THE RELATIONSHIP BETWEEN ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION AMONG EMERGING ADULTS IN MALAYSIA

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The Relationship between Anxiety, Self-esteem and Internet Addiction among Emerging Adults in Malaysia

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APPROVAL FORM

This research paper attached hereto, entitled “The Relationship between Anxiety, Self-esteem and Internet Addiction among Emerging Adults in Malaysia” prepared and submitted by Rodney Sin Ming Keen, Tan Wai Yee and Youn Jia Xin in partial fulfillment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

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ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Abstract

Internet addiction has reached an alarming rate. However, it was unclear that the correlation between anxiety, self-esteem and internet addiction among emerging adults in Malaysia. Therefore, current study aimed to investigate the relationship between anxiety, self-esteem and internet addiction. The gender difference in internet addiction was examined as well. Current study used quantitative and cross-sectional research design. A total of 391 Malaysian emerging adults were recruited by using purposive sampling method. Internet Addiction Test (IAT), Rosenberg Self-Esteem Scale (RSES) and Beck Anxiety Inventory (BAI) were used in the present study. The independent sample t-test indicated that there is no significant gender difference in the internet addiction. Besides, Pearson correlation test revealed that there was a medium, significant negative correlation between anxiety and self-esteem and the Multiple regression analysis found that anxiety and self-esteem significantly predicted internet addiction. Current study highlighted the importance of considering the level of anxiety and self-esteem when addressing internet addiction. Hence, it has a vital implication for the targeted samples, educationalists, parents and also the legal authorities. Future study should use longitudinal study, develop bilingual survey and include validity scale to enhance the generalizability of the results.

Keywords: emerging adult, internet addiction, anxiety, self-esteem
DECLARATION

We declare that the material contained in this study 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.

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# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abstract</strong></td>
<td>i</td>
</tr>
<tr>
<td><strong>Declaration</strong></td>
<td>ii</td>
</tr>
<tr>
<td><strong>List of Tables</strong></td>
<td>vii</td>
</tr>
<tr>
<td><strong>List of Figures</strong></td>
<td>viii</td>
</tr>
<tr>
<td><strong>List of Abbreviations</strong></td>
<td>ix</td>
</tr>
<tr>
<td><strong>Chapters</strong></td>
<td></td>
</tr>
<tr>
<td><strong>I Introduction</strong></td>
<td>1</td>
</tr>
<tr>
<td>- Background of Study</td>
<td>1</td>
</tr>
<tr>
<td>- Problem Statement</td>
<td>5</td>
</tr>
<tr>
<td>- Significance of Study</td>
<td>8</td>
</tr>
<tr>
<td>- Research Objectives</td>
<td>10</td>
</tr>
<tr>
<td>- Research Question</td>
<td>10</td>
</tr>
<tr>
<td>- Research Hypotheses</td>
<td>10</td>
</tr>
<tr>
<td>- Variables Definition</td>
<td>10</td>
</tr>
<tr>
<td><strong>II Literature Review</strong></td>
<td>13</td>
</tr>
<tr>
<td>- Gender Difference on Internet Addiction</td>
<td>13</td>
</tr>
<tr>
<td>- Anxiety and Self-esteem</td>
<td>14</td>
</tr>
<tr>
<td>- Anxiety and Internet Addiction</td>
<td>16</td>
</tr>
</tbody>
</table>
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Self-esteem and Internet Addiction
Predictors of Internet Addiction
Theoretical Framework
Conceptual Framework

III Methodology

Introduction
Research Design
Sampling Method
Sample size
Participants
Location
Procedure
Instruments
Data Analysis

IV Results

Introduction
Normality Assumptions
Multiple Linear Regression Assumptions
Descriptive Statistic
Independent Sample t-test
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Appendix F: Mahalanobis Distance, Cook’s Distance and Centered Leverage Distance 81
Appendix G: Scatterplots of Internet Addiction 82
Appendix H: Statistic of Internet Addiction for Both Genders 83
Appendix I: Correlation between Anxiety, Self-esteem and Internet Addiction 84
Appendix J: Multiple Regression of Anxiety and Self-esteem on Internet Addiction 85
<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Skewness and Kurtosis</td>
<td>33</td>
</tr>
<tr>
<td>4.2 Coefficients</td>
<td>34</td>
</tr>
<tr>
<td>4.3 Model Summary</td>
<td>34</td>
</tr>
<tr>
<td>4.4 Descriptive Statistics for Demographic Variables</td>
<td>36</td>
</tr>
<tr>
<td>4.5 Descriptive Statistics for Main Variables</td>
<td>37</td>
</tr>
<tr>
<td>4.6 Independent Sample t-test</td>
<td>38</td>
</tr>
<tr>
<td>4.7 Correlations between Anxiety and Self-esteem</td>
<td>39</td>
</tr>
<tr>
<td>4.8 Correlations between Anxiety and Self-esteem with Internet Addiction</td>
<td>40</td>
</tr>
<tr>
<td>4.9 Multiple Regression of Anxiety and Self-Esteem on Internet Addiction</td>
<td>40</td>
</tr>
</tbody>
</table>
List of Figure

Figure

1.0 Conceptual framework of present study
List of Abbreviations

Abbreviations

1. IAT  Internet Addiction Test
2. RSES  Rosenberg Self-Esteem Scale
3. BAI  Beck Anxiety Inventory
Chapter I

Introduction

Background of Study

Internet is a product of era in the evolution of human seeking for better technology and development. The progress is irreversible and undoable, once people get used to the benefits of internet, the only thing is how to maximize and fully utilize the potential of internet. Internet is a neutral device, just as knife and money, the consequence of using it depends on the intention of user (Young, 1999). In 2017, Deputy Communications and Multimedia Minister Datuk Jailani Johari said that among 725 participants involved in a study conducted by Malaysian Communications and Multimedia Commission, 89% were found to be addicted to the internet. This shows that the internet addiction in Malaysia has reached an alarming rate and serious concern should be taken (Malaysian National News Agency, 2017).

The past study showed that internet addiction significantly correlated with anxiety, stress and depression. Internet addicts are more likely to suffer from higher anxiety, stress and depression compared to non-addicts (Akin & Islender, 2011). One of the local study found that 71% of internet user in Malaysia has an entertaining purpose while 56% is for emotional expression (Kapahi, Ling, Ramadass, & Abdullah, 2013). Stressful and depressed people utilize internet more likely to escape from real life world and go online to seek for sense of security and comfort zone to release their negative emotion and repression.
They are preoccupied by internet and bring negative effect to daily routine such as missing class and being late to social event. When they are isolated, they will go for people online to have a talk (Leung & Lee, 2012). The term of internet addiction is further used by psychiatrist to explain problematic internet use with severe social, psychological and occupational impairment. Internet addicts are more likely to have psychological symptoms such as somatization, depression, anxiety and hostility (Adahe & Balkan, 2012).

Male and female are so different in terms of preference, value system, social identity, expressive behaviour and many other aspects. There will be cross-sectional and longitudinal difference among different cultural context and historical context. The present study would like to study the gender difference among emerging adults in Malaysia on internet addiction. Yee (2006) found that there are several purposes of online role playing game. Among the 6675 participants, he found that male players play for achievement and manipulation purpose while female for escapism, immersion and relationship purpose. Besides, the preference of game type is different according to gender. Boys prefer first-person shooting, car racing, and sport game. While girls prefer game that classified as car race, action adventure, puzzle and board game. It showed that boys have higher preference to entertaining game but girls like instructive game more (Karakus, Inal, & Cagiltay, 2008). Other than gaming, social networking is another major purpose of using internet. Parkins (2012) conducted a research by analysing 50 participants’ emotion expression on their Facebook and Twitter accounts. The results showed that females use more emotional expression marker such as punctuation,
full stops, capitals, additional letter, emotion and laughter than males. In terms of information and knowledge acquisition, boys outscored girls in general information score which includes questions about history, geography, science and cultural literacy (Evan, Schweingruber, & Stevenson, 2002). It is arguable that these gender differences which related to internet usage will impact the tendency of male and female to become internet addict.

Anxiety is a mood state that often classified as a symptom in various types of psychological disorder. Anxiety and depression are typically being studied together but yet different. According to Barlow’s (2002) concept, anxiety is thought of future threat with preparation of any possible imminent negative event. Anxiety makes the individuals experience muscle tension and overtly has an avoidance motive. Depression is thought of loss and failure with the experience of energy loss and withdrawal. People with internet addiction are prevalent to these two psychological symptoms, but the present study critically examines the association between anxiety and internet addiction (Adaher et al., 2012).

Past study had done research about the impact of anxiety in different aspect. A group of academic staff members with low level of job stress had perform better in their career life. Role conflict, which brings anxiety to the employees, is negatively associated with job performance (Gharib, Jamil, Ahmad, & Ghouse, 2016). Maroofi, Nazaripour and Maaznezhad (2012) conducted a research to find out the connection between anxiety and job satisfaction. The result showed that two types of job related anxiety (situational and constant anxiety) are both negatively correlated to job satisfaction.
Undergraduate students also reported that anxiety and depression during examination session will negatively affect their academic performance especially for new-intake student regardless of gender difference (Mihăilescu, Diaconescu, Ciobanu, Donisan, & Mihaiulescu, 2016). The negative effect of anxiety on student has been duplicated as past study of Bigdeli (2010) stated that anxious student will have their learning process disturbed. The good news is test anxiety can be reduced by using several techniques. Nolting (2002) advocated that short and long term relaxation techniques help to handle anxiety. It is also important to transform their negative self-talk into positive self-talk in a realistic way.

The present research put highlight on the effect of self-esteem on internet addiction. Rosenberg (1965), one of the pioneers American Psychologist, defined self-esteem as how an individual positively evaluate himself or herself in a general way. People with high self-esteem see themselves as worthy to be accepted by other people and recognise their own value inside. Self-esteem also includes feelings of self-respecting, which means that people with self-esteem strive to maintain their own dignity. With this sense, their high self-confidence will be one of the outcome appeals in their subjective view about their relationship, skill and abilities (Abdel-Khalek, 2007).

Does self-esteem relate to internet usage? The significant correlation between self-esteem and internet addiction had been proved by Bahrainian and his colleagues (2014) that these two variables are negatively related. To be more specific, Wiederhold (2016) stated that family-home self-esteem and social self-esteem is the significant predictor of internet addiction. People who lacks of self-esteem tend to immerse themselves in the virtual world to
feel good which they are lacking in the real world. Griffiths (2000) explained that this is related to the individual’s coping strategy and ways of compensating inadequacies. They may become dependent to internet use to gain satisfaction and perhaps overcome their real weakness. Thus, with internet use people are given new social identity and personality because users can always hide their shortcomings from other internet users.

**Problem Statement**

Emerging adulthood is those who between 18 to 25 years old and undergoing transition from the stage of adolescence to adulthood (Arnett, 2005). They neither accomplished their role as adolescence nor completed achieved their roles as an adult (Karatatatar & Cihan, 2019). This transition in life may cause psychological distress for them as the life role is interrupted (Lane, Leibert, & Goka-Dubose, 2017).

In order to deal with the distress, emerging adults tend to have impulsive behaviors which may further promote other mental disease (King, Karyadi, Luk, & Patock-Peckham, 2011), such as using internet. The growth of the Internet is one of the technology which contribute much to the development in the 21th century (Nadeem, Buzdar, Shakir, & Naseer, 2018). However, this advancement carries negative impact which is internet addiction.

Despite the convenience of internet that bring advantages to many different aspects of human’s life, it does lead the internet addiction cases increase sharply (Shek & Yu, 2012). It is becoming more common and serious problems among youths worldwide. In a study done by Malaysian Communications and Multimedia Commission (MCMC) in Malaysia, in the 89% of internet addicts, more than half of them (60%) claimed to have increased level of anxiety and 32 percent of them have major depression (New Straits Time, 2017). The study also revealed that around 76 percent of those heavy users aged between 20 to 49. This shown that internet addiction is a disorder that becoming prominent, to make things worse,
psychopathologies such as obsessive-compulsive disorder and schizophrenia are always go
on with the habit of using internet (Ko, Yen, Yen, Chen and Chen, 2012).

Internet becomes a space for emerging adults to escape from anxiety and stress when
things in the real life go wrong. When the frequency of them using this negative method to
respond to the demanding events increase, they may become internet addicts. The
presumption of the addiction self-medication appears as a consequences of the emerging
adults trying to self-cure their stress by using internet (Khantzian. 1997). In addition,
emerging adults may experience the very first time to get more freedom and far from the
controlling and monitoring of parents (Young, 2004), therefore, they become more vulnerable
to internet addiction especially those college students who have more free time (Smahel,
Brown, & Blinka, 2012).

As Lane and Fink (2015) mentioned, social support can act as an interpersonal
resources and protective factors to maintain the well-being of emerging adults during the life
transition. However, internet addiction will negatively impact this protective factor by
decrease the interaction time with friends and family members. This negatively impact the
face-to-face communication and can elevate the loneliness and depression level of the
emerging adults, thereby reducing their well-being of psychology (Kraut, Patterson,
Lundmark, Kiesler, Mukophadhayay, & Scherlis, 1998). Meerkerk, Eijnden, Franken and
Garretsen (2010) also stated that the compulsive use of internet can causes them to become
lonelier, have lower life satisfaction, always feel blue and decrease in self-esteem.

Study shown that social anxiety and depression can be the precursor of internet
addiction (Lai et al., 2015). There is also a positive correlation between the internet addiction
with anxiety and depression score (Müller, Beutel, & Wölfing, 2014; Tonioni et al., 2012).
When the relationships in reality is affected, it in turn intensify the time for emerging adults
spend online. In order to get more emotional support and get more interaction with others
(Morahan-Martin & Schumacher, 2003), they may produce a fake online profiles to act as other than themselves (Young, 1998). People with social anxiety also reported they feel much easy to communicate with people online instead of face-to-face (Shepherd & Edelmann, 2005). Individuals with internet addiction will realize that they can eliminate the anxious state that they unable to deal with through communicating online (Yüçens & Üzer, 2018).

Internet can assist them to escape from low self-esteem, irrational thought and unfavorable emotions (Craig, 1995; Griffiths, 2000). However, the effect is actually only last for a short period of time (Campbell, Cumming, & Hughes, 2006) and often cause mental health issues such as anxiety or depression (Young, 1998). According to Cherian et al. (2018), the existence of psychological distress plays a vital role in enhance the chances of having internet addiction. The emerging adults may assume internet as a method to compensate those rejections, in fact, this future enhance the reciprocal relationship (Aydm & San, 2011).

The relatedness of psychological resources such as self-esteem and internet addiction has been studied by many researchers in the past (Andreassen, Pallesen & Griffiths, 2017; Hahn, Reuter, Spinath, & Montag, 2017). People tend to perceive internet as a coping method and offset of some shortage such as low self-esteem (Griffiths, 2000). Those with lower self-esteem more prone to internet addiction (Kim & Davis, 2009; Yang & Tung, 2007) and they actually do score higher on the risk of become internet addicts (Servidio, Gentile and Boca, 2018).

As compared to those who have high self-esteem, people with low self-esteem spend more time staying on social website (Andreassen et al., 2017; Douglas et al., 2008; Servidio, 2019). They tend to show scare and withdrawal when face-to-face interacting with others in real life (Stieger & Burger, 2010). Instead, they perceive the social interaction online is coziest and acceptable (King & Delfabbro, 2016). They find a protection which can minimize
the possibilities of being reject (Zhao, Yu, Zhang, & Ren, 2017), they feel more governable to express themselves online and can meet their needs better (Niemz, Griffiths, & Banyard, 2005).

Although there are researchers who show concern in the study of the emerging adulthood population (Lane et al., 2015; King et al., 2011; Yücens et al., 2018), there are still lack of similar subjects as current studies especially in Malaysia context. Therefore, current study should be done in order to have closer look on the issues and to figure out appropriate solutions.

**Significance of Study**

The purpose of conducting this study is to investigate the use of internet among emerging adults as their coping strategy for their anxiety. As the study conducted by Mohammadkhani, Alkasir, Pourshahbaz, Dehkordi, and Sefat (2017) stated that adolescent is the age group with higher risk for addicting to internet. Due to the fact that using internet is the fastest and most convenient way to deal with several matters, so that they always use internet for multiple purposes for instances communication, education, leisure or financial. Regardless of the pros of using internet, when someone continuously using internet without control, it is possible to cause several negative impacts. Emerging adults are those who tend to spend most of their time on internet and consequently they are easily to become addictive. Subsequently, solutions have to be figure out as soon as possible to prevent the phenomenon to be getting severe. Therefore, it turns out to be very important to discover what psychological factors that are possible to lead individual into internet addiction.

In previous studies, researchers wish to analyze what psychological characteristics a person have when he/she is addictive to internet (Seabra et al., 2017). While few past studies had acknowledged that self-esteem can predict internet addiction (Seabra et al., 2017; Bahrainian et al., 2014). Besides, in concerning the factors that are related with internet
addiction, anxiety also serves as one of the psychological traits that internet users have when they are overly involved in internet. Hence, main objective of this study is to hypothesize the prevalence of internet addiction in Malaysia’s emerging adulthood. Also, this research is to measure the relationship of internet addiction, anxiety and also self-esteem. Consequently, the result from this study could contribute to the formulation of the concept of this behavioral dependency, internet addiction. Another purpose of this research is whether anxiety level and self-esteem could predict internet addiction as well as the association between these three variables.

On the other hands, this research concerns about raising awareness of this behavioral addiction to the public. By doing so, parents, social workers, politicians and anyone else in this community may begin to aware of the seriousness of this problem. If they realize this problem immediately, they are in the best place to control this situation from getting worst. As for parents, they could have more understanding about internet addiction and so that they could help their children to restrain themselves from overly using internet. Others than that, parents could try to give positive evaluation to their children because they play an important role to influence the self-perception of their children. According to Seabra et al. (2017), self-esteem is positively associated with internet addiction.

Next, this study also can provide emerging adults with some information of the internet addiction because it could lead individual into some physiological and psychological disorders (Akar, 2015). They can also find a better way to cope with anxiety than using the internet to reduce their anxiety level and thus increasing their self-esteem. In short, monitor the usage of internet is critical as internet addiction could harm them.

Furthermore, society could gain insight from this study about internet addiction is a severe problem as it can lead to other societal problem. Also, this research could benefit the future researcher for extension research on this relevant topic as well as provide a suggestive
relationship between internet addiction, anxiety and self-esteem for further investigation. In-depth exploration and investigation of the association between these three variables would offer some helpful insights for counselor. Therefore, they could improve their services for their clients or else develop some useful interventions. Anyone in this community have to be involved and take responsibilities in curbing this phenomenon from getting worse.

Research Objectives

There are three objectives in current study. First of all, this study aims to figure out whether there is a difference in internet addiction between male and female emerging adults. Next, the purpose of current study is to investigate whether there is a significant relationship between anxiety and self-esteem. The third objective of the study is to identify whether anxiety and self-esteem can predict internet addiction.

Research Questions

1. Is there a significant gender difference in internet addiction among emerging adults?
2. Is there any significant relationship between anxiety and self-esteem?
3. Will anxiety and self-esteem predict internet addiction?

Research Hypotheses

1. There is a significant gender difference in internet addiction among emerging adults.
2. There is a significant relationship between anxiety and self-esteem.
3. Anxiety and self-esteem will predict internet addiction.

Variables Definition

Internet addiction.

Conceptual definition. Internet addiction can be considered as a psychological dependence on the internet, despite any type of activity once they logged on into internet (Kandell, 1998). Similarly, internet addiction is referred as despite realizing the negative impacts, a tendency of a user to spend more time on using internet than initially intended
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Amandeep, Sufen and Marko (2015) stated that it is one of the negative consequence of excessive internet use among internet users. Although no majority agreement has been successfully brought about in defining Internet addiction, yet Block (2008) described internet addiction share the following four aspects such as excessive use which related with lack of ability to manage the time, withdrawal symptoms like feeling anxious when someone is disallowed to access to internet, low tolerance when ones require more time to surf internet as well as negative repercussions like fatigue and social difficulties.

Operational definition. Internet addiction was accessed by Internet Addiction Test (IAT) which tend to measure the level of addictive use of internet. It consisted 20 items and consequently the scores are total up. The higher the total score, the greater level of internet addiction is.

Anxiety.

Conceptual definition. Anxiety can be defined as an unpleasant state of mind causing oneself to behave nervously (Azher, 2014) over an impending ill. Trivedi and Gupta (2010) mentioned that anxiety normally described individual’s behavioral, emotional and cognitive responses when they perceived of danger. Anxiety is able to produce functional responses to an upcoming challenging events.

Operational definition. Anxiety was measured by using Beck Anxiety Inventory. This instrument consisted of twenty-one items which used to measure anxiety level. Higher scores in this questionnaire shows higher anxiety level.

Self-esteem.

Conceptual definition. Self-esteem is usually defined as individual’s overall sense of worth about self (Zaman & Munaf, 2019). Individual’s view about the self can be either in the way of positive or negative. According to Koç and Kafa (2019), peoples with high self-esteem experience more sense of accordance with their perception as well as having sense of
purpose in life than those with low self-esteem who tend not to have clear sense of self. Self-esteem is an either favourable or unfavourable attitude (Rosenberg, 1965) as well as positive or negative evaluation (Smith, Mackie, & Claypool, 2014) people have about themselves.

**Operational Definition.** Self-esteem can be assessed by adopting Rosenberg self-esteem scale. This self-report measure comprised of 10 items which used to measure global self-worth. It is used to assess both positive and negative feelings about oneself. Score would be sum up and the higher scores designate higher self-esteem.

**Emerging adulthood.**

**Conceptual definition.** It is a developmental period range roughly from ages 18 to 25 years old (Kelly et al., 2019) and also a transition stage which from adolescence to adulthood. Arnett (2000) described emerging adulthood as individuals’ growing independence from their own parents and trying to get use to the financial responsibilities and social roles of adulthood. Yet, people in emerging adulthood does not view themselves as an adolescence nor adult (Arnett, 2000). According to Arnett (2000), this period is for them to explore and find out a wide variety of possible choices in relationship, career, and worldviews.

**Operational Definition.** Emerging adulthood serves as an age which range from 18 to 25 years old. People who are in this age group are those who were graduated from their secondary school, either starting to further their study in any profession or involve in career world.
Chapter II

Literature Review

Gender Difference on Internet Addiction

The difference between male and female in using internet and tendency to get addicted with it has always been an interesting topic in the academic circle. Kim and Davis (2009) conducted a research among 315 college students about their problematic internet use (PIU). The male students reported higher PIU score than female students and this indicated that male students are more likely to addict in internet than female students. Male students use internet more often for entertainment and information acquisition while female students are for relationship purpose. The finding is found to be consistent with the research done by other researchers after. Shahnaz and Karim (2014) studied 210 internet users collected from University of Dhaka in Bangladesh to find out how internet addiction differs in different genders. Internet Addiction Test (IAT) was used and they found out that males are more inclined to develop internet addiction as they spend more time and related to “online dependency” and “neglect of duty” than females. Besides, the recent study done by Ifdil (2018) and his colleagues in Indonesia found similar results. They were using Chen Internet Addiction scale to measure internet addiction among 84 men and 84 women. The result replicated with previous study that men showed higher internet addiction than women with a significant difference. A local study on internet addiction done by Teong and Ang (2016) in East Malaysia on 287 usable data from student in 4 public universities in Sabah and Sarawak. The analysis showed that not only male students spend significantly more time on internet than female students; their internet addiction score are also significantly different in male students with higher scores.

However, some researches proved the gender difference on internet addiction conversely. Back to 2013, Chiu and her colleagues conducted a study focusing on internet...
addiction and mobile phone addiction among college students in Taiwan. The outcome stated that female college students have more time management issue, which lead to significant higher general mobile phone addiction than male students. Female students also reported higher internet addiction tolerance, impulsive use and withdrawal syndrome with non-significant difference. Oktuğ (2012) conducted a research to study the effect of gender on internet addiction which target sample as undergraduate student in Istanbul Kültür University and Istanbul Aydın University in Turkey. 210 male and 163 female students answered the Internet Addiction Scale and their score had been analysed. The findings revealed that there is a significant gap of internet addiction between different genders. Female students are more excessive internet users compared to male students, thus they are more prone to have internet addiction.

Although majority of researches prove that there is a gender difference in internet addiction, present study will not overlook the exception. According to the study done by Dai (2016) in China, gender was not found to differ in tendency to become internet addicts. The time spent between male and female student was not found be significantly different, but the female students spend more time than male students. Another result of study conducted by Odaci (2011) in Turkey among university student agrees with previous findings. It showed no significant difference between the problematic internet use between sex and computer ownership. This conclusion is supported by Weinstein (2015) and his colleagues, their study in Israel among adults with average age of 29. There is no significant correlation between genders and internet addict found in the study (Weinstein et al., 2015).

Anxiety and Self-esteem

Zare and Riasati (2012) mentioned that anxiety can be a main treat for one’s self-esteem. In their study done in Iran among 108 language learners, a negative relationship has been found between the anxiety of language learner in learning new language and their
self-esteem. In 2016, a study aimed to investigate the relationship between self-esteem, body-esteem and social anxiety was done by Abdollahi, Talib, Mobarakeh, Montaz and Mobarake among 520 high school students in Iran. The results revealed that one’s self-esteem and body-esteem can negatively predict social anxiety. Those who have low self-esteem tend to pay attention to the negative evaluation from others. Also, the study done by Abdollahi and Talib (2015) as well as Abdollahi and Abu Talib (2015) shown similar results.

In the study of Nordstrom, Goguen and Hiester (2014), college students with high level of social anxiety reported to have lower self-esteem and more difficulties in college adaptation as compared to those with low social anxiety. Besides, those with high social anxiety tend to have lower social self-esteem and in turn lead to greater anxiety. However, the study revealed that social self-esteem of these students was able to be increased at the end of their first semester as they started to master and handle the challenges in socialization.

Another study showed the mediating effect of self-esteem between mindfulness and social anxiety (Tan, Lo, Ge, & Chu, 2016). 508 undergraduates from Chinese context had joined the study. The study concluded that anxiety is negatively correlated to self-esteem, besides, self-esteem did have an effect in mediating the relationship between mindfulness and social anxiety in which mindfulness training can enhance self-esteem and high self-esteem can reduce the social anxiety. This result is supported by previous studies such as Hofmann (2007) and Kong, Wang, and Zhao (2014).

According to Van Tuijl, Jong, Sportel, Hullu and Nauta (2014), viewing oneself in a negative manner is an outstanding and remarkable cause in major cognitive vulnerable of anxiety especially in those adolescents who struggle in the identity confusion phase. They done a study to investigate the relationship between implicit and explicit self-esteem and the social anxiety symptoms in Netherlands secondary school students. In their definition, implicit self-esteem is the voluntary self-judgment in particular context that lead and direct
one’s actions. On the other hand, explicit self-esteem is when cognitive resources, time and motivation have an effect on one’s self-evaluation. The study’s results revealed that low explicit self-esteem can predict one’s social anxiety disorder. However, there is no effect of implicit self-esteem on social anxiety in the study.

Similarly, another meta-analysis confirmed the statement that low explicit self-esteem can enhance the sign or symptoms of anxiety as well as depression in adults (Sowislo & Orth, 2013). These studies proven that, specifically, explicit self-esteem, can negatively predict the social anxiety among either adolescents or adults. Also, the study of Sowislo and others (2013) discovered that the association between anxiety and self-esteem is more balance in which they have a small but significant predictive effect in both directions.

According to terror management theory (TMH) (Greenberg, Pyszczynski, & Solomon, 1986), self-esteem is a protective factor for people’s anxiety or fear about acknowledging the destiny of die. However, in the study of Routledge (2012) shown no improving effect of self-esteem on death-anxiety after the activity to enhance self-esteem. This may attribute to the reason that the self-esteem baseline is already relatively high at first. Despite the results, previous studies did prove the effect of high self-esteem on decreasing the anxiety of death (Greenberg et al., 1992 & Routledge et al., 2010).

In general, the study of Longworth, Deakins, Rose and Gracey (2016) indicated that global self-esteem is strongly and negatively related to anxiety. However, in a cross-sectional study of Sikandar, Tahir and Shah (2019) found that there is no significant association between self-esteem and anxiety level among 86 males with age 17 to 35.

Anxiety and Internet Addiction

Internet addiction is an alarming concern in this society and it covered a lot of the subtypes. Based on past studies, there are several findings described that anxiety is associated with internet addiction (Weinstein, et al., 2015; Köksal, 2017; Gupta, Khan, Rajoura, &
Srivastava, 2018; Masih, & Rajkumar, 2019). These might be due to the reason that people who suffering from anxiety tend to serve internet as a coping mechanism and escapism from negative emotions (Gupta et al., 2018). Anxiety normally considered as a critical aspect that in relation with developing and sustaining addictive behaviors (Köksal, 2017).

Internet game addiction (IGA) considered one of internet addiction. Likewise, IGA was referred as uncontrolled use of internet which consequently impeded their daily and social life. Hence, relationship between Internet game addiction and anxiety level was examined by a past study done by Kim, Hughes, Park, Quinn and Kong (2016). IGA was being studied because they believed that students engaged in internet are more into internet gaming. They tend to spent more than 3 hours per day into internet gaming. Comparison was made between group with IGA and group without IGA. Result disclosed that group with IGA has higher anxiety level. In another word, internet user who allocate most of their time on internet gaming tend to lead themselves into high self-reported anxiety level.

Moreover, according to Li, Hou, Yang, Jian and Wang (2019), their recent study aimed to analyze the relationship between anxiety level and their internet addiction. A total of 1545 participants in this longitudinal study and 3 waves of their data was collected over 6 months. As a result, students with high anxiety level could predict high level of internet addiction. Those who are severely addicted to internet could also be named as a problematic internet user. Although the relationship between internet addiction and anxiety was always found as positively related, yet they revealed to have a weaker relationship (Stavropoulos et al., 2017). However, the strength of the association changes over time. Bryant and Zillmann (1984) declared that a mood enhancing hypothesis was used to explain the relationship between these two variables. When people are in negative mood, they are more likely to relieve stress by doing some leisure activities or entertainment.
On the others hands, social anxiety was also being studied recently. Social anxiety is a type of anxiety experience in social setting (Rapee & Heimberg, 1997). People tend to be anxious when they have social interaction with others people. Hence, a study designed to examine the association between internet addiction and social anxiety among university students which was conducted by Weinstein and his colleagues (2015). They claimed that people with social anxiety is not likely to have intention to present in front of others. This research consisted of 2 studies which have 120 participants respectively. Both results also revealed that there is positive relationship between internet addiction and social anxiety, yet it has a moderate relation. Next, a post-hoc t test is conducted and finding declared that respondents with high level of social anxiety tend to have higher level of internet addiction. In addition, internet user with high social anxiety score do not prefer social network. In another word, they use internet not primarily for interaction or social use. Their findings were in line with earlier researchers, which also claimed that a correlation exist among problematic internet use and social anxiety.

Self-esteem and Internet Addiction

Over these few years, self-esteem was always being studied with internet addiction (Ayas & Horzum, 2010; Blachnio, Przepiorka, Benvenuti, Mazzoni, & Seidman, 2019; Naseri, Mohamadi, Sayehmri, & Azizpoor, 2015). There was always a negative association between self-esteem and internet addiction as people with lower level self-esteem prefer using internet as a way to recompense (Blachnio et al., 2019). In addition, research from Yildirim, Sevincer, Kandefer, and Afacan (2018) concluded, based on the Internet Addiction Test, those who fulfill the criteria for risk of internet addiction tend to have a significantly lower self-esteem.
According to Arafa, Mahmoud and Salem (2019), 407 young adults were included in a study which intended to measure the relation of self-esteem on internet addiction. All participants were mostly high educated. Consequently, result of this study showed that 25.3% of the participants were highly addicted to internet and 29.5% of respondents showed low self-esteem. Their targeted population was around 18-45 years old, subsequently they found that younger internet users within this age group were more prone to become dependent on internet. They considered a person who uses internet more than 4 hours per day is known as being addicted to internet. Also, comparison is made between internet user who spent less time on internet and those who overly involved in internet, findings showed that group with highly use of internet turns out to have lower self-esteem. This research also highlighted that the association between self-esteem and internet addiction among participants who age between 18-25 years old remain significant. Result from study by Kırcaburun (2016) also proposed higher rate of daily internet use of adolescents nowadays was affecting significantly by lower self-esteem. They tend to feel inferior, less likely to have positive evaluation towards themselves, and have negative self-worth. They are more likely to escape from the real interaction because anonymity in the virtual life is more preferable for them (Kırcaburun, 2016).

Accessing to internet has become easier and it also brought massive amount of advantages to internet user. However, it potentially causes some negative impacts to individual who constantly using it. In line with this explanation, it has shown an association between self-esteem and excessive use of internet is showed. This study was conducted by Fortes and Fernandes (2016), they analyzed how self-esteem could affect internet addiction. Targeted sample was adolescents and similarly the finding revealed that there is a negative correlation between these two variables, the correlation coefficient was -0.156. Yet, they had a weak relation. Also, the researchers mentioned that people who have negative self-evaluation
prefer to spend their spare time on internet rather than deal with people face-to-face. As people who become overly dependent on internet is possible to affect their life and also has impact on their self-esteem (Ayas et al., 2010). In short, people’s behaviors and attitudes were significantly determined by their self-esteem.

Causes that lead to internet addiction was not a new issue in this era, yet it is a hot topic that constantly being reviewed by researchers. Because it not only brings physiological disorder like eyesight problem but it also harms people in terms of psychological aspects. In 2012, Yao, He, Ko and Pang also has a major concern in this relevant topic: The relation of self-esteem on Internet addiction. A quantitative study was carried out in a college and more than half of the respondents (64.4%) claimed that they use internet every day. Similar to the above two past studies, self-esteem scale was used to measure because this scale has a high reliability. Outcome of this study was consistent with some earlier researches. Result in this study proved that self-esteem has a major influence on students’ internet behaviors. It is positively associated with Internet addiction. Likewise, according to one of the findings, it revealed that persons with higher self-esteem were less vulnerable to internet addiction than people with lower self-esteem (Naseri et al., 2015). In summary, college students with low self-esteem are more vulnerable to become addictive to the internet.

Predictors of Internet Addiction

Kim et al. (2009) conducted a research to examine the role of self-esteem, anxiety, flow and self-rated importance of online activity. 279 college students with average age of 21.4 who studied in USA were collected to participate in this study to respond to Young’s Internet Addiction Test (1998) and Caplan’s Generalized Problematic Internet Use Scale (2002). Based on their evaluation, anxiety is positively associated with internet problematic use. Apart from that, high self-esteem is proved to predict low tendency of internet addiction.
Self-esteem was a powerful negative predictor of internet use and its contribution was neutralized by traits of anxiety or worry. This finding is consistent with study later conducted by Younes (2016) and her colleagues in Pennsylvania. The university students with low self-esteem indicated significant higher potential to internet addiction. According to the results, there is a significant correlation between stress, anxiety and depression with internet addiction. The score of depression, anxiety and stress are significantly higher in the high risk internet addiction group (Younes et al., 2016).

Besides, the previous study had found result that questions the correlation between self-esteem and internet addiction. Kumar and Mondal (2018) had proved that the significant and positive association of obsession-compulsion, interpersonal sensitivity, depression, and anxiety with internet addiction among university students. Yet, there is no significant difference of self-esteem found among moderate and severe internet users in Kolkata, India.

However, some researchers worried that the negative effect of internet use has been exaggerated. A longitudinal study had been conducted by Shaw and Gant (2002) to examine the effect of consistent internet communication on loneliness, depression and self-esteem. Throughout the pre-test, mid-test and post-test, undergraduate students reported decrease in loneliness and depression, yet increase in self-esteem. The researchers suggested that the typical negative impression about internet need to be defensed. Although anxiety is not one of the variables in this study, it showed an opposite side of internet in affecting users beneficially (Shaw et al., 2002).

**Theoretical Framework**

Self-medication hypothesis (SMH) is first proposed by Khantzian (1985) which pay major attention on the heroin and cocaine dependence. Later, the hypothesis highlighted that majority of the behavior addiction which included internet addiction or other gambling behaviors are caused by human mental distress and psychological pain which regardless of
the association with psychiatric disorder. People often feel powerless when overwhelming by life problems and in the moment, the solely method that they can think about is addiction (Dodes, 2002).

According to Khantzian (2003), those who prone to addict fail to equip with good emotional education and have a very few words to express their feelings. Instead of find a suitable way to self-cope with that chaos in their inner psyche, they choose to become addicts which help them to cope with their emotional suffer, depression, anxiety (Khantzian, 2003). They fail to endure, adjust and acknowledge their affective states which enhance the vulnerability to get into the addiction (Tronnier, 2015) and they aim to use this way to secure their emotional stability in term of both physiological and psychological (Khantzian, 2003). They feel empowered by engaging in the addiction, trusting that their emotion as well as their whole life is now in control (Dodes, 2002). In fact, this is an illusion and false sense.

Another theoretical framework is the self-determination theory proposed by Deci and Ryan (1985) which stated that people is led by a motivation to improve, grow and achieved fulfillment. According to the theory, there are three needs in human life which included competence, connection and autonomy. People can only become self-determine when three of the needs are met.

In the context of psychology, self-determination is defined as an individual’s capability to make decision and control their own life, this capability is vital in one’s psychological well-being (Cherry, 2019). Three of the needs can be instrumentally in illustrating the use of internet (Chen & Jang, 2010; Nadkarni & Hofmann, 2012). Many studies also mentioned that excessive internet use is associated with the unmet needs in real-life (Chak & Leung, 2004; Song, LaRose, Eastin, & Lin, 2004; Young, 1998). Internet, which is very convenient to be accessed, become an immediate tool for people to compensate their unmet need in real-life (Wan & Chiou, 2006).
For example, internet enable people to feel satisfied and empowered in a way that they can control their identity that they want themselves to be instead of showing real-self (Wong, Yuen, & Li, 2015). Specifically, internet provide internet users to feel related with others by interaction online, meanwhile, they have the sense of autonomy in which they are interacting with other in a controlled situation (Seidman, 2013).

The presence of the psychological distress such as low self-esteem, stress, anxiety and depression can further enhance the relationship between the achievement of needs and excessive internet use (Wong et al., 2015). Also, the cognitive behavioral model that introduced by Davis (2001) also support this view that psychological distress act as an important catalyst in internet addiction. Many studies showed that psychological distress is going in the same direction with problematic internet use in which, the more severe the psychological distress, the higher the seriousness of excessive internet use and vice versa (Ebeling-Witte, Frank, & Lester, 2007; Yeh, Ko, Wu, & Cheng, 2008; Young & Rogers, 1998).

Therefore, according to the theory above, the link between the psychological variables such as anxiety and self-esteem with internet addiction is proposed in current study.
Conceptual Framework

Figure 1. Conceptual framework of present study.

The dependent variable of the study is internet addiction. The independent variables are anxiety, self-esteem and gender. With higher anxiety level and lower self-esteem, one is predicted to have higher level of internet addiction. The study grounded with the theory of self-determination which suggests that psychological distress such as low self-esteem and anxiety can enhance excessive internet use (Wong et al., 2015). There are past studies which have proven there is an association between anxiety and self-esteem (Nordstrom et al., 2014; Sowislo et al., 2013). Therefore, current study also intended to highlight the association between anxiety and self-esteem.

Gender served as another variable that may have an effect on internet addiction among emerging adulthood. Past studies supported that different gender do have a different tendency towards internet addiction (Ifdil et al., 2018; Shahnaz et al., 2014 & Teong et al., 2016).
Chapter III

Methodology

Introduction

In this chapter, research design explains the approach and type of design used for the study. Research sample and sampling method will reveal general overview of sample of study, sample size distribution. Besides, location of study will summarize the setting and population of study while research procedure will explain the steps of data collection and pilot study in the study. The instrument discusses about the instruments that will be used to measure the variables in the study. Lastly, data analysis will explain the steps of checking necessary assumptions and analyzing the main variables.

Research Design

This present research adopted a cross-sectional and quantitative research design which intend to determine the gender differences on internet addiction, the impact of self-esteem and anxiety on internet addiction, as well as the relationship between the three variables which are internet addiction, self-esteem and anxiety. Cross-sectional study can either be analytical and descriptive which actually referred as an observational study where exposure and the outcome (measurement) of a respondent are learned at only one point of time (Pandis, 2014). All concerned data and information in this study were collected by self-administered test. By using cross-sectional study, it is a way to reduce the cost of this study as it serves as an inexpensive tool (Pandis, 2014). Others than its economical way for researchers to adopt, it is also easy to use and not time-consuming compared with longitudinal study (Setia, 2016).
Sampling Method

Current study used purposive sampling method to recruit participant. It is a non-probability sampling method in which the participants are chosen accordingly to the criteria set in advance (Crossman, 2019). In other words, not everyone has equal chance to participate in the study, instead, only participants who fit the characteristics that the study required will be chosen.

In current study, purposive sampling method was used because of the large number of population that is widespread in Malaysia. This sampling method is cost saving, time saving and more convenient. By targeting on samples which fulfill particular characteristics, meaningful result can be contributed to the research (Etikan, Musa, & Alkassim, 2016). Therefore, anyone who meet the criterion: Malaysia citizen aged between 18-25, are chosen as participants in the study.

Participants are approached by using paper and pencil questionnaire. Online survey was sent to the participants within this age range by distributing the survey link in social media such as Facebook and WhatsApp. By generating online survey, participants across different part of Malaysia are recruited and this prevent selection bias.

Sample Size

The target population in current study are emerging adults in Malaysia. Based on the Malaysia demographics profile 2018 (2018), the population for this age group are approximately 5,210,792. By using the formula of Krejcie and Morgan (1970), a minimum of 386 participants are needed in this study.
Participants

Malaysians who aged between 18 to 25 were recruited in current study. In other words, those who did not meet the criteria, including not a Malaysian or aged below 18 and above 25 were excluded from the study.

In the final sample, there were total 391 Malaysian participants who aged between 18 to 25 (M = 21.05 years; SD = 1.63 years). The number of male participants (N = 147; 37.6%) are less as compared to female participants (N = 243; 62.1%). Besides, there were 11 Malays (2.8%), 358 Chinese (91.3%), 17 Indians (4.3%), and 5 with other races (1.3%).

Location

The study aimed at emerging adults in Malaysia; therefore, it was conducted across the country. The online survey was distributed on social media such as Facebook or WhatsApp by a survey link. In addition, paper and pencil questionnaire were also distributed around the campus. Malaysia citizen who aged between 18 to 25 are targeted.

Procedures

Before conducting the actual study of the current research, a pilot study was conducted to collect preliminary data and to measure the reliability of the instruments (Teijlingen & Hundley, 2002). Paper and pencil survey questionnaires were distributed to the targeted samples which were emerging adults. The informed consent form was attached with the questionnaire to ensure the voluntary participation of the participants without exposing to negative consequence from their participation. The consent required the respondents to agree to provide their data to balance the autonomy and maintain the dignity of the individual and the integrity of the research (Nnebue, 2010).
A group of 40 respondents are recruited in the pilot study. The analysis showed that the reliability of the scales ranged from 0.77 to 0.92. The actual study began after the pilot study.

In the main study, the procedures were similar to the pilot study but the questionnaires were distributed through both online survey and paper and pencil in order to reach more samples. The link of final version of the questionnaire which included psychological tests, informed consent and participants’ demographic information is generated from the Qualtrics. The data collected was analyzed by using SPSS version 23.

**Instruments**

**Internet Addiction Test.** Internet Addiction Test (IAT) was adopted in this study in order to assess the severity of internet addiction. This test was developed by Dr. Kimberly Young in 1998 which served to measures characteristics and behaviors in relation with problematic use of the Internet which include compulsivity, escapism, and dependency (Young, 2017). According to the manual of IAT (Young, 2017), internet not only referred to as surfing internet or any online activities, it is a broad concept which also consisted social media, internet gaming and access to mobile phones or any other form of technology.

In this test, it included 20-items, respondents required to answer all questions with a Likert scale of 1 to 5 with 1 for “rarely” and 5 for “always.”. Also, these 20 items were grouped into 3 factors which were withdrawal and social problem (items 3, 4, 5, 9, 13, 15, 18, 19, 20), time management and performance (items 1, 2, 6, 8, 16, 17) as well as reality substitute (items 10, 12, 14). Item 7 and 11 are categorized into “others factor”. For example, question that related to withdrawal and social problem is “How often do you prefer the excitement of the Internet to intimacy/relationships with your partner/friends?” item associated with time management and performance is “How often do you find that you stay online longer than you intended?” and lastly question related to reality substitute is “How
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?” (Rosenthal, Cha, & Clark, 2018). The lowest score was 20 and the highest score in this test would be 100. Different score range indicated different type of online user (20–49= average online user, 50–79 = experiencing occasional or frequent problems with Internet use, and 80–100 = internet use is causing significant problems). Total scores were sum up and the higher the scores, the more internet dependence is. In addition, the finding of the reliability of IAT revealed high internal consistency, which has a Cronbach’s alpha of 0.90 (Keser, Eşgi, Kocadağ, & Bulu, 2013). This test is commonly and widely use and had been translated into several languages. English version of IAT was used in this research. Moreover, it is a self-report test which entailed 5-10 minutes to complete.

Rosenberg Self-Esteem Scale. Rosenberg Self-Esteem Scale (RSES) is a broadly use instrument in assessing one’s self esteem. Rosenberg (1965) deemed that self-esteem exists as one of the component of self-concept. In another word, RSES used to measure an individual’s self-perception or feelings of self-worth on a 4-point Likert-type scale. It is ranged from 1 (totally disagree) to 4 (totally agree). This scale was constructed by Rosenberg in 1965. Similarly, this scale had been translated to different languages.

It consisted of 10 questions and has a continuum of self-worth. There are 2 factors in this scale. One factor measured positive self-esteem (items with positively worded) and the other assess negative self-esteem (items with negatively worded). 5 items were positively worded (items 1, 3, 4, 7, 10) and another 5-items were reverse scoring (items 2, 5, 6, 8, 9). Items which are negatively worded in the scale included “At times I think I am no good at all.”, “I feel I do not have much to be proud of.”, “I certainly feel useless at times.”, “I wish I could have more respect for myself.” and “All in all, I am inclined to feel that I am a failure.”. Item ratings are sum up, with higher scores indicating greater positive evaluation on
them. Also, internal consistency of RSES is high with Cronbach’s alpha range from .85 to .88 (Martín-Albo, Núñez, Navarro, & Grijalvo, 2007).

**Beck Anxiety Inventory (BAI).** Beck Anxiety Inventory was first developed by Aaron Temkin Beck and his colleagues in 1988. This inventory intended to determine the severity of anxiety in adolescents and adults. This inventory has 21 items and participants were required to respond on a four-point Likert scale ranging from 0 (not at all) to 3 (severely, I could barely stand it). Furthermore, this test potentially distinguish depression from anxiety because all the items in the BAI characterize the affective, physiological, and cognitive symptoms of anxiety rather than depression. Each of them is a short and simple description of anxiety symptom in one of its four expressed aspects such as (1) subjective (“unable to relax”) (items 4, 5, 9, 10, 14, and 17), (2) neurophysiologic (“numbness or tingling”) (items 1, 3, 6, 8, 12, 13, and 19), (3) autonomic (“feeling hot”) (items 2, 18, 20, and 21) and (4) panic-related (“fear of losing control”) (items 7, 11, 15, and 16). Due to its length and simplicity of the scale, it needs 5-10 minutes for participants to complete this inventory.

An anxiety score is created by taking the total scores (range from 0-63) of all items, with higher scores specifying greater level of anxiety. If a total score falls within 0 - 7 is considered as a "minimal level"; 8 - 15 interpreted as "Mild level"; 16 -25 as "Moderate", whereas 26 - 63 as "Severe level of anxiety". Internal consistency (Cronbach's alpha) for the items in BAI was considered good which range from .92 to .94 (Beck et al., 1988). In addition, several reasons for adopting BAI to measure one’s anxiety level are it is easy to use, not overlapping with depression symptom and also precise to understand.

**Data Analysis**

In the present study, SPSS version 23 was used to analyze the outcome of the study. Before the analysis between variables, the assumption of normality was examined. The assumptions of normality were tested in various ways. Skewness and kurtosis referred to the
degree of asymmetry and the peakness or flatness of the given distribution respectively (Čisar & Čisar, 2010). Histogram was used to show the visual estimation of data distribution (Das & Imon, 2016). Other than that, Quantile-Quantile plot (Q-Q plot), Kolmogorov-Smirnov and Shapiro-Wilk’s W test were used to test the assumption of normality (Pallant, 2016).

Besides, the first assumption of multiple linear regressions was examined to determine the dependent variable can be classified as continuous data. Each variable need to be independent to each other and the multicollinearity can be examined by using Variance Inflation Factors (VIF) and tolerance. VIF value more than 10 and small values for tolerance reveal the presence of multicollinearity which is undesirable (Keith, 2006).

Apart from that, the error is independent implying that the subject is responding independently where the Durbin Watson is close to two (Reddy & Sama, 2015). Mahalanobis distance (Penny & Jolliffe, 2001) and Cook’s distance (Cook & Weisberg, 1982) also will be utilized to disclose outliers in multivariate data. The cases with value larger than 2 times of Leverage’s value are recommended to be investigated. Lastly, the scatterplot will be analysed to examine linearity (Reddy et al., 2015) normality of residual and homoscedasticity (Muzaffar, 2016).

Independent sample t-test was used to study whether there is a gender difference on internet addiction among Malaysia emerging adults. The relationship between anxiety and self-esteem will be analyzed by using Pearson Product-Moment Correlation. Lastly, multiple linear regression was used to analyze the association between anxiety, self-esteem and internet addiction. Anxiety and self-esteem served as predictor while internet addiction served as the outcome variable.
Chapter IV

Results

Introduction

In this chapter, the normality assumptions had been tested firstly to ensure that the results draw accurate conclusions about reality. Normality test such as skewness, kurtosis, Q-Q plots, histograms and Kolmogorov-Smirnov test were conducted. Multiple linear regression assumptions were checked to ensure there is no violation. Besides, demographics data were tabulated to have better picture for the details of target variables. Moreover, independent t-test, correlation analysis and multiple linear regression analysis were conducted.
Normality Assumptions

Table 4.1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>.872</td>
<td>.544</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>.098</td>
<td>.186</td>
<td>.000</td>
<td>.006</td>
</tr>
<tr>
<td>Internet Addiction</td>
<td>.198</td>
<td>-.281</td>
<td>.025</td>
<td>.097</td>
</tr>
</tbody>
</table>

Note. Significant at $p < .05$.

Before conducting the actual study, the normality assumptions had been checked. Table 4.1 showed that the Skewness and Kurtosis values of each distribution are within the acceptable range which is -2 to +2 (George & Mallery, 2010). This indicates that the normality assumptions are met. Besides, histogram was used to show visual estimation of the distribution. The histogram obtained showed a bell-shaped curve indicating that the value of each score is normally distributed (refer to Appendix D, pg. 79). The Q-Q plots of each distribution also showed that the normality assumptions are met as the data points are nearly a straight line for all scale (refer to Appendix E, pg. 80).

However, the Kolmogorov-Smirnov and Shapiro-Wilk test showed an undesirable result as the $p$ value is less than .05. Except for the Shapiro-Wilk value of internet addiction, other values indicate that the sample group is significantly different from the population which violated the assumption. This result was accepted as it is difficult for large sample size study to obtain non-significant result in Kolmogorov-Smirnov and Shapiro-Wilk Test (Ghasemi & Zahediasl, 2012).
Multiple Linear Regression Assumptions

**Type of variable.** Firstly, the variable type of outcome variable must be in continuous scale. This assumption was met as Internet addiction was studied in interval scale.

**Independence.** The assumption of independence (Berry, 1993) between outcome variable was met as each respondent would not affect other respondents’ behaviour.

Table 4.2

<table>
<thead>
<tr>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>A_T</td>
</tr>
<tr>
<td>SE_T</td>
</tr>
</tbody>
</table>

*Note. Low multicollinearity if tolerance>.10 and VIF<10.*

**Multicollinearity.** Multicollinearity assumption expects low inter-correlations between predictors by analysing the Variance Inflation Factor (VIF) and tolerance value. Table 4.2 showed that the VIF values are all less than 10 while tolerance values are all larger than .01 thus revealing that this assumption was met (Keith, 2006; Shieh, 2010).

Table 4.3

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

**Independent errors.** Durbin Watson was used to test the assumption of independence of errors. Table 4.3 showed that the value of Durbin Watson was 1.736 which indicates congruent to the assumption.
Multivariate outliers. Cook’s distance, Mahalanobis Distance, and Centred Leverage Distance were used to check multivariate outliers by using standard deviation of 2. The results of Cook’s distance and Mahalanobis Distance showed that no single data exceeds their benchmark of 1 and 15 respectively (refer to Appendix F, pg. 81). The Centered Leverage Value is 0.023, which was calculated by the equation 3[(2 + 1)/391] where 2 is number of predictors and 391 is total sample size in the present study (Dhakal, 2017). Four cases exceeded the benchmark of Centered Leverage Distance, but these cases are not removed as they showed no violation in the other two distance.

Linearity, residual normality and homoscedasticity. In addition, the assumptions of linearity of residual, residual normality and lastly, homoscedasticity are required for regression analysis. The scatterplot showed that the assumptions for linearity, residual normality and homoscedasticity were met (Refers to Appendix G, pg. 82).
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Descriptive Statistic

Table 4.4

Descriptive Statistics for Demographic Variables

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>n</th>
<th>%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td>21.05</td>
<td>1.63</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>147</td>
<td>37.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>244</td>
<td>62.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malay</td>
<td>11</td>
<td>2.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>358</td>
<td>91.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indian</td>
<td>17</td>
<td>4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>1.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The present study had collected a total number of 391 responses. All the participants are Malaysian emerging adults who aged between 18 – 25 (M = 21.05 years; SD = 1.63 years). Among these participants 37.6% of them are male (n=147) while 62.1% of them are female (n=243). There are 2.8% of Malay (n=11), 91.3% of Chinese (n=358), 4.3% of Indian (n=17), and 1.3% with other races (n=5) (Refers to Table 4.4).
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Table 4.5

Descriptive Statistics for Main Variables

<table>
<thead>
<tr>
<th>Main Variables</th>
<th>( n )</th>
<th>%</th>
<th>( M )</th>
<th>( SD )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td></td>
<td></td>
<td>17.08</td>
<td>12.11</td>
</tr>
<tr>
<td>Low (0-21)</td>
<td>275</td>
<td>70.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium (22-35)</td>
<td>81</td>
<td>20.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High (36-63)</td>
<td>35</td>
<td>9.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet Addiction</td>
<td>42.57</td>
<td>14.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average (20-49)</td>
<td>274</td>
<td>70.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium (50-79)</td>
<td>114</td>
<td>29.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe (80-100)</td>
<td>3</td>
<td>0.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Beck (1998), the respondents of Beck Anxiety Inventory (BAI) with score lower than 22 are considering as low anxiety individual. Respondents with score between 22 to 35 are people with moderate anxiety. Respondents who scored 36 and above are assumed to have potentially concerning level of anxiety. 70.3% of participants (\( n=275 \)) are having low-anxiety, 20.7% (\( n=81 \)) having moderate anxiety and 9.0% of them (\( n=35 \)) having high level of anxiety. Besides that, Young (1998) suggested that the respondents of Internet Addiction Test (IAT) with score of 20 to 49 are average online user. Respondents with score 50 to 79 are experiencing occasional or frequent problems because of the Internet. Lastly, those scored 80 to 100 in IAT are considered as severe Internet addiction. Among the participants of present study, 70.08% of them are average online user (\( n=274 \)), 29.16% of moderate online user (\( n=114 \)) while only 0.77% of them (\( n=3 \)) are severe internet users (Refers to Table 4.5).
Independent Sample t-test

Research Question 1: Is there a significant gender difference in internet addiction among emerging adults?

Table 4.6

<table>
<thead>
<tr>
<th></th>
<th>Internet Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Male</td>
<td>147</td>
</tr>
<tr>
<td>Female</td>
<td>244</td>
</tr>
</tbody>
</table>

Note. Significant at p<.05.

H1: There is a significant gender difference in internet addiction among emerging adults.

An independent-sample t-test was conducted to study whether gender difference exist in internet addiction among emerging adults in Malaysia. As despite from Table 4.6, there was no a significant difference, \( t(389) = .534, p = .594 \). Mean of IAT score for male \((M=43.07, SD=14.33)\) was slightly higher than mean for female \((M=42.26, SD=14.54)\) (Refers to Appendix H, pg. 83). The results fail to support the H1 in present study as there is no significant gender difference in internet addiction.
Pearson Product-Moment Correlation

Research Question 2: Is there any significant relationship between anxiety and self-esteem?

Table 4.7

Correlations between Anxiety and Self-esteem

<table>
<thead>
<tr>
<th></th>
<th>Self-Esteem</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>-.37**</td>
<td>.00</td>
<td>389</td>
</tr>
</tbody>
</table>

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

H2: There is a significant relationship between anxiety and self-esteem.

A Pearson product-moment correlation was run to determine the relationship between anxiety and self-esteem among Malaysian in emerging adulthood (Refers to Appendix I, pg. 84). The results showed that there was a medium, negative correlation between anxiety and self-esteem, which was statistically significant ($r = -.37, n = 391, p < .005$) (refer to Table 4.7). The H2 was supported by this result.
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Multiple Linear Regression

Research Question 3: Will anxiety and self-esteem predict internet addiction?

Table 4.8

Correlations between Anxiety and Self-esteem with Internet Addiction

<table>
<thead>
<tr>
<th></th>
<th>Internet Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.34**</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-.28**</td>
</tr>
</tbody>
</table>

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

Table 4.9

Multiple Regression of Anxiety and Self-Esteem on Internet Addiction

<table>
<thead>
<tr>
<th></th>
<th>Internet Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td>Anxiety</td>
<td>5.53</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>-3.45</td>
</tr>
</tbody>
</table>

Note. *p <.05, **p <.01, ***p <.001

H3: Anxiety and self-esteem will predict internet addiction.

Multiple regression analysis was used to test if the anxiety and self-esteem significantly predicted internet addiction among emerging adults (Refer to Appendix 1, pg. 85). The model was statistically significant, F (2, 388) = 32.801, p< .001 and accounted for 14% of the variance. It was found that anxiety and self-esteem significantly predicted internet addiction while anxiety (β=.280, p< .001) have stronger prediction power than self-esteem (β=.174, p= .001) (Refer to Table 4.9). Thus, H3 was supported in the present study.
Chapter V

Discussion and Conclusion

Introduction

The objective of this study was to assess whether self-esteem and anxiety could affect internet addiction among emerging adulthood. The findings from present study proved that there is no gender differences in internet addiction; anxiety and self-esteem were significantly related as well as anxiety and self-esteem both have a significant outcome on internet addiction.

Gender Difference in Internet Addiction

The independent sample t-test shown that there is no significant gender difference in the internet addiction among emerging adults in Malaysia, $t(389) = .53, p = .59$. However, mean of IAT score for male ($M=43.07, SD=14.33$) was slightly higher than female ($M=42.26, SD=14.54$). The result did not support the hypothesis suggested in current study which stated that there is a significant gender difference in the internet addiction.

The result was consistent with one of the past studies by Odaci (2011) which indicated that males and females did not differ in the inclination to internet addiction, with the explanation that this may be due to the increase of internet accessibility and the technology advancement which met the daily-needs such as learning knowledge, enjoying game, interaction with others and online shopping. In the past, males’ addiction to online games were well-documented (Rudolph, Klemz, & Asquith, 2013; Xu, Turel, & Yuan, 2012). However, the function of internet is not only constrained to online games nowadays, social media such as Facebook and Instagram also became well-accepted. Therefore, females who tend to value the sense of belonging started to involve more in different social activities through social network (Babalola, 2019) thus making the usage of internet among males and females became comparable.
Weinstein et al. (2015) also agreed that there is no significant gender difference in internet addiction among emerging adults, however, it is disagreed by some of the past studies (Gnisci, Perugini, Pedone, & Conza, 2011; Shahnaz et al., 2014) which claimed that males have higher level of internet addiction. The possible reason suggested by Weinstein et al. (2015) about the inconsistent of studies may be due to the cultural differences in term of the anticipation towards different gender. In some countries, males are expected to be emphasized on “fearless, strong and assertive”, whereas females to be “sensitive, soft and kind”. Hence, due to the desire to succeed in online games, the ambitious males may be more susceptible to internet addiction (Cho, Sung, Shin, Lim, & Shin, 2013). In other words, this culture may be not applicable in Malaysia, therefore, there is no significant gender difference found in internet addiction among the emerging adults.

**Anxiety and Self-esteem**

The Pearson Product-Moment Correlation showed that there was a medium, negative correlation between anxiety and self-esteem, which was statistically significant ($r = -0.37, n = 391, p = .005$). The result had supported the second hypothesis in which there is a significant relationship between anxiety and self-esteem.

The result tallied with the past study by Zare et al. (2012) that the possible reason for the negative relationship between anxiety and self-esteem may be due to the ability of people with high self-esteem to cope with challenges. The more ability the people have to address the difficulties, there were be less anxiety. However, if people fail to enhance their self-worth by coping life issues effectively, it can be psychologically and emotionally threatening as they may think that they cannot fit into the social settings and being rejected by others (Lawrence & Williams, 2013). Therefore, self-esteem, which also incorporate both the ability
to feel the value of happiness and to cope with life difficulties effectively became a vital determinant for mental health and development (Melnyk et al., 2016).

Abdollahi et al. (2016) also agreed that there is a negative relationship between self-esteem and anxiety, with the insight that people with low self-esteem tend to concern with others negative evaluation. They will try to avoid any social situation due to fear of rejection. However, when it is necessary to engage in a social setting, they may become anxious due to the overwhelming of any possible negative evaluations by others thus decreasing their self-esteem. In short, the negative cycle shown the inevitable negative relationship between anxiety and self-esteem.

According to the cognitive model of anxiety (Clark & Beck, 2010), people’s cognition on how they evaluate themselves build an essential part for anxiety. If there is a negative thought in onself, this will raise the anxiety in the social context, and this risen anxiety in turn, will further worsen the negative thought (Blöte, Miers, Van, & Westenberg, 2018). Again, this model may explain the negative relationship between the anxiety and self-esteem.

Anxiety, Self-esteem and Internet Addiction

The objective of this study was to assess whether self-esteem and anxiety could affect internet addiction among emerging adulthood. The findings from this present study proved that there is no gender differences in internet addiction, $t (389) = .53, p = .59$; anxiety and self-esteem were significantly related ($r = -.37, n = 391, p < .005$) as well as anxiety and self-esteem both have a significant outcome on internet addiction anxiety ($\beta = .28, p < .001; \beta = -.17, p = .001$).

The Multiple Linear Regression shown that both of the variables, anxiety and self-esteem significantly predicted internet addiction among Malaysia’s emerging adulthood. In addition, anxiety posed stronger prediction power than self-esteem. The result supports the
hypothesis claimed in present study which indicated that anxiety and self-esteem predict internet addiction.

Current research has demonstrated that anxiety could predict internet addiction which show consistency with a past study by Akin and Iskender (2011). Their findings indicated that people with higher anxiety level is more likely to develop internet addiction. This current result was also supported by few past studies, indicating positive association between anxiety and internet addiction (Weinstein et al., 2015; Köksal, 2017; Gupta et al., 2018; Masih et al., 2019). Emerging adults preferred to use internet as a coping mechanism in order to avoid undesirable life events or social communication. Internet offers individual a place for social interaction that potentially stay away from synchronous communication, since they might consider face-to-face communication could trigger their anxiety level. Besides, people nowadays tend to use internet as a platform to maintain relationship and perform daily routine such as online shopping or for entertainment purpose. In short run, internet could temporarily reduce someone’s anxiety level (Campbell et al., 2006).

Mozafari, Sepahvandi and Ghazanfari (2018) agreed the predictive effect of social anxiety toward internet addiction. People with social anxiety lack effective communication skill may result in inability to develop close relationship (Mozafari et al., 2018). Human beings are in need to have an intimate relationship with another human being. Hence, people with social anxiety is able to conceal their fear in this virtual world. Using internet as a way to alleviate anxiety was rewarding at the initial try but individual most probably would go back to internet once they perceived threatening events in real life situation. Individuals with higher anxiety level are more likely to use internet for recreation purpose and less likely for social communication (Weinstein et al., 2015).
The result of this study indicated that self-esteem was a significant predictor of internet addiction which was in line with the past research of Błachnio et al. (2019). They highlighted that individual with lower self-esteem has higher tendency to develop the problem of excessive internet usage because they regard internet as a way to improve their self-evaluation. People with lower self-worth found that face-to-face socialization is challenging and online chatting could let them socialize comfortably. Yao et al. (2014) research explained that people who lack of self-esteem could have increased security by being able to manage their impression and self-presentation online thus improving the sense of belonging. Therefore, negative self-evaluation inclined to lead someone addicted to internet as they perceived internet could bring a lot of advantages to their self-worth.

Aydon and Sari (2011) also opined that social self-esteem is a negative predictor of internet addiction. This could be due to the reason that individual tends to value their peer relationship and it could impact their self-esteem. When having negative self-evaluation in peer relationships, an individual may develop dependent behaviors such as internet addiction for the purpose of keeping them away from these stressful relationships (Craig, 1995). From an internet user’s viewpoint, internet could serve as a compensation for some limitations such as low self-esteem. Individual with lower self-esteem perceived internet as a way to increase their satisfaction by achieving some online accomplishment for instances online gaming (Arafa et al., 2019) and develop a better social identity on this virtual world. The newly created social identity could counteract their negative perception of themselves.

Conclusion

In conclusion, the current findings support the hypothesis and achieve the aim of this study which intended to determine the predictive effect of anxiety and self-esteem ($\beta=.28$, $p<.001$; $\beta=-.17$, $p=.001$) on internet addiction among emerging adulthood. This result is
paralleled to these previous findings (Weinstein et al., 2015; Köksal, 2017; Gupta et al., 2018; Masih et al., 2019; Blachnio et al., 2019; Yildirim et al., 2018; Arafa et al., 2019; Kircaburun, 2016; Fortes et al., 2016) which respectively supported that self-esteem and anxiety could predict the prevalence and the level of severity of internet addiction. This finding suggested that anxiety as an unpleasant emotional state and self-esteem as an evaluation of self-worth both serve as a contributing factor to internet addiction.

Theoretical Implication

Current study could contribute to the larger community in several patterns. It alerts the society to pay extra concern and focus on internet addiction issue among the emerging adults. Furthermore, this study also offers some informative resources for further understanding the level of anxiety and self-esteem when addressing this addictive behavior.

Result of this study had contributed to the theories used in this study which are self-medication hypothesis (SMH), self-determination theory, and the cognitive behavioral model. When individual faces emotional instability or emotional distress, they are prone to find a way to relieve their unpleasant mood and the way is more likely to be addictive behavior. Hence, finding of this present study advocated that people with anxiety is more likely to immerse into internet was actually well matched with self-medication hypothesis. As this study indicated that people with lower self-esteem is more addicted to internet because internet provides them a space to create a new preferable identity and manage their images which they fail to acquire it in their real life setting. Therefore, this result was compatible with self-determination theory which emphasized that people wish to have sense of autonomy and control in their life as it is crucial to their well-being.

These theories offer an in-depth understanding that emerging adulthood with either self-esteem issue or anxiety issue is at risk in developing internet addiction. Consequently,
these theories could be applied in this topic in future and also in Malaysia context as those findings in this study was congruent with the stated theories.

**Practical Implication**

In a nutshell, results obtained from this study are beneficial to people from all walks of life such as the targeted sample, society, educationalist, parents and also the legal authorities. It helps to raise awareness and comprehend the cons that could bring by overly-addicted to internet, thus building up the knowledge of the symptom of having internet addiction. Therefore, behaviors of internet addiction should take in consideration of anxiety plus self-esteem and efforts should evolved and taken to improve emerging adults’ psychological and physiological well-being.

In this case, mental health professions could have a better apprehension about the dynamics of the correlation between these two variables (anxiety and self-esteem) studied with regard to internet addiction. They could gain insights in developing useful intervention or prevention as well as modifying current treatment techniques in order to tailor with present challenges and the uniqueness of individual. For examples, they can target the most vital factor that potentially lead the targeted population into addictive behaviors, also identify some useful solution in order to prevent internet addiction.

Moreover, school counsellor or social workers could organize some workshops in helping students to learn more about functional coping strategies instead of merely avoiding issue they faced. Effective problem solving skills should also be addressed. Individuals are encouraged to be aware of the inconsistency found between their real-self and virtual self. Once they noticed the warning sign of addictive behaviors, they are motivated to seek for professional help.
In addition, closest caregivers or parents should always be aware of their children’s behaviors such as the length of time their child spent in using internet. Once parents detected that their children internet usage of time is out of proportion, parents should discuss and find some solutions for their addiction. Hence, it could somewhat aid in preventing their children from further immersed in using internet without control. Public or university could take action in setting up some awareness campaign, highlighting the importance of the risk of addictive behaviors and internet addiction in terms of physical and psychological well-being.

Limitation of Current Study

There are several limitations in the current study. First, the use of the cross-sectional study which only collect the data from participants once (Mann, 2003) and unable to trace the long-term development of their internet addiction. The study is unable to show the pattern of changes on internet addiction over time. This make the result less effective to draw the causal-effect between the gender, anxiety, self-esteem and internet addiction.

The second limitation of current study is language barrier. Since most of the participants in current study are Chinese, English may not be their mother-tongue language. The participants may have difficulties in understanding or misunderstand some of the items in Beck Anxiety Inventory (BAI) such as “wobbliness in legs” and “feeling of choking”. In fact, some of the participants did approach the researchers or checked online dictionary in order to seek for the meaning of the words.

Next, the self-report questionnaire may have a social desirability bias. Social desirability bias means the inclination of participants to provide responses that fit the social desirable instead of selecting responses that reflect their real situation (Grimm, 2010). This kind of data may be provided by some participants who have high conformity to social norm...
The results generated may be less accuracy if the participants did not participate in the survey honesty.

**Recommendation for Future Study**

To address the limitation of cross-sectional study, future study is recommended to use longitudinal study in order to determine the cause-and-effect connection between the variables (Caruana, Roman, Hernández-Sánchez, & Solli, 2015). By identifying the causal-effect more competency, better solution can be generated in order to solve the issue. Besides, longitudinal study can provide the developmental trend of internet addiction over time (Caruana et al., 2015). The result then could contribute to the research on human development.

Since the language proficiency may have an effect on the results, it is crucial for the future study to translate the survey into the main language of the participants or provide a bilingual survey. As Harzing, Reiche and Pudelko (2013) mentioned, making a translation form of survey into the main language of participants is extremely crucial. This can prevent the participants in guessing the meaning of words and therefore provided inaccurate answer.

Last but not least, in order to prevent the social desirable bias, future study could invite the close friends or parents who known the specific attributes or behaviors of the participants to provide data needed about the target participants. By doing so, more objective and accurate data can be generated. Besides, validity scale such as Marlowe-Crowne Social Desirability Scale (Crowne et al., 1960) can be used to cope this bias. The elements of detecting fake in the scale able to help the researchers to rule out the data that may be faking good and thus filter the invalid data (Lambert, Arbuckle, & Holden, 2016).
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http://dx.doi.org/10.1037/0003-066X.55.5.469

doi:10.1037/11381-001


ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION


ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

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ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

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ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION


ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

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Appendices

Appendix A

Beck Anxiety Inventory (BAI)

Instructions: Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Mildly, but it didn’t bother me much</th>
<th>Moderately – it wasn’t pleasant at times</th>
<th>Severely – it bothered me a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbness or tingling</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling hot</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wobbliness in legs</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Unable to relax</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fear of worst happening</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Dizzy or lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Heart pounding / racing</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Terrified or afraid</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nervous</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Feeling of choking</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hands trembling</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Shaky / unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fear of losing control</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Difficulty in breathing</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fear of dying</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Scared</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Indigestion</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Faint / lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Face flushed</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hot / cold sweats</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Appendix B

Rosenberg Self-Esteem Scale

Instructions: Please read the following statements and for each, circle the number that best represents you. The rating scale is as follows:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Moderately disagree</th>
<th>Moderately agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1. On the whole I am satisfied with myself. 1 2 3 4
2. At times I think I am no good at all. 1 2 3 4
3. I think that I have a number of good qualities. 1 2 3 4
4. I can do things as well as most other people. 1 2 3 4
5. I feel I do not have much to be proud of. 1 2 3 4
6. I certainly feel useless at times. 1 2 3 4
7. I feel that I am a person of worth, at least on an equal plane with others. 1 2 3 4
8. I wish I could have more respect for myself. 1 2 3 4
9. All in all, I am inclined to feel that I am a failure. 1 2 3 4
10. I take a positive attitude toward myself. 1 2 3 4
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Appendix C

Internet Addiction Test

To begin, answer the following questions by using this scale:

<table>
<thead>
<tr>
<th>Question</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> How often do you find that you stay on-line longer than you intended?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>2</strong> How often do you neglect household chores to spend more time on-line?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>3</strong> How often do you prefer the excitement of the Internet to intimacy with your partner?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>4</strong> How often do you form new relationships with fellow on-line users?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>5</strong> How often do others in your life complain to you about the amount of time you spend on-line?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>6</strong> How often do your grades or school work suffer because of the amount of time you spend on-line?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>7</strong> How often do you check your email before something else that you need to do?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>8</strong> How often does your job performance or productivity suffer because of the Internet?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>9</strong> How often do you become defensive or secretive when anyone asks you what you do on-line?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>10</strong> How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td><strong>11</strong> How often do you find yourself anticipating when you will go on-line again?</td>
<td>1 2 3 4 5 0</td>
</tr>
<tr>
<td></td>
<td>Question</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>How often do you fear that life without the Internet would be boring, empty, and joyless?</td>
</tr>
<tr>
<td>13</td>
<td>How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?</td>
</tr>
<tr>
<td>14</td>
<td>How often do you lose sleep due to late-night log-ins?</td>
</tr>
<tr>
<td>15</td>
<td>How often do you feel preoccupied with the Internet when off-line, or fantasize about being on-line?</td>
</tr>
<tr>
<td>16</td>
<td>How often do you find yourself saying “just a few more minutes” when on-line?</td>
</tr>
<tr>
<td>17</td>
<td>How often do you try to cut down the amount of time you spend on-line and fail?</td>
</tr>
<tr>
<td>18</td>
<td>How often do you try to hide how long you’ve been on-line?</td>
</tr>
<tr>
<td>19</td>
<td>How often do you choose to spend more time on-line over going out with others?</td>
</tr>
<tr>
<td>20</td>
<td>How often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back on-line?</td>
</tr>
</tbody>
</table>
Appendix D

Histogram of Anxiety, Self-esteem and Internet Addiction
Appendix E

Q-Q plots of Anxiety, Self-esteem and Internet Addiction

![Normal Q-Q Plot of A_T](image1)

![Normal Q-Q Plot of SE_T](image2)

![Normal Q-Q Plot of IA_T](image3)
## Appendix F

Mahalanobis Distance, Cook’s Distance and Centered Leverage Distance

<table>
<thead>
<tr>
<th>Residuals Statistics*</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
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<tbody>
<tr>
<td>Predicted Value</td>
<td>29.89</td>
<td>61.49</td>
<td>42.57</td>
<td>5.493</td>
<td>391</td>
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<tr>
<td>Std. Predicted Value</td>
<td>-2.307</td>
<td>3.445</td>
<td>.000</td>
<td>1.000</td>
<td>391</td>
</tr>
<tr>
<td>Standard Error of</td>
<td>.678</td>
<td>2.723</td>
<td>1.119</td>
<td>.352</td>
<td>391</td>
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<tr>
<td>Predicted Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted Predicted</td>
<td>30.21</td>
<td>60.44</td>
<td>42.57</td>
<td>5.485</td>
<td>391</td>
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<tr>
<td>Residual</td>
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<td>.000</td>
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<td>.997</td>
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<td>3.164</td>
<td>.000</td>
<td>1.001</td>
<td>391</td>
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<tr>
<td>Deleted Residual</td>
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<td>13.469</td>
<td>391</td>
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<tr>
<td>Std. Deleted Residual</td>
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<td>3.201</td>
<td>.000</td>
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<tr>
<td>Mahal. Distance</td>
<td>.001</td>
<td>15.122</td>
<td>1.995</td>
<td>2.119</td>
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<tr>
<td>Cook’s Distance</td>
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<td>.052</td>
<td>.003</td>
<td>.005</td>
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<tr>
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<td>.039</td>
<td>.005</td>
<td>.005</td>
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a. Dependent Variable: IA_T
Appendix G

Scatterplots of Internet Addiction

Scatterplot
Dependent Variable: IA_T
### Appendix H

Statistic of Internet Addiction for Both Genders

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<tr>
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<th>Female</th>
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<tr>
<td>N Valid</td>
<td>147</td>
<td>244</td>
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<tr>
<td>Missing</td>
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<tr>
<td>Mean</td>
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<td>Std. Error of Mean</td>
<td>1.182</td>
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<tr>
<td>Median</td>
<td>44.00</td>
<td>42.00</td>
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<tr>
<td>Mode</td>
<td>49</td>
<td>47</td>
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<tr>
<td>Variance</td>
<td>205.352</td>
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<tr>
<td>Percentiles</td>
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<td></td>
<td>32.00</td>
<td>32.00</td>
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<td></td>
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<td></td>
<td>52.00</td>
<td>51.75</td>
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## Appendix I

Correlation between Anxiety, Self-esteem and Internet Addiction

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<tr>
<th></th>
<th>A_T</th>
<th>SE_T</th>
<th>IA_T</th>
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<tbody>
<tr>
<td><strong>A_T</strong> Pearson Correlation</td>
<td>1</td>
<td>-.370**</td>
<td>.344**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>391</td>
<td>391</td>
<td>391</td>
</tr>
<tr>
<td><strong>SE_T</strong> Pearson Correlation</td>
<td>-.370**</td>
<td>1</td>
<td>-.278**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>391</td>
<td>391</td>
<td>391</td>
</tr>
<tr>
<td><strong>IA_T</strong> Pearson Correlation</td>
<td>.344**</td>
<td>-.278**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>391</td>
<td>391</td>
<td>391</td>
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</table>

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

Multiple Regression of Anxiety and Self-esteem on Internet Addiction

### ANOVA

<table>
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<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<tr>
<td>1</td>
<td>Regression</td>
<td>2</td>
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<td>32.801</td>
<td>.000p</td>
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<td></td>
<td>Residual</td>
<td>388</td>
<td>179.409</td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>81380.087</td>
<td>390</td>
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a. Dependent Variable: IA_T

b. Predictors: (Constant), SE_T, A_T

### Coefficients

<table>
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<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
<th>Collinearity Statistics</th>
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<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>t</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>51.079</td>
<td>4.649</td>
<td>10.986</td>
</tr>
<tr>
<td></td>
<td>A_T</td>
<td>.333</td>
<td>.060</td>
<td>.280</td>
</tr>
<tr>
<td></td>
<td>SE_T</td>
<td>-.530</td>
<td>.154</td>
<td>-.174</td>
</tr>
</tbody>
</table>

a. Dependent Variable: IA_T
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Re: USERC/236/2019

16 December 2019

Dr Chye Quei Ting
Head, Department of Psychology and Counselling
Faculty of Arts and Social Science
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Bangi
31900 Kajang, Selangor, Malaysia

Dear Dr Chye,

Ethical Approval For Research Project/Protocol

We refer to the application for ethical approval for your students’ research projects from Bachelor of Social Science (Hons) Psychology programme enrolled in course UARZ3413. We are pleased to inform you that the application has been approved under expedited review.

The details of the research projects are as follows:

<table>
<thead>
<tr>
<th>Research Title</th>
<th>Student’s Name</th>
<th>Supervisor’s Name</th>
<th>Approval Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. The Relationship Between Parenting Style and Emotion Regulation Among Undergraduate Students in UTPA</td>
<td>1. Choong Zi Qian 2. Lee Koo Nge 3. Yong Chai Yee</td>
<td>Pa Aminah Zaini Bani Mohamad</td>
<td></td>
</tr>
<tr>
<td>5. Perceived Parenting Style and Perceived Stress Tolerance of Aggressive Among College Students in Malaysia</td>
<td>1. Bork Chua Y Li 2. Yong E Liang</td>
<td>Dr. Pew Ho Win</td>
<td></td>
</tr>
<tr>
<td>8. The Relationship Between Anxiety, Self-Efficacy and Internet Addiction Among Adolescents in Malaysia</td>
<td>1. Boonyat Win Mountain 2. Tan Xin Yee 3. Yong Sia Xiu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Workload and Quality of Sleep, Mental Health and Functional Social Support Among Human Services Students in Malaysia</td>
<td>1. Ngoo Cheng Yi Woon 2. See Ee Kye 3. Tan Jia Thoe</td>
<td>Ms. Tay Keat Wun</td>
<td></td>
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<tr>
<td>10. A Study of Effectiveness of Resilience Workshop Among Malaysian Undergraduate Students</td>
<td>1. Liu Sia Yee 2. Yeoh Keng Yi</td>
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ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

<table>
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<th>Supervisor's Name</th>
<th>Approval Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. The Relationship Between Persecution, Perfectionism and Coping Among UTAR</td>
<td>1. Joanna Lee Yee</td>
<td>Dr. Siew Fui Chin</td>
<td>16 December 2019 - 15</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td>2. Lee Yan Yee</td>
<td></td>
<td>December 2020</td>
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<tr>
<td>12. Dark Trait and Social Media Addiction: The Mediating Role of Coping</td>
<td>1. Beatrice Wong Zi Guan</td>
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<tr>
<td>Strategies</td>
<td>2. Ghul Hua Jin</td>
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</tr>
<tr>
<td></td>
<td>3. Hua Hua Yang</td>
<td></td>
<td></td>
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<tr>
<td>13. The Relationship Between Loss of Control, Coping Strategies and</td>
<td>1. Choo Swee Mun</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socialization Among Undergraduate Students in Malaysia</td>
<td>2. Wong Hui Ling</td>
<td></td>
<td></td>
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<td></td>
<td>3. Tan Hui Qin</td>
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</table>

The conduct of this research is subject to the following:

1. The participants' informed consent be obtained prior to the commencement of the research;
2. Confidentiality of participants' personal data must be maintained; and
3. Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.

Should the students collect personal data of participants in their studies, please have the participants sign the attached Personal Data Protection Statement for records.

Thank you.

Yours sincerely,

Professor Dr Fadzli bin Abd Rahman
Chairman
UTAR Scientific and Ethical Review Committee

cc Dean, Faculty of Arts and Social Science
Director, Institute of Postgraduate Studies and Research
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

FYP 2 - The relationship between anxiety, self-esteem and internet addiction among emerging adults in Malaysia

<table>
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<tbody>
<tr>
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<th>Primary Sources</th>
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<td>2. digitalscholarship.unlv.edu</td>
<td>1%</td>
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<tr>
<td>3. link.springer.com</td>
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<td>4. <a href="http://www.tandfonline.com">www.tandfonline.com</a></td>
<td>1%</td>
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<td>5. docshare.tips</td>
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<td>6. pdfs.semanticscholar.org</td>
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<td>7. ir.amu.ac.in</td>
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<td>8. <a href="http://www.coursehero.com">www.coursehero.com</a></td>
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<td>9. journals.sagepub.com</td>
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<td>17</td>
<td>Alan Lewis</td>
</tr>
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<td>18</td>
<td>Steven Sek-yum Ngai</td>
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<td>22</td>
<td>Kenneth I. Pakenham, Christina Samios</td>
</tr>
</tbody>
</table>
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

DEPARTMENT OF PSYCHOLOGY AND COUNSELLING
FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN

UAPZ 3023 Final Year Project II

Research Project Evaluation Form

**TURNITIN:** ‘In assessing this work you are agreeing that it has been submitted to the University-recognised originality checking service which is Turnitin. The report generated by Turnitin is used as evidence to show that the students’ final report contains the similarity level below 20%.’

<table>
<thead>
<tr>
<th>Project Title: The Relationship between Anxiety, Self-esteem and Internet Addiction among Emerging Adults in Malaysia</th>
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<tbody>
<tr>
<td>Supervisor: Ms. Low Sew Kim</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student’s Name</th>
<th>Student’s Id</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rodney Sin Ming Keen</td>
<td>1. 1604814</td>
</tr>
<tr>
<td>2. Tan Wai Yee</td>
<td>2. 1603271</td>
</tr>
<tr>
<td>3. Youn Jia Xin</td>
<td>3. 1604662</td>
</tr>
</tbody>
</table>

**INSTRUCTIONS:**
Please score each descriptor based on the scale provided below:

1. For criteria 1, 2, 3, 4, 5, 6:
   - 0 = no attempt, 1 = very poor, 2 = poor, 3 = average, 4 = good, 5 = very good

2. For criteria 3, 4:
   - 0 = no attempt, 1 = very poor, 3 = poor, 5 = average, 7 = good, 10 = very good

3. For criteria 7:
   Please retrieve the mark from “Oral Presentation Evaluation Form”.


### Abstract (5%) | Score
---|---
1. States clearly the research objectives. (5%)
2. Describe briefly and clearly the approach/methodology of the study. (5%)
3. Highlights the outcomes of the study. (5%)
4. Highlights the significance of the study. (5%)
5. Three relevant keywords mentioned. (5%)

**Subtotal (Sum /5) / 5%**

**Remark:**

### Methodology (20%) | Score
---|---
1. Appropriate research design/framework (5%)
2. Appropriate sampling techniques (5%)
   - Sample size is justified.
   - Sampling method correctly mentioned
   - Location of how the subjects are selected
3. Clear explanation of procedure (5%)
   - How is consent obtained
   - Description of how data was collected
4. Explanation on the instruments/questionnaires used (5%)
   - Description of instrument measures, scoring system, meaning of scores, reliability and validity information.

**Subtotal / 20%**

**Remark:**

### Results (20%) | Score
---|---
1. Analyses used are appropriate for each hypothesis. (10%)
2. Interpretations and explanations of the statistical analyses are accurate. (10%)

**Subtotal / 20%**

**Remark:**

### Discussion & Conclusion (25%) | Score
---|---
1. Constructive discussion of findings.
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

- Explanation and critical analysis. Results were critically analyzed with similar and/or dissimilar results. (10%)

2. Implication of the study. (5%)

3. Limitations mentioned relevant and constructive to the study. (5%)

4. Recommendations for future research. (5%)

Subtotal / 25%

Remark:

5. LANGUAGE & ORGANIZATION (5%)

1. Comprehensiveness: Content Organization + Language

Subtotal / 5%

Remark:

6. APA STYLE AND REFERENCING (5%)

1. APA format is followed

Subtotal / 5%

Remark:

7. *ORAL PRESENTATION (20%)

<table>
<thead>
<tr>
<th>Score</th>
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Subtotal

Remark:

PENALTY:
Maximum 10 marks for LATE SUBMISSION, MISSING FORM or POOR ATTENDANCE for consultation with supervisor

<table>
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<th>Score</th>
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**FINAL MARK/TOTAL
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

***Overall Comments:


Signature: ______________________________ Date: __________________

Notes:
1. Subtotal: The sum of scores for each assessment criteria
2. FINAL MARK/TOTAL: The summation of all subtotal score
3. Plagiarism is UNACCEPTABLE. Parameters of originality required and limits approved by UTAR are as follows:
   (i) Overall similarity index is 20% and below, and
   (ii) Matching of individual sources listed must be less than 3% each, and
   (iii) Matching texts in continuous block must not exceed 8 words

   Note: Parameters (i) – (ii) shall exclude quotes, references and text matches which are less than 8 words.

   Any works violate the above originality requirements will NOT be accepted. Students have to redo the report and meet the requirements in SEVEN(7) days.

*The marks of “Oral Presentation” are to be retrieved from “Oral Presentation Evaluation Form”.
**It’s compulsory for the supervisor/reviewer to give the overall comments for the research projects with A- and above or F grading.
# ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

<table>
<thead>
<tr>
<th>Full Name(s) of Candidate(s)</th>
<th>Rodney Sin Ming Keen, Tan Wai Yee, Youn Jia Xin</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1604814, 1603271, 1604662</td>
</tr>
<tr>
<td>Programme / Course</td>
<td>Psychology</td>
</tr>
<tr>
<td>Title of Final Year Project</td>
<td>The relationship between anxiety, self-esteem and internet addiction Among emerging adults in Malaysia.</td>
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### Supervisor's Comments

(Compulsory if parameters of originality exceeds the limits approved by UTAR)

<table>
<thead>
<tr>
<th>Overall similarity index:</th>
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<tbody>
<tr>
<td>Internet Sources:</td>
<td>%</td>
</tr>
<tr>
<td>Publications:</td>
<td>%</td>
</tr>
<tr>
<td>Student Papers:</td>
<td>%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Number of individual sources listed of more than 3% similarity:</th>
</tr>
</thead>
</table>

### Parameters of originality required and limits approved by UTAR are as follows:

(i) Overall similarity index is 20% and below, and
(ii) Matching of individual sources listed must be less than 3% each, and
(iii) Matching texts in continuous block must not exceed 8 words

Note: Parameters (i) – (ii) shall exclude quotes, bibliography and text matches which are less than 8 words.

Based on the above results, I hereby declare that I am satisfied with the originality of the Final Year Project Report submitted by my student(s) as named above.

---

Signature of Supervisor: ____________________________
Name: ____________________________

Signature of Co-Supervisor: ____________________________
Name: ____________________________
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

Date: ____________________________ Date: ____________________________

UNIVERSITI TUNKU ABDUL RAHMAN

ACADEMIC YEAR 2019/2020

FINAL ASSESSMENT

MAIN

UAPC2103 COUNSELLING SKILLS

MONDAY, 14 MAY 2020 TIME: 9.00 AM – 1.00 PM (4 HOURS)

BACHELOR OF SOCIAL SCIENCE (HONS) PSYCHOLOGY

Instruction to Candidates:

1. You are required to fill in the particulars below

Name:
Student ID:
Index Number:
Programme:
Course Code:
Course Name:

2. You are required to fill in and submit the final assessment declaration form along with the final assessment

3. You are required to Turnitin the assessment. Do exclude the cover page of the assessment while Turnitin the assessment.

SECTION A: SHORT ANSWER QUESTIONS [TOTAL: 70 MARKS]
This section contains TWO (2) questions.
Answer ALL questions.

SECTION B: SHORT CASE STUDY [TOTAL: 30 MARKS]
Answer ONE(1) question only.
SUBMISSION OF FINAL YEAR PROJECT /DISSERTATION/THESIS

It is hereby certified that Rodney Sin Ming Kee (ID No: 1604814) has completed this final year project entitled “The Relationship between Anxiety, Self-esteem and Internet Addiction among Emerging Adults in Malaysia” under the supervision of Ms. Low Siew Kim from the Department of Psychology and Counselling, Faculty of Arts and Social Sciences.

I understand that University will upload soft copy of my final year project in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,

Name: Rodney Sin Ming Kee
FACULTY OF ARTS AND SOCIAL SCIENCES
UNIVERSITI TUNKU ABDUL RAHMAN

Date: 1st April 2020

SUBMISSION OF FINAL YEAR PROJECT /DISSERTATION/THESIS

It is hereby certified that Tan Wai Yee (ID No: 1602271) has completed this final year project entitled “The Relationship between Anxiety, Self-esteem and Internet Addiction among Emerging Adults in Malaysia” under the supervision of Ms. Low Siew Hui from the Department of Psychology and Counselling, Faculty of Arts and Social Sciences.

I understand that University will upload softcopy of my final year project in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,

[Signature]

Name: Tan Wai Yee
ANXIETY, SELF-ESTEEM AND INTERNET ADDICTION

FACULTY OF ARTS AND SOCIAL SCIENCES  
UNIVERSITI TUNKU ABDUL RAHMAN

Date: 1st April 2020

SUBMISSION OF FINAL YEAR PROJECT /DISSERTATION/THESIS

It is hereby certified that Youn Jia Xin (ID No: 1604662) has completed this final year project entitled "The Relationship between Anxiety, Self-esteem and Internet Addiction among Emerging Adults in Malaysia" under the supervision of Ms. Low Sew Kimm from the Department of Psychology and Counselling, Faculty of Arts and Social Sciences.

I understand that University will upload softcopy of my final year project in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,

Name: Youn Jia Xin
<table>
<thead>
<tr>
<th>Task Description</th>
<th>Duration</th>
<th>Data/Time</th>
<th>Supervisor's Signature</th>
<th>Supervisor's Remarks</th>
<th>Next Appointment Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methodology, Data Collection &amp; Data Analysis</td>
<td>W1-W2</td>
<td>11/1/20</td>
<td></td>
<td>To check the analysis of the test data</td>
<td></td>
</tr>
<tr>
<td>Testing &amp; Analysis</td>
<td>W3-W6</td>
<td>11/2/20</td>
<td></td>
<td>The current draft is subject to change</td>
<td>2.5/2/20</td>
</tr>
<tr>
<td>Discrim Findings &amp; Analysis with Supervisor</td>
<td></td>
<td></td>
<td></td>
<td>To check whether the instrument is robust</td>
<td></td>
</tr>
<tr>
<td>Amending Findings &amp; Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion &amp; Conclusion</td>
<td>W7-W9</td>
<td>11/7/20</td>
<td></td>
<td>Clip Art to be submitted, chart 5 to refine the draft</td>
<td>2.9/2/20</td>
</tr>
<tr>
<td>Discuss Discussion &amp; Conclusion with Supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amending Discussion &amp; Conclusion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submission of first draft*</td>
<td>Monday of Week 10</td>
<td></td>
<td></td>
<td>submit the first draft to Turnitin.com to check similarity rate</td>
<td></td>
</tr>
<tr>
<td>Amendment</td>
<td>W10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submission of final FYP (FYP I + FYP II)*</td>
<td>Monday of Week 11</td>
<td></td>
<td></td>
<td>submit hardcopy, CD, and relevant documents to supervisor</td>
<td></td>
</tr>
<tr>
<td>Oral Presentation</td>
<td>W11-W12</td>
<td></td>
<td></td>
<td>Oral Presentation Schedule will be released and you supervisor will inform you via email</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. The listed duration is for reference only. Supervisors can adjust the period according to the topics and content of the projects.
2. *Deadline for submission can not be changed, one mark will be deducted per day for late submission.
3. Supervisors are to take the active role in making appointments with their supervisors.
4. Both supervisors and supervisees should keep a copy of this record. This record is to be submitted together with the submission of the FYP II.