESULTS

Table 1. Demographic Variables of Nursing Students

Characteristics	n	%
Age		
15-20 Years	183	88.0
21-25 Years	24	12.0
Gender		
Female	169	81.6
Male	38	18.4

Based on table 1, most participants were between 15 and 20 years old (88%), and most were female (81,6%).

Table 2. The Use of Social Media in Nursing Students

The use of social media	n	%
Active	102	49.3
Not active	105	50.7

Based on table 2, most participants are not active social media users (50,7%).

Table 3 Incidence of Insomnia in Nursing Students

Insomnia	n	%
Yes	103	49.8
No	104	50.2

Based on table 3, most participants said they did not experience insomnia (50,2%).

Table 4. Correlation between Excessive Use of Social Media and Insomnia in Nursing Students

So ci al m ed ia	Ins om nia	T ot al	P- v al	O R
Not ins om nia	Ins om nia			

	f	%	f	%	f	%	u	e
A	76	3	29	1	1	5	0,	6.
cti		6.		4	0	0	0	9
ve		7		5	.		0	2
N		5				7	1	6
ot	28	1	74	3	1	4		
ac		3.		5	0	9		
tiv		5		.	2	.		
e				7		3		

The relationship between the excessive use of social media and insomnia was significant (p-value 0.001). Based on the OR, respondents who actively use social media are 6.9 times higher risk of insomnia than respondents who do not actively use social media.

DISCUSSION

Social media shows interactive participation. With digital and mobile technology, interaction is easier than ever before. Today, individuals can talk to a large number of people and get immediate feedback. Social media allows people to exchange information and find entertainment through such sites (Manning Jimmie, 2014). Social media includes social networking sites and blogs where people can easily connect. For educational purposes, social media has been used as an innovative way. Social media has increased the quality and speed of collaboration for students. Social media makes the students easily communicate or share information quickly through various social sites such as Facebook, Youtube, Instagram, etc. Teachers can also post on social media about class activities, school events, and homework assignments. Social media's negative impact on education is privacy issues such as posting personal information on online sites (Siddiqui & Singh, 2016).

Respondents in this study were students aged 15-20 years (88%), and according to research by Al-Fadhel at King Saud University that one of the most important motivations for students in using social media is entertainment, exploration, acquaintances, and communication with other people (Adam, 2020). Spending more time on social media leads to internet game addiction, disrupts the regular sleep pattern, and leads to more interruptions during sleep (Hale & Guan, 2015). A study confirms that increasing social media usage is associated with increased sleep disturbances like insomnia (Raudsepp, 2019). One study found that 70% of hospital employees and university students used social media in bed and spent an hour or more overnight doing it. Increased use of social media in bed was seen in younger participants than in older participants, resulting in insomnia, anxiety, and short sleep duration at night. (Bhat et al., 2018). This is following the results that adolescents are the most social media users (88%). The majority of respondents stated that they use social media because they get easy through wi-fi networks in school.

Excessive use of social media can cause a lot of problems for its users. Insomnia is a common sleep complaint that occurs with difficulty initiating sleep, difficulty maintaining sleep, frequent waking at night, a tendency to wake up too early, and unable to return to sleep. Respondents who experience insomnia are those who usually do homework at night, chat with friends until late at night, browse and download things related to hobbies and pleasures, and activities playing online games at night. Insomnia is also caused by the availability of facilities such as computers, laptops, tablets, or cell phones. The adverse effects of insomnia are fatigue, moodiness, irritability or anger, daytime sleepiness, lack of concentration, poor memory, poor quality performance at school

or work, lack of motivation or energy, and headaches or tension (American Academy of Sleep Medicine, 2014; Morin et al., 2015). Other factors that cause insomnia are age, gender, disease, and socioeconomic status (Susanti, 2015). Frequent social networking sites also affect reduced sleep on weekdays (Levenson et al., 2016). A study found that a fear of missing information drives social media users at night, so they constantly check their phones, leading to sleep disturbances and negatively affecting sleep quality (Tandon et al., 2020). In addition, adolescents are more likely to stay up late, have short sleep duration on weekdays, sleep late with long sleep on weekends (Bakotic et al., 2017).

The most exciting finding of this study was the relationship between the excessive use of social media and insomnia in nursing students, consistent with similar results reported by other researchers. A study in Australia and China found an association between social media use and sleep disturbances in adolescents. Excessive internet use has a direct detrimental effect on health and has an indirect negative effect on sleep (An et al., 2014; Vernon et al., 2015). Checking social media, sending emails, or seeing the news before bed can keep us awake, as nighttime use of electronics can affect our sleep through the light stimulating effect of digital screens. Circadian rhythms, including melatonin rhythms, are involved in different aspects of the facilitation of sleep. Circadian rhythms are biological cycles that have a period of about 24 hours. Body temperature, hormonal levels, sleep duration and quality, cognitive performance, and other physiological variables can affect circadian rhythm. The blue light emitted from the cell phone screen has been shown to increase the left frontal and parietal cortex's response during our work. Blue waves suppress delta brain waves so that they can control drowsiness (Wahl et al.,

2019). The blue light emitted by the phone affects melatonin levels. This signals to the brain that it is daytime, so melatonin production is suppressed, and sleep is delayed (Bhat et al., 2018).

Although these findings suggest an association between excessive social media use and insomnia and the need to develop an intervention to reduce social media's adverse effects on sleep, this study has limitations. The limitation was a cross-sectional study whereby causal relationships cannot be established.

CONCLUSIONS

The study concluded that excessive use of social media makes nursing students have insomnia. This research can provide information to optimize the use of social media to support the learning process and improve students' sleep quality. Students also need to be educated to establish a healthy sleep routine and control media use before bed to get adequate and quality sleep. Students must also understand and learn to improve their sleep patterns when they are young so that they have good sleep patterns when they grow up.

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