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Effects of Mobile Phone Usage Behavior and Mobile Phone Addiction among Youth

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Abstract

Mobile phone offers several benefits which ease community socializing and communication process. Moreover, mobile phone assists them in information and entertainment seeking process while at the same time act as safety tool during emergency situation. Nevertheless, albeit benefit offered, mobile phone has created problem to the community particularly to the young one whereby addiction is most obvious one. Such social issue however, seems to attract less interest from the scholars, which eventually lead to lack of understanding on this issue. Consequently, in addition to this, the present research aims to investigate one of the significant areas of mobile phone usage to analyze the psychological context and the relationships for young users between mobile phone addiction and mobile phone usage. Based on these problems, this study was conducted to determine the level of mobile phone usage among youths; and to find out the level of the mobile phone addiction among youths. The research was carried out on 400 youths in Klang Valley using the survey method. The finding concludes that youths mobile phone usage behavior and addiction is at a moderate level. A serious attention must be given to this issue before the youths become addicted. All the responsible parties such as parents, educators and policy makers must work together to combat the negative impact of mobile phone addiction.

Keywords: Youth, Mobile Phone, Addiction and Mobile Phone Usage Behavior

Introduction

Mobile phone is classified as a device that is used for information searching, communication, entertainment, online transaction and so on (Adams & Paul, 2017). In addition, the mobile phone is seen as an essential means of communication and has become an essential part of society. It is not unprecedented because the new generations are digitally literate (i.e. citizens of modern age) and would naturally be easily drawn to any new gadget. In today's world, mobile phones have become a basic need for people and are no longer categorized as luxury items (Fadzil, Ghazali, Samah & Bolong, 2019).

The millennials not only used the mobile phone as a communication tool but also as a way of expressing themselves (Ito & Okabe, 2004) and, very specifically, as a means of looking stylish and trendy (Ling 2001). It been contrasted to earlier generations, or known as early immigrants (i.e. people born before the technological era), that frequently utilized their cell phones for communication purpose or for contact the customers in business (Bianchi & Phillips, 2005).

Development of mobile phone technology has created a valuable range of role and enhanced movability where been expanded the pervasiveness use of mobile phone, particularly among adolescents. Moreover, Adams and Paul (2017) asserts the smartphone has appeared as one of the most popular consumer electronic devices among young adults. They also mentioned adolescent customers are increasingly aware of the functions and features of cell phone as opposed to their older peers. Although mobile phones offer great convenience, they can impose adverse effects, trigger dramatic psychological changes and consequences harmful physiological reactions, leading to a condition widely identified as 'cell phone addiction' (Eduardo *et al.*, 2012). It was identified high psychological needs satisfaction is strongly correlated with physical and psychological wellbeing, while low psychological needs can cause physical and psychological issues, including addictive behaviors such as internet addiction and cell phone addiction (Kumcagiz & Gunduz, 2016; Settle, 2020).

Findings of past study revealed teenagers who were exhibit lower level of psychological security depend on cell phones as a way of getting attached with others also contribute to the mobile phone attachment risk (Kim, 2018; Alamassi *et al.*, 2015). Those results are consistent with the theory of self-determination, a motivational paradigm that explains how individual motivation is produced and then influences the development of humans. Additionally, this study indicates that one social context exists in the presence of long-term psychological needs, the person may have a significant desire to fulfill those expectations in other social contexts, such as the virtual Internet world (Ryan & Deci, 2020).

The above implies that satisfaction with psychological wants is not only a part of the social context, but also an internal motivation that triggered people to exhibit externalizing behavior. Hence, it suggests that the fulfillment of psychological needs of teenagers can satisfy their inner void and solitude by playing computer games, watching videos in online or chatting in online (Sheldon, Abad & Hinsch, 2011).

Problem of Statement

In previous studies there were found that usage of mobile phone more than one hour per day would cause the health issues, poor memory and concentration deficit (Sandstrom, Wilen, & Mild, 2001), whereas another study also supported this statements even there have high tendency psychological impacts for those who spend more than seven hours a day in using mobile phone (Fredrik, Michael, & Lennart, 2008). Furthermore, Thomee, Harenstam, and Hagberg (2011) supported that statement and his study also indicated repeated use of the mobile phone is correlated with depression, sleep problems and physical symptoms.

Past studies found obsessive mobile phone use could carry into mental illness (Beranuy *et al.*, 2009, Lee *et al.*, 2014), and over utilization of mobile phones will cause a big problem among adolescents such as loneliness, drug and alcohol use, mental depression and poor performance in academic (Sánchez-Martínez & Otero, 2009). Moreover, Liu and Yoo (2018) asserts the most

immediate effect on college students was that the higher degree of cell phone use fascinated the drop in their educational achievements and it can quickly distract students during learning process in classroom (Ravizza Hambrick & Fenn, 2014). In summary, dependent on the mobile phone can have a negative effect to the mental illness and social health of an individual also effect on the everyday activities, resulting in encountered to discover mobile phone addiction among university students, as well as identify potential addiction factors.

Research Objective

The general objective of this study is to examine the effect mobile phone addiction among youths. Specifically, this paper will determine the level of mobile phone usage among youths; and to find out the level of the mobile phone addiction among youths.

Literature Review

Mobile Phone Usage Behavior

Researchers noticed adolescent cell phone users continue to demonstrate sufficient monthly spending. Mobile phones are designed multiple features that allow its young users to communicate and for entertainment. Recent study demonstrated text messaging to be the common feature used by young users (Nurvitadi, 2003; Madell & Muncer, 2004). Teenagers made text messaging a necessity due to the service was fast, inexpensive and easy (Grinter & Eldrige, 2001). Eldrige and Grinter (2001), projected adolescents would use text messaging to schedule time for talking, changing plans that already made, and talking or chattering.

This is in line with Lie (2004), statement that text messaging patterns it has a substantial peak among teenagers significantly between the ages of 16 and 24. In Nurvitadhi (2003), studies of teenage cell phone use in Japan and the USA, found that a large proportion (69.53%) of Japanese adolescents have chosen to use the text messaging service. Whereas American teenagers (35.5%) preferred cell phone game applications. More MP3 (MPEG-1 Audio Layer 3) features of cell phones were also found to be used by Japanese adolescents (40.21%) compared with other features. In his study on female teenagers and young adult men, Ling (2001) found that female teenagers sent more text messages compared to adult men. He also noted that there are transition period periods in mobile phone usage patterns among teenagers. While the teenagers in the early 20s, text messaging was to ever be phased out by voice calling.

In line with Ling's results, Lie (2004) identified some trend exists among young adults in mobile voice telephony. A research analyzing cell phone usage habits among high school students found similar results (Madell & Muncer, 2004). A majority (91.9%) of a total of 1340 students send text messages (89.4%) and receiving phone calls (80%) using their mobile phones. The findings appear to indicate a slightly greater preference for conventional call functions among younger samples than for the SMS system.

Other than that, there were have a positive indication of mobile phone usage behavior. Some researchers seen mobile phone have significant relationship in make the relationship stronger where believed mobile phone constructed to let family members and peers communicate. Past studies show rather than friends' youths also contact their family members. It's really important for teenagers to be able to reach parents easily and vice versa (Australian Psychological Society, 2004), because it allows them to feeling secure and associated with important people in their lives. Rather than that,

this is really play a vital role in emergency time. Generally speaking, cell phones help establish family relationships by preserving clear communication and reducing human interaction (Wale & Gillard, 1994). Adolescents and their families can connect at all times and in all locations without much difficulty via mobile phone. Both teenagers and their families may be in close contact with each other. They both addressed contacting friends frequently to talk, exchange stories and gossip. Thereby the mobile phone provides a chance to establish and preserve their connection with people. Consequently, mobile phone gives us an opportunity to establish and sustain human relationships.

Mobile Phone Usage Behavior and Mobile Phone Addiction

In past study, Choliz (2010); and Gao *et al.*, (2018) mentioned mobile phone addiction is referred to as mobile phone dependency (Choliz, 2010, Gao *et al.*, 2018), or problematic use of mobile phone (Liu *et al.*, 2017). While the evidence of cell phone addiction is still under debate for being a kind of mental addictions (Billieux *et al.*, 2015), many scholars tend to view it as a behavioral addiction. Thus, Niemsz, Griffiths and Banyard (2005); and Yen *et al.*, (2009), defined typical addictive behaviors such as cognitive salience, loss of control, mood change, tolerance, withdrawal, conflict and relapse as mobile phone addictions. Medical norm for cell phone dependency is expressly reinterpreted who identified and treated certain dependence habits for example drug consumptions and gambling requirements outlined in the updated fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (Billieux *et al.*, 2015).

Mobile phone use is a part of interactive technology such as internet, and it is anticipated to have similar impact. This research explores the purposes that higher mobile phone usage will result in increased addiction to the mobile phone and associated problems. Past studies have viewed the total of received calls and messages as the main contribution to the mobile phone addiction (Billieux *et al.*, 2008). Nowadays, received calls and numbers of sending messages were used to examine the mobile phone usage behavior among individuals (Billieux *et al.*, 2007). Nevertheless, it is clear that both factors not correlate on the addiction towards mobile phone (Walsh *et al.*, 2011) and therefore the present research has accentuated on necessity to include research on connection with mobile phone use and mobile phone addiction in order to explain the mediation process mobile use.

In order to identify the problematic sensation of mobile phone utilization Billieux, *et al.*, (2015), suggested a model involving three distinct mechanisms for developing problematic mobile phone use. The excessively affirmation pathway focuses on personality traits such as low self-esteem, emotional instability, anxiety, and unstable attachments which can cause the individual to use mobile phones excessively as a way to try and receive reassurance from others. Addiction to the mobile phone would have difficulty in emotional understanding which can lead to more interpersonal issues. Those people who more dependent on mobile phones or any other media, are more like to hide their feelings and cover up them. The theory of compensatory Internet use also suggests that negative life circumstances might rise a motivation to go online to alleviate negative feelings (Kardefelt-Winther, 2014b). When the motivation to go online is focused on an unsatisfied need for real life and the use of the Internet helps relieve the real-life problem, then an person may express a greater desire to spend more time online, that could lead to undesirable results (Kardefelt-Winther, 2014a).

Mobile Phone Addiction and Consequences

Past studies showed addictive cell phone use may lead to significant problems in students' sleep habits (Van den Bulck, 2003). Furthermore, as stated by Liu et al., (2018) mobile phone dependency has become a worldwide concern due to its rapid growth in usage and its negative impacts. This is in line with Kamibeppu and Sugiura (2005), who mentioned students tend to engage in emails and texts and feel anxious even during the night when they are supposed to sleep because they have not received replies from friends. Apparently, the addictive condition leads students remain awake all nights, thereby impeding their daily activities. In addition, Beranuy, Oberst, Carbonell and Chamarro, (2009) studies also stated psychological distress, sleep disorder (Liu *et al.*, 2017), and less academic achievements can result from mobile phone addiction (Samaha & Hawi, 2016). Hence, for many young adults, cell phones are absolutely essential, but these devices can adversely affect their mental health and wellbeing. Even though the mobile phone usage driven to better access to information, improved accessibility and many conveniences but still brought many threats because of improper use of smartphones (Adams & Paul, 2017).

Generally, there have two ways to identify the mobile phone addiction. First, ascertain whether certain amount of frequency of mobile phone usage is higher than limit that set. Second, evaluate the frequent use of mobile phones has a detrimental effect on physical, psychological and mental health. If the person meets both criteria, the user with a mobile phone addiction can be identified (Jiang & Bai, 2014). A possible cell phone user is characterized by more than four hours per day. Even though mobile phones are useful for humans, their detrimental effect is becoming more apparent. University students with mobile phone dependency have poor ability to monitor (Wang et al., 2016). They could allocate a lot of time "interacting" with the mobile phone, reducing the time required to perform the duties of their everyday lives. According to Çagan *et al.*, (2014), the greater the intensity of cell phone addiction, the more likely the academic performance of university students would decrease. Thus, the mobile phone addiction can be classified as secretive disease that's affecting many phone users. This is in line with Kim, Milne and Bahl (2018), who mentioned it is essential to give an attention in understanding the disregard behavior which result in negative and psychological experiences in health and impact the quality of life.

Result and Discussion

Socio-Demographic Profiles of the Respondents

There were 400 respondents who took part in this study and the result of respondent's socio-demographic profiles is shown in Table 1.1. The result revealed that majority of the respondents were male (63.5%) and the remaining were female (34.5%). The result also indicates that most of the respondents involved are 21 years old and younger (66%) and 34% of the respondents are less than 20 years old. Thus, Muhammad (2012) asserted teenagers aged 16 years old and above are more abstract and think critically to make decisions. Therefore, this group of teenagers are more mature and can start making wise decisions in their life.

Table 1.1: Socio-Demographic Profiles of Respondents (n=400)

Profile	Frequency	Percentage (%)
Gender		
Male	254	63.5
Female	138	34.5
Age		
21 years old and older	136	66.0
20 years old and younger	264	34.0
Ethnic		
Malay	317	79.3
Chinese	45	11.3
Indian	12	3.0
Sarawakian	12	3.0
Sabahan	11	2.8
Others	3	0.8

Mobile Phone Usage Behavior

Mobile phone usage belongs to some interactive technology as the internet, and is expected to produce a similar impact. Past studies have viewed on total phone-talk time, and the number of calls and text messages as the main contributor towards mobile phone addiction (Billieux et al., 2007, Billieux et al., 2008). The present study identified the needs of mobile phone usage in youth's daily routine. Respondent's mobile phone usage behavior level was categorised into three categories namely low (mean score 1.00-2.33), moderate (mean score 2.34- 3.67) and high (mean score 3.68-5.00) (Table 1.2). The statements were arranged according to the mean score, from the highest to the lowest. A mean score above 3.68 showed that respondents in the study have a strongly addicted with mobile phone. The lower level of mean score stated that youths mobile phone usage is very less, followed by moderate level which showed that youths was moderately used mobile phone and high level stated that youth behaviour was very high in mobile addiction.

Table 1.2: Mobile Phone Usage Behaviour Level Score Scale

Level	Scores
Low	1.00 – 2.33
Moderate	2.34 – 3.67
High	3.68 – 5.00

Table 1.3 showed mean score and standard deviation of statements related to mobile phone usage behavior. This section consists 11 items regarding different types usage of mobile phone to calculate each respondent's usage level in their daily routine. The respondents answered based on the needs mobile phone usage and the items were measured using the Likert scale. They are as follows: 1= never use; 2=almost never; 3= occasionally/sometimes; 4=almost every time and 5=frequently use. All the statements related to mobile phone usage behaviour were measured based on mean scores.

Table 1.3: Mean Score of Statements on Respondents' Mobile Phone Usage Behavior (n = 400)

Statement	an	SD
1. Using for chatting (e.g. WhatsApp)	4.71	0.760
2. Browsing information in the internet	4.71	0.703
3. Using to connect with social networking sites	4.65	0.758
4. Use phone for taking pictures	4.06	1.013
5. Receiving phone calls	3.62	1.197
6. Taking selfie	3.42	1.205
7. Playing games	3.30	1.386
8. Use for navigation such as Waze	2.97	1.201
9. Use for keep health records	2.63	1.167
10. Sending SMS (Short Message Service)	2.28	1.185
11. Sending MMS (Multimedia Messaging Service)	1.76	1.198
Overall Mean Score: 3.45		

*Note: 1.00 – 2.33 = Low, 2.34 – 3.67 = Moderate, 3.68 – 5.00 =High

The results showed there have few purposes in using mobile phone. Highest mean score 4.71 gained for the two items were respondents answered they are more frequently use mobile phone for chatting (e.g. WhatsApp) and browsing information in the internet. This is in line with Kaufmann and Peil (2020), who mentioned online communication has become a global phenomenon and it is shifted to smartphone usage since traditional Short Message Service (SMS) system is gradually replacing the communication platforms.

Moreover, WhatsApp, a free-of-charge, advertising-free apps are more frequently used by people in 180 countries (WhatsApp, 2019). However, the results indicated lowest mean score 1.76 for statement sending MMS (Multimedia Messaging Service). Overall, the level of the mobile phone usage is in moderate level with mean score 3.45. The results showed the youths not heavily influence with mobile phone, however there have a mild impact in their daily life.

Mobile Phone Addiction

The use of mobile phones is a part of interactive technology such as internet, and it is anticipated to have similar impact. This research explores the hypothesis that higher mobile phone usage will result in increased addiction to the mobile phone and associated problems. The statement to measure respondents' mobile phone usage addiction level was developed based on past literatures.

Table 1.4 consisted of 10 statements to discuss about the level of mobile phone addiction. Each of the statements was measured in the form of Likert Scale of 1 to 5. Scale 1 (strongly disagree), Scale 2 (disagree), Scale 3 (somewhat agree), Scale 4 (agree) and Scale 5 (strongly agree). All the statements related to addiction were measured based on mean scores. For each statement, a score was given based on the answer. For example, if the respondents agreed of those statements, they will answer "strongly agree" and if they did not agree with those statements, they will state "strongly disagree". The score recorded where the reversed scale scores.

The researcher used mean score levels namely low, moderate and high to categorise those levels. Based on 10 statements given, the possible mean scores from 3.68 to 5.00 indicated very high addiction on mobile phone. This is followed by mean score 2.34 to 3.67 which stated that the level of addiction towards mobile phone were moderate. Lastly, mean score from 1 to 2.33 stated that the level of addiction towards mobile phone was very low. The results of mean ranking are shown in Table 1.4.

Table 1.4: Mobile Phone Addiction Level Score Scale

Level	Scores
Low	1.00 – 2.33
Moderate	2.34 – 3.67
High	3.68 – 5.00

The results revealed that level mobile phone addiction was moderate (mean score 3.34) (Table 1.5). The result indicated that youths mobile phone usage addiction may impact their daily life. The statements were arranged according to the mean score, from the highest to the lowest.

Table 1.5: Mean Score of Statements on Respondents' Mobile Phone addiction (n=400)

Statement	*Mean	SD
1. Using my smartphone longer than I had intended	4.02	1.369
2. Constantly checking my smartphone so as not to miss conversations between other people on Twitter or Facebook	3.65	1.519
3. I felt that I neglected my work due to the heavy use of smartphones	3.57	1.396
4. Won't be able to stand not having a smartphone	3.52	1.583
5. I will never give up using my smartphone even when my daily life is already greatly affected by it	3.43	1.362
6. Having a hard time concentrating in class, while doing assignments, or while working due to the use of smartphone	3.28	1.433
7. Feeling impatient and fretful when I am not holding my smartphone	3.13	1.434
8. Always thinking of using my smartphone even though I am not using it at the current stage/ at the moment? when I am not using it	3.02	1.365
9. Feeling pain in the wrists or at the back of the neck while using a smartphone	2.97	1.486
10. The people around me tell me that I use my smartphone too much.	2.79	1.407
Overall Mean Score: 3.34		

*Note: 1.00 – 2.33 = Low, 2.34 – 3.67 = Moderate, 3.68 – 5.00 = High

All the respondents stated that they moderately addicted towards mobile phone addiction. Thus, the results showed the have moderate relationship between mobile phone usage behavior and addiction. Based on Hussain, Williams and Griffiths (2015), addiction perceived as repetitive habit pattern that increases the risk of disease and/or associated personal and social problems. Addictive behaviours are often experienced subjectively as 'loss of control'. In this study, mobile addiction can be understand as behaviour where the youth lost control over usage of mobile phone. They can't control their self from using mobile phone at their side, they become emotionally and physically unstable when they don't have their mobile phone.

Conclusion

Finding of this the paper revealed there have a positive relationship between mobile phone usage behavior and mobile phone addiction. Therefore, this paper might be useful to educators, and most importantly for youths in understanding about the impact of level of mobile phone usage behavior and the implications of its disproportionate use. Hence, the educators should play the vital role in strengthening the interpersonal relationship building techniques and self-control training among the who showing negative traits, and in planning of study time and endorsing them to achieve their life goals.

In addition, students at universities will understand about the level of mobile phone usage behavior and the implications of its disproportionate use. Parents and those who are responsibility on youth would find out that the experience of this paper has strengthened their knowledge and the ability addition to providing clear guidelines for mobile communication activities for individuals. For the authority parties such as government and policy makers this study could be useful in planning programs for young technology users. In a nutshell, this paper can emphasize the necessity of proper use of technology and provide direction to the technology-savvy youth in particular on how to reap the technology's advantage for their positive growth.

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