

The Impact Of Smartphone Addiction On The Psychological Well-Being Among University Students in Malaysia

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ABSTRACT

Background and Aims: Smartphones play a vital role in people's daily life because of its easy accessibility and convenience owing its various features. It is immensely popular gadget among adolescents and university students. Despite its advantages, this gadget prompts various emotional wellness issues like loneliness, stress, misery, nervousness and sleep problems. Therefore, this study was conducted to determine the impact of smartphone addiction on the psychological well-being of university students. **Materials and methods:** Across-sectional study was conducted on 400 students attending a private university in Malaysia using convenient sampling technique. Primary data was collected with a well-structured, self-administered questionnaire which adapted the Smartphone Addiction Scale -Short version, Young's Internet Addiction test and Psychological Well-Being scale. Independent sample t tests, and Pearson's correlation were employed for data analysis and interpretation. **Results:** There was a significant relation between smartphone addiction and Young's addiction test score. A negative correlation was observed between smartphone addiction and psychological well-being score among the study population. **Conclusion:** A negative impact of excessive smartphone addiction on the psychological wellbeing among the university students was observed. Strategies to educate university students on the efficacious use of smartphone could have a beneficial effect on their mental health

Keywords

Smartphone Addiction, Psychological well-being, University students

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Introduction

Smartphones have emerged as one of the most popular devices which play a vital role in people's daily life because of its portability, accessibility and convenience. It has ubiquitous presence across countries irrespective of their economy [1]. Smartphones which function similar to portable computers provide a broad scope of applications such as online communication, navigation, social web and internet access [2]. Besides the availability of camera, music, calculator and video recording in these appliances attract the younger generations making it an immensely popular gadget among adolescents and university students [3]. It is estimated that over 85% of university students possess a smartphone and the number of smartphone owners is expected to grow [4]. The most serious problems created by smartphone operation is the probability of behavioural addictions, in which an individual cannot keep himself from doing the important conduct and may show agitation if he or she faces with disallowance [5]. Available literature indicates that an alarming 60% of young adults are addicted to their smartphones [6]. It is also conceivable that the time spent on smartphone limits the time for physical activities and social interactions [7]. They often feel lonely, shy and have a low quality of life since there is nothing productive gained by just scrolling over the phone. This is bound to have deleterious effects on health which may exhibit as lack of rest, dry eyes and torment in the shoulder or neck [8]. Excessive usage of smartphones can deteriorate the psychological well-being and mental health problems like anxiety, depression and stress may manifest [9]. Psychological well-being can be defined as the capacity of an individual to convey his self-satisfaction without allowing others to influence his optimism [10]. A good

mental health is necessary to improve creativity and productivity in the young generation. This study is conducted to determine the relationship between smartphone addiction and psychological well-being among university students in Malaysia.

Methodology

Research Design : This study adopted a deductive research model with cross-sectional survey study design.

Study population : Students of a private university in Shah Alam, Malaysia.

The sample size was calculated using the formula for single sample at 95% confidence interval .

$$N = \frac{Z^2 \times p(1-p)}{e^2} \div \frac{1+Z^2 \times p(1-p)}{e^2 N}$$

The estimated prevalence was taken from a previous similar study [11]. The calculated sample size was 371.

Convenience sampling technique was used.

Respondents with known mental illness, alcoholics and physical disabilities which may influence the results were excluded from this study.

Data collection tool

In this research, the primary data was collected using self-administered questionnaire adapted after literature review. It consisted of questions on Smartphone Addiction Scale - Short version [2] in part A, Young's Internet Addiction test [12] in part B and Psychological well-being scale [13] in part C.

Smartphone Addiction Scale -Short version consists of ten items and is evaluated by using a six-point Likert scale. The total score therefore ranges from ten to sixty points.

The Young's Internet Addiction test scale focuses on six dimensions of Internet addiction namely,excessive usage, neglect towards work, anticipation, preoccupation, salience,lack of self-control and neglect of social life. There are five options for eachquestion with 1 point (very rare), 2 (rarely), 3 (often), 4 f(very often) and 5 (always). The total score rangesbetween twenty and hundred .Above eighty is considered as severe addiction.

The Psychological Well-being scale consists of eight items on the core aspects of social-psychological functioningnamely ,purpose,self-acceptance ,optimism , competence,engagement, relationships, contribution to others' well-being and being respected,. The scale is measured on a seven-point scale ranging from "Strong disagreement" =1 to "Strong agreement" =7. The total score therefore ranges from eight to fifty six .

Ethical consideration: This study sought ethical approval from the University Ethics committee . The participants werebriefly explained on the objectives of the study, the confidentiality of the data collected and its use solely for research purpose. Informed consent was thus taken from the respondents who voluntarily participated in the study.

Data analysis

Paired sample t-test and Pearson correlation were used to determine the relationship between smartphone addiction, internet addiction and psychological wellbeing using SPSS version 26.

Results:

A total of 400 students aged between 18 to 24 years ,pursuing different courses in the university voluntarily participated in this study.Statistically significant corelation between the means of total smartphone addiction score and Internet Addiction score was observed(Table 1) .

Similarly,on comparing the means of smartphoneaddiction and psychological well-being score, a negatively correlation was observed which was also statistically significant (Table2).

Table 1:Comparison of the means of smartphone addiction score and Young's Addition Test using Paired sample t test.

	Mean	N	Standard. Deviation	Standard. Error of Mean	t test	df	Sig. (2 tailed)
Total Smartphone addiction score	32.41	400	13.116	.656	-18.075	399	<0.01*
Total Young's Addiction Test Score	44.32	400	23.300	1.165			

Paired Sample Statistics(Total Smartphone addiction score - Total Young's Addiction Score)

** Significance p value<0.05

Table 2:Comparison of the means of smartphone addiction score and Psychological well -being score using Paired sample t test

Paired Samples t Test	Mean	N	Standard Deviation	Standard. Error of Mean	T	df	Sig. (2 tailed) At 95% Confidence interval
Total Smartphone addiction score	32.41	400	13.116	.656	-6.566	399	<0.01*
Total Psychological well -being score	40.41	400	11.979	.399			

Paired Sample Statistics(Total Smartphone Addiction score - Total psychological wellbeing score)

** Significance p value<0.05

Table 3: Correlation between the smartphone usage , Young Internet Addiction Test (IAT)score and Psychological well-being among university students.

		Total Smartphone usage	Total Young's Addiction Test Score	Total psychological wellbeing score
Total usage	Pearson Correlation	1	.885**	-.887**
	Sig. (2-tailed)		.000	.000
	N	400	400	400
Total Addiction Test Score	Pearson Correlation	.885**	1	-.860**
	Sig. (2-tailed)	.000		.000
	N	400	400	400
Total psychological wellbeing score	Pearson Correlation	-.887**	-.860**	1
	Sig. (2-tailed)	.000	.000	
	N	400	400	400

** Statistically significant

Discussion

Smartphone is extremely popular amongyoung adults which include university students.According to the National Information Society Agency(2015) , among adults within the age of 20-59 years, jobless university students are found to be addicted to smartphone.This is presumably on the grounds that smartphones are easily available to university students and have excess of spare time when contrasted with grown-up laborers[14]. Students utilize this gadget as it can offer a magnitude of advantages to them.Despite its various benefits, it is important to keep a good stability between social, intellectual and physical health states to certify a healthy prosperity. Therefore the current research aims to study the impact of smartphone addiction on the psychological well -being of students in a private university in Malaysia .

In the present study, the mean score on smartphone addiction was 32.41 +-13SD.University students are addicted to their smartphones as it empowers the user to multi task (attend to classes, augment learning,stay connected with companions, peersor familias well as enjoy with online games. It permits the users to keep abreast with the recent local and global news.With smartphones, it just takes a few taps for the students to extract data on endless subjects making learning simpler. Smartphone addiction or "nomophobia" (fear of being without a smartphone), is frequently associated with issues of internet abuse.

According to Norazah (2013), students find it convenient to access information on smartphones due to its constant connectivity to the internet[15]. On comparing the mean scores of smartphone addiction and Young's internet addiction test score of the study population, a statistically positive correlation was observed (Table 1, 3). Researchers like Satoko also reported a similar correlation between mobile phone dependence and internet addiction. This can be attributed to the two common characteristics they share namely; excessive usage and intermittent craving to engage in IT-related activities. Therefore, it was suggested that students with higher traits of smartphone dependence would show greater levels of internet addiction[16]. This finding is vital as physical and mental health problems were more frequently encountered in internet addicted group than in non-addicted group in a similar study by Chandola, R. et al in India[9].

A negative correlation between smartphone addiction and psychological wellbeing among the study population was observed which was statistically significant (Table 2, 3). This shows that excessive usage of smartphone leads to addiction which culminates in poor mental health status. Previous studies have also documented that excessive smartphone usage tends to decrease face to face interactions with friends and this may have a bearing on the poor mental health status among the users[17,18,19]. Yilmaz, et al noted that changing their social interaction styles, restricting their lives to the technological world maybe responsible for poor psychological wellbeing among the young generation[20]. Kumcagiz, Gunduz (2016), also reported a negative connection between mental health status and smartphone addiction. They concluded that smartphone addiction decreases if the level of mental health status improves. They believed that students who could not be psychologically supported often feel miserable, dull and eventually become addicted towards smartphone[7]. This gives hope that by providing more scope for interaction among peers and friends, smartphone addiction among student community could be minimised.

Limitations of the study :The study results maybe affected by the convenient sampling technique adopted. Besides, both the exposure to smartphone and its effect were calculated based on self-reporting and hence maybe subjected to response bias. For future research on this topic, it is suggested that the study be conducted on a bigger sample involving a wider age group with a longitudinal study design for more accurate and dependable results.

Conclusion

The study results throw light on the negative impact of smartphone addiction on the psychological health of university students. This may help in creating awareness among the students towards conscious use of smartphone. It can be used for the planning and implementation of psychological counselling for university students aimed at sustaining their psychological wellbeing.

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References

- [1] Poushter J. Smartphone ownership and internet usage continues to climb in emerging economies. Pew research center. 2016 Feb 22;22(1):1-44.
- [2] Kwon M, Lee JY, Won WY, Park JW, Min JA, Hahn C, Gu X, Choi JH, Kim DJ. Development and validation of a smartphone addiction scale (SAS). PloS one. 2013 Feb 27;8(2):e56936.
- [3] Tatli H. Akilli Telefon Seçiminin Belirleyicileri: Üniversite Öğrencileri Üzerine Bir Uygulama/Determinants of Smartphone Selection: An Application of the University Students. Cankiri Karatekin Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi = Cankiri Karatekin University journal of the Faculty of Economics and Administrative Sciences.. 2015;5(2):549.
- [4] Anderson M, Jiang J. Teens, social media & technology 2018. Pew Research Center. 2018 May 31;31:2018.
- [5] Grant JE, Potenza MN, Weinstein A, Gorelick DA. Introduction to the special issue on the American Journal of Drug and Alcohol Abuse. 2010 Aug;36(5):233-41.
- [6] Kumcagiz H, Gündüz Y. Relationship between Psychological Well-Being and Smartphone Addiction of University Students. International Journal of Higher Education. 2016;5(4):144-56.
- [7] Thomée S. Mobile phone use and mental health. A review of the research that takes a psychological perspective on exposure. International journal of environmental research and public health. 2018 Dec;15(12):2692.
- [8] Narawi WS, Shaz'Ain Razak NA. The Effect of Smartphone Usage on Accommodation Status.

- [9] Chandola R. USING OF EXCESSIVE INTERNET MAY HAVE MORE MENTAL HEALTH PROBLEMS.
- [10] Diener E. What is positive about positive psychology: The curmudgeon and Pollyanna. *Psychological Inquiry*. 2003 Jan 1;14(2):115-20.
- [11] Kim HJ, Min JY, Kim HJ, Min KB. Association between psychological and self-assessed health status and smartphone overuse among Korean college students. *Journal of Mental Health*. 2019 Jan 2;28(1):11-6.
- [12] Young KS. Internet addiction: The emergence of a new clinical disorder. *Cyberpsychology & behavior*. 1998;1(3):237-44.
- [13] Diener E, Wirtz D, Tov W, Kim-Prieto C, Choi DW, Oishi S, Biswas-Diener R. New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social indicators research*. 2010 Jun 1;97(2):143-56.
- [14] National Information Society Agency. The Survey on Internet Overdependence. http://www.nia.or.kr/site/nia_kor/ex/bbs/view.do?cbIdx=65914&bcIdx=17132&parentSeq=17132
- [15] Suki NM, Suki NM. Investigating consumers' loyalty toward online games: A correlation analysis. *Advanced Science Letters*. 2018 Jul 1;24(7):4950-3.
- [16] Ezoe S, Toda M, Yoshimura K, Naritomi A, Den R, Morimoto K. Relationships of personality and lifestyle with mobile phone dependence among female nursing students. *Social Behavior and Personality: an international journal*. 2009 Mar 31;37(2):231-8.
- [17] Tangmunkongvorakul A, Musumari PM, Thongpibul K, Srithanaviboonchai K, Techasrivichien T, Suguimoto SP, Ono-Kihara M, Kihara M. Association of excessive smartphone use with psychological well-being among university students in Chiang Mai, Thailand. *PloS one*. 2019 Jan 7;14(1):e0210294.
- [18] Norhizan NF, Ghazi HF, Abdalrazak HA, Abdalqader MA, Baobaid MF, Hasan TN, Hassan MR. Social phobia and its association with body shape and internet addiction among private university students in Selangor, Malaysia. *International Journal of Medical Toxicology & Legal Medicine*. 2019;22(1and2):106-10.
- [19] Rotondi V, Stanca L, Tomasuolo M. Connecting alone: Smartphone use, quality of social interactions and well-being. *Journal of Economic Psychology*. 2017 Dec 1;63:17-2
- [20] YıldızDurak H. What would you do without your smartphone? Adolescents' social media usage, locus of control, and loneliness as a predictor of nomophobia.