

Please cite this article as: Gananda, P.V., Vellu, V., Yusuf, S., Ibrahim, M.S. (2021). Smartphone addiction and social anxiety among university students: a cross-sectional study. *The Asian Journal of Professional and Business Studies* 2 (1).

SMARTPHONE ADDICTION AND SOCIAL ANXIETY AMONG UNIVERSITY STUDENTS: A CROSS-SECTIONAL STUDY

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ABSTRACT

Smartphone addiction has lately received public attention as a cause of poor mental health among university students across the globe. The use of smartphones has resulted in increased stress, anxiety, and depression among university students. There are a number of reasons why students use their smartphones, with the substantial body of research showing that students use their smartphones for entertainment, socialization, and educational purposes. Many individuals, however, are unaware that smartphone addiction is a significant problem that can have a detrimental impact on a person's thoughts, behaviors, habits, feelings, and sense of well-being. This ultimately causes a person to experience loneliness, sleep deprivation, and mental health disorders such as social anxiety and depression. This mental illness can be characterized as miserable mood, lack of interest or pleasure, feelings of guilt or low self-worth, irregular sleep pattern or appetite, low energy, and difficulty in concentrating. The aim of this study is to examine the relationship between smartphone addiction and social anxiety among university students enrolled in public institutions of higher learning. A total of 113 data were gathered through an online survey from five faculties at UPSI, and then analysed using SPSS version 25. According to the findings, university students are more likely than the

ARTICLE INFO

Keywords:

addiction, smartphone, social anxiety, university student

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general population to get hooked to their smartphones and are more susceptible to developing social anxiety disorder.]

1.0 INTRODUCTION

Today's society has experienced considerable change as a result of technological advances. Life was drastically different before the advent of modern technologies. In the lives of people all around the globe, technology now plays an essential role. Due to modern technology, it has been made easier to have access to education, health, industry, transportation and many more possibilities. For example, the smart phone is one of the modern technologies designed to simplify and reduce stress in people's life. The easy and efficient use of smartphones has significantly improved our lives in both positive and negative ways (Alhassan et al., 2018). This technology is being utilised irresponsibly these days, and as a consequence, it is having a detrimental impact on society and making our lives more complicated.

In the wake of these sophisticated technological developments, there has been an increase in the prevalence of addiction, which no longer just refers to drug or substance misuse, but now encompasses behavioural addictions such as excessive smartphone usage, online gambling, and online gaming. It is a brain disease characterised by an insatiable need for rewarding stimuli notwithstanding the negative repercussions of doing so (Darnai et al, 2019). It is an inability to quit doing something or a strong desire for something that ultimately leads to the formation of an addiction. Our health may be jeopardised if we have a strong drive that leads to self-destruction. It may have an impact on both a person's physical and mental health (Darnai et al, 2019). When a person spends more time on their smartphone than they do engaging with actual people, they find it difficult to stop themselves from checking their device on a regular basis

Individuals suffering from psychological issues such as social anxiety or feelings of loneliness may be more susceptible to the effects of excessive smartphone usage. This is related to the continuous fear of missing out (FOMO), as well as anxiety and despair, among other factors (Bloemen and Coninck, 2020). In a study conducted among university students, researchers discovered that students who had excellent grades are more likely to get hooked to their smartphones as a result of psychological discomfort (Parasuraman et al, 2017). Despite the fact that smartphones have an obviously addictive nature, they have not been classified as such by the Diagnostic and Statistical Manual of Mental Disorders (DSM). According to a review of the literature on cell phone addiction, smartphone and technology addiction manifests itself in one or more of the following ways: choosing to use the device even when you are aware of its effects and losing interest in other activities; feeling irritable and uneasy when you are separated from your phone, which results in feelings of anxiety or loneliness when you are unable to use the device; feeling irritable and uneasy when you are separated from your phone; feeling anxious or lonely when you are unable to use the device (Bloemen and Coninck, 2020).

Excessive use of the internet, computers, smartphones, and other electronic devices has been linked to a number of health problems, according to a study published by the World Health Organization (WHO). According to this study, the excessive use of smartphones has been linked to issues with mental health, such as anxiety and depression, among others (WHO, 2015). According to numerous research, there is a link between smartphone addiction and mental health issues such as anxiety disorder and depression, among others. According to the World Health Organization, 10 to 20 % of children and adolescents worldwide suffer from mental health issues, with anxiety disorder being the most common (Parasuraman et al, 2017).

According to a research conducted by Ching et al. in 2015, 46.9 % of Malaysian students are addicted to their smartphones. This demonstrates that they are more reliant on their smartphones in their everyday lives and that they are totally reliant on this device as a method of avoidance. Smartphones are being used as a means of escaping from unpleasant emotions, communicating in public, and interacting with others. Although initially beneficial as a diversion, this practise ultimately had a detrimental effect on a student's mental health. Students would eventually suffer from poor self-esteem, social anxiety, panic attacks, and despair as a result of their experiences. According to this data, students are more likely to get hooked to

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their smartphones and are more susceptible to anxiety disorders and despair. This research is being carried out in order to determine the connection between smartphone addiction and social anxiety among university students enrolled in public institutions of higher learning. |

2.0 LITERATURE REVIEW

The usage of mobile phones has grown rapidly in recent years, and it has been ingrained in the minds of its users. Smartphones may be referred to as minicomputers since the features and capabilities they provide are similar to those of a computer or laptop, but their structure is smaller than usual, and they are very useful (Rambitan, 2015). Smartphones are popular devices that are capable of storing and processing more data than traditional cellphones; they have many features, for example, games, access to the Internet and informal groups, informing, records, and visual and auditory stimulation, among others. With this technological advancement, the cell phone had almost completely transformed the way people communicated with one another. As it is used in a variety of settings, including learning, working, and communication, the global use of mobile phones has an impact on people and social orders in various structures. The smartphone has made life more convenient by providing a plethora of features that allow customers to manage the bulk of their daily labour of love with the click of a button. It enables customers to communicate more quickly and easily, as well as to get collection information, via the use of internet resources.

The widespread use of the Internet, as well as its increasing influence on users' lives to the point where it has become a dominant element in their lives, has prompted researchers to investigate the consequences of frequent internet usage on the physical and mental development of both children and adults, as well as the effects of frequent internet usage on children and adults (Diomidous et al, 2016). The term 'social media' refers to a variety of internet-based platforms that allow users to communicate with one another vocally and visually via various mediums (Carr and Hayes, 2015). According to the Pew Research Center (2015), at least 92 % of children and adolescents participate in online social networking activities. Researchers Lenhart, Smith, Anderson, Duggan, and Perrin (2015) discovered that adolescents aged 13–17 were significant social media users, with 87 % of them approaching a computer or tablet device and 58 % approaching a smartphone device. Nearly 75% of adolescents aged 15 to 17 have a smartphone, with a further 68 % of those aged 13 to 14 having a smartphone (Pew Research Centre, 2015).

Smartphone has caused the younger generation to become more and more preoccupied with its innovation that it has become a trademark of the younger generation and may even lead to addiction, according to a study conducted by Ching et al., (2015) which found that 46.9 % of Malaysian students were addicted to smartphones. As a result of a study conducted by the Malaysian Communication and Multimedia Commission in 2018, the Hand Phone Users Survey (HPUS) revealed that smartphone penetration rates increased by 2.1%, from 75.9% in 2017 to 78.0% in 2018. In addition, video calling is becoming more popular, with 15.9% of smartphone users making video calls, up from 53.4% in 2017. Video calling is also becoming increasingly popular, with 69.3% of smartphone users making video calls in 2017. As a result, it demonstrates that Malaysian society regards the smartphone as a major technology that should be utilised in daily life. This situation can be observed clearly since the technology or innovation insightful generation is so reliant on the development of touchscreen innovation, whereby an application on a smartphone can be used at any time by simply touching it, and the smartphone has access to the internet or the web can be accessed at any time throughout the day.

The smartphone has had a significant impact on many students' lives around the globe, especially in the education sector. Students who use their smartphones for educational reasons get access to a wealth of information and knowledge since they can access a variety of material with a single click. Approximately 10-20 % of children and adolescents worldwide suffer from mental health issues, the majority of which are social anxiety disorders, according to the World Health Organization (WHO) in 2017. It is also known as social phobia. Social anxiety disorder is characterised by excessive worry or dread of being assessed, adversely evaluated, or rejected in a social or performance setting. People who suffer from social anxiety

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disorder may be concerned about looking or behaving nervously (for example, flushing or stumbling over their words), as well as being seen as incompetent, uncomfortable, or dull.

Smartphone addiction may result in a variety of issues, including physical and mental health issues. Following the findings of the Royal Society for Public Health and the Young Health Movement (2017), it has been estimated that the prevalence of unease and discouragement has increased by 70% among young people during the preceding 25 years. Aside from that, a research conducted by Demirci et al. (2015) discovered that excessive smartphone usage may cause anxiety or possibly wretchedness, both of which can lead to sleep problems. According to a few studies, they also discovered that excessive smartphone uses causes discomfort and contributes to the development of various illnesses such as ringxiety, Nomophobia, and fear of missing out (FoMO) (Demirci et al, 2015).

According to a research conducted by Samaha and Hawi (2016), the dangers of smartphone compulsion and addiction may be linked to life satisfaction via academic achievements and demands on the individual. It demonstrates that students who have poor academic results are more likely to experience less life satisfaction and are more likely to succumb to smartphone addiction than their peers. Another advantage of smartphone equipped with web and internet-enabled aspect is that it enables students to stay connected on a regular basis and makes it easier for them to obtain scholarly-related resources online at any time and from wherever they may be. However, using a smartphone for an extended period of time or on a consistent basis may have a negative impact on an individual's health; the individual may experience headaches, and messages and calls cause interruptions in students' concentration and focus on finishing their coursework, which will have a negative impact on their academic performances. 2015; (Abu-Shanab, 2015).

3.0 METHODOLOGY

MATERIALS AND METHODS

Several higher learning institutions, which are located in the state of Perak, have been selected as the location for this research. Students at the higher learning institutions were divided into groups based on their educational programmes and faculty affiliations. The participants in this research were recruited using a simple random sampling technique, which ensures that every member of the targeted population is picked equally, regardless of whether or not there is any bias in the process. Online questionnaires were used to gather the data for this study, which included responses from students enrolled in the respective higher learning institutions. Face-to-face contact was prohibited during the Covid-19 pandemic, therefore the procedure of data gathering was carried out entirely online throughout the outbreak. Through the use of Google forms, a survey questionnaire was created, and links to the questionnaire were sent to WhatsApp groups students from various faculty in the higher learning institutions. This also removes the need to respond to the questionnaire at a certain time and place in a specific area. Participants in the study were asked to provide their consent before taking part, and their names were kept private in order to promote involvement from the respondents. The questionnaire was divided into three sections: a demographic portion, a piece to assess smartphone addiction, and a section to assess social anxiety. The items used to build the construct of smartphone addiction were drawn from the College Students' Smartphone Addiction Scale (SAS-C). Meanwhile, the items used to assess social anxiety were adapted from Leary's 15-item Interaction Anxiousness Scale. Both constructs used a five-point Likert scale with 1 indicating Strongly Disagree, 2 suggesting Disagree, 3 indicating Neutral, 4 indicating Agree, and 5 indicating Strongly Agree, with prior cronbach alpha values showing more than .800 to .900. SPSS was used to analyse the data from this research.

4.0 FINDINGS AND DISCUSSION

In order to collect responses, the questionnaire was given to students from different faculties in the respective higher learning institutions. A total number of 113 samples were obtained throughout the two-week data collecting period. Based on the findings, the frequency distribution of the respondents' demographic profile can be seen in Table 3. There are a total of 113

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respondents with 23 male respondents and 90 female respondents, accounting for 20.4 % and 79.6 %, respectively. In this research, the proportion of female respondents is greater than the %age of male respondents, as shown by the data. In this study, majority of the respondents are from the age of 22, with 55 respondents (48.7%), followed by 23 years, with 31 respondents (27.4%). Respondents in the age of 21 years, represent 15.9% of the total respondents with 18 respondents. The minority of respondents were from the age of 24 years, with 6 respondents (5.3%), 20, 25 and 26 years with 1 respondent in each age category which represent 0.9% of the respondents, respectively.

Table 1: Frequency Distribution of Demographic Profile of Respondents

Variables	Freq	Percent
Gender		
Male	23	20.4
Female	90	79.6
Age (Years)		
20	1	0.9
21	18	15.9
22	55	48.7
23	31	27.4
24	6	5.3
25	1	0.9
26	1	0.9
Education Programme		
AT01	8	7.1
AT05	13	11.5
AT06	30	26.5
AT49	2	1.8
AT50	11	9.7

In this study, the demographic profile of respondents involves an analysis of the student programmes, in addition to the demographic profile of respondents. The majority of respondents, 44, are from the Social Communication programme, accounting for 38.9% of the total number of respondents. With 30 respondents, the TESL programme had the second highest number of respondents in this research (26.5%). With 13 respondents (11.5%) from the Malay Literature programme are the third biggest group of survey participants, followed by respondents from the Chinese Language programme with 11 respondents (9.7%). Then 8 respondents, the Malay Language programme accounts for 7.1 % of the total number of respondents. Meanwhile, respondents from the Tamil Language Program (4.4%) and the Arab Language Program (1.8%) were the minority respondents in this research, with 5 (4.4%) and 2 (1.8%) respondents, respectively.

Given that the data from the gathered samples is normally distributed, the parametric statistical method is used in this study. The product-moment correlation coefficient technique, developed by Pearson, was used to assess the relationship between the variables to answer the study's main research objectives. Pearson's product-moment correlation was used to evaluate two correlation coefficients, and the significance threshold for all correlation coefficients was established at the level of 0.05. (2-tailed). The Pearson correlation coefficient may be used to assess the strength of the relationship

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(r). As the r value varies, the strength of the relationship between variables varies as well, as seen in the table below. If the r value is 0, it indicates no relationship between two variables. Meanwhile, if the r value is 1, it is interpreted as a positive correlation whereas if the r value is -1, it is interpreted as a negative correlation.

Table 2: Pearson Product-Moment Correlations

Variables	r	p
Smartphone Addiction	.505	.000
Social Anxiety		

Based on the data in table 2, it can be determined that the r value (.505) indicating a significant relationship between smartphone addiction and social anxiety among university students. Given the significance of the sig-r ($p < .05$), it is concluded that the null hypothesis of this research is rejected.

5.0 CONCLUSION

The purpose of this study is to determine the relationship between smartphone addiction and social anxiety among university students. With the growing popularity of smartphones among young people, especially students, it is important to increase awareness about the detrimental effects of excessive smartphone usage on mental health problems. It is important to comprehend how smartphone addiction impacts one's psychological state in order to prevent negative effects such as increased susceptibility to stress, anxiety, and depression. According to the current results, university students are more prone to get addicted to their cellphones and are more vulnerable to acquiring social anxiety disorder than the general population. Their anxiety level is related to their degree of smartphone addiction as a consequence. Therefore, more study on this topic should be done in the future, since it will be essential and helpful in a variety of ways. Future studies are critical because they will serve as a guide for educational scholars and aspiring researchers, guiding them to stay on track and motivating them to conduct more in-depth research or different study areas that focus on different demographic factors, yielding different results and providing more options for future researchers to consider. Additionally, it assists the educational scholar in gaining a better comprehension.

REFERENCES

- Abu-Shanab, E., & Haddad, E. (2015). The influence of smart phones on human health and behavior: Jordanians' Perceptions. *International Journal of Computer Networks and Applications*, 2(2), 52-56.
- Alhassan, A. A., Alqadhib, E. M., Taha, N. W., Alahmari, R. A., Salam, M., & Almutairi, A. F. (2018). The relationship between addiction to smartphone usage and depression among adults: A cross sectional study. *BMC Psychiatry*, 18(1). <https://doi.org/10.1186/s12888-018-1745-4>
- Bloemen, N., & De Coninck, D. (2020). Social Media and Fear of Missing Out in Adolescents: The Role of Family Characteristics. *Social Media + Society*. <https://doi.org/10.1177/2056305120965517>
- Carr, C. T., & Hayes, R. A. (February 6, 2015). *Social Media: Defining, Developing, and Divining* (Unpublished master's thesis). School of Communication Illinois State University. doi:<https://doi.org/10.1080/15456870.2015.972282>

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- Ching, S.M., Yee, A., Ramachandran V, Sazly Lim, S.M., Wan Sulaiman, W.A, Foo, Y.L. (2015) Validation of a Malay Version of the Smartphone Addiction Scale among Medical Students in Malaysia. *PLoS ONE* 10(10): e0139337. doi:10.1371/journal.pone.0139337
- Darnai, G., Perlaki, G., Zsidó, A.N. (2019). Internet addiction and functional brain networks: task-related fMRI study. *Sci Rep* 9, 15777 <https://doi.org/10.1038/s41598-019-52296-1>
- Demirci, K., Akgönül, M., & Akpinar, A. (2015). Relationship of smartphone use severity with sleep quality, depression, and anxiety in university students. *Journal of behavioral addictions*, 4(2), 85-92.
- Diomidous, M., Chardalias, K., Magita, A., Koutonias, P., Panagiotopoulou, P., & Mantas, J. (2016). Social and Psychological Effects of the Internet Use. *Acta informatica medica : AIM : journal of the Society for Medical Informatics of Bosnia & Herzegovina : casopis Društva za medicinsku informatiku BiH*, 24(1), 66–68. <https://doi.org/10.5455/aim.2016.24.66-68>
- Lenhart, A., Smith, A., Anderson, M., Duggan, M., & Perrin, A. (2015). *Teens, technology & friendship* (Vol. 10). Washington, DC: Pew Research Center.
- Parasuraman, S., Sam, A. T., Yee, S., Chuon, B., & Ren, L. Y. (2017). Smartphone usage and increased risk of mobile phone addiction: A concurrent study. *International journal of pharmaceutical investigation*, 7(3), 125–131. https://doi.org/10.4103/jphi.JPHI_56_17
- Rambitan, V. M. M. (2015, January 23). *The Effect of Smartphone on Students' Critical Thinking Skill in Relation to the Concept of Biodiversity*. American Journal of Educational Research. <http://pubs.sciepub.com/education/3/2/18/index.html>.
- Samaha, M., & Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Computers in Human Behavior*, 57, 321-325.
- World Health Organisation (WHO), 2015. Public health implications of excessive use of the Internet and other communication and gaming platforms. Meeting report. Main Meeting Hall, Foundation for Promotion of Cancer Research National Cancer Research Centre, Tokyo, Japan. 27-29 August 2014. |

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