



THE IMPACT OF LONELINESS AND FEAR OF MISSING OUT IN PREDICTING
PHUBBING BEHAVIOUR AMONG UNDERGRADUATES IN MALAYSIA

ANG MAY PHING

CHONG YUAN XIN

LAU PEI JUN

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Predictors of Phubbing Behaviour among Undergraduates in Malaysia

Ang May Phing, Chong Yuan Xin, and Lau Pei Jun

Universiti Tunku Abdul Rahman

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PREDICTORS OF PHUBBING BEHAVIOUR

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PREDICTORS OF PHUBBING BEHAVIOUR

APPROVAL FORM

This research paper attached hereto, entitled “The Impact of Loneliness and Fear Of Missing Out in Predicting Phubbing Behaviour among Undergraduates” prepared and submitted by” Ang May Phing, Chong Yuan Xin, and Lau Pei Jun” in partial fulfilment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

Supervisor

Ms. Sarvarubini A/P Nainee

Date: _____

Abstract

With the accompaniment of easy access to the internet, smartphones have become the primary tool for communication purposes in the daily lives of people. Smartphones have undeniably brought convenience not only in terms of communication but in many other aspects such as entertainment, information seeking and managing one's life. However, despite the many benefits, frequent use of smartphones has caused individuals to develop unhealthy habits such as phubbing and this consequently raised questions about whether this act damages interpersonal relationships. Therefore, the purpose of this study is to investigate the factors that predict phubbing behaviour among undergraduate students in Malaysia namely loneliness and fear of missing out (FoMO). 173 undergraduate students across Malaysia were recruited for this study through convenient sampling by using an online survey. UCLA Loneliness Scale Version 3, Fear of Missing Out Scale (FoMOs) and Phubbing Scale (PS) were employed to measure the variables in our study. Findings of this study revealed that loneliness and FoMO significantly predicted phubbing behaviour. Moreover, results of multiple regression indicated that FoMO was the stronger predictor of the phubbing behaviour. As phubbing is not a widely researched topic in Malaysia, findings of this study can contribute to being a source of reference for awareness campaigns in the future. Furthermore, it also gives light to relevant professionals in developing behavioural interventions to prevent severe addiction that consequently gives rise to physiological and psychological health issues among individuals.

Keywords: undergraduate students, loneliness, fear of missing out, phubbing behaviour

DECLARATION

We declare that the material contained in this paper is the end result of our own work and that due acknowledgement has been given in the bibliography and references to all sources be they printed, electronic or personal.

Name : Ang May Phing

Student ID : 15AAB05415

Signed : _____

Date : 22nd Mar 2019

Name : Chong Yuan Xin

Student ID : 15AAB01406

Signed : _____

Date : 22nd Mar 2019

Name : Lau Pei Jun

Student ID : 15AAB03169

Signed : _____

Date : 22nd Mar 20

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CHAPTER I

Introduction

Background of Study

Resulting from the rapid advancement of technology, there has been a vast increase in new and innovative technologies and virtual communication such as tablets, laptops, and smartphones. This advancement has enabled millions of people living in this developed and concurrently developing world to connect with others with just a click of a button on the mobile phone (Przybylski & Weinstein, 2013). Due to this, it has caused a major shift in the daily habits and behaviours of an individual, so much so that information and communication technologies (ICT) have been integrated to become one of the essentials in our lives (Oberst, Wegmann, Stodt, Brand and Chamarro, 2017). According to T'ng, Ho and Low (2018), due to the need to leave their circle of comfort to pursue their tertiary education, undergraduate students would seemingly have a higher need to stay connected with their close ones such as their friends, family members or close relatives. Hence it would make sense that undergraduates would require internet connection along with their smartphones wherever they go.

Research has broadly shown that these technologies such as the internet and smartphones have aimed to be a means to socialise and to keep one entertained. Studies revealed that as the internet is easily accessible in this world today due to free WiFi spots scattered around or attractive internet data packages along with affordable smartphones, a multitude of tasks ranging from information access to casual activities like online shopping, can be carried out instantaneously. For example, instead of having to read the newspapers or watching the news to keep oneself updated about occurrences around the world, with just a ten-minute scroll through social networking sites (SNS) (e.g., Facebook, Twitter, Instagram, and more) or article websites

(e.g., BuzzFeed, SAYS.com, WorldOfBuzz) one can feed oneself with a handful of updates without going through a hassle. Besides that, messaging are made instant through applications like WhatsApp, Wechat, Facebook Messenger and so on. According to Przybylski and Weinstein (2013), mobile phones allow people to feel a continual sense of connection with the outside world. In a nutshell, smartphones nowadays are able to fulfil the needs of people in many aspects.

While smartphones have contributed to a handful of benefits to people, it has also stirred up some concerns. A particular one is that these technologies, especially smartphones are very much portable and easy to carry around. While that is beneficial, it has been found to contribute to one of the major problems that everyone is facing in the context of a social setting. One of the troubles that most people are facing nowadays during time spent together with peers or others is the scenario whereby each of them has their eyes locked on their smartphones and no one is found to make eye-contact with anyone sitting around that table. A term has been coined and updated into the *Macquarie Dictionary* to describe this act and that term is phubbing. Derived from the words “phone” and “snubbing”, phubbing is a verb whereby one is snubbing the other party by actively attending to their phones even when one is in close proximity to another person (Roberts & David, 2015). To put it simply, instead of paying attention to the people present in a social setting, phubbing is an act whereby people choose to lock their eyes on their cell phones over communicating with people. A phuber is the one who is engrossed with using the phone and not engaging in active communication, while a phubee is the one that is being ignored in that context.

The widespread availability and the usage of smartphones say something about how commonly present these devices are whether in private or public settings during intimate or

casual interactions (Przybylski & Weinstein, 2013). Usually, these devices act as subtle objects in the background but despite its subtlety, we tend to find ourselves unconsciously picking up our phones to check for new notifications even when our phones are on silent mode. It should be taken into consideration that phubbing is more common than one could possibly think of. For example, an average of 36 cases of phubbing would be found in a restaurant per dinner session (Stop Phubbing). Another researcher conducted a study and found that in a sample of 143 females that are in a romantic relationship, roughly seventy per cent of them said that cell phones would interrupt the interaction with their significant other “sometimes”, “often”, “very often” or “all the time” (McDaniel & Coyne, 2014). Furthermore, according to a survey carried out by a few researchers involving a sample of 400 youths that were randomly selected from five colleges in one of India’s district, results revealed that the phubbing prevalence was 49.3%, which is nearly half of the sample (Davey et al., 2018). As mentioned before, due to the needs of undergraduate students to stay connected, the tendency of the phubbing behaviour would be more likely to occur as they always have their smartphones with them.

Evidence show that phubbing behaviour has brought forth many negative effects. It has been found to undermine relationships that have been built prior or even newly established friendships. When phubbing takes place, attention would be diverted away from the co-occurring face-to-face conversations to attend to thoughts and task outside of the immediate social context (Przybylski & Weinstein, 2013). Due to this, these social interactions would be perceived as rude and socially unacceptable by the ones who are being ignored (Abeele, Antheunis & Schouten, 2016) as their perceived connection, closeness and interaction quality is undermined. If sufficient awareness is not brought upon this issue of phubbing and the consequences it would bring, people would gradually begin to assume that this behaviour is socially acceptable and it would

ultimately become a norm (T'ng et al., 2018). With that, perhaps interventions with greater intensity would be needed to solve this issue in the future.

In this present study, a survey will be conducted among undergraduate students, to understand how loneliness and the Fear of Missing Out (FoMO) would actually predict one's tendency to phub. Loneliness basically refers to the extent to which one is living alone and has close to no interpersonal interaction with others (Karapetsas et al., 2015). On the other side, fear of missing out is a type of apprehension faced by individuals who are constantly desiring to stay continually updated with the lives of other people as they are afraid that others may be living in a more rewarding experience as compared to them (Oberst et al., 2017). Simply put, people who have the fear of missing out tend to be afraid that they are not up-to-date and this could cause them to consequently feel like an outlier in a group of people.

Problem Statement

As the development in mobile technologies have been significantly improving in recent years (Pontes et al., 2015), smartphones has surpassed laptops and personal computers as the most commonly used device to access the Internet (Buckle, 2016). It facilitates social interaction and allows people to be in touch with anyone regardless of where they are. However, several studies (Chotpitayasunondh & Douglas, 2016; Karadağ et al., 2015; Roberts & David, 2016) have found that in spite of the benefits of smartphones in bringing people together, it may sometimes pull people apart from each other by phubbing. The research of Ranie and Zickuhr (2015) reported that 90% of respondents used their smartphones when they were socializing, and also believed that 86% of the others involved in the same interaction did the same. Besides, the study of Roberts and David (2016) also demonstrated that nearly 50% of the respondents were being phubbed by their romantic partners when they were spending time together.

Phubbing behaviour has affected both phubbers and phubees' lives intensely in recent years (Chotpitayasunondh & Douglas, 2016). It ruins the real-life social relationships of both phubbers and phubees since it is considered a disrespectful and impolite behaviour (Karadağ et al., 2015). Several studies (Abeele, Antheunis & Schouten, 2016; Krasnova et al., 2016; Misra et al., 2014) have shown that when being phubbed, people will have lesser satisfaction with the interaction as they perceive the interaction to be poor in quality, and also experience less connectedness with their partner. Besides, Roberts and David (2016) also demonstrated that phubbing may result in a lower level of relationship satisfaction among romantic partners, which may indirectly lead to lower life satisfaction and even depression. Phubbing behaviour may even jeopardize human lives (Lee et al., 2015). Lee et al. (2015) reported that there was a case that happened in Malaysia where a six-year-old girl accidentally fell through a gap of an escalator while her mother was fiddling with her phone, having an argument with her husband on phone, and therefore neglected the child. This case showed how being inattentive while on the mobile devices cost lives.

Karadağ et al. (2015) found that the use of smartphones will contribute to the phubbing behaviour. Individuals who tend to use their smartphone more compared to those who did not will have a higher possibility for phubbing. According to the study of TNS Malaysia Connected Consumer Study (2014), smartphones are the most commonly used device in Malaysia. The Google Global Connected Consumer survey which was conducted in 2014 has indicated that in every two Malaysian adults, there will be one who owns a smartphone (Lee et al., 2015). Moreover, the result of Hand Phone Users Survey (HPUS) also showed that 71.4% of the respondents keep checking their phones even when it does not ring (MCMC, 2014). Based on the statistic from Statista (2018), it revealed that 97.2% of the smartphone users in Malaysia

accessed the Internet by using their mobile devices. With these data indicating high possibility of phubbing behaviour, more research studies should be focusing on studying the issues of phubbing in Malaysia. However, there are very limited research conducted in Malaysia as most of them were conducted in Western countries. Due to the cultural differences, the determinants and consequences of the phubbing behaviour may be different in Malaysia in comparison with other countries. Therefore, the results of this present study is able to fill in the knowledge gap of phubbing in Malaysia.

Loneliness is found to be significantly linked with phubbing behaviour. Unlike the past, loneliness is now moving towards the younger generation as the trend has changed. Research of Karadağ et al. (2016) reported that college students will tend to use smartphones more frequently when they experience loneliness because they believed that the use of smartphones will help them to ease loneliness (Karadağ et al., 2015). Moreover, studies (Chotpitayasunondh & Douglas, 2016; Elhai et al., 2016) also indicated that high fear of missing out (FoMO) will contribute to problematic smartphone use and thus lead to higher chances to phub (Karadağ et al., 2015). However, although phubbing behaviour has been assumed to be a cause from FoMO in previous studies, no empirical study has indicated the relationship between phubbing and FoMO.

Research Objectives and Hypotheses

General Objectives

The objective of this study is to investigate the relationship between loneliness, fear of missing out, and phubbing behaviour among undergraduates.

Specific Objectives

This study is conducted to achieve the following research objectives:

1. To determine the relationship between loneliness and phubbing behaviour among undergraduates.
2. To investigate the relationship between fear of missing out and phubbing behaviour among undergraduates.
3. To examine the unique predictor of phubbing behaviour.

Significance of Study

In the advancement of technology, every young adult owns a smartphone and the prevalence for them to get involved in phubbing behaviour is relatively high. For instance, phubbing is possible to become a norm in this modern society (Chotpitayasunondh & Douglas, 2016). Studies showed that loneliness (Błachnio & Przepiórka, 2018) and fear of missing out (Franchina et al., 2016) are possible factors that increases the likelihood of phubbing behaviour. Throughout this study, we are able to provide more information about phubbing, examine the underlying reason of how factors namely loneliness and fear of missing out, leads to the phubbing behaviour. Besides, it also guides us to achieve a better understanding of the negative impacts of the phubbing behaviour. Phubbing not only brings along negative emotions towards those who are being ignored due to phubbing, but it will also affect the social interaction with others. Moreover, people who phub during social interactions will give a general impression of being rude and inconsiderate of others' feelings. The act of phubbing will absolutely interrupt the communication process (Chotpitayasunondh & Douglas, 2016), as the individual is constantly

checking his or her phone, especially when the other person is talking and trying to convey an important message.

We hope this study able to bring a positive impact to society in educating them on the ways one can improve social interactions. Other than that, it may provide counsellors, psychologists, and researchers a guideline to further study on other potential factor that leads to phubbing behaviour. Likewise, it also provides the idea for interventions for behavioural therapy in controlling smartphone usage. Nevertheless, this study could spread awareness to both the public and to relevant authorities to pay closer attention to the effects of phubbing behaviour. According to The Nation (Yoon, 2016) in South Korea, accidents often happen when pedestrians are too focused on their smartphones and unconsciously ignored the dangerous surroundings while walking on the busy road. There are more than 300 signboards which remind pedestrians to stop phubbing. The Korean government is aware of the severity of phubbing that may possibly cause accidents to happen but unfortunately, the power of signboards did not make much changes on the phubbing phenomena because people are not able to even notice the signboard as their heads are completely buried in their smartphone. Therefore, we expect that our study could raise awareness to the public. Furthermore, we also hope the government may be increasingly concerned about the impact of phubbing behaviour and conduct more and more “Stop Phubbing” campaigns to raise awareness among the public in the Malaysia.

Research Questions

1. Is there any significant relationship between loneliness and phubbing behaviour among undergraduates?

2. Is there any significant relationship between fear of missing out and phubbing behaviour among undergraduates?
3. What is the unique predictor for phubbing behaviour among undergraduates?

Hypotheses

H1: There is a significant positive relationship between loneliness and phubbing behaviour among undergraduates.

H2: There is a significant positive relationship between fear of missing out and phubbing behaviour among undergraduates.

Conceptual Definitions

Fear of Missing Out. A pervasive apprehension that one experiences due to the fear that other people may be having pleasant experiences from which one is absent and the longing that an individual has to stay persistently connected and updated with the happenings in others' lives. (Przybylski, Murayama, DeHaan & Gladwell, 2013)

Loneliness. A feeling of distress that is subjective and arises when one has the perception of their social connections being found to be insufficient or dissatisfying. (Matthews et al., 2016)

Phubbing. An act of snubbing the people that one is present with by choosing to attend to one's mobile phone frequently, instead of paying attention to them. (Karadağ et al., 2015)

Undergraduates. Individuals who are pursuing the studies for their first degree (Cambridge Dictionary, 2018).

Operational Definitions

Fear of Missing Out. Fear of Missing Out is measured by Fear of Missing Out Scale: FoMOs (Przybylski, Murayama, DeHann, & Gladwell, 2013), a 10 items scale in measuring the fear of being left out in social media. A higher score indicates a higher fear of missing out.

Loneliness. Loneliness is measured by UCLA Loneliness Scale Version 3 (Russell, 1996), it is used to measure the subjective feeling of loneliness and the feeling of social isolation. The higher the score, the higher the loneliness.

Phubbing. Phubbing is measured by Phubbing Scale (Karadag, 2015), a 10 items scale in measuring phubbing behaviour. The higher the score, the higher the phubbing behaviour.

Undergraduates. The participants involved university students who are currently pursuing degree in Malaysia.

Chapter II

Literature Review

Loneliness and Phubbing

Bian and Leung (2014) studied loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital among Chinese students in China. The purpose of this study was to identify which psychological attributes such as shyness and loneliness is a stronger predictor in predicting smartphone addiction. The psychological attributes used in this study is loneliness, measured by Revised UCLA Loneliness Scale, version 3 (Russell, 1996) and shyness, measured by Short Version of Cheek and Buss's (1981) Shyness Scale. A total amount of 478 students were obtained through snowball sampling to complete the online survey. They found that loneliness is the most influencing factor in predicting smartphone addiction. The researchers claimed that smartphones act as a medium for lonely people to engage in different social activities such as online gaming, chatting or searching for information because it does not require many social cues during an interaction. It provides people with an opportunity to reduce face-to-face interaction especially individuals who are experiencing loneliness, whereby they can choose to interact with others through the mobile phone or other social networking application instead of interacting with the people in front of them. Therefore, it represents the act of phubbing where they choose to concentrate on their smartphone rather than interacting face-to-face with their partners such as speaking to each other (Haigh, 2015).

A similar study was carried out by Jiang, Li, and Shypenka (2018) in examining loneliness, individualism, and smartphone addiction among international students in China. The variable was measured by UCLA Loneliness Scale, version 3, Hofstede's Individualism Index

(Hofstede, 2001), and Smartphone Addiction Scale–Short version (SAS-SV) (Kwon, Kim & Cho, 2013), The questionnaires were translated from English into Chinese, Spanish, and Russian versions, then distributed among international university students through snowball sampling. There were 438 international university students who participated in this study. From the result, five per cent of students who live in collectivistic cultures and 3.6 per cent of students who live in individualistic cultures suffer from the severe level of loneliness. Meanwhile, five per cent of students among both groups of collectivistic and individualistic participants were suffering from severe loneliness, also they had a higher tendency to involve in smartphone addiction. In short, people from collectivistic culture have higher levels of loneliness as compared to individualistic culture. This can be explained by the perception of collectivistic individuals to have the tendency to perceive themselves as an integral part in social relationships, hence, they will be more likely to experience higher levels of loneliness when studying abroad. Due to the loneliness felt, it caused them to have a higher risk of smartphone addiction. This smartphone addiction could ultimately lead them to the act of phubbing because using their phones is perceived to be one of the tools for them to cope with their lonely situation (Karadag et al., 2015).

In Turkey, Enez Darcin et al. (2016) focused on smartphone addiction and its relationship with social anxiety and loneliness among Turkey students at Uskudar University. In total, 367 students from the Faculty of Health Sciences, Faculty of Engineering and Natural Sciences, and Faculty of Humanities and Social Sciences participated in this study. The result showed the total of loneliness score is positively correlated with the total smartphone addiction score and some of the subscale scores from smartphone addiction which is daily life disturbance, positive anticipation, and cyber-oriented relationship. The researchers explained that individual who felt lonely are in favor of the other activities related to their smartphone such as Internet surfing and

gaming. According to Karadag et al. (2015), internet addiction may cause phubbing behaviour as the origin of Internet surfing and gaming is obtained through the Internet.

Phubbing behaviour not only happened among undergraduates students, there is further evidence stating that this phenomenon also happened among high school students and elementary school students as it is found that the prevalence to be involved in smartphone addiction is relatively high. The research of Karadag et al. (2015) claimed that smartphone addiction is the strongest predictor in predicting phubbing behaviour. Therefore individuals who are addicted to smartphone use are more likely to phub. Xu (2017) did a research on the relationship between smartphone addiction, social anxiety, and loneliness among 195 high school students in Beijing and found that students who are addicted to smartphone use have a higher level of loneliness. Loneliness, become one of the reason for high school students to rely on smartphone usage. The group of students tends to meet new friends or join other virtual communities to get rid of their loneliness by using smartphone media but it is hard for them to convert the virtual relationship into an intimate relationship.

Another study was carried out by Jeong, Kim, Yum, and Hwang (2015) to comprehend the factors that may lead to smartphone addiction and the type of content that usually lead smartphone users to be addicted to. A total number of 944 children aged 11 to 12 years old from 20 elementary schools in South Korea participated in this study. The result is not consistent with other findings, showing that loneliness is not the predictor of smartphone addiction. Therefore, the result of this study also suggested other factors such as self-control or stress that may be a stronger predictor in predicting smartphone addiction, whereas, there was finding of stated that self-control negatively predicts smartphone addiction (Chotpitayasunondh & Douglas, 2016)

which means that the more self-control an individual has, the lower the likelihood of phubbing behaviour.

Fear of Missing Out and Phubbing

Andreassen (2015) posited that the consequences of excessively submerging oneself in social networking can be pathological and consequently lead to a form of behavioural addiction especially because social networking sites can be easily accessed through mobile devices. This causes one to constantly have the need to have their phones within their reach, which ultimately may lead to one type of behavioural addiction such as the act of phubbing. One of the pathological consequences of excessive social networking is anxiety and based on the claims of Przybylski, Murayama, DeHaan and Gladwell (2013), anxiety has been identified to be one of the components of the fear of missing out (FoMO) construct. Simply defining FoMO, it is the anxiety that one feels due to being out of touch with the happenings within an individual's social circles. Additionally, FoMO has been found to be linked to a few types of addiction behaviour such as social media engagement (Przybylski et al., 2013), pathological usage of mobile devices (Fuster, Chamarro & Oberst, 2017). According to Karadağ et al., (2015), phubbing is a nuisance that is at the intersection of multiple addictions and they proposed that phubbing has a multi-faceted structure comprising of the addiction of mobile phones, internet addiction, social media addiction and gaming addiction.

Cheever, Rosen, Carrier and Chavez (2014) designed a study to determine the anxiety levels among college students in a South Californian university in America when their wireless mobile devices (WMDs) were unexpectedly not available, either taken away from them voluntarily, or were allowed to keep but were instructed to turn the WMDs off and place them out of their vision. A total of 163 students participated in this study and results showed that these

students spent on average 13.58 hours daily on their WMDs. Furthermore, yielded results also display that students who did not have possession of their phones were significantly more anxious over time and students who had a heavy usage of WMD daily were found to have a steady increase in anxiety over time when their devices were out of sight whereas no changes in anxiety levels were to be found among users with low daily WMD usage. Cheever et al., (2014) claim that the induction of anxiety within those heavy WMD users is due to the psychological dependence they have on their devices. As people have increasingly begun to depend on WMDs for entertainment, interaction, information and to stay in-touch with significant others, the WMD has perhaps become a surrogate companion to help satisfy the needs of people. Consequently, taking these WMD away from them is causing them to feel deprived of something essential like losing a friend, which ultimately causes them to have anxiety that they are missing out on something.

In another study by Jones (2014), her study focused on students within the age range of 18 to 22 at Elon University. She wanted to gauge the level of engagement students had towards their mobile devices and with other people during face-to-face interactions. To gain an insight upon the primary uses of cell phones, cell phone habits, and the emotions that would be aroused should one not possess their cell phones within near reach, she distributed survey questions to students and required them to answer the questionnaire. After obtaining the survey results, she then proceeded to carry out a field observation at heavily populated student locations to observe the interactions among the students. Upon carrying out the survey and observation, her findings show that out of 200 students that were observed, 43.5% of them were busy on their phones while 35.6% of the did not have their cell phones and the remaining 20% were either talking on the phones or had their earphones plugged in. Additionally, survey results also report that

feelings of disconnection (77.4%), nakedness (25.8%) and stress (25.8%) were experienced by students when they did not have their cell phones with them. Jones (2014) purported that these array of emotions were felt because people dislike the feeling of being oblivious to the things that are occurring around them in the world they are in and that people desire to be in touch, being able to receive information instantaneously and impulsively. This clearly shows that these students do have a high level of FoMO and they have displayed a need to have their cell phones carried with them all the time.

On the other hand, Elhai, Levine, Dvorak and Hall (2016) conducted a study examining how few variables namely FoMO, need for touch (tactile needs), anxiety and depression are related to problematic smartphone use and the frequency of usage among 308 North American adult residents whom are avid users of technology through an online labour market, Amazon's Mechanical Turk (Mturk) which is often used for social science research. Among all these variables, the need for touch was the second highest variable to associate to problematic usage of smartphones and anxiety came in at the third place. However, depression was not found to have a strong association with problematic usage of smartphones but contributed most to the continuum of smartphone usage instead. Surprisingly, FoMO was found to be the factor that was most associated to the problematic usage of smartphones. This could possibly be explained by individuals with higher levels of FoMO are found to have lower satisfaction levels with three main components of the self-determination theory, competence, autonomy and relatedness. Hence, lower relatedness elicits their need to use their phones to go online to satisfy their emptiness which may lead to habitual checking wherever or whenever they may be.

Oberst et al. (2017) purported that FoMO might be a construct that is rather complex and instead of perceiving it to be a unitary phenomenon, it should be seen in a specific cognition such

as online fear of missing out. Hence, the researchers approached FoMO as a construct that is multi-dimensional comprising of the dispositional trait FoMO, which is an unwavering individual characteristic, and the state-FoMO, referring to the FoMO of the content found online and the interpersonal interactions. In other words, trait-FoMO is the anxiety that one experiences over general things in life, while state-FoMO relates to the desire to not miss out on online happenings or peer interactions. Recently, Balta, Emirtekin, Kircaburun and Griffiths (2018) adopted this idea and conducted a study among students in high schools and a university in the northern region of Turkey. Their study focused on the direct and indirect associations between trait anxiety, neuroticism and trait-FoMO with phubbing via state-FoMO and problematic usage of Instagram. Findings of the study portray (i) neuroticism has an indirect association with phubbing via problematic usage of Instagram, (ii) trait-FoMO was associated to state-FoMO and state-FoMO, in turn, was associated to the problematic usage of Instagram, and (iii) state-FoMO was associated to problematic usage of Instagram and in turn, relates to phubbing. They justified that due to Instagram's recent update that allows others to know the new on ongoing things that are happening in one's lives via live streaming and stories, this application has become highly attractive for people who adopt higher levels of trait and state-FoMO and has caused them to have the desire to update their pages excessively and compulsively.

Theoretical Framework

Media Dependency Theory (Ball-Rokeach & DeFleur, 1976) was originally used to conceptualize around the notion of sociology and the context of large social systems. In recent years, the theory is extended to cover the aspect of social media. Basically, the theory postulated that an individual will develop a sense of dependency with the media to fulfill some of the needs and accomplish certain goals by accessing to media information (Ball-Rokeach, 1998).

According to the study of Karadağ et al. (2015), social media addiction is significantly related to the phubbing behaviour. As a person phubs, he or she is more likely to access to social media such as Facebook and Twitter to get information through smartphones. Since social media and phubbing behaviour is highly linked with each other, Media Dependency Theory is employed to explain how fear of missing out (FoMO) and loneliness are related to the phubbing behaviour.

According to Jung (2017), it is impossible for people to solely depend on their interpersonal relationship to fulfil their needs in this modernization. Since society is transforming at a rapid pace, the mass media system has turned into a crucial system in the society that one has to rely on to gain information so that they can survive well. Ball-Rokeach and DeFleur (1976) have classified the individual's media dependency connections into three media needs which can be used to identify how significant media is to a person at any particular moment. The first one is surveillance, which refers to how people depend on the media to understand more about their social environment. Secondly, social utility touches upon the need to act effectively and meaningfully within that social world. The last need is fantasy-escape, which states that people rely on media to fulfil their need to escape from the social environment when they feel overwhelmed.

In the current study, surveillance can be used to explain the relationship between fear of missing out and phubbing behaviour. As mentioned early, FoMO is displayed when one is worried that they are not up-to-date to the current phenomena of their social environment, and this would lead them to feel being socially excluded (Chotpitayasunondh & Douglas, 2016). Consequently, they have to stay constantly updated with the daily lives of other people through social media in order to feel being included in a group. Since people with FoMO will depend

largely on social media to keep track of what other people are doing (Franchina et al., 2018), it fulfills their needs of understanding the social environment.

Moreover, the third media need which is fantasy-escape can be applied to explain the relationship between loneliness and phubbing behaviour. According to Haigh (2015), people who experience loneliness will prefer to interact with others through smartphones or social media applications rather than communicate with people face-to-face. For instance, a lonely person would prefer to rely on social media to get more information rather than having a face-to-face discussion with other people. According to this component of the theory, social media does not only provide users with chances to avoid face-to-face interactions with others, but it also offers users an opportunity to observe others without the needs to have any conversation with others (Wainner, 2018). Therefore, people who experience loneliness can rely on the media to fulfil the needs of escaping from the social environment.

Based on Ball-Rokeach and DeFleur (1976), the more an individual relies on media to fulfil their needs, the higher the essentiality the social media is to the individual, and thus the bigger the impact of social media on the individual. Since both the components of this theory are able to fulfil the needs of people who are FoMO and lonely, it is assumed that they will use more social media, and thus they would have higher chances to be addicted to social media. Consequently, it may result in phubbing behaviour. Therefore, media dependency theory supported this study.

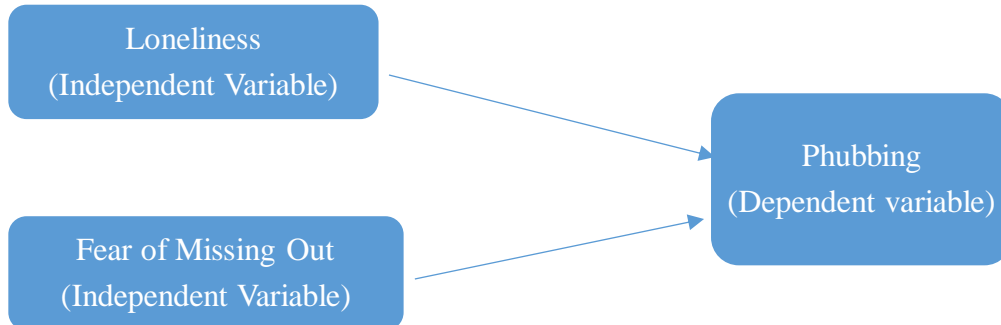
Conceptual Framework

Figure 2.1 Conceptual Framework of the Study on the impact of Loneliness and Fear of Missing Out towards Phubbing among undergraduates students.

There are two independent variables and one dependent variable in this study which are loneliness, fear of missing out, and phubbing. The strength and direction of the relationship is one of the interests in this study. Furthermore, the independent variables are used to predict phubbing behaviour and to find out whether loneliness or fear of missing out is the best predictor in predicting phubbing in a multiple regression.

Chapter III

METHODOLOGY

Research Design

The current study is a quantitative survey research. Attributable to its quantitative nature, a cross-sectional survey research design was adopted to examine the relationship between fear of missing out, loneliness and phubbing behaviour among undergraduates in Malaysia. This research design was chosen because it is inexpensive and it allowed us to collect and access large data in little time (Levin, 2006). Besides that, it also enabled us to look at different variables at once and provide information about the current situation in the population (Mann, 2003).

Research Sample

The population of the study involved undergraduates from both public and private universities and colleges in Malaysia. According to the statistic from Ministry of Higher Education (MOHE) (2017), it demonstrated that there were a total of 1,700,126 undergraduates' students in the year 2017. Besides, there were 20 public universities and 510 private colleges and universities in Malaysia (MOHE, 2015). Undergraduates are chosen to participate in the research because they are likely to have a higher need to stay connected with their loved ones by using internet along with their smartphones since they have left home to pursue tertiary education (T'ng, Ho & Low, 2018).

A total of 173 of undergraduates from both public and private universities and colleges in Malaysia were recruited to take part in the study. There were 65.70% of female respondents ($n = 113$) and 34.30% of them are male ($n = 59$). Furthermore, the respondents' age ranged from 17 years old to 26 years old. Initially, the total number of respondents that we had collected is 228. However, 56 respondents who were not undergraduates and did not have a smartphone were

excluded as the focus on this research is the phubbing behaviour among undergraduates. Hence, only 172 respondents were included in the study for further analysis.

The data of the research were collected using **convenient sampling method**. The questionnaire was constructed using Qualtrics and was shared through social media (E.g. WhatsApp) to undergraduates who were available from the universities and colleges in Malaysia. This method is employed as it allowed us to approach the targeted sample quickly and effortlessly as it only took less time and it is inexpensive. Moreover, unlike the random sampling method, the convenient sampling method only has little rules in restricting the data collection (Mugera, 2013), therefore it can be carried out in a simpler way.

Research Location

Malaysia is divided into Peninsular Malaysia (West Malaysia) and East Malaysia, and there are 13 states and three federal territories. West Malaysia is formed by 11 states and two federal territories which are Kuala Lumpur, Putrajaya, Selangor, and Negeri Sembilan (Central region); Perlis, Kedah, Perak, and Pulau Pinang (Northern region); Malacca and Johor (Southern region); and lastly Pahang, Kelantan, and Terengganu (East Coast region). Apart from that, East Malaysia is formed by the other two states and one federal territory which are Sabah, Sarawak and Labuan.

According to the Department of Statistics Malaysia (2018), the total population of Malaysia was approximately 32.4 million. Besides, the population of the three main races (Malay, Chinese and Indian) in Malaysia is 20.07 million, 6.69 million and 2.01 million relatively, while the other minor groups consist of 1% of the total population (Department of Statistics Malaysia, 2018).

Instrumentation

A self-administered questionnaire consisting of four sections was created in order to collect data. It consisted of three instruments which were UCLA Loneliness Scale Version 3, Fear of Missing Out Scale (FoMOs) and Phubbing Scale (PS), all three instruments are reliable and validated. Besides, six questions were created to collect the demographic information of respondents.

First of all, the demographic information of the respondents was acquired by asking six questions in the first section. Each respondent was required to fill in their sex, age, and ethnicity. Next, to filter our respondents, they were asked whether they are a university student. If yes, they were required to fill in the name of the institution to make sure if they are indeed studying in a university. The last demographic question was asked if they owned a smartphone. If they do not have a smartphone, they will be excluded from the study.

UCLA Loneliness Scale Version 3 (Rusell, 1996).

UCLA Loneliness Scale Version 3 is revised from the original UCLA Loneliness Scale and the Revised UCLA Loneliness Scale. It is used to determine the loneliness level and also social isolation. It consists of 20 items and measures by 4-point Likert scale to determine the level of loneliness and social isolation. For example “How often do you feel that you are lack of companionship?” Besides, there are 9 reverse-scored items, which are questions 1, 5, 6, 9,10,15,16,19, and 20. The example for reverse-scored item is “How often do you feel close to people?” Respondent needed to rate the items from scale 1 which represents “Never” to 4 which represents “Often”. The total score of 20 items was added. The higher the score indicates the higher the level of loneliness. This scale consists of high internal consistency (coefficient alpha = .96) and test-retest over a two-month period of .73. It also provides concurrent and preliminary

construct validity in self-reports in loneliness and other related emotional stated (Russell, 1996). *Fear of Missing Out Scale (FoMOs)* (Przybylski, Murayama, DeHann, & Gladwell, 2013).

Fear of Missing Out Scale (FoMOs) is used to measure the fear of being left out in social media. It consists of 10 items and measures by 5-point Likert scale to measure the fear of missing out. The example of Fear of Missing Scale are “I fear my friends have more rewarding experiences from me.”, “I get worried when I find out my friends are having fun without me.”, and “I get anxious when I don’t know what my friends are up to”. Respondent needed to rate from 1 which represent “Not at all true of me” to 5 which represent “Extremely true of me”. The mean score of the 10 items was calculated. The higher the score indicates the higher the level of fear of missing out. The reliability of this scale is ($\alpha = .87$ to $.90$) (Przybylski, Murayama, DeHann, & Gladwell, 2013).

Phubbing Scale (Karadağ et al., 2015).

Phubbing Scale is used to measure phubbing behaviour. It consists of 10 items on this scale and measures by 5-point Likert scale to measure the phubbing behaviour. The example of Phubbing Scale are “I am always busy with my phone when I’m with my friends.”, “People complaint about me dealing with my mobile phone.”, and “I’m busy with my mobile phone when I’m with friends at dinner.” Respondent needed to rate from 1 which represents “Never” to 5 which represents “Always”. The total score of 10 items were added. The higher the score, the higher the phubbing behaviour. The reliability of this scale is ($\alpha = .87$) for 5 items of Communicative Disorders and ($\alpha = .85$) for another five items of Obsession (Karadağ et al., 2015).

Pilot Study

There were 30 respondents that participated in the pilot study. The self-administered questionnaires were distributed online. Each respondent spent around 5 minutes to complete the questionnaire.

Reliability

The data was collected and the reliability test was computed using Statistical Package for Social Sciences (SPSS) version 21.0. The reliability test is valid if the alpha value is .70 or higher (Taber, 2018). The result was as follow: Alpha Cronbach’s coefficient ($\alpha = .897$) for UCLA Loneliness Scale Version 3, alpha Cronbach’s coefficient ($\alpha = .841$) for Fear of Missing Out Scale (FoMOs), and alpha Cronbach’s coefficient ($\alpha = .755$) for Phubbing Scale. There are two factors in phubbing scale: Communicative Disorder and Obsession. The alpha Cronbach’s coefficient ($\alpha = .727$) for Communicative Disorder in Phubbing Scale and alpha Cronbach’s coefficient ($\alpha = .702$) for Obsession in Phubbing Scale. Summary of the pilot study was shown in Table 3.1 below.

Table 3.1

Reliability of Instruments (n=30)

Variable	No of items	Cronbach Alpha		
		Past Study	Pilot Study	Actual Study
UCLA Loneliness Scale Version 3	20	.96	.90	.90
Fear of Missing Out Scale (FoMOs)	10	.87 - .90	.84	.81
Phubbing Scale	10	-	.76	.81
Communicative Disorder	5	.87	.73	.82
Obsession	5	.85	.70	.68

Research Procedure

The respondents were recruited using convenient sampling method. Data collection was conducted through an online survey. The questionnaire was constructed using Qualtrics and the hyperlink of the survey was shared on Facebook, Instagram and WhatsApp to the undergraduates across Malaysia. Before taking part in the survey, respondents were required to read the general instructions which included the informed consent. Next, if they do not have any enquiries, and are willing to participate in the study, they were required to proceed with answering the questionnaire. Lastly, after they completed the questionnaire, all the responses were submitted for the analysis of results. Data collected were analysed using SPSS version 21.

Data Analysis

The collected data was analyzed using SPSS version 23.0. Descriptive statistics which included age, gender, ethnicity and total scores from FoMOs , UCLA-3 and Phubbing will be presented in the form of mean and standard deviation. As for inferential statistics, Pearson Correlation Coefficient and Multiple Linear Regression were adopted to get the statistical results among different variables. First of all, Pearson Correlation Coefficient is used to analyze the correlation between loneliness and phubbing behaviour and the correlation between fear of missing out and phubbing behaviour. Then, Multiple Linear Regression is used to examine the predicting role of loneliness and fear of missing out on phubbing behaviour. Significance level ($p \leq .05$) will be employed in the current research.

CHAPTER 4

FINDINGS AND ANALYSIS

Descriptive Statistic

Demographic information of respondents. Table 4.1 illustrated the demographic information of the respondents in this research. The respondents ranged from 17 to 26 years old, and the average age is 21.70 years ($M = 21.70$, $SD = 1.62$). As for sex, there are a total of 113 female respondents (65.7%) and 59 male respondents (34.3%). Chinese respondents (83.1%) which consisted of a very high percentage were involved in the research ($n = 143$) followed by Malays (12.8%), Indians (2.9%) and other ethnicities (1.2%)

Table 4.1

Demographic Information of Respondents (n=172)

	<i>n%</i>	Mean	SD	Min.	Max.
Age		21.70	1.62	17	26
Gender					
Female	113 (65.7)				
Male	59 (34.3)				
Ethnic					
Chinese	143 (83.1)				
Malay	22 (12.8)				
Indian	5 (2.9)				
Other	2 (1.2)				

Note. n = sample size; SD = standard deviation; Min. = minimum; Max. = maximum

Frequency distribution of variables. Table 4.2 showed the scores on the loneliness, fear of missing out and phubbing behaviours among the undergraduates. The mean score of loneliness was 45.38 ($SD = 9.13$) while the fear of missing out was 2.57 ($SD = 0.70$). Besides,

the mean score of phubbing behaviour was 26.35 ($SD = 7.06$). To examine the level of loneliness and fear of missing out, median was used as the cut-off score. Respondents who scored lower than the median will be categorized in the low-level category whereas respondents who score above the median will be placed in the high-level category. As for the level of phubbing behaviours, scores exceeding 45 indicated higher chances to phub (Karadağ et al., 2016).

Table 4.2

Frequency Distribution of Variables (n=172)

Variable	n(%)	Mean	SD	Median	Min.	Max.
Loneliness		45.38	9.13	45.00	28	71
Low (score 28 to 45)	92 (53.5)					
High (score 46 to 71)	80 (46.5)					
Fear of Missing Out		2.57	0.70	2.6	1.0	4.5
Low (score 1.0 to 2.6)	92 (53.5)					
High (score 2.7 to 4.5)	80 (46.5)					
Phubbing Behaviours		26.35	7.06	26	12	49
Low (score 12 to 45)	168 (97.7)					
High (score 45 to 49)	4 (2.3)					

Note. n = sample size; S.D = standard deviation; Min. = minimum; Max. = maximum

Inferential Statistic

Correlation between Loneliness, Fear of Missing Out and Phubbing Behaviour

ROI: To determine the relationship between loneliness and phubbing behaviour among undergraduates.

H1: There is a significant positive relationship between loneliness and phubbing behaviour.

To answer the first research objective, Pearson correlation test was conducted. As shown in Table 4.3, the results indicated that there was a statistically significant positive relationship between loneliness and phubbing behaviours among undergraduates in Malaysia ($r = .150, n = 172, p < .05$). This indicates that a lonelier undergraduate will be more likely to engage in phubbing behaviour. Therefore, *H1* is accepted.

RO2: To investigate the relationship between fear of missing out and phubbing behaviour among undergraduates.

H2: There is a significant positive relationship between fear of missing out and phubbing behaviour.

The results from Table 4.3 demonstrated that there was a significant positive relationship between fear of missing out and phubbing behaviour among undergraduates in Malaysia ($r = .383, n = 172, p < .001$). It means that undergraduates who have higher levels of fear of missing out would be more likely to phub. Hence, *H2* is accepted.

Although the results indicated that there was a statistically significant positive relationship between loneliness, fear of missing out and phubbing, however, the relationship of both variables to phubbing behaviour are not strong.

Table 4.3

Correlation among Variables (n = 172)

Variables	1	2	3
1. Loneliness	1	.210**	.150*
2. Fear of Missing Out		1	.383**
3. Phubbing Behaviour			1

Note. * $p < .05$; ** $p < .01$.

Predictor of Phubbing Behaviour

RO3: To examine the unique predictor of phubbing behaviour

Multiple linear regression was performed to examine if loneliness and fear of missing out significantly predict the phubbing behaviour among undergraduates. Results from table 4.4 indicated that two predictors statistically significantly predicted the phubbing behaviour $F(2, 169) = 15.145, p < .001$. Total variance of 15.2% in the data can be explain by the two predictors. Besides, results also showed that fear of missing out ($\beta = .368, p < .001$) has a greater impact on phubbing behaviour among undergraduates than loneliness ($\beta = .073, p = .316$). Therefore, fear of missing out is a stronger predictor of phubbing behaviour compared to loneliness in this study.

Table 4.4

Summary of Multiple Regression Analysis for Variables Predicting Phubbing Behaviour

Predictors	F	R²	df	se	β	t	p
	15.145	.152	(2, 169)				
Loneliness				.056	.073	1.005	.316
Fear of Missing Out				.732	.368	5.080	.001

CHAPTER 5

DISCUSSION & CONCLUSION

Discussion

Loneliness and Phubbing

The first objective of this study was to examine the presence of loneliness of an individual would predict phubbing behaviours among undergraduate students in Malaysia. We expected loneliness to positively predict phubbing behaviour. The findings of the presence study indicate that a positive correlation between loneliness and phubbing does exist among undergraduates students in Malaysia. This result suggests that individuals with higher levels of loneliness would have a higher tendency of phubbing behaviour, and individuals with lower levels of loneliness would have a lower level tendency to phub.

Present findings supported by Karadağ, et al (2016) where the participants revealed themselves to be emotionally lonely, hence using a smartphone would be one of the ways for them to alleviate their loneliness. Meanwhile, the study of Tulane, Vaterlaus, and Bekert (2018) claimed that there are also participants revealing that phubbing is a way to avoid the feeling of loneliness or embarrassment when they are alone in public. It also makes them feel connected and that there is someone with them. People who felt lonely will have an increased likelihood in phubbing behaviour, the world in smartphone makes them felt connected to people (Savci & Aysan, 2017). A study on how smartphone affects an individual's physiological functioning which was conducted by the researchers Tonacci et al. (2019) showed the results that using smartphones is more likely to emotionally activate a person, even a person who is not dependent on a smartphone. This can be explained on why phubbing behaviour is more frequent among individual who feels lonely compared to those who are not.

However, when a person concentrates too much on their smartphone, it affects their social interaction and relationship in a real-life situation. In addition, they are unable to follow the conversation from time to time, this not only gives an impression of disrespect for the person who is talking, it even causes a person to feel lonelier when they found themselves being unable to blend in the current social situation (Karadağ et al., 2016). The phenomena of phubbing does not help individuals to alleviate their loneliness. In fact it increases the level of loneliness because it reduces the sense of community (Olsson et al., 2019). It is supported by Hu and Yang (2016) who conducted a study on classroom phubbing among university students in Liaoning on the causes of phubbing. Hu and Yang (2016) posited that phubbing causes an individual to develop a sense of feeling that he or she has been isolated from the reality and simultaneously putting him or herself into a virtual world. Reid (2018) also claimed that phubbing may worsen a person's psychological issues if one does not handle it properly. Other than loneliness, psychological factors such as a sense of security, self-realization and ownership may be possible factors in predicting phubbing behaviour (Hu & Yang, 2016).

Although loneliness is a significant predictor in predicting phubbing behaviour, however, the significance of loneliness in predicting phubbing is significantly low. Loneliness is one of the components in measuring social connectedness (Lee & Robbins, 1995) and also a component in social cognition (Wegmann, Oberst, Stodt, & Brand, 2017). It might act as a moderating role in predicting phubbing behaviour, hence, this could be a potential explanation to why the results show a low level of significance in predicting phubbing behaviour.

Fear of Missing Out and Phubbing

The second objective of this study was to examine whether the presence of FoMO in an individual would predict phubbing behaviours among undergraduate students in Malaysia. We expected FoMO to positively predict the phubbing behaviour. The findings of the present study indicate that a positive correlation between fear of missing out and phubbing does exist among undergraduate students in Malaysia. This result suggests that individuals with higher levels of FoMO would have higher tendency of phubbing behaviour; and individuals with lower levels of FoMO would have lower tendency to phub.

Current studies' findings are in line with a past observational study by Jones (2014) showing that through an observation of roughly 200 students in a school's cafeteria, more than half of the students were engaged with their devices. Furthermore, another finding in Jones (2014) found that individuals who did not have their phones within close proximity aroused feelings of disconnection, nakedness and stress. Smartphones have become a mandatory item to have in one's daily life because it allows us to carry out daily functions such as information seeking, entertainment and keeping in touch with the ongoing lives of people (Przybylski & Weinstein, 2013). Due to the absence of their devices, they are unable to gain access to the events that are happening around them. Therefore, this suggests that people with a fear of missing out on the ongoing lives of their peers or family would increase a need for their phones to be in close proximity, which ultimately increases the likelihood of these individuals to phub in social situations.

Similarly, our findings were supported by a study conducted by Cheever et al., (2014) which shows that there was a significant increase in anxiety over time among students who had a high daily usage of wireless mobile devices (WMB) when their devices were either not in

possession or switched off. Cheever and colleagues (2014) posited a probable explanation for the induced anxiety among these students is due to the psychological dependence that these students have toward their devices as these WMDs are able to satisfy their needs of connection. In other words, taking away their devices takes away the opportunity for them to use their phones and to them, this is equivalent to cutting off their connection with the world. Hence, minimal awareness of updates from their surroundings causes them to feel anxious of missing out. Consequently, students would prefer their WMDs to be in sight and within reach.

Furthermore, another study conducted in Turkey also yielded results showing that trait FoMO is associated to state FoMO which in turn led students to have a problematic usage of Instagram; and this extensive use of Instagram in turn led to a higher tendency of phubbing behaviours (Balta, Emirtekin, Kircaburun & Griffiths, 2018). This outcome is in line to our results stating that there is a positive correlation between FoMO and phubbing. Lee and Chiou (2013) claimed that a potential explanation for this extensive use of social networking sites (SNS) among people is due to the desire of the individuals to gratify their social needs namely the need to belong and the need for popularity. Besides that, students are increasingly reliant on SNSs as these platforms allow the construction of social identities (Oberst, Renau, Chamarro & Carbonell, 2016). Given these, failure to gratify these psychological needs could escalate one's sensitivity to develop a fear of missing out on things and this would steer people towards the direction of SNSs. Advances of technology has opened up an instant gateway for people to connect with the outside world such as Instagram's new "stories" feature that allows people to be kept updated on the concurrent happenings of their friend in any part of the world. Hence, this instantaneous source of update motivates an individual to habitually and constantly check on their phones which eventually leads to phubbing in social situations.

Conclusion

In this era of globalization, technology is developing at a fast pace, and smartphones have become one of the most needed tools by everyone. Due to the increasing usage of smartphones accompanied by the widely accessible internet source, phubbing has become a norm in Asian countries such as Korea. Smartphone usage is found to be relatively high in Malaysia, hence a study about phubbing was conducted to identify the possible predictors of phubbing behaviours among undergraduate students in Malaysia. The aim of this study is to identify the relationship between loneliness, fear of missing out, and phubbing behaviour among undergraduates in Malaysia.

Mobile Dependency Theory was used to explain the relationship between loneliness, fear of missing out and phubbing. Surveillance well explained the relationship between fear of missing out and phubbing where people with high fear of missing out more rely on social media to constantly update on the latest news feed among their friends. Fantasy-escape explained that people who experience loneliness may depend on media to escape from the social environment.

The sample size was obtained by using convenient sampling. 172 undergraduates (aged 17 to 26 years old) have participated in this study. 59 male and 113 female had participated in this study. The questionnaire consists of demographic information and three scales which are UCLA Loneliness Scale Version 3, Fear of Missing Out Scale, and Phubbing Scale. Besides, a pilot study was conducted to ensure the reliability of the scales and found that there is high reliability in all scales.

Pearson Correlation was used in this study. It showed that there is a significant positive relationship between loneliness and phubbing ($r = .150$), the hypothesis for the first research question is accepted. It also showed that there is a significant positive relationship between fear

of missing out and phubbing behaviour, the hypothesis for the second research question is accepted. In Multiple Linear Regression, the result shown fear of missing out ($\beta = .368, p < .001$) has a greater impact on phubbing behaviour among undergraduates than loneliness ($\beta = .073, p = .316$).

Implications

Theoretical Implication

The theory that was employed in this study was Media Dependency Theory which explained how people develop a sense of dependency towards media to fulfil needs (Ball-Rokeach, 1998). Based on the findings, there are several crucial theoretical implications. The results revealed that loneliness and fear of missing out, which are relevant to the components of media dependency theory are significantly correlated to the likelihood of the phubbing behaviour. The relationship between loneliness and phubbing behaviour can be explained by the media dependency theory that lonely people have a higher reliance on social media as they need to escape from the social environment. As for people who have a fear of missing out, the theory explained that they would depend largely on media to gratify their social needs. Thus, this can be a possible explanation as to why phubbing behaviour increase. Since the findings can be explained by the theory, future researches can consider employing this theory to discuss similar topics that they wish to venture into.

In addition, since the theory was applied and tested in this research, which was also conducted in Malaysia, it can be used in future studies that are carried out in a Malaysian context. It can be served as one of the literature regarding studies on phubbing behaviours in Malaysia setting as past researches that employed media dependency theory were carried out only in Western countries. In future, it provides the counsellors and psychologists ideas for

devising a proper treatment plan to treat people with smartphone usage problem. They can use the theory as a guideline for them to evaluate their clients and develop the most effective treatment for them.

Practical Implication

First of all, the findings of this research are able to fill the knowledge gap of phubbing behaviour in Malaysia. Since most of the studies regarding phubbing behaviour were only conducted in Western countries, there are only limited researches studying about phubbing behaviours. Hence, this research enriched the literature of future research regarding phubbing behaviours in a Malaysian context. Furthermore, although the findings indicated that the correlation between the variables and phubbing behaviour are not strong, they were still significant. With the findings of this research, it can be used as a source of reference for the Malaysian civil sector to organize more "Stop Phubbing" campaigns in order to build a stronger awareness among the public regarding factors that predict the issues of phubbing behaviour. Hence, knowledge and information of phubbing behaviour could be spread and the public would be educated to have a better understanding of the determinants and consequences of the phubbing behaviour.

Limitations of Study

While the current study provides us with a deeper understanding of the relationships among loneliness, FoMO and phubbing, this study is not without limitations. One of the shortcomings of this paper is that the ratio of ethnicity is uneven. Majority of the respondents that participated in this study are Chinese and there is a deficit in Malay and Indian respondents. Therefore, with the results yielded from this study, it is difficult to be generalised to the population as it does not accurately reflect the Malaysian population.

Another limitation is that convenience sampling method was applied in our study by using an online survey questionnaire. Using online questionnaires, we were not able to fully control the ratio of ethnicity and gender in our sample size. Control over recruiting participants from different states in Malaysia is also difficult. Therefore, over-representation or under-representation of the sample might occur leading to potentially biased results.

Moreover, the ability to generalise the findings of this study to the Malaysian population is limited. This is because the current study relied on a relatively small sample (n=172) when the actual population of the undergraduates in Malaysia is many times larger than the sample. Hence, the generalization of the results from the current study might be less likely to be applicable to the population.

Finally, our study only focused on investigating the relationship among three variables namely loneliness and FoMO; and how these are able to predict the phubbing behaviour. Even though a significant correlation was achieved, the significance of it was somehow low. Possible explanations could be due to failure in addressing other potential factors that could mediate the relationship between our chosen variables which could potentially yield a different outcome altogether ultimately.

Recommendations of study

For future studies, it is recommended that researchers adopt the probability sampling method into their study. More specifically, researchers could use random sampling as this method allows the results to be generalized to the Malaysian population as it would reflect the population more accurately. Furthermore, researchers should recruit a larger sample size and collect data from all different states in Malaysia as the current sample does not comprise of students from every 14 states in the country. Consequently, researchers are able to gain results

that have a high significance level for a more accurate reflection of the targeted population. In considering the ratio ethnicity, it is highly recommended that future researchers collect data from each major race (Malay, Indian and Chinese) in Malaysia so that results are more generalizable to the population.

Nowadays, it is observable that majority of people possess smartphones and internet access. It has become a daily necessity for most people. Without proper awareness, individuals might develop severe addiction towards these things. As phubbing is not a widely researched phenomenon in Malaysia, future research should consider looking into various contributors to the phubbing behaviour as well as the consequences of it. Since the present study yielded a result of low significance, other potential predictors such as shyness, extraversion and social anxiety could be useful to look into.

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Appendix A
QUESTIONNAIRE



UNIVERSITY TUNKU ABDUL RAHMAN
FACULTY OF ARTS AND SOCIAL SCIENCE
BACHELOR OF SOCIAL SCIENCE (HONS) PSYCHOLOGY

PARTICIPANT INFORMATION SHEET

Topic of the Research

This research is being conducted to examine "The impact of loneliness and fear of missing out in predicting phubbing behaviour among undergraduates in Malaysia". Your participation in this survey is highly appreciated.

Purpose of the Research

This study is done to fulfil the requirements of subject UAPZ 3023 Final Year Project 2. In order to collect the required information, your participation in this research study is highly appreciated.

Procedures

This questionnaire consists of 40 questions and the estimated time to complete it will be approximately 10 minutes. The questionnaire was designed to find out the impact of loneliness and fear of missing out (FOMO) in predicting phubbing behaviour.

Voluntary Participation

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any point of the time, there will not be any negative consequences.

Confidentiality

All the information will be solely used for academic purposes and it will be kept private and confidential. The data of the research will neither be revealed to the third party nor used for any other purposes other than the study.

Contact Information

If you have any questions concerning the research, kindly contact Ang May Phing at cookiedaphne@1utar.my.

Agreement

I have read and understood about the description stated above and have decided to take part in the study.

YES. I AGREE TO PARTICIPATE IN THIS STUDY.

NO. I DISAGREE TO PARTICIPATE IN THIS STUDY.

**Section A: Demographic Information**

Sex

Male

Female



Age

Ethnicity

Malay

Chinese

Indian

Others (please specify)

Are you an undergraduate?

Yes

No

Name of Institution (e.g. University Tunku Abdul Rahman)

Have smartphone/s

Yes

No

Please read each statement carefully before answering. Please indicate how often each of the statements below is descriptive of you.

	Never	Rarely	Sometimes	Often
1. How often do you feel that you are "in tune" with the people around you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. How often do you feel that you lack companionship?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. How often do you feel that there is no one you can turn to?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. How often do you feel alone?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. How often do you feel part of a group of friends?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. How often do you feel that you have a lot in common with the people around you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Rarely	Sometimes	Often
7. How often do you feel that you are no longer close to anyone?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. How often do you feel that your interests and ideas are not shared by those around you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. How often do you feel outgoing and friendly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. How often do you feel close to people?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. How often do you feel left out?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. How often do you feel that your relationships with others are not meaningful?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. How often do you feel that no one really knows you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. How often do you feel isolated from others?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Rarely	Sometimes	Often
15. How often do you feel you can find companionship when you want it?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. How often do you feel that there are people who really understand you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. How often do you feel shy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. How often do you feel that people are around you but not with you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. How often do you feel that there are people you can talk to?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. How often do you feel that there are people you can turn to?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Below is a collection of statements about your everyday experience. Using the scale provided please indicate how true each statement is of your general experiences. Please answer according to what really

reflects your experiences rather than what you think your experiences should be. Please treat each item separately from every other item.

	Not at all true of me	Slightly true of me	Moderately true of me	Very true of me	Extremely true of me
1. I fear others have more rewarding experiences than me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I fear my friends have more rewarding experiences than me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I get worried when I find out my friends are having fun without me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I get anxious when I don't know what my friends are up to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. It is important that I understand my friends "in jokes."	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Sometimes, I wonder if I spend too much time keeping up with what is going on.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all true of me	Slightly true of me	Moderately true of me	Very true of me	Extremely true of me
7. It bothers me when I miss an opportunity to meet up with friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. When I have a good time it is important for me to share the details online (e.g. updating status).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. When I miss out on a planned get-together it bothers me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. When I go on vacation, I continue to keep tabs on what my friends are doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Please read each statement carefully before answering. Please indicate how often each of the statements below is descriptive of you.

	Never	Sometimes	About half the time	Most of the time	Always

	Never	Sometimes	About half the time	Most of the time	Always
1. My eyes start wandering on my phone when I'm together with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I am always busy with my mobile phone when I'm with my friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. People complain about me dealing with my mobile phone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I'm busy with my mobile phone when I'm with friends at dinner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I don't think that I annoy my partner when I'm busy with my mobile phone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. My phone is always within my reach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Sometimes	About half the time	Most of the time	Always
7. When I wake up in the morning, I first check the messages on my phone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I feel incomplete without my mobile phone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. My mobile phone use increases day by day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. The time allocated to social, personal or professional activities decreases because of my mobile phone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Appendix B
SPSS RESULT

Pearson Correlation

Descriptive Statistics

	Mean	Std. Deviation	N
TOTAL_LONELINESS	45.3837	9.12764	172
MEAN_FOMO	2.5727	.69905	172
TOTAL_PHUBBING	26.3547	7.06419	172

Correlations

		TOTAL_LONELINESS	MEAN_FOMO	TOTAL_PHUBBING
TOTAL_LONELINESS	Pearson Correlation	1	.210**	.150*
	Sig. (2-tailed)		.006	.050
	N	172	172	172
MEAN_FOMO	Pearson Correlation	.210**	1	.383**
	Sig. (2-tailed)	.006		.000
	N	172	172	172
TOTAL_PHUBBING	Pearson Correlation	.150*	.383**	1
	Sig. (2-tailed)	.050	.000	
	N	172	172	172

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Multiple Regression Analysis

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	MEAN_FOMO, TOTAL_LONELINESS ^b		Enter

a. Dependent Variable: TOTAL_PHUBBING

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.390 ^a	.152	.142	6.54362

a. Predictors: (Constant), MEAN_FOMO,
TOTAL_LONELINESS

b. Dependent Variable: TOTAL_PHUBBING

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1296.963	2	648.481	15.145	.000 ^b
	Residual	7236.404	169	42.819		
	Total	8533.366	171			

a. Dependent Variable: TOTAL_PHUBBING

b. Predictors: (Constant), MEAN_FOMO, TOTAL_LONELINESS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		
	B	Std. Error	Beta			Lower Bound	Upper Bound	
1	(Constant)	14.228	2.874		4.950	.000	8.554	19.903
	LONELINESS	.056	.056	.073	1.005	.316	-.054	.167
	FOMO	3.719	.732	.368	5.080	.000	2.274	5.164

a. Dependent Variable: TOTAL_PHUBBING

Appendix C

EVIDENCE OF E-MAIL REPLY

Re: Enquiry for Phubbing Scale

Gönderen: Xing Chong <xingyx1916@outlook.com>
 Gönderildi: 9 Mart 2019 Cumartesi 19:44
 Kime: Şule Betül Tosuntaş
 Konu: Enquiry for Phubbing Scale

Good day Sir,

I am Xing who is using Phubbing Scale in my research.
 I collected the data and would like to run the reliability test.

For the information that I know, Phubbing Scale contains five items for Communicative Disorders and five items for Obsession.
 May I know which five items are for Communicative Disorder and which Five Items are for Obsession?

This is the items in Phubbing Scale:

1. My eyes start wandering on my phone when I'm together with others.
2. I am always busy with my mobile phone when I'm with my friends.
3. People complain about me dealing with my mobile phone.
4. I'm busy with my mobile phone when I'm with friends at dinner.
5. I don't think that I annoy my partner when I'm busy with my mobile phone.
6. My phone is always within my reach.
7. When I wake up in the morning, I first check the messages on my phone.
8. I feel incomplete without my mobile phone.
9. My mobile phone use increases day by day
10. The time allocated to social, personal or professional activities decreases because of my mobile phone

I had a question, can I calculate the reliability using all ten items because the previous study that I referred did not do so. Or it is compulsory to separate in Communicative Disorder and Obsession to run the reliability test?

I look forward to your reply. Thank you very much.

Regards,
 Xing.

Re: Enquiry for Phubbing Scale



xingyx1916@outlook.com
 週二 2019/3/12 上午 07:02
 sbtosuntas@hotmail.com



Dear Şule,

Thank you very much for your reply.
 It is very clear. Thanks!!

Regards,
 Xing.

----- Original Message -----

Subject: Ynt: Enquiry for Phubbing Scale
 From: Şule Betül Tosuntaş
 To: Xing Chong
 CC:

Dear Xing,

This is the factor structure of the scale.

1. My eyes start wandering on my phone when I'm together with others. **(Communication Disturbances)**
2. I am always busy with my mobile phone when I'm with my friends. **(Communication Disturbances)**
3. People complain about me dealing with my mobile phone. **(Communication Disturbances)**
4. I'm busy with my mobile phone when I'm with friends at dinner. **(Communication Disturbances)**
5. I don't think that I annoy my partner when I'm busy with my mobile phone. **(Phone Obsession)**
6. My phone is always within my reach. **(Phone Obsession)**
7. When I wake up in the morning, I first check the messages on my phone. **(Phone Obsession)**
8. I feel incomplete without my mobile phone. **(Phone Obsession)**
9. My mobile phone use increases day by day. **(Phone Obsession)**
10. The time allocated to social, personal or professional activities decreases because of my mobile phone. **(Communication Disturbances)**

Re: Enquiry for Phubbing Scale

Hi, the link attached to social, personal or professional activities conducted outside of my mobile phone. (Communication Disturbances)

Communication Disturbances: 1-2-3-4-10

Phone Obsession: 6-6-7-8-9

We always calculate reliability coefficients for each factor and also total scale. I suggest that to do so. Furthermore, it's not that hard. Good luck with your work.

[At the end of the exploratory factor analysis performed using the scale consisting of 10 items, graded from 1 (never) to 5 (always) in a 5-point Likert scale, the following 2 factors were found: (i) Factor 1 (5 items; $\alpha = .87$) and (ii) Factor 2 (5 items; $\alpha = .85$).]

Regards,

Arş. Gör. Dr. Şule Betül Tosuntaş
Uludağ Üniversitesi
Eğitim Fakültesi
Eğitim Programları ve Öğretim Anabilim Dalı
Görülük Yerleşkesi, 16059
Bursa / TÜRKİYE

Res. Asst. Dr. Şule Betül Tosuntaş
Uludağ University
Faculty of Education
Department of Educational Sciences
Curriculum and Instruction
Görülük Campus, 16059
Bursa / TURKEY

Re: Request for scoring manual



Xing Chong
週二 2018/11/6 上午 12:18
Şule Betül Tosuntaş



Hi Şule,

Thank you very much for your reply.

May I know is there any cut off score for the phubbing scale? Or just add up all items from the scale?

Regards,
Xing Chong.

----- Original Message -----
Subject: Ynt: Request for scoring manual
From: Şule Betül Tosuntaş
To: xingyx1916@outlook.com
CC: Engin Karadağ

Hello,

I'm Şule, working with Prof. Karadağ. Sure, you can use our scale by citing in your research. Please find the attached scale. Also, I would be grateful if you share with us your paper. If you have any further questions, don't hesitate to contact me.

Good luck with your research.

Şule

Re: Request for scoring manual

Prof. Dr. Engin Karadağ / Industrial and Organizational Psychology & Educational Leadership and Policy Studies
[Akdeniz University](#) / 07058 Kampus, Antalya, TR
Co-Director: [University Assessments & Research Laboratory \(UnAr\)](#)
Editor: [Educational Sciences: Theory & Practice \(ESTP\)](#)
Editor: [Research in Educational Administration & Leadership \(REAL\)](#)
Editor: [Journal of Pedagogical Research \(JPR\)](#)
e-mail: [http://engin.karadag@hotmail.com](mailto:engin.karadag@hotmail.com) / enginkaradag@akdeniz.edu.tr / enginkaradag@ogu.edu.tr
Phone: +90.242 227 4400 / 4679 | Mobil: +90.505 764 86 50
Web: <http://www.enginkaradag.net> / <http://www.uniar.net>

Gönderen: Xing Chong <xingyx1916@outlook.com>

Gönderildi: 30 Ekim 2018 Salı 12:24

Kime: enginkaradag@ogu.edu.tr; engin.karadag@hotmail.com

Konu: Request for scoring manual

Dear Sir,

I am students who currently conducting a research on the topic of phubbing and relationship satisfaction among young adults. Recently, I read your research on Determinants of phubbing, which is the sum of many virtual addictions: A structural equation model, the items in Phubbing scale may help me a lot in measuring phubbing behavior.

Herewith, I sincerely hope that I can get a clear scoring manual on the Phubbing Scale to work on my research. I am look forward for your reply.

Regards,

Chong Yuan Xin.