

Smartphone Usage: Reasons among Gender in University of Cyberjaya, Selangor, Malaysia

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ABSTRACT

Smartphones have been an essential device in most of our daily activities. However, there is not much information regarding the difference of smartphone usage between gender among medical students. Therefore, this study aims to determine the prevalence of smartphone usage and the reasons of its usage among medical students by gender.

A cross-sectional study was done, using self-administered questionnaires given to 300 medical students in University of Cyberjaya. The students were selected using stratified and simple random sampling methods.

All respondents were using smartphone with majority from age of 18-21 years old (55.3%), female (67.7%), Malay (85%) and studying in 1st year (24.7%). The most popular reason of smartphone usage for male and female was entertainment mainly leisure activity (91.8% and 93.6%, respectively).

There was no significant difference between gender and reasons of smartphone usage among medical students. Regardless, time must be managed wisely to avoid overuse of smartphones that can disrupt relationships with others.

Keywords: smartphone, reason, medical student, gender, Selangor

INTRODUCTION

Smartphone is defined as “a computing device with a screen, one that is small enough to be held in one hand, that supports cellular, Wi-Fi connectivity and telephone calling that has the ability to

download, install and run applications. ^[1] A study on the prevalence of smartphone usage among International Islamic University Students reveals, out of 40 respondents, 90% owned and used a smartphone. ^[2] This finding is consistent with a research among 460 medical students in Jeddah University that shows high level of smartphone use and ownership (99.4%) among students. ^[3]

Another study showed that among 1441 smartphone users, shows that 51.7% were female. ^[4] Next, a study done in United States stated that 93.7% of smartphone apps consumer report having apps, 69.2% having used health apps, and 55.7% having used brain training apps. Among the consumers, 66.9% reported that brain training apps helped with thinking, 69.3% with attention, 53.3% with mood, 65% with memory. ^[5] A study among 30 medical students in India showed most of the students used smartphone two hours daily (80%) for texting/browsing/social media (83%). ^[6] Lastly, Majority of the Malaysian respondents were using mobile phone for communication purposes (87.8%), photo shooting (59.7%), entertainment (58.2%), and educational/academic purposes (43.8%). ^[7]

Therefore, this study aims to identify the prevalence of smartphone usage and the reasons among medical students in University of Cyberjaya by gender.

MATERIALS AND METHODS

A cross-sectional study was done in University of Cyberjaya (UOC) as there has not been a recent study done in the university regarding reasons of smartphone usage among gender. Three hundred students were chosen among 550 medical students ranging from Year 1 to Year 5 based on stratified and convenience sampling. Inclusion criteria was Malaysian and those who were absent or refuse to participate on the day of data collection were count as non-response.

The respondents who agreed to sign the consent were given the questionnaires according to their timetable and the questionnaires will be collected at the end of the day by the researchers. The questionnaires that was used in this study were adopted and revised from The Generalised Anxiety Disorder-2 (GAD2) and Smartphone Addiction Scale: Short Version (SAS-SV) questionnaires.^[8] Data collected were recorded and analyzed using Statistical Package for the Social Sciences (SPSS).

The association between gender and reason of smartphone usage was determined

Table 2: The reasons of smartphone usage by gender prevalence of smartphone usage

Reasons	Male (N=97)		Female (N=203)	
	Yes n (%)	No n (%)	Yes n (%)	No n (%)
Leisure activity	89 (91.8)	8 (8.2)	190 (93.6)	13 (6.4)
Study related	82 (84.5)	15 (15.5)	181 (89.2)	22 (10.8)
Texting	80 (82.5)	17 (17.5)	175 (86.2)	28 (13.8)
Social media	76 (78.4)	21 (21.6)	187 (92.1)	16 (7.9)
Calling family members	66 (68.0)	31 (32.0)	150 (73.9)	53 (26.1)
Mobile gaming	63 (64.9)	34 (35.1)	82 (40.4)	121 (59.6)
Calling friends	57 (58.8)	40 (41.2)	122 (60.1)	81 (39.9)
Reading news	57 (58.8)	40 (41.2)	114 (56.2)	89 (43.8)
Online usage	5 (5.2)	92 (94.8)	6 (3.0)	197 (97.0)

P > 0.05

Table 2 shows the most popular reason for smartphone usage among males and females is leisure activity (91.8% and 93.6% respectively).

by Pearson chi-square test. The level of significance was set at $p < 0.05$ and confidence level at 95%.

RESULT

The total number of respondents was 300 with 100% response rate.

Table 1: The prevalence of smartphone usage among respondents by socio demographic characteristic

Socio-demography	Frequency	Percentage	p-value
Age (years)			
18-21	166	55.3	
22-25	133	41.7	< 0.001
26-29	1	3.0	
Gender			
Male	97	32.3	< 0.001
Female	203	67.7	
Ethnicity			
Malay	255	85.0	
Chinese	12	4.0	< 0.001
Indian	29	9.7	
Others	4	1.3	
Year of study			
Year 1	74	24.7	
Year 2	54	18.0	
Year 3	57	19.0	0.264
Year 4	52	17.3	
Year 5	63	21.0	
TOTAL	300	100	

Majority of the respondents were students with age of 18-21 years old (55.3%), female (67.7%), Malay (85%) and studying in 1st year (24.7%) (Table I).

Top reasons of smartphone usage for males is leisure activity (91.8%), followed by study related (84.5%) and texting (82.5%), while leisure activity (93.6%), social media (92.1%) and study related (89.2%) are popular reasons among female.

It is also highly indicative that there is no significant association between gender and reason of smartphone usage ($p > 0.05$).

DISCUSSION

Majority (55.3%) of the respondents who use smartphones are in the age group of 18-21 years old. This is similar to a study done in Brazil, which states that 85% of those ages 18 to 34 own a smartphone compared with just 32% of those 50 and older. Even in countries like Germany and Australia, where smartphone ownership rates far outpace those in Brazil, younger adults are far more likely to own smartphones than older age groups.^[9] This

may due to high dependency on hand phone was observed among respondents, in particular the youngsters. For instance, more than 80% of them feel anxious and would go back if they had left their phone, waking up in the middle of the night to check their phone and could not last an hour to check their phone after waking up. ^[10]

In our study, female has the higher prevalence in smartphone usage compared to male with the percentage of 67.6%. This is different from a study done in Malaysia that showed the male users have continued to outnumber female users, where males made up 58.9% while females account for 41.1%, a ratio of 1.43. ^[10] This was also supported by a study conducted in Saudi Arabia which stated that male consumers tend to have higher familiarity towards smartphone compared to their female counterparts. ^[11] The difference might be due to female have more natural desire to connect with friends and family, as a method for sharing information and catching up. ^[12]

This is supported by a study done among 324 university students in Najran, Saudi Arabia, ^[11] which found that making a phone call (83.2%), browsing Internet (79.9%), downloading software (74.9%) and sending text messages (65.0%) are among the top types of usage. In comparison with our study, 72.0% of the users use smartphones to call family members. This similarity might be due to the same age group of university students, where in the Najran study, 97.5% of the respondents are from the 19-30 years old age group, compared to our study, where 100% of the respondents are from the 18-29 years old age group.

A national survey done in Malaysia by Malaysian Communications and Multimedia Commission (MCMC) found that 88.6% of the users use smartphones for social media and 56.4% use them to play games, ^[13] which was similar with our result where 87.7% of our respondents use phones for social media and 48.3% of them use for mobile gaming. This could be explained by

high ownership of smartphones among the younger age groups, where in the MSMC study, 87.0% of the 20-34 years old age group own smartphones.

Majority of our respondents use the smartphone as a source of entertainment. While male use their smartphone to play mobile games, female tend to use for social networks such as Instagram and Facebook. This is similar to another study done among medical students in China, which stated that male students were more likely to play games, watch mobile phone videos, and listen to music, whereas female students were more inclined to use the social networking services and mobile phone communication functions. ^[4] A study done among 266 students in Korea also found that 55.4% of males and 44.6% of females use their phones to access social media ^[14] compared to 78.4% of males and 92.1% of females in our study. This large difference could be due to social media applications such as Facebook, Twitter, Instagram, Snapchat which have become widely popular in recent years, hence attracting the younger generations, including university students. A local study found that 95.3% of university students subscribed to Facebook. ^[15]

A study in China has reported a significant different in usage of smartphone between gender where smartphone games among male (aOR = 2.27; 95% CI: 1.17 – 4.42) and multimedia applications among female (aOR = 2.22; 95% CI: 1.37 – 3.59). ^[4] However, our study showed no significant difference between gender and reason of smartphone usage ($p > 0.05$).

Limitations for this study include small sample size, where ideally, the study should be done nationwide among various medical schools. Small sample size might lead to large standard error and result in wide range of confidence interval.

CONCLUSION

Almost all respondents are using smartphone and majority are using smartphone for entertainment. However,

this study identified no significant difference between reason of smartphone usage and gender.

Although smartphone can prove to be an advantageous learning and communicating tool, university students must have good conscience on how to benefit optimally from using them as increase in smartphone usage could be a factor that influence causal pathway leading to mental health problem such as anxiety, depression and poor sleep quality

Therefore, university should create a health education programs and intervention to counter with increase in smartphone usage among university student and provide counseling service to students that are already addicted to their smartphone. The students should also be monitored closely for their result. It is also recommended that the university conduct mental health status examination in order to improve their student's mental well-being.

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