THE RELATIONSHIP BETWEEN SOCIAL ANXIETY, PROCRASTINATION,

SELF-ESTEEM AND INTERNET ADDICTION AMONG UNIVERSITY STUDENTS

IN MALAYSIA.

CHOO YUN EN

A RESEARCH PROJECT

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT

FOR THE BACHELOR OF SOCIAL SCIENCE (HONS)

PSYCHOLOGY FACULTY OF ARTS AND SOCIAL SCIENCE

UNIVERSITI TUNKU ABDUL RAHMAN

OCT 2022

The Relationship between Social Anxiety, Procrastination, Self-esteem and Internet

Addiction among University Students in Malaysia.

Choo Yun En

Universiti Tunku Abdul Rahman

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

This research project is submitted in partial fulfilment of the requirements for the Bachelor of

Social Science (Hons) Guidance and Counselling, Faculty of Arts and Social Science,

Universiti Tunku Abdul Rahman. Submitted on OCT 2022.

ACKNOWLEDGEMENT

I wouldn't be able to finish the present study on my own. I get a lot of support and resources along the way. As a result, I would want to take this chance to thank a number of people for their support and direction during the project.

First and primarily, Ms Nur Shakila Binti Ibharim, my FYP supervisor, is the person I value the most since she patiently offers me sincere advice on everything from broad directions to little details. Her expertise in reviewing papers and advice has helped me in reducing the difficulty and effort of mine in completing the FYP.

I also wish to thank my family members for their understanding and patience. I also want to express my gratitude to my friends Tan Lei Gee and Loo Chi Ying for their support and advice over the process of my senior project.

Last but not least, I want to thank each respondent for agreeing to take part in my study. Every single one of those who has offered to assist me is much appreciated for your time and work.

CHOO YUN EN

APPROVAL FORM

This research report, titled "The relationship between Social Anxiety, Procrastination, Self-esteem and Internet Gaming Disorder among University students," was produced and submitted by Choo Yun En in part of the requirements for the Bachelor of Social Science (Hons) Guidance and Counselling and is accepted.

_____   Date: ___5.12.2022____

Supervisor

(Ms Nur Shakila Binti Ibharim)

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Abstract

Internet gaming addiction refers to overuse which neglect basic needs depression when the internet is not available, poor performance and social withdrawal. Internet gaming disorder also causes loss of control over the amount of time spent playing games which leads to sacrifices of other hobbies and activities. These study aims to investigate the relationship between social anxiety, procrastination, self-esteem and internet gaming disorder (IGD) among university students in Malaysia. A convenience sampling method was conducted among 111 participants and they were recruited by applying the convenience sampling method. The participants were Malaysian university students which female (n = 72, 64.9%) are more than male (n = 39, 64.93%). The instruments used were Internet Gaming Disorder Scale, Social Interaction Anxiety Scale, Procrastination Scale and Rosenberg Self-esteem Scale. Results shows that social anxiety and procrastination shows positive relationship with Internet Gaming Disorder while self-esteem was negatively correlated with internet gaming disorder. There is no significant difference between male and female in internet gaming disorder. The results of this study will give university counsellors real advice on how to help Malaysian university students who are at a high risk of dropping out by boosting their academic toughness. The results of this study will give university counsellors concrete information on how to assist university students who study at Malaysia who are at a greater risk of having internet gaming addiction.

Keywords: Internet gaming disorder, Social anxiety, Procrastination and Self-esteem

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Declaration

I hereby certify that the content of this paper is entirely original work of mine, and that ALL sources, whether printed, electronic, or personal, have received proper citation in the bibliography.

Name: CHOO YUN EN

Student ID: 19AAB06709

Signed: _____

Date: 5 DECEMBER 2022

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Table of Contents

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

List of tables

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

List of figures

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

List of Abbreviations

IGD   Internet Gaming Disorder

SIAS   Social Interaction Anxiety Scale

PS   Procrastination Scale

RSES   Rosenberg Self-esteem Scale

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Chapter 1

Introduction

Background of Study

According to Curran et al. (2016), the usage of the internet across the globe is more

than 2 billion. The internet is used by people in many aspects such as information searching,

communications, entertainment, games and more. The more time people spend on the internet

increases the chances of people having internet gaming disorder (Nie & Erbring, 2002; Shao

et al., 2018). People slowly shift from using traditional media into using the internet. For

example, the traditional method in calling others has transferred into using the internet which

costs less. The amount of time spent on the internet also depends on the amount of time spent

at home (Nie & Erbring, 2002; Shao et al., 2018).

The internet has connected people from fields and science around the world and

makes study for students easier. During the pandemic, the time of people using the internet

increased. Many governments have introduced "work from home" or lockdown to reduce the

spread of Covid-19 (Curran et al., 2016). The restriction causes people to be more dependent

on the internet because many activities are physically shifted to on-line. The internet has

many benefits we can see during Covid-19 pandemic (Curran et al., 2016). For example, we

can have meetings through online platforms. We can also buy groceries or shop for Chinese

New Year through online shopping. During this period, the usage of e-wallet also increases to

reduce direct contact with others. With the growth of the internet, people spend less time

together with their friends and family. People also less attend outdoor activities.

The amount of internet gaming disorder severity increased significantly during

COVID-19 pandemic (Teng et al., 2021). The studies predict that the engagement in video

games is a coping mechanism for students to cope with the mental health burden associated

with pandemics. Researchers found that during pandemic, students were likely to have affected young people's mental health psychiatric illness (Teng et al., 2021). During pandemic, students increase their cope with pandemic stress by increasing their time on internet gaming. Due to increasing time in internet gaming, students have higher risk to exposure in Internet Gaming Disorder (Teng et al., 2021). Overall, the studies found that COVID-19 pandemic would lead to being more engaged with playing video fc games.

The World Health Organization (WHO) has cautioned that increased screen usage and gaming may occur during the COVID-19 pandemic. Due to this, there is an increased chance of internet and gaming addiction (World health organization, 2020). Young people are using the internet and playing video games more frequently, which may be related to pandemic-related lifestyle changes including staying at home, quarantines, and shuttered businesses and schools (Schmidt et al., 2020). While playing video games and using the internet can be entertaining and accessible, doing so in an unsuitable way can result in a number of mental health issues, such as internet gaming disorder and problematic internet use (Oka et al., 2021).

Initially, the internet has enabled users to escape or release their stress, avoid problems and dodge difficult thoughts in daily life. Moreover, the internet is also the place where people gain information about the condition of Covid-19, entertainment, online classes, and home fitness sessions. However, there are several activities on the internet such as video gaming, social media usage, gambling and shopping that lead to internet gaming disorder (Király et al., 2020). Unorganized use of the internet will cause deterioration in an individual's self, family, social, educational and many other important fields (Király et al., 2020).

According to Ko (2014), signs of excessive internet gaming disorder are overuse which neglects basic needs, depression when internet is not available, arguments, lying, poor performance, and social withdrawal. In DSM 5, internet gaming disorder is a condition requiring further study and additional research. According to DSM 5, continuing to use the internet despite negative consequences, failure to limit internet use, consistent internet usage is more than anticipated and impaired psychosocial function are symptoms made adjustment from diagnostic criteria for substance use disorder for internet gaming disorder.

Internet gaming disorder causes loss of control over the amount of time spent playing games which leads to sacrifice of other hobbies and everyday activities (Wang et al., 2019). Internet gaming disorder also causes sleep issues, psychological distress, depression and anxiety (Satghare et al., 2016). Significant impairment with normal physical, mental, social and emotional functioning is caused by sleep issues. A person's quality of life can be significantly diminished by insufficient or non-restorative sleep (Satghare et al., 2016). Although the internet has grown to be a crucial academic resource, students might still have serious academic issues if they spend too much time playing interactive games, gossiping in chat rooms, and surfing unrelated websites (Satghare et al., 2016). People who engage in internet gaming will remain up late or all night which will result in increasing sleep issues (Satghare et al., 2016). This will cause students to have difficulties in finishing their homework, preparing for tests that result in failing grades.

In extreme cases, students with internet gaming disorder will neglect their fundamental biological needs for example sleeping, eating, and maintaining personal hygiene. Students may suffer from a number of health issues, including weight gain or loss, dry or itchy eyes, headaches, backaches, carpal tunnel syndrome, general fatigue, and/or exhaustion (Király et al., 2015).

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Problem Statement

According to Wartberg et al. (2019), internet usage has reached as high as 14. The broadest systematic evaluation of internet gaming disorder prevalence studies conducted by Mihara and Higuchi (2017), reported prevalence rates ranging from 0.7% to 27.5%. According to a study of 36 studies done in Chinese and published by Long et al. (2018), the prevalence of gaming disorder varied from 3.5% to 17%. According to the findings, the prevalence of gaming disorder has marginally increased over the past ten years. Prevalence estimates on average ranged from 1.97% in 2009 to 4.70% in 2017 (Stevens et al., 2021). However, there are limited studies on internet gaming disorder in Malaysia, especially university students.

Based on Oka et al. (2021), IGD prevalence was 4.1% during the pandemic. Analysis showed that likely IGD prevalence increased over 1.6 times during the pandemic which is from 3.7% to 5.9%. IGD prevalence was probably higher during the pandemic than it had been previously (1-2.5%) (Oka et al., 2021). One research of American adolescents aged 8 to 18 found that 8.5% of students met 6 of the 11 criteria of internet gaming disorder, whereas a survey of young people in Australia found that just 5% of gamers met 4 of the 9 criteria of internet gaming disorder. In a study of ninth-graders from Germany, the authors found a general prevalence of 1.2% and in a study from the Netherlands that examined various age groups, the authors discovered a general prevalence of 5.5% among adolescents between the ages of 13 and 20 and a prevalence of 5.4% among adults having internet gaming disorder (Gentile et al., 2017). Thus, from the latest findings, it shows that the level of internet gaming disorder among university students increases after a pandemic.

Internet gaming often has content that is more geared toward men, while women are said to play fewer games and for a shorter period of time (Griffiths, 2018). Aspects of gaming motivation may affect these differences. Women seem to utilise the internet in general differently than men, spending more time on social media than games (Griffiths, 2018). Unsurprisingly, men routinely report considerably more issues than women with excessive gaming (Stavropoulos et al., 2019). Male participants spent more than twice as much time each week playing games as did female respondents among those who said they had played a game in the previous month. Young adults and adolescents scored considerably higher on the internet gaming disorder scale than middle adults (ages 31 to 40) (Lemmens et al., 2015). The findings from previous research showed that there were inconsistencies regarding gender differences in internet gaming disorder.

The findings validated about the links between internet gaming disorder and social anxiety by showing that adolescents with mobile game addiction had greater self-reported levels of social anxiety. Compared to female adolescents, male adolescents may feel more social anxiety if they use mobile games compulsively (Wang et al., 2019). According to a study by (Hyun et al., 2015) extended usage of the internet and social network services is linked to an increase in anxiety brought on by social interaction.

On the other hand, Khan et al. (2017) compares a few articles and notices that there are different discussions which some say that female is higher, some say male are higher and some say there are no difference between male and female in internet gaming disorder made by different researchers. In this article, the result by Shek et al. (2016) in Hong Kong and Chiu et al. (2016) in Taiwan states that females have higher internet gaming disorder than male. Malik et al. (2015) and Fernandez et al. (2015) states that there was no difference. The findings from previous research showed that, there were inconsistency regarding gender differences in internet gaming disorder.

Many of the researchers did study on the relationship among internet gaming disorder and procrastination. There is an issue where there is little research on internet gaming disorder and general procrastination. General procrastination is when people tend to procrastinate towards a variety of tasks or making decisions (Nordby et al., 2019). For example, laying in the bed and not wanting to get up, always late for appointments, not doing as planned and many more (Hen et al., 2021). There is a perception that because video games can offer delightful experiences, be highly motivating, exciting, and instantly rewarding, players run the risk of being diverted from their less interesting real-life commitments and choosing to play games instead (Nordby et al., 2019). The research focuses more on academic procrastination and less on general procrastination. Students also will procrastinate in doing house chores. Therefore, there is a need for research towards general procrastination and internet gaming disorder.

According to Sevelko et al. (2018), self-esteem has been identified as a risk factor and predictor towards internet gaming disorder. Low self-esteem can be diverted or avoided through the internet such as gaming and entertainment. People with lower self-esteem will have higher risk of internet gaming disorder. However, according to Ayas and Horzum (2013), the relationship between self-esteem and internet gaming disorder is insignificant, negative and low-level. There is a gap where Sevelko et al. (2018) states that internet gaming disorder will be affected by self-esteem while Hyun et al. (2015) states differently. Thus, this study will be conducted to examine the relationship of social anxiety, procrastination, self-esteem and internet gaming among university students. There have also been reports linking internet gaming disorder to lower levels of self-esteem.

Significance of Study

Theoretical Significance

This study can provide a clearer picture of the relationship between social anxiety, procrastination, self-esteem and internet gaming disorder among university students in Malaysia. In addition, this study can also provide awareness and realization for future research on internet gaming disorder, social anxiety, procrastination and self-esteem. There is a lack of research on social anxiety, procrastination, self-esteem and internet gaming disorder among university students in Malaysia during pandemic. Thus, this study will help to reduce the gap in the studies. Students' way of living is different during the pandemic. Therefore, the level of internet gaming disorder, social anxiety, procrastination and self-esteem might be different compared to before the pandemic. Hence, this study can assist to declare the theory by correlating the theory with the framework before pandemic.

Practical Significance

Counsellors, educators, university students and the public can benefit from this research. For counsellors, they can think of ways and programs to help university students with internet gaming disorder and teach skills to university students to reduce the level of internet gaming disorder. Educators and the public can gain information about internet gaming disorder among university students. They can also supervise or observe university students on their internet gaming disorder and provide information to help university students. University students can be aware of the factors that affect their level of internet gaming disorder. They can lessen the risk of having internet gaming disorder. This study can benefit readers by letting readers be aware of the risk of having internet gaming disorder during a pandemic. University students can also know the risk of getting internet gaming disorder during pandemic is higher compared to before pandemic. University students need to manage their time and self-control well to avoid having internet gaming disorder.

Research Objectives

1. To examine the relationship between social anxiety and internet gaming disorder among university students.

2. To examine the relationship between procrastination and internet gaming disorder among university students.

3. To examine the relationship between self-esteem and internet gaming disorder among university students.

4. To examine the gender differences in internet gaming disorder among university students.

Research Questions

1. What is the relationship between social anxiety and internet gaming disorder among university students?

2. What is the relationship between procrastination and internet gaming disorder among university students?

3. What is the relationship between self-esteem and internet gaming disorder among university students?

4. What are the gender differences in internet gaming disorder among university students?

Research Hypotheses

H_1 : There is a positive relationship between social anxiety and internet gaming disorder among university students.

H_2 : There is a positive relationship between procrastination and internet gaming disorder among university students.

H_3 : There is a negative relationship between self-esteem and internet gaming disorder among university students.

H_4 : Male will have a higher amount of internet gaming disorder level than females among university students.

Definition of Terms

Conceptual Definition

Internet Gaming Disorder. Internet gaming disorder causes loss of control over the amount of time spent playing games which leads to sacrifice of other hobbies and everyday activities (Wang et al., 2019). Online gaming addiction was closely linked to "negative escapism," or the negative reinforcement of gaming as a strategy to escape daily problems and suffering. According to DSM 5, continuing to use the internet despite negative consequences, failure to limit internet use, consistent internet usage is more than anticipated and impaired psychosocial function are symptoms made adjustment from diagnostic criteria for substance use disorder for internet gaming disorder (Ko, 2014).

Social Anxiety. Social anxiety is a natural human experience in which people will feel fear of judgement from society (Morrison & Heimberg, 2013). People with social anxiety frequently pay more attention to themselves or their experience than to their situation. They will have their own safety behaviour matching their fear (Rodebaugh et al., 2004). The higher the score of social anxiety, the higher the level of internet gaming disorder (Ye et al., 2021).

Procrastination. Procrastination is a behaviour where students tend to delay on performing an action or doing their task (Goroshit, 2018). There are five types of procrastination which are general procrastination, academic procrastination, decisional procrastination, neurotic procrastination and dysfunctional procrastination (Limone et al., 2020). The procrastination focusses in this research are general procrastination that means a behaviour associated with difficulty to complete at the deadline within a certain time frame.

Self-esteem. Self-esteem is an attitude of people towards an object or situation (Rosenberg et al.,1995). Self-esteem is effective to judge a person's own worth, value or significance (Blascovich et al., 1991). Low self-esteem can cause anxiety which is a defensive mechanism to protect a person (Cast & Burke, 2002). Low self-esteem also causes some issues such as internet gaming disorder. The lower the score of self-esteem, the higher the level of internet gaming disorder (Bahrainian et al.,2014).

Operational Definition

Internet Gaming Disorder. Internet gaming disorder can be practically determined by Internet Gaming Disorder Scale (Pontes & Griffiths, 2015). This scale contains 9 items. It is a self-report scale with 5-point Likert scale where 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = very often.

Social Anxiety. Social anxiety can be measured by Social Interaction Anxiety Scale (Mattick & Clarke, 1998). This scale consists of 20 items. It is a self-report scale with 4-point Likert scale where 0 = not at all characteristics, 1 = slightly characteristic or true of me, 2 = moderately characteristic or true of me, 3 = very characteristic or true of me, 4 = extremely characteristic or true of me.

Procrastination. Procrastination can be defined by the General Procrastination Scale (Lay, 1986). It is a self-report scale with 20 items. It is a 5-point Likert scale where 1 =

extremely uncharacteristic, 2 = moderately uncharacteristic, 3 = neutral, 4 = moderately

characteristic, and 5 = extremely characteristic. The five components of this scale are poor

time management (item 1,2,7 and 10), good planning (item 8, 14, 15, 18 and 20), delaying

(item 5, 9, 11, 12 and 19), doing things in the last minute (item 15, 16 and 17), and lastly,

good time management (items 3,4, 6 and 13).

Self-esteem. Self-esteem can be measured by Rosenberg Self-esteem Scale

(Rosenberg, 1965). This is a self-report scale and consists of 10-items. It is a 4-point Likert

scale where 1 = strongly disagree, 2 = disagree, 3 = agree and 4 = strongly agree.

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Chapter 2

Literature Review

Internet Gaming Disorder

Internet gaming disorder can completely or partially satisfy demands. The usage of

video games as a means of escaping from the unhappiness of everyday life is a sign of

pathologic gaming behaviour (Ko, 2014). Online gaming addiction was closely linked to

"negative escapism," or the negative reinforcement of gaming as a strategy to escape daily

problems and suffering. In negative reinforcement models of substance addiction, escape also

functions as a key mechanism (Ko, 2014). Studies show that internet gaming disorder and

substance use disorder are similar in a number of ways including personality features and a

dependency on online gaming as a coping technique (Ko, 2014).

Internet gaming disorder causes loss of control over the amount of time spent playing

games which leads to sacrifice of other hobbies and everyday activities (Wang et al., 2019).

Internet gaming disorder also causes sleep issues, psychological distress, depression and

anxiety. Significant impairment with normal physical, mental, social and emotional

functioning is caused by sleep issues (Satghare et al., 2016). Sleep issues will cause students

to feel tired and drowsy hence causeing weight gain, feeling of loneliness, low well-being,

and worsen feelings of depression which will then lead to depression disorder (Satghare et al.,

2016).

The combined prevalence rates of Internet gaming disorder (20.0%) and gaming

disorders (10.1%) for Southeast Asia in the current study are much greater than those for

other globe regions. Asqah et al. (2020) used data from 12,938 adolescents aged 14 to 17 to

examine the prevalence of Internet Gaming Disorder across seven European countries, and

they discovered that the rate was 1.6% overall, with Greece having the highest prevalence

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

2.5%, followed by Poland 2.0%, Iceland 1.8%, Germany 1.6%, Romania 1.3%, The

Netherlands 1.0%, and Spain 0.6% (Asqah et al., 2020). Similar findings were made by

Gentile, who discovered that 8.5% of 1178 teenagers in the United States between the ages of

8 and 18 had pathological video gaming (Chia et al., 2020). Prevalence of Internet Gaming

Disorder was 8.8% and 19.3% among the participants (Chia et al., 2020).

Internet Gaming Disorder is more prevalent in men than women as seen with

substance use disorder. In men with Internet Gaming Disorder, they show worse self-esteem,

lower life satisfaction and older age (Wang et al., 2019). Neuroticism, sensation seeking, trait

anxiety, state anxiety, and hostility are personality traits connected to Internet Gaming

Disorders. Internet gaming disorders are linked to high levels of impulsivity (Chia et al.,

2020). Lastly, a study shows that high impulsivity will increase the likelihood of Internet

Gaming Disorder.

The majority of those who have IGD are men. Dong et al. (2018) found that the

majority of male and female teenagers played video games, however some more recent

research indicates that the gender difference is closing (Dong et al., 2018). For instance, a

research in China reported that 45.6% of female and 87.4% of male teenagers played online

games, but that the percentage of males with internet gaming disorder was significantly

greater in the male population which is 6.3% for boys and 2.4% for girls. Similar findings

have also been noted in Taiwan (Ko et al, 2016.), Korea (Ha and Hwang, 2014), and other

places (Dong et al., 2018).

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Social Anxiety

The worry of being judged by someone in social or performance contexts is described as social anxiety disorder (SAD) (American Psychiatric Association, 2013). The worry of being negatively judged by others is a distinguishing element of SAD, and it is thus closely tied to social standards and role expectations. The severe social regulations in collectivist societies are likely to have a bigger effect on social behaviour than the more lenient social norms in individualistic cultures (Hofmann, Asnaani et al., 2010). Excessive concern about breaching these social rules, in other words, might lead to a severe concern of being judged socially. People from collectivist societies have been reported to have higher levels of SAD than those from individualistic cultures (Heinrichs et al., 2006).

According to Murad (2020), one of the most frequent psychiatric illnesses that people face nowadays is social anxiety. A lot of research has looked at social anxiety as one of the most important emotional illnesses, affecting a variety of psychological and behavioural issues, due to its frequency. Fear and unease in social performance and interactional circumstances are common among people with social anxiety, and they have a considerable detrimental impact on many parts of their lives (Alansari, 2004; Muammariyah, 2009).

Students often encounter several adjustments for example moving away from family or forming social connections and difficulties such as academic achievement as they progress through university (Mitchell et al., 2008). While many students successfully manage this period of change, others face challenges in both academics and emotional adjustment. Social anxiety, an emotional disorder that is often unnoticed or concealed from the casual observer, is one psychosocial aspect that may limit achievement in university/college. According to Parade et al. (2010), incidence rates of social anxiety in university/college students range from 10 to 33 % compared to 7–13 % in the general population (Brook & Willoughby, 2015).

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Procrastination

According to Goroshit (2018), procrastination is a behaviour that is generally defined as a voluntary delay of action, even if the wait is likely to be worse. Academic procrastination is comparable to procrastinating, except it is more focused on the study process. Over 60% of undergraduate students said academic duties, projects, and project papers are frequently delayed to the point where perfect achievement is exceedingly unlikely. Students who put off projects and are less inclined to participate in them are more likely to get poor results on the final exam.

Students frequently engage in procrastination. According to Rosário et al. (2009), around 70% of university students suffer from procrastination and have a tendency to postpone work. Procrastination is the act of prolonging or avoiding something, and it is sometimes referred to as a failure of self-control. Procrastination is irrational behaviour, therefore it is more difficult to regulate (Eerde & Klingsieck, 2018). People will procrastinate again, even if they want to change and are aware that delaying has bad consequences.

Procrastination has been proved in numerous studies to have an influence on a student's academic progress, well-being, and standard of living (Goroshit, 2018). When an individual's ambitions are in conflict with their ideals or basic necessities, procrastination arises. Procrastination can also be defined as the inability to accomplish an objective. Procrastination has a favourable association with self-efficacy, depression, and performance, according to Ariani & Susilo (2018). Procrastination is common among students who believe they cannot complete the work.

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Self-esteem

Based on Branden, N. (2021), everyone has great energy within them which is called self-esteem. It involves more than a natural sense of self-worth which is supposedly human heritage. The gleam is merely the first step towards self-esteem. Self-esteem can also be defined as the belief in one's intellectual capacity and dealing with life's basic issues. At the same time, self-esteem is also the belief in our right to feel happy, a sense of being worthwhile, appreciative and competent to express our desires and needs and enjoy the rewards for our effort.

The role of self-esteem in psychological adjustment has been investigated for almost a decade in therapeutic, cognitive, personality and behavioural science (Greenier, et al., 1995). The importance of self-esteem is frequently overstated to the point that low self-esteem is considered the source of all bad and high self-esteem is viewed as the source of all good (Manning et al., 2006). According to Rosenberg (1965), self-esteem is defined as an individual's general constructive appraisal of themselves. A person with great self-esteem appreciates himself and believes he is worthwhile.

Individuals' self-esteem is defined as their negative or positive perspective toward themselves (Rosenberg 1979). The most commonly used measure of self-esteem, the Rosenberg Self-Esteem Scale (RSES; Rosenberg 1979), essentially catches people's general sense of acceptance and regard (Rosenberg et al. 1995). Many people believe that strong self-esteem leads to positive outcomes and that poor self-esteem is at the foundation of personal and social issues.

Murphy (2005) describes self-esteem as a worldwide barometer of self-evaluation including cognitive assessments of basic self and impactful experiences of the individual that are connected to these global evaluations. According to Wang and Ollendick (2001), self-

esteem entails a self-evaluation accompanied by an emotional response to oneself. In all current theories and concepts of self-esteem, the evaluating and behavioural parts are present.

Social Anxiety and Internet Gaming Disorder

According to Gioia, et al. (2022), internet gaming may provide another alternative virtual environment where highly socially anxious people can transfer most of their social activities, relieve their difficult life incidents, negative emotions, and feel more secure and at ease than in face-to-face socialization. The situation they would avoid is the development of close friendships. However, as noted by Lo et al. (2005), online games only momentarily lessen social anxiety, dangerously diminishing face-to-face social interactions.

However, because this online activity may assist them to avoid and escape from challenges and anxieties associated with face-to-face social interactions, people who suffer from social anxiety have been reported to be more vulnerable to the possibility of establishing problematic online gaming (Lee & Leeson, 2015). With the current research, a deeper understanding of the relationship between social anxiety and internet gaming disorder may have various practical implications.

In both adolescent and adult people, a number of studies that were examined discovered a substantial correlation between social anxiety and internet gaming disorder. People with internet gaming disorder, especially male scored much higher on the social anxiety scale than people who had no internet gaming disorder. Several research that were examined discovered a high correlation between social anxiety (Gioia et al., 2022). According to Starcevic et al. (2020), compared IGD patients with ordinary people, finding that the patients had considerably greater levels of social anxiety (Starcevic et al., 2020).

According to (Barlińska et al., 2015), social anxiety and problematic video game use may be associated, and excessive use may be better understood and treated as a coping mechanism rather than a compulsive behaviour. Report states that socially anxious people may utilise games as an escape strategy, avoiding in-person interactions but considerably expanding online relationships (Wei et al., 2012). As a result, social anxiety was firmly linked with internet gaming disorder. This is because many people with high social anxiety reported socialising more with people online rather than face-to-face.

Procrastination and Internet Gaming Disorder

According to Tokel (2014), this research also found that there was a link between general procrastination and internet gaming disorder. This finding indicated that those who put off their daily chores are more likely to become addicted to internet gaming. Past studies have likewise pointed in the same direction. Students with poor time management skills may fail to accomplish their daily routine duties, which might lead to an increased reliance on internet gaming (Nordby et al., 2019). People with internet gaming disorder procrastinate because of the impact of reward mechanisms they get in playing games (Nordby et al., 2019).

According to Yeh et al., (2017), the result of the study shows that young adults with IGD have high levels of procrastination with controls for gender, age, and education level. Procrastinators tend to choose short-term benefits over long-term gains, reflecting a core component of poor self-regulation (Yeh et al., 2017). They voluntarily delay an intended action despite expectations being worse off because of the delay. Further, they prefer to begin with more pleasurable work, but not work with future benefits. Internet gaming is convenient, popular, and available in modern society.

According to Loehlin & Martin (2014), temporal motivation theory, when work tasks and internet games are both available to young adults with procrastination, if the reward of the work task is unpredictable and delayed, they may choose behavior with a predictable reward in a short time, namely internet gaming (Loehlin & Martin, 2014). Work tasks in the real world are mostly unpredictable and delayed in modern society. If procrastinators repeatedly engage in internet gaming, the postponing behavior may condition them with an immediate reward and pleasure response (Loehlin & Martin, 2014). Real-world tasks would then be repeatedly delayed and the performance levels of procrastinators would be impaired. This vicious cycle could contribute to the vulnerability of procrastinators to IGD.

According to Sung et al. (2014), young adults with internet gaming disorder spent most of their time on internet gaming. This excessive use may cause them to postpone their daily work tasks. Escape is one characteristic symptom of IGD (American Psychiatric Association, 2013). These young adults can escape into internet gaming when they meet difficulty in their daily work tasks. This behavior may manifest as procrastinating behavior (Sung et al., 2014).

Self-esteem and Internet Gaming Disorder

According to Hyun et al. (2015), a recent clinical model has proposed that adolescents with IGD may endorse a unique set of maladaptive beliefs that underlie persistent and excessive involvement in internet gaming activities. These include beliefs about game reward value and tangibility, maladaptive and inflexible rules about gaming behaviour, over-reliance on gaming to meet self-esteem needs, and gaming as a method of gaining social acceptance.

According to Bozoglan et al. (2013), decreased levels of self-esteem have also been reported to be associated with internet gaming disorder and online gaming addiction. Practical support together with positive role models for patients with drug or alcohol addiction could lead to successful recovery from such an addiction due to increased self-esteem (Johansen et al., 2013).

Low self-esteem has always been identified as being among the psychological characteristics associated with excessive internet use. According to Seabra et al. (2017), several studies have proposed several explanations for this phenomenon. Low self-esteem may prompt some people to seek brief comfort from life's troubles through activities that allow them to avoid reality. According to Yen et al. (2014), the internet offers individuals things that allow them to feel more confident and positive about themselves, giving the impression that they have higher self-esteem in the digital environment. Park et al. (2014) looked at circumstances in which real-life problems and relationships were having problems and discovered that people with low self-esteem were more possible to establish simulated connections on the internet to help them heal the wounds their real-life relationships had done to their self-esteem

Theoretical Framework

The theory used to support internet gaming disorder is Cognitive Behavioural Theory. Beck was the first to establish Cognitive Behavioural Theory in 1964 (Kenny & Michael, 2013). Cognitive Behavioural Theory is a theory that claims that our thoughts influence our behaviour and feelings (Beck, 2011). According to Beck (2011), people are prone to get trapped in a vicious cycle in which their actions perpetuate their problem. Paying attention to the present moment is emphasised in CBT (Beck, 2011). CBT also uses guided

discovery to teach clients how to react to their dysfunctional thoughts and behaviours (Beck, 2011). CBT utilises a series of approaches to alter one's thoughts, attitude, and behaviour (Beck, 2011). The relationships between thoughts, emotions, and behaviour are explored in CBT (Beck, 2011).

Internet gaming disorder is able to explain by Cognitive Behavioural Theory (CBT). This is because internet gaming disorder happens when people having social anxiety, procrastination and low self-esteem. The thoughts in individual will cause them to avoid facing social anxiety, procrastination and low self-esteem. The behaviour is they will escape into gaming world. Individuals' thoughts mostly function through social and psychological needs, which are individual social needs and self-esteem. These needs will create and achieve their intentions and demands on gaming and how an individual utilises gaming to meet their wants and reach their objectives (Han et al., 2020). According to CBT, individual used gaming to satisfy several of their escapisms need (Dong & Potenza, 2014). Internet gaming functions as effective substitutes for individual and facilitated interaction, supplying choices or replacements for areas of an individual's environment that are not as accomplished.

Conceptual Framework
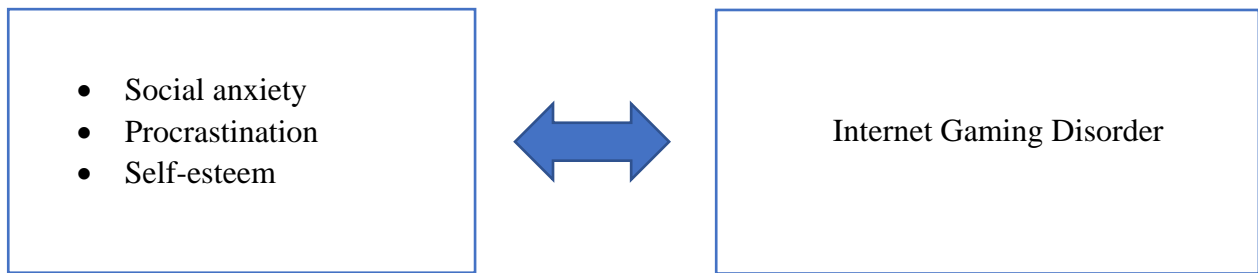
Figure 1 The conceptual framework of "Internet Gaming Disorder among Malaysian University students: Social Anxiety, Procrastination and Self-esteem."

In this study, social anxiety, procrastination, self-esteem and internet gaming disorder were the variables being measured. Internet gaming disorder can be explained using Cognitive Behavioural Theory. In Cognitive Behavioural theory, internet gaming disorder influences thoughts which affect people's behaviour and feelings. This theory provides a suitable explanation for internet gaming disorder because people's thoughts, escaping from issues in life, wanting to feel relaxed, escape loneliness and as an unhelpful lifestyle using internet gaming. The negative reinforcement from overuse of the internet will cause people to have internet gaming disorder. People with social anxiety tend to escape from a social situation where they will choose to communicate online. For procrastination, when the goal of an individual is inconsistent with their values or basic needs. The individual tends to procrastinate when it is hard to achieve their goal. Individuals use the internet as a coping strategy when they have shortcomings such as low self-esteem. Internet gaming helps users to feel good because the internet can offer things that will comfort users and let users feel the wound is healing in the virtual world. This shows that people with internet gaming disorder were due to thoughts and feelings.

Chapter 3

Methodology

Research Design

This research is based on a correlational design and a quantitative design to collect data about the relationship between internet gaming disorder, social anxiety, procrastination and self-esteem. This research will use a quantitative method, which involves the process of data collection. This is because the study intended to investigate the relationship between different variables which is internet gaming disorder, social anxiety, procrastination and self-esteem among university students in Malaysia. This method will be gathering primary data from participants. Questionnaires will be applied to gather data from participants. The questionnaires will be sent through online because this method can save cost and be able to collect the data faster during pandemic.

Sampling Procedures

Sampling Method

In this research, a convenience sampling method has been used. This is because the objective of the study was to discover internet gaming disorder among university students. In convenience sampling, a list of qualifications needed to be composed. This was to decide which participants were suitable and which was not. By conducting the list of qualifications, finding participants saved time and effort (Tongco, 2007). The inclusion for this research participants was university students in Malaysia. The university comes from different parts of Malaysia, not only University Tunku Abdul Rahman in Kampar. The main goal of using

convenience sampling was because this is the easiest way to recruit the participants. It is also easily accessible (Sedgwick, 2013).

Location of study

To conduct an online survey questionnaire, Google Form was generated and was shared through social media such as WeChat, WhatsApp, Instagram and Facebook to increase the number of participants. Online survey was easier to pass around throughout Malaysia.

Ethical Clearance Approval

My research supervisor (Puan Nur Shakila Binti Ibharim), Head of the Department of Psychology and Counselling (Dr. Pung Pit Wan) and Dean of Faculty of Art and Social Science (Dr Lee Lai Meng) all gave their approval based on the university ethical clearance protocol. Additionally, it was guaranteed to the UTAR Scientific and Ethical Review Committee that there was no breach of any ethical principles prior to the data gathering. The approval for moving forward to collect the data was completed after the present research proposal was completed.

Sample Size, Power and Precision

Sample Size

The generator software for sample size used was G*Power 3.1.9.7. version. The sample size for Pearson's Product Moment Correlation is 67. Due to issues with potential bias, sample size needs have increased by roughly 50% on average. This is a significant rise in the sample size needed, implying that failing to account for incomplete information when calculating sample size requirements could result in insufficient sample size standards (Wolf et al., 2013). Thus, the sample size of 67 will be increased 50% to maintain the accuracy of results. Finally, the sample size in this study will be 101 respondents.

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Actual Sample Size

The study's final sample size was 115 university students. The sample consisted of

65.2% female (n=75) and male respondent 34.8% (n=40). Initially, a total of 115 responses

were collected in this present study. There was none unengaged response. Therefore, no

responses were removed from this present study.

Power Analysis

According to G*Power 3.1.9.7, to calculate Hypothesis 1, Person's Product Moment

Correlation (PPMC) was used to establish if a statistically significant connection existed

between social anxiety disorder and internet gaming disorder. The statistical test,

"Correlation: Bivariate Normal Model," recommended a sample size of 67 and "Exact" as the

test family. In this investigation, a medium effect size of 0.3 will be used. According to

Marino et al. (2020), the effect size for internet gaming disorder and social anxiety is 0.42. In

this investigation, a medium effect size will be employed. The margin of error is 0.05, and the

power is 0.80.

According to G*Power 3.1.9.7, to calculate Hypothesis 2, Person's Product Moment

Correlation (PPMC) was used to establish if a statistically significant connection existed

between procrastination and internet gaming disorder. The statistical test, "Correlation:

Bivariate Normal Model," recommended a sample size of 67 and "Exact" as the test family.

In this investigation, a medium effect size of 0.3 will be used. According to Nordby et al.

(2019), the effect size for internet gaming disorder and procrastination is 0.33. In this

investigation, a medium effect size will be employed. The margin of error is 0.05, and the

power is 0.80.

According to G*Power 3.1.9.7, to calculate Hypothesis 3, Person's Product Moment Correlation (PPMC) was used to establish if a statistically significant connection existed between self-esteem and internet gaming disorder. The statistical test, "Correlation: Bivariate Normal Model," recommended a sample size of 67 and "Exact" as the test family. In this investigation, a medium effect size of 0.3 will be used. According to King & Delfabbro (2016), the effect size for self-esteem and internet gaming is 0.46. In this investigation, a medium effect size will be employed. The margin of error is 0.05, and the power is 0.80.

According to G*Power 3.1.9.7, to calculate Hypothesis 4, Independent Sample t-Test establish if a statistically significant connection existed between male and female in internet gaming disorder. According to Su et al. (2020), the effect size for internet gaming disorder among male and females is 0.47. In this investigation, a medium effect size will be employed. The margin of error is 0.05, and the power is 0.80.

Data Collection Procedures

Inclusion and Exclusion Criteria

Respondents must pursue their studies at one of Malaysia's institutions in order to meet the inclusion requirements. This is because this study is to measure internet gaming disorder among university students in Malaysia. The exclusion criteria are the Malaysian students who study overseas. The people who graduated were also excluded from filling in the questionnaires.

Procedures of Obtaining Consent

Participants in online surveys will receive the informed consent through Google Form. After viewing the participant information page, participants must agree with informed consent. before proceeding in answering the questions. Informed consent can let participants

understand that the information is kept and used for research purposes only. The participant

information sheet will let participants understand the topic of study conduct, the purposes,

confidentiality, willingness to participate and researcher's contact information. Participants

can contact researchers when they have questions to ask or face any issue while answering

the questions. In informed consent, they also stated clearly that participants might leave the

research at any time if they were uncomfortable with the questions being asked.

Data Collection Procedures

Online questionnaires have been shared on social media such as Facebook, Instagram,

WeChat and WhatsApp. This data collection method can ensure the safety of participants

while minimising the risk of facing people. This can reduce the risk of participants having

covid due to the Covid-19 pandemic. This online questionnaire consists of demographic,

Internet Gaming Disorder (IGD), Social Interaction Anxiety Scale (SIAS), Procrastination

Scale, and Rosenberg Self-esteem Scale. The demographic included participants' data such as

gender, year of study and name of university. The name and email of participants are not

required to remain anonymous.

Pilot Study

Pilot research was performed before the actual study to ensure that the study was

feasible. The data was obtained from 20 participants via Facebook, Instagram, WhatsApp,

and WeChat via an online survey using Google Form. After gathering the data, the researcher

examined it and evaluated the validity of the instrument. According to Keith (2017), the

instruments' Cronbach's alpha was higher than the desirable range of.70. The instruments or

questionnaires used in this study demonstrated excellent dependability result from the

reliability test (see Table 3.1).

Actual Study

As with the tools and forms used in the pilot study demonstrated Cronbach's alpha

range of.70, all items were kept in the final analysis. According to Keith (2017), a

dependability of.70 or higher was considered to be satisfactory for each scale or instrument.

As a result, the instruments used in the actual study were not changed. To reach the required

number of respondents, the online survey questionnaires were dispersed over several social

networking sites, including WhatsApp, Instagram, Facebook, and WeChat. 115 participants

were total recruited in actual study. Aside from that, all of the tools utilised in the actual

study displayed excellent Cronbach alphas (see Table 3.1).

Table 3. 1 Reliability of Instruments in Pilot Study (n=20) and Actual Study (n=115).

Variable	Number of Items	Cronbach's alpha Pilot Study	Cronbach's alpha Actual Study
SIAS	20	.89	.887
PS	20	.758	.824
RSES	10	.787	.711
IGDS9-SF	9	.711	.854

Note: SIAS = Social Interaction Anxiety Scale, PS = Procrastination Scale, RSES =

Rosenberg Self-esteem Scale and IGDS9-SF = Internet Gaming Disorder Scale – Short Form

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Instruments

The study's tools included the following: Internet Gaming Disorder (Pontes & Griffiths, 2015), Social Interaction Anxiety Scale (Turner et al., 1989), Procrastination (Lay, 1986), and Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Internet Gaming Disorder. This scale was created by Pontes & Griffiths in 2015. There are 9-item 5-point Likert scale with no reverse item and self-report instrument. This instrument was designed to measure students' internet gaming disorder. The scores were 1 = never to 5 = very often. The possible minimum score for participants is 9 and maximum score are 45. The higher the score of the scale, the more severe the participants' internet gaming disorder. This internet gaming disorder scale has an internal consistency coefficient Cronbach alpha of 0.82 (Arıcak et al., 2018).

Social Anxiety. This scale was created by Mattick in 1998. There are 20-item 4-point Likert scales with reverse scores for items 5, 9 and 11. This instrument was designed to measure students' social anxiety. The scores were 0 = not at all characteristic to 4 = extremely characteristic. The possible minimum score for participants is 0 and maximum score is 80. The higher the score of the scale, the severe the participants' social anxiety. This social interaction anxiety scale has reported Cronbach alpha are between 0.88 to 0.93 which means it is reliable (Heimberg et al., 1992).

Procrastination. This scale was created by Lay in 1986. This scale is a self-reported 5-point Likert scale with 20 items. The reverse score for Procrastination scale items is 3, 4, 6, 11, 13, 14, 15, 18 and 20. The Procrastination scale can be divided into five components which is good planning, postponing, rushing, efficient use of time, and inefficient use of time. The scores were 1 = extremely uncharacteristic to 5 = extremely characteristic. The possible minimum score for participants is 20 and maximum score is 100. The higher the score means

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

the higher procrastination. This procrastination scale has high internal consistency where the Cronbach alpha is 0.82.

      Self-Esteem. This scale was created by Rosenberg in 1965. There are 10-item 4-point Likert scales with reverse scores for items 5, 9 and 11. This instrument was designed to measure students' self-value, worth and overall opinion about oneself. The rate was "Strongly Agree", "Agree", "Disagree" and "Strongly Disagree". The possible minimum score for participants is 0 and maximum score is 80. The higher the score of the scale, the lower the participants' self-esteem. This self-esteem scale has Cronbach alpha between 0.83 to 0.91 (Tinakon & Nahathai, 2012).

Chapter 4

Results

Descriptive Statistics

Demographic Characteristics

      The demographic information about the study's respondents is shown in Table 4.1 below. Male respondents made up 35.1% of the sample (n = 39), while female respondents made up 64.9% (n = 72). The responders were all attending university. Most responders (n = 36) were from Universiti Tunku Abdul Rahman. Multimedia University, Universiti Utara Malaysia, Monash University Malaysia, Universiti Malaysia Pahang, Han Chiang University College of Communication, Tunku Abdul Rahman University of Management and Technology, Universiti Putra Malaysia, Universiti Sains Malaysia, Universiti Teknologi Malaysia, Universiti Teknologi MARA, International Islamic University Malaysia, and Open University were among the other universities represented among the participants in this study. Chinese made up the majority of the respondents (n = 64; 57.67%), followed by Malay (n = 32; 28.83%), Indian (n = 13; 11.71%), and other (n = 2; 1.8%). Participants include 13.51% from Year 1 (n=15), 27.93% from Year 2 (n=31), 38.74% from Year 3 (n=43), and 19.82% from Year 4 (n=22).

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Table 4. 1 Demographic Information of Participants (n=111).

	n	%
Gender		
Male	39	35.1%
Female	72	64.9%
Ethnic		
Chinese	64	57.66%
Malay	32	28.83%
Indian	13	11.71%
Other	2	1.80%
Year		
Year 1	15	13.51%
Year 2	31	29.93%
Year 3	43	38.74%
Year 4	22	19.82%

Note, n = number of cases; % = percentage

Descriptive Statistics of Topic-Specific Variables

The respondents' frequency distribution scores on social anxiety, procrastination, self-esteem and internet gaming disorder reported in Table 4.2. The mean score for each variable served as the cut-off point for categorising scores into low class and high class, where low score class is below mean and high score class is above mean (Mishra et al., 2019). The mean score for social anxiety was 42.63, with low levels of social anxiety being experienced by

55.86% of respondents (n = 62) and high levels of social anxiety being reported by 44.14% of

respondents (n = 49). The average score for procrastination was 60.78, with 54.05% of

respondents (n = 60) reporting low levels of procrastination and 45.95% reporting high levels

(n = 51). The mean score for self-esteem is 22.57; 49.55 percent of respondents (n=55)

reported having low self-esteem, while 50.45 percent of respondents (n=56) reported having

good self-esteem. The average score for internet gaming disorder was 16.90, with mild levels

of the condition present in 43.24% of respondents (n = 48) and high levels in 56.74% of

respondents (n = 63).

Table 4. 2 Frequency of Topic-Specific Characteristics (i.e, social Anxiety, Procrastination,

Self-esteem and Internet Gaming Disorder) (n=111)

	n	%	M	SD	Min	Max
Social Anxiety			42.63	12.26	10	68
Low (<xx)	62	55.86				
High (≥ xx)	49	44.14				
Procrastination			60.78	10.76	36	86
Low (<xx)	60	54.05				
High (≥ xx)	51	45.95				
Self-esteem			22.57	4.96	11	35
Low (<xx)	55	49.55				
High (≥ xx)	56	50.45				
Internet Gaming Disorder			16.90	7.82	0	32
Low (<xx)	48	43.24				
High (≥ xx)	63	56.757				

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Note. n = number of samples; % = percentage; M = mean; SD = standard deviation; Min = minimum value; Max = maximum value.

Data Diagnostic and Missing Data

Frequency and Percentages Missing Data

There were no missing data in this study after the completion of the missing data. There have been no unengaged responses. All 115 data were therefore legitimate, allowing for the continuation of the data analysis.

Methods for Addressing Missing Data

The MS Excel function was used to find the missing data. The function "countblank," for example, "=countblank(C2 to BM9)," was used to find the missing data. C2 to BM9 was the data for each instrument from row C2 to BM2. Additionally, the Google form can identify the missing data. To avoid missing data, participants can only move on to the next section after answering every question. The submissions that lacked certain information would be able to submit. Therefore, there was no missing data.

Criteria for Post Data-Collection Exclusion of Participants

According to Mishra et al. (2019), in order to impute missing data, there cannot be more than 20% of a case's data missing. Large standard errors and representative mistakes will be brought on by a high missing value, missing values of more than 20% will result in severe bias. Yet, the imputation did not occur and all cases with missing values were discarded.

The data that demonstrate disengaged reaction throughout the research are to be excluded based on the next exclusion criterion. The responses to the questions C2 to BM2

were used to analyse the unengaged responses using the equation "=STDEV.S(C2:BM2) to detect unengaged responses. The answer that received a score lower than .50 will be regarded as being inactive. (Gyasi et al., 2017).

In addition, the outliers will be breaching the data's normality. The boxplot method of JASP 0.16.4.0 will be utilised to find the outliers. Through JASP, several outliers were discovered. By examining the data for kurtosis, skewness, and Shapiro Wilk in order to remove any information that might have an impact on normality.

Criteria for Imputation of Missing Data

The responses were discarded as part of the data exclusion process after the data collection. The results' dependability and accuracy will be cherished, thus responses with less than 80% of completeness will be eliminated primarily for this reason. As a result, data having over 20% of missing data will be subject to the action of withdrawing cases (Gyasi et al., 2017). All of the missing ordinal level values were imputed using their median, which was the method used for the restoration of missing data. There was no missing data in the current study, hence no restoration of missing data was done.

Analyses of Data Distributions

Normality of Variables. For all the variables, which included social anxiety, procrastination, self-esteem, and internet gaming disorder, skewness, kurtosis, Shapiro-Wilk, and boxplot were the normality tests used in this study. In the current study, the outliers that were discovered using skewness, kurtosis, and boxplot were removed.

Skewness and Kurtosis. Skewness and kurtosis were two methods that were employed to assess the normality of the data. Checking for outliers in the data set was another advantage of using the skewness and kurtosis method. Skewness and kurtosis had a standard score for data normalcy that did not exceed ±2.00. According to Table 4.3, the skewness of social anxiety, procrastination, self-esteem, and internet gaming disorder were 0.012, 0.348, 0.103 and -0.373. social anxiety, procrastination, self-esteem and internet gaming disorder all had -0.201, -0.220, 0.014 and -0.417 kurtosis. The majority of the factors were positively skewed, with the exception of internet gaming disorder.

Table 4. 3 Skewness, Kurtosis and Shapiro Wilk

	Skewness	Kurtosis	Shapiro Wilk
Social anxiety	0.012	-0.201	0.158
Procrastination	0.348	-0.220	0.045
Self-esteem	0.103	0.014	0.561
Internet gaming disorder	-0.373	-0.417	0.027

Boxplot and Outliers. The boxplot showed that all of the variables contained outliers (Appendix B). Three cases (Case 110, 111 and 99) were an outlier in social anxiety, two cases (Cases 110 and 113) were outliers in procrastination, and no outlier for self-esteem and internet gaming disorder. To assure the study's accuracy, outliers were removed from the study.

Data Analysis

H_1 **: There is a positive relationship between social anxiety and internet gaming disorder among university students.**

The Shapiro-Wilk test for internet gaming disorder has a *p*-value of .027, or less than.05, therefore the assumption of Pearson Product-Moment Correlation is not met. Therefore, Spearman Correlation, a non-parametric test, was used.

The association between social anxiety and internet gaming disorder was examined using Spearman Correlation. According to the findings in Table 4.4, r (111) = .444, $p < .001$. This demonstrates that social anxiety and internet gaming problem have a strong positive association. The higher the social anxiety, the higher the internet gaming disorder. Therefore, H_1 is supported. The Guildford's Rule of Thumb showed that the strength of the relationship is a moderate relationship.

Table 4. 4 Correlation among Social Anxiety and Internet Gaming Disorder

Spearman's Correlations

Variable		SUM SIAS	SUM IGD
1. SUM SIAS	Spearman's rho	—	
	p-value	—	
2. SUM IGD	Spearman's rho	0.444	—

Spearman's Correlations

Variable	SUM SIAS	SUM IGD
p-value	< .001	—

Note. SUM SIAS = sum of Social Interaction Anxiety Scale; SUM IGD = sum of Internet Gaming Disorder.

H_2 : There is a positive relationship between procrastination and internet gaming disorder among university students.

The Shapiro-Wilk test for internet gaming disorder has a *p*-value of .027 and procrastination has a *p*-value of .045, or less than.05, therefore the assumption of Pearson Product-Moment Correlation is not met. Therefore, Spearman Correlation, a non-parametric test, was used.

The association between procrastination and internet gaming disorder was examined using Spearman Correlation. According to the findings in Table 4.5, $r(111) = .409, p < .001$. This demonstrates that procrastination and internet gaming problem have a strong positive association. The higher the procrastination, the higher the internet gaming disorder. Therefore, H_2 is supported. The Guildford's Rule of Thumb showed that the strength of the relationship is a moderate relationship.

Table 4. 5 Correlation among Procrastination and Internet Gaming Disorder

Spearman's Correlations

Variable	SUM PS	SUM IGD
1. SUM PS Spearman's rho	—	

Spearman's Correlations

Variable		SUM PS	SUM IGD
	p-value	—	
2. SUM IGD	Spearman's rho	0.409	—
	p-value	< .001	—

Note. SUM PS = sum of Procrastination Scale; SUM IGD = sum of Internet Gaming Disorder.

H_3 **: There is a negative relationship between self-esteem and internet gaming disorder among university students.**

The Shapiro-Wilk test for internet gaming disorder has a *p*-value of .027, or less than.05, therefore the assumption of Pearson Product-Moment Correlation is not met. Therefore, Spearman Correlation, a non-parametric test, was used.

The association between self-esteem and internet gaming disorder was examined using Spearman Correlation. According to the findings in Table 4.6, *r* (111) = - 0.412, *p* < .001. This demonstrates that self-esteem and internet gaming problem have a strong positive association. The lower the self-esteem, the higher the internet gaming disorder. Therefore, H_3 is supported. The Guildford's Rule of Thumb showed that the strength of the relationship is a moderate relationship.

Table 4. 6 Correlation among Self-esteem and Internet Gaming Disorder

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Spearman's Correlations

Variable		SUM RSES	SUM IGD
1. SUM RSES	Spearman's rho	—	
	p-value	—	
2. SUM IGD	Spearman's rho	-0.412	—
	p-value	< .001	—

Note. SUM RSES = sum of Rosenberg Self-esteem Scale; SUM IGD = sum of Internet Gaming Disorder.

H_4 : Male will have a higher amount of internet gaming disorder level than females among university students.

The Shapiro-Wilk test for internet gaming disorder has a *p*-value of .027, or less than.05, therefore the assumption of Independence Sample-*t* Test is not met. Therefore, Mann Whitney *U* test, a non-parametric test, was used.

The results showed that $W = 1557.000$, $p = .346$. Therefore, H_0 was failed to be rejected. The results of Mann-Whitney U-Test revealed that the male ($Median_{male} = 17.500$) is not statistically different from the internet gaming disorder level of female ($Median_{female} = 16.000$) at .05 level of significance. However, Rank-Biserial Correlation, r = .109 showed that there was a small to medium effect size (Cohen, 1988).

Table 4. 7 Relationship among Gender and Internet Gaming Disorder

Independent Samples T-Test

	W	df	p	Rank-Biserial Correlation	SE Rank-Biserial Correlation
SUM IGD	1557.000		0.346	0.109	0.115

Note. For the Mann-Whitney test, effect size is given by the rank biserial correlation.

Note. Mann-Whitney U test.

Assumption Checks

Test of Normality (Shapiro-Wilk)

		W	p
SUM IGD	Female	0.976	0.183
	Male	0.965	0.256

Note. Significant results suggest a deviation from normality.

Descriptives

Group Descriptives

	Group	N	Mean	SD	SE	Coefficient of variation
SUM IGD	Female	72	17.458	7.487	0.882	0.429
	Male	39	15.872	8.405	1.346	0.530

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Chapter 5

Discussion and conclusion

Discussion

The purpose of the current study was to look at the relationships between social anxiety, procrastination, self-esteem and internet gaming disorder. Additionally, this study looked at the difference of gender in internet gaming disorder.

Social anxiety and internet gaming disorder

The finding indicated that H_1 which is social anxiety and internet gaming disorder had a significant and positive relationship was consistent with current studies (Gioia et al., 2022; Starcevic et al., 2020; Wei et al., 2012). Therefore, H_1 was accepted. Some important scientific results confirm those who experience social anxiety at a high degree are more likely to have a high level of internet gaming disorder.

The internet enables people with social anxiety to engage in anonymous contacts that they feel are secure in (Prizant et al., 2016). They may feel more at ease online because of how much significance they place on these nonverbal clues (Prizant et al., 2016). These internet usage patterns differ in ways that are important to those with social anxiety. Online games do not expose players to visual, do not ask them to use their social skills, and allow players to remain anonymous (Ciarrochi et al., 2016). In lack of a committed relationship, games enable connection with complete strangers. The limited social engagement necessary in gaming and the aspects of the interaction that socially anxious people see as "safe" may be the causes of the positive correlation between gaming and social anxiety (Ciarrochi et al., 2016).

According to Gioia et al. (2022), the findings imply that people with social anxiety may be marginally more prone to pathological internet use. It may be argued that those with social anxiety prefer online conversations and gaming because they feel more at ease there. As people got older, a greater connection existed between social anxiety and and online social comfort, time spent online, and problematic internet use (Gioia et al., 2022). Therefore, social anxiety is linked closely to internet gaming disorder.

According to CBT, individual used gaming to satisfy several of their escapisms need (Dong & Potenza, 2014). Internet gaming functions as effective substitutes for individual and facilitated interaction, supplying choices or replacements for areas of an individual's environment that are not as accomplished. According to Young & Brand (2017), the addiction to the internet gaming, anxiety, recklessness, and social withdrawal all decreased more in the CBT group. Among patients in the CBT group who made progress, internet gaming disorder, attentiveness, recklessness, social withdrawal, sadness, anxiety, and family cohesiveness saw the biggest gains. This is in line with the study which CBT will help in social anxiety and internet gaming disorder.

Procrastination and internet gaming disorder

The finding indicated that H_2 which is procrastination and internet gaming disorder had a significant and positive relationship was consistent with current studies (Tokel., 2014; Nordby et al., 2019; Yeh et al., 2017; Loehlin & Martin, 2014; Sung et al., 2014). Therefore, H_2 was accepted. Some important scientific results confirm those who experience procrastination at a high degree are more likely to have a high level of internet gaming disorder.

Short-term rewards are frequently preferred over long-term ones by procrastinators, which is a key indicator of their weak self-control (Loehlin & Martin, 2014). Despite the fact that the delayed action may negatively impact expectations, they choose to postpone an intended activity (Yen et al., 2017). Additionally, they choose to start with more enjoyable work rather than work that would pay off later. In modern society, internet gaming is accessible, convenient, and popular (Yen et al., 2017).

When young adults with procrastination have a choice between work activities and internet games, if the reward of the job assignment is unknown and delayed, they may pick the activity that has a predictable payoff quickly, such as internet gaming (Loehlin & Martin, 2014). Real-world tasks are frequently uncertain and delayed in today's culture. Procrastinators may develop an immediate reward and pleasure response from their procrastinating behaviour if they play online games on a regular basis (Yen et al., 2017). Procrastinators may be more sensitive to IGD as a result of this vicious cycle.

Internet gaming occupied the majority of the time of young adults with IGD. They can put off completing their everyday tasks as a result of their excessive use (Demir & Kutlu, 2018). One defining IGD symptom is escape (American Psychiatric Association, 2013). When these young adults encounter problems with their regular employment tasks, they might escape into internet gaming. Procrastinating conduct could be a manifestation of this habit (Demir & Kutlu, 2018).

It's common for procrastinators to repeatedly put off important tasks in daily life, and for those who are addicted to the internet, excessive internet gaming can exacerbate this problem (Yeh et al., 2017). The incentive for self-regulation may be influenced by expectation, value, latency sensitivity, and delay itself (Yeh et al., 2017). Increasing one's expectation of success is one strategy for reducing procrastination for a particular task (Yeh

et al., 2017). Hence, we can see that procrastination is linked closely to internet gaming disorder.

According to Lindenberg et al. (2022), gaming disorder and other forms of nonspecific internet use have been linked to these coexisting psychopathologies and problematic behaviours such as procrastination can be prevented by using CBT. People with procrastination escape the work by engaging into the gaming world. This shows that procrastination and internet gaming disorder can be explained using CBT.

Self-esteem and internet gaming disorder

The finding indicated that H_3 which is self-esteem and internet gaming disorder had a significant and negative relationship was consistent with current studies (Bozoglan et al., 2013; Johansen et al., 2013; Seabra et al., 2017; Park et al., 2014). Therefore, H_3 was accepted. Some important scientific results confirm those who experience self-esteem at a lower degree are more likely to have a high level of internet gaming disorder.

Social contacts and desire for online social interactions are hypothesised to be mediated by self-esteem discovered that among a sample of Turkish university students aged 18 to 24, low self-esteem was linked to internet gaming disorder (Hyun et al., 2015). According to a study by Seabra et al. (2017), those who are heavy users of multiplayer online role-playing games have low self-confidence. Strong self-esteem is recognised to be a barrier against internet gaming disorder as well as drug and alcohol addiction. There have also been reports linking internet addiction and online game addiction to lower levels of self-esteem.

This research has shown that psychiatric illnesses, personality features, and self-esteem are linked to internet gaming addiction (Seabra et al., 2017). Self-esteem has been associated with problematic internet usage and internet use in some other studies. The study

on self-esteem and internet use also includes studies on the connection between adolescents' use of social networking sites and self-esteem (Wang, 2019).

According to these studies, teenagers who lack self-esteem are more likely to play video games than their more confident peers (Hyun et al., 2015). The researcher claims that because it enables users to adopt a distinct personality and social identity, it improves their mood (Wang, 2019). In other words, these users find a lot of fulfillments in using gaming. As can be seen, people with poor self-esteem may think of gaming as a way to make up for their flaws; therefore, increased gaming may develop into a dependency (Bahrainian et al., 2014).

According to Pakpour et al. (2022), mood swings, loneliness, sleep issues, behavioural issues, depression, low self-esteem, and increased violence are all potential effects of IGD. Some focused areas of CBT for Internet Gaming Disorder may include stimuli regulation and learning and putting into practice healthy coping mechanisms while craving due to the behavioural similarities between persons with IGD and those who suffer substance use and gambling problems. This can help people with low self-esteem to regulate their thought.

Gender and internet gaming disorder

The finding indicated that H_4 which is gender and internet gaming disorder had no significant differences was inconsistent with previous studies (Griffiths et al., 2018; Stavropoulos et al., 2019; Wang et al., 2019) in which male is higher than female in internet gaming disorder. Therefore, H_4 was rejected. However, it is consistent with other studies (Malik et al., 2015; Fernandez et al., 2015). The researchers mention that there was no difference regarding gender in internet gaming disorder which is consistent with the result in current study. It can be seen that with the variables social anxiety, procrastination and social

anxiety, participants will have risk in having internet gaming disorder disregarding gender difference.

Implication

Theoretical implication

The current findings have been added to the Cognitive Behavioural Theory, which describes how university students in Malaysia with factors like social anxiety, procrastination, self-esteem and internet gaming disorder are interrelated. Based on the studies, social anxiety, procrastination and self-esteem have a significant relationship with internet gaming disorder. As a result, the findings and analysis of the current study supported the studies hypothesis and showed that it is still reliable and applicable to research in Malaysia. This is in line with Beck (2011) Cognitive Behavioural Theory which explains that a person's thoughts affect the behaviour. Social anxiety, procrastination and low self-esteem contains thoughts that students would like to avoid from the real world. Therefore, they would tend to use internet gaming to help them as an avoidance behaviour.

This means lowering students' social anxiety, procrastination and increasing their self-esteem can help students in lowering their level of internet gaming disorder. In order to develop a more thorough understanding, the current study recommended that future research investigate or take into account the variables social anxiety, procrastination and low self-esteem in other addictions such as social media addiction and gambling addiction.

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Practical Implication

The current study offers university students a useful framework to identify the key elements impacting internet gaming disorder. This means that by enhancing their skills on dealing with social anxiety, procrastination and low self-esteem will help students reduce their internet gaming addiction. Additionally, students are able to efficiently and be aware of causes that contribute to internet gaming disorder. By doing this, university students' can be more aware about it and pay more attention to it, which will be advantageous to the students.

Additionally, counsellors can benefit from this study, especially those working with university students that are at a high risk of developing internet gaming disorder. First, the findings indicated that social anxiety are crucial for causing internet gaming disorder (Gioia et al., 2022; Yeh et al., 2017; Park et al., 2014).

University students could benefit from a counsellor's help in establishing their skills and overcoming internet gaming disorder. Additionally, this study found that thoughts were adversely connected with behaviour. Students with avoidant thoughts can benefit from cognitive behavioural therapy which can be helped by a counsellor. The purpose of cognitive behavioural therapy is helping a person identify and modify his thoughts to change the behaviour.

Limitations

A total of 59 items in the current survey questionnaire may have an impact on how accurate the results are. Due to the time commitment, participants could feel pressure to respond to every question in order to finish the survey. This indicates that a long survey questionnaire may make respondents impatient and uninterested in responding. The social

interaction anxiety scale and procrastination scale has 20 questions each that participants encountered survey fatigue when they need to answer other questions behind.

In addition, the strategy used in the current study to collect participants contains weaknesses. Data collection method used is through WeChat, WhatsApp, Instagram and Facebook. Researchers get restricted in collecting data from participants. The participants were mostly gathered at a few universities and researchers did not get participants from many other universities. Hence the data would not be accurate to represent the population of university students in Malaysia. Wider spread of questionnaires is needed to make sure the data collected is able to represent the population.

Last but not least, all of the questionnaires utilised in the current study were self-reported online surveys, which may cause response bias. The validity and reliability of the self-reported data may be in doubt because respondents may fear of societal judgement. Participants might be influenced by wanting to show good looking results. Hence, they might fill in the questionnaires with concealment which will affect the accuracy of the data.

Recommendation for future study

The first recommendation is to expand the sample size in order to improve the validity and reliability of the findings. The sample size is a crucial element that has an impact on the data's trustworthiness (Faber & Fonseca, 2014). As a result of the participants' responses to the questions, some of the findings may have been impacted by social expectations. With a total of 111 samples, the current study had a medium effect size after excluding outliers and invalid samples. The current sample technique may limit the data's capacity to be generalized to Malaysian university students as a whole. Therefore, given that the population of interest is vast, future researchers might think about increasing the sample size.

The second recommendation is that the frequency of letting participants answer can be increased. Future researchers can consider using longitudinal research because it can show differences over a lengthy period of time (Kumar, 2014). For example, the questionnaire can be filled during start of the semester, before the final exam and during semester break. This is to make sure the results of variables are not due to stress or other. It can also provide insight about the severity level of social anxiety, procrastination, self-esteem and internet gaming disorder over different period of time.

The third recommendation is that future researchers can conduct a qualitative study on internet gaming disorder. During a qualitative content analysis, the results are presented in phrases and concepts, allowing for some interpretation of the data. Researchers will select an analytic method depending on how extensively the researcher intends to include the informants' perspectives into the study. The selection of analysis technique depends on how thoroughly the researcher wants to include the informants' views into the study (Bengtsson, 2016). This can let viewers to better understand internet gaming disorder in more depth.

References

Al Asqah, M. I., Al Orainey, A. I., Shukr, M. A., Al Oraini, H. M., & Al Turki, Y. A. (2020).

The prevalence of internet gaming disorder among medical students at King Saud

University, Riyadh, Saudi Arabia: A cross-sectional study. *Saudi Medical Journal*,

41(12), 1359. doi: 10.15537/smj.2020.12.05584

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental

disorders (5th ed.). Washington, DC: Author.

Arıcak, O. T., Dinç, M., Yay, M., & Griffiths, M. D. (2018). Adapting the short form of the

internet gaming disorder scale into Turkish: Validity and reliability. *Addicta: The

Turkish Journal on Addictions*.

Ayas, T., & Horzum, M. (2013). Relation between depression, loneliness, self-esteem and

internet addiction. *Education*, *133*(3), 283-290.

Bahrainian, S. A., Alizadeh, K. H., Raeisoon, M. R., Gorji, O. H., & Khazaee, A. (2014).

Relationship of Internet addiction with self-esteem and depression in university

students. *Journal of preventive medicine and hygiene*, *55*(3), 86.

Barlińska, J., Szuster, A., & Winiewski, M. (2015). The role of short-and long-term cognitive

empathy activation in preventing cyberbystander reinforcing cyberbullying behavior.

Cyberpsychology, Behavior, and Social Networking, *18*(4), 241-244.

Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis.

NursingPlus open, *2*, 8-14.

Blascovich, J., Tomaka, J., Robinson, J. P., Shaver, P. R., & Wrightsman, L. S. (1991).

Measures of self-esteem. *Measures of personality and social psychological attitudes*,

1, 115-160.

Branden, N. (2021). *The power of self-esteem*. Health Communications, Inc..

Brook, C. A., & Willoughby, T. (2015). The social ties that bind: Social anxiety and

academic achievement across the university years. *Journal of Youth and Adolescence*,

44(5), 1139-1152.

Cast, A. D., & Burke, P. J. (2002). A theory of self-esteem. *Social forces*, *80*(3), 1041-1068.

Chia, D. X., Ng, C. W., Kandasami, G., Seow, M. Y., Choo, C. C., Chew, P. K., ... & Zhang,

M. W. (2020). Prevalence of internet addiction and gaming disorders in Southeast

Asia: A meta-analysis. *International journal of environmental research and public*

health, *17*(7), 2582.

Chiu, S. I., Hong, F. Y., & Chiu, S. L. (2013). An analysis on the correlation and gender

difference between college students' Internet addiction and mobile phone addiction in

Taiwan. *International scholarly research notices*, *2013*.

Ciarrochi, J., Parker, P., Sahdra, B., Marshall, S., Jackson, C., Gloster, A. T., & Heaven, P.

(2016). The development of compulsive internet use and mental health: A four-year

study of adolescence. *Developmental psychology*, *52*(2), 272.

Curran, J., Fenton, N., & Freedman, D. (2016). *Misunderstanding the internet*. Routledge.

Demir, Y., & Kutlu, M. (2018). Relationships among Internet addiction, academic

motivation, academic procrastination and school attachment in adolescents.

International Online Journal of Educational Sciences, *10*(5). DOI:

https://doi.org/10.15345/iojes.2018.05.020.

Dong, G., & Potenza, M. N. (2014). A cognitive-behavioral model of Internet gaming

disorder: Theoretical underpinnings and clinical implications. *Journal of psychiatric*

research, *58*, 7-11.

Dong, G., Wang, L., Du, X., & Potenza, M. N. (2018). Gender-related differences in neural responses to gaming cues before and after gaming: implications for gender-specific vulnerabilities to Internet gaming disorder. *Social cognitive and affective neuroscience*, *13*(11), 1203-1214. https://doi.org/10.1093/scan/nsy084

Eerde, W., & Klingsieck, K. B. (2018). Overcoming procrastination? A meta-analysis of intervention studies. Educational Research Review, 25, 73-85.

Fioravanti, G., Dèttore, D., & Casale, S. (2012). Adolescent Internet addiction: testing the association between self-esteem, the perception of Internet attributes, and preference for online social interactions. *Cyberpsychology, Behavior, and Social Networking*, *15*(6), 318-323. DOI: 10.1089/cyber.2011.0358

Gentile, D. A., Bailey, K., Bavelier, D., Brockmyer, J. F., Cash, H., Coyne, S. M., ... & Young, K. (2017). Internet gaming disorder in children and adolescents. *Pediatrics*, *140*(Supplement_2), S81-S85.

Gioia, F., Colella, G. M., & Boursier, V. (2022). Evidence on Problematic Online Gaming and Social Anxiety over the Past Ten Years: a Systematic Literature Review. *Current Addiction Reports*, 1-16.

Goroshit, M. (2018). Academic procrastination and academic performance: An initial basis for intervention. Journal of prevention & intervention in the community, 46(2), 131-142.

Greenier, K. D., Kernis, M. H. and Waschull, S. B. (1995). Not all high (or low) self-esteem people are the same: Theory and research on stability of self-esteem. In M. H. Kernis (Ed.), Efficacy, agency, and self-esteem (pp. 51-71). New York: Springer.

Griffiths, M. D. (2018). Conceptual issues concerning internet addiction and internet gaming disorder: Further critique on Ryding and Kaye (2017). *International journal of mental health and addiction*, *16*(1), 233-239.

Han, J., Seo, Y., Hwang, H., Kim, S. M., & Han, D. H. (2020). Efficacy of cognitive behavioural therapy for internet gaming disorder. *Clinical psychology & psychotherapy*, *27*(2), 203-213.

Heinrichs, N., Rapee, R., Alden, L. A., Bögels, S., Hofmann, S. G., Oh, K. J., & Sakano, Y. (2006). Cultural differences in perceived social norms and social anxiety. Behaviour Research and Therapy, 44, 1187–1197. http://doi.org/fj47j8

Hofmann, S. G., Asnaani, A., & Hinton, D. E. (2010). Cultural aspects in social anxiety and social anxiety disorder. Depression and Anxiety, 27, 1117–1127. http://doi.org/br9ttn

Hyun, G. J., Han, D. H., Lee, Y. S., Kang, K. D., Yoo, S. K., Chung, U. S., & Renshaw, P. F. (2015). Risk factors associated with online game addiction: A hierarchical model. *Computers in human behavior*, *48*, 706-713. https://doi.org/10.1016/j.chb.2015.02.008

Khan, M. A., Shabbir, F., & Rajput, T. A. (2017). Effect of gender and physical activity on internet addiction in medical students. *Pakistan journal of medical sciences*, *33*(1), 191.

King, D. L., & Delfabbro, P. H. (2016). The cognitive psychopathology of Internet gaming disorder in adolescence. *Journal of abnormal child psychology*, *44*(8), 1635-1645.

King, D. L., Delfabbro, P. H., Zwaans, T., & Kaptsis, D. (2013). Clinical features and axis I comorbidity of Australian adolescent pathological Internet and video game users.

Australian & New Zealand Journal of Psychiatry, *47*(11), 1058-1067. DOI:
10.1177/0004867413491159

Király, O., Griffiths, M. D., & Demetrovics, Z. (2015). Internet gaming disorder and the
DSM-5: Conceptualization, debates, and controversies. *Current Addiction Reports*,
2(3), 254-262.

Király, O., Potenza, M. N., Stein, D. J., King, D. L., Hodgins, D. C., Saunders, J. B., ... &
Demetrovics, Z. (2020). Preventing problematic internet use during the COVID-19
pandemic: Consensus guidance. *Comprehensive psychiatry*, *100*, 152180.

Ko, C. H. (2014). Internet gaming disorder. *Current Addiction Reports*, *1*(3), 177-185.

Kumar, R. (2014). Research methodology: A step-by-step guide for beginners. SAGE.

Lee, B. W., & Leeson, P. R. (2015). Online gaming in the context of social anxiety.
Psychology of Addictive Behaviors, *29*(2), 473.

Lee, B. W., & Stapinski, L. A. (2012). Seeking safety on the internet: Relationship between
social anxiety and problematic internet use. *Journal of anxiety disorders*, *26*(1), 197-
205. https://doi.org/10.1016/j.janxdis.2011.11.001

Lemmens, J. S., Valkenburg, P. M., & Gentile, D. A. (2015). The Internet gaming disorder
scale. *Psychological assessment*, *27*(2), 567. http://dx.doi.org/10.1037/pas0000062

Lindenberg, K., Kindt, S., & Szász-Janocha, C. (2022). Effectiveness of Cognitive
Behavioral Therapy–Based Intervention in Preventing Gaming Disorder and
Unspecified Internet Use Disorder in Adolescents: A Cluster Randomized Clinical
Trial. *JAMA network open*, *5*(2), e2148995-e2148995.

Loehlin, J. C., & Martin, N. G. (2014). The genetic correlation between procrastination and

impulsivity. *Twin Research and Human Genetics*, *17*(6), 512-515.

doi:10.1017/thg.2014.60

Marino, C., Canale, N., Vieno, A., Caselli, G., Scacchi, L., & Spada, M. M. (2020). Social

anxiety and Internet gaming disorder: The role of motives and metacognitions.

Journal of Behavioral Addictions, *9*(3), 617-628.

Mattick, R. P., & Clarke, J. C. (1998). Development and validation of measures of social

phobia scrutiny fear and social interaction anxiety. Behaviour Research and Therapy,

36(4), 455-470.

Mihara, S., & Higuchi, S. (2017). Cross-sectional and longitudinal epidemiological studies of

I nternet gaming disorder: A systematic review of the literature. *Psychiatry and

clinical neurosciences*, *71*(7), 425-444.

Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive

statistics and normality tests for statistical data. Annals of cardiac anaesthesia, 22(1),

67.

Mitchell, M., MacInnes, D., & Morrison, I. (2008). Student wellbeing study. Christ Church,

New Zealand: The Department for Innovation, Canterbury Christ Church University.

Morrison, A. S., & Heimberg, R. G. (2013). Social anxiety and social anxiety disorder.

Annual review of clinical psychology, *9*, 249-274.

Murphy, C. M., Stosny, S. and Morrel, T. M. (2005). Change in self-esteem and physical

aggression during treatment for partner violent men. Journal of Family Violence, 20,

201-210.

Nie, N. H., & Erbring, L. (2002). Internet and society: A preliminary report. *IT & society*, *1*(1), 275-283.

Nordby, K., Løkken, R. A., & Pfuhl, G. (2019). Playing a video game is more than mere procrastination. *BMC psychology*, *7*(1), 1-12.

Oka, T., Hamamura, T., Miyake, Y., Kobayashi, N., Honjo, M., Kawato, M., ... & Chiba, T. (2021). Prevalence and risk factors of internet gaming disorder and problematic internet use before and during the COVID-19 pandemic: A large online survey of Japanese adults. *Journal of Psychiatric Research*, *142*, 218-225.

Pakpour, A. H., Fazeli, S., Zeidi, I. M., Alimoradi, Z., Georgsson, M., Brostrom, A., & Potenza, M. N. (2022). Effectiveness of a mobile app-based educational intervention to treat internet gaming disorder among Iranian adolescents: study protocol for a randomized controlled trial. *Trials*, *23*(1), 1-13.

Prizant-Passal, S., Shechner, T., & Aderka, I. M. (2016). Social anxiety and internet use–A meta-analysis: What do we know? What are we missing?. *Computers in Human Behavior*, *62*, 221-229. https://doi.org/10.1016/j.chb.2016.04.003

Rodebaugh, T. L., Holaway, R. M., & Heimberg, R. G. (2004). The treatment of social anxiety disorder. *Clinical Psychology Review*, *24*(7), 883-908.

Rosário, P., Costa, M., Núñez, J. C., González-Pienda, J., Solano, P., & Valle, A. (2009). Academic procrastination: Associations with personal, school, and family variables. The Spanish journal of psychology, 12(1), 118-127.

Rosenberg, M. (1965). Society and the adolescent self- image. Princeton, NJ: Princeton University Press.

Rosenberg, M. (1987). Rosenberg Self-esteem Scale. In K. Corcoran and J. Fischer (Eds.), Measures for clinical practice (pp. 408-409). New York: Free Press.

Rosenberg, M., Schooler, C., Schoenbach, C., & Rosenberg, F. (1995). Global self-esteem and specific self-esteem: Different concepts, different outcomes. *American sociological review*, 141-156.

Satghare, P., Abdin, E., Vaingankar, J. A., Chua, B. Y., Pang, S., Picco, L., ... & Subramaniam, M. (2016). Prevalence of sleep problems among those with Internet gaming disorder in Singapore. *ASEAN Journal of Psychiatry*, *17*(2), 1-11.

Seabra, L., Loureiro, M., Pereira, H., Monteiro, S., Marina Afonso, R., & Esgalhado, G. (2017). Relationship between Internet addiction and self-esteem: Cross-cultural study in Portugal and Brazil. *Interacting with computers*, *29*(5), 767-778.

Sedgwick, P. (2013). Convenience sampling. Bmj, 347.

Sevelko, K., Bischof, G., Bischof, A., Besser, B., John, U., Meyer, C., & Rumpf, H. J. (2018). The role of self-esteem in Internet addiction within the context of comorbid mental disorders: Findings from a general population-based sample. *Journal of behavioral addictions*, *7*(4), 976-984.

Shao, Y. J., Zheng, T., Wang, Y. Q., Liu, L., Chen, Y., & Yao, Y. S. (2018). Internet addiction detection rate among college students in the People's Republic of China: a meta-analysis. *Child and Adolescent Psychiatry and Mental Health*, *12*(1), 1-10.

Shek, D. T., & Yu, L. (2016). Adolescent internet addiction in Hong Kong: prevalence, change, and correlates. *Journal of pediatric and adolescent gynecology*, *29*(1), S22-S30.

Starcevic, V., Choi, T. Y., Kim, T. H., Yoo, S. K., Bae, S., Choi, B. S., & Han, D. H. (2020).

 Internet gaming disorder and gaming disorder in the context of seeking and not

 seeking treatment for video-gaming. *Journal of Psychiatric Research*, *129*, 31-39.

Stavropoulos, V., Adams, B. L., Beard, C. L., Dumble, E., Trawley, S., Gomez, R., & Pontes,

 H. M. (2019). Associations between attention deficit hyperactivity and internet

 gaming disorder symptoms: Is there consistency across types of symptoms, gender

 and countries?. *Addictive Behaviors Reports*, *9*, 100158.

Stevens, M. W., Dorstyn, D., Delfabbro, P. H., & King, D. L. (2021). Global prevalence of

 gaming disorder: A systematic review and meta-analysis. *Australian & New Zealand

 Journal of Psychiatry*, *55*(6), 553-568. https://doi.org/10.1177/0004867420962851

Su, W., Han, X., Yu, H., Wu, Y., & Potenza, M. N. (2020). Do men become addicted to

 internet gaming and women to social media? A meta-analysis examining gender-

 related differences in specific internet addiction. *Computers in Human Behavior*, *113*,

 106480.

Sung, M., Shin, Y. M., & Cho, S. M. (2014). Factor structure of the Internet Addiction Scale

 and its associations with psychiatric symptoms for Korean adolescents. *Community

 Mental Health Journal*, *50*(5), 612-618.

Teng, Z., Pontes, H. M., Nie, Q., Griffiths, M. D., & Guo, C. (2021). Depression and anxiety

 symptoms associated with internet gaming disorder before and during the COVID-19

 pandemic: A longitudinal study. *Journal of Behavioral Addictions*, *10*(1), 169-180.)

Tinakon, W., & Nahathai, W. (2012). A comparison of reliability and construct validity

 between the original and revised versions of the Rosenberg Self-Esteem Scale.

 Psychiatry investigation, *9*(1), 54.

Tokel, S. T. (2014). Exploring Internet addiction academic procrastination and general

    procrastination among Pre-Service ICT teachers.

Tongco, M. D. C. (2011). Purposive sampling as a tool for informant selection. *Ethnobotany*

    Research and applications, *5*, 147-158.

Wang, J. L., Sheng, J. R., & Wang, H. Z. (2019). The association between mobile game

    addiction and depression, social anxiety, and loneliness. *Frontiers in public health*,

    247.

Wang, Q., Ren, H., Long, J., Liu, Y., & Liu, T. (2019). Research progress and debates on

    gaming disorder. *General psychiatry*, *32*(3).

Wang, Y. and Ollendick, T. H. (2011). A cross-cultural and developmental analysis of self-

    esteem in Chinese and Western children. Clinical Child and Family Psychology

    Review, 4, 253-271.

Wartberg, L., Kriston, L., Zieglmeier, M., Lincoln, T., & Kammerl, R. (2019). A longitudinal

    study on psychosocial causes and consequences of Internet gaming disorder in

    adolescence. *Psychological medicine*, *49*(2), 287-294.

Wei, H. T., Chen, M. H., Huang, P. C. &Bai YM. (2012.) The association between online

    gaming, social phobia, and depression: an internet survey. *BMC Psychiatry*, *12*, 92.

Ye, S., Cheng, H., Zhai, Z., & Liu, H. (2021). Relationship Between Social Anxiety and

    Internet Addiction in Chinese College Students Controlling for the Effects of Physical

    Exercise, Demographic and Academic Variables. *Frontiers in Psychology*, *12*, 3260.

Yeh, Y. C., Wang, P. W., Huang, M. F., Lin, P. C., Chen, C. S., & Ko, C. H. (2017). The

    procrastination of internet gaming disorder in young adults: The clinical severity.

    Psychiatry Research, *254*, 258-262. https://doi.org/10.1016/j.psychres.2017.04.055
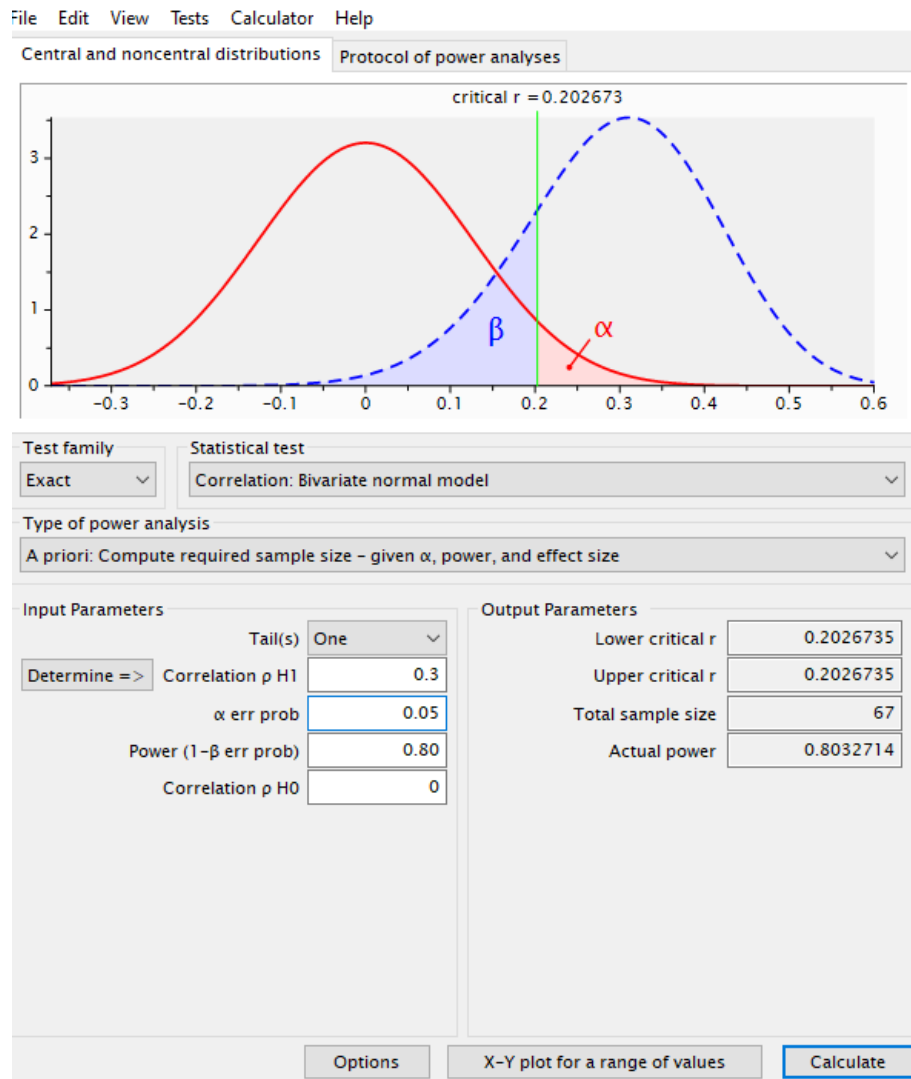
INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Yen, J. Y., Liu, T. L., Wang, P. W., Chen, C. S., Yen, C. F., & Ko, C. H. (2017). Association

between Internet gaming disorder and adult attention deficit and hyperactivity

disorder and their correlates: Impulsivity and hostility. *Addictive behaviors*, *64*, 308-

313. https://doi.org/10.1016/j.addbeh.2016.04.024

Young, K. S., & Brand, M. (2017). Merging theoretical models and therapy approaches in the

context of Internet gaming disorder: A personal perspective. *Frontiers in psychology*,

8, 1853

Appendixes

Appendix A

Sample Size Calculation

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS
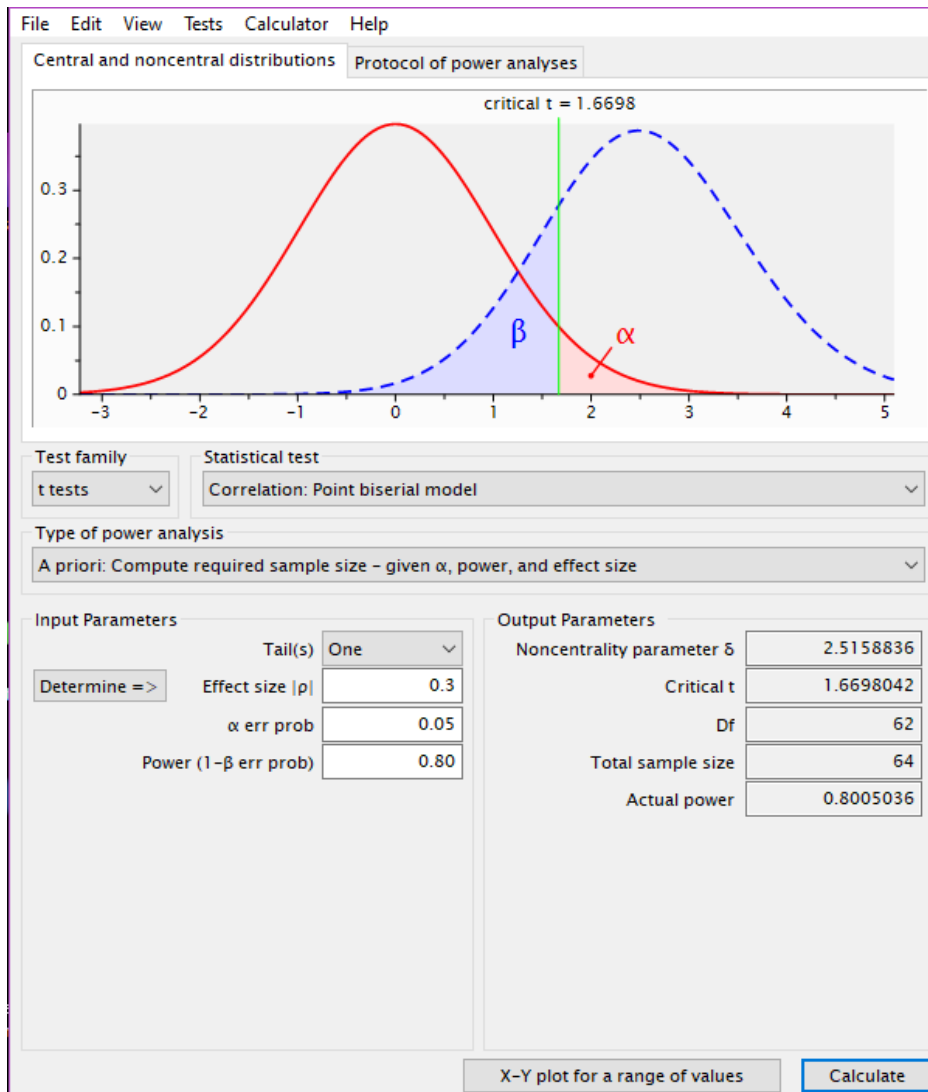
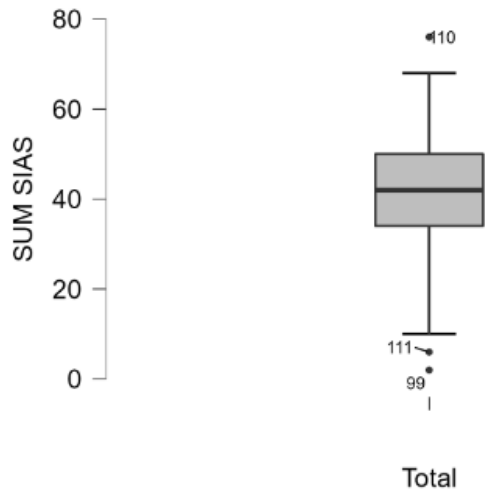INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Appendix B

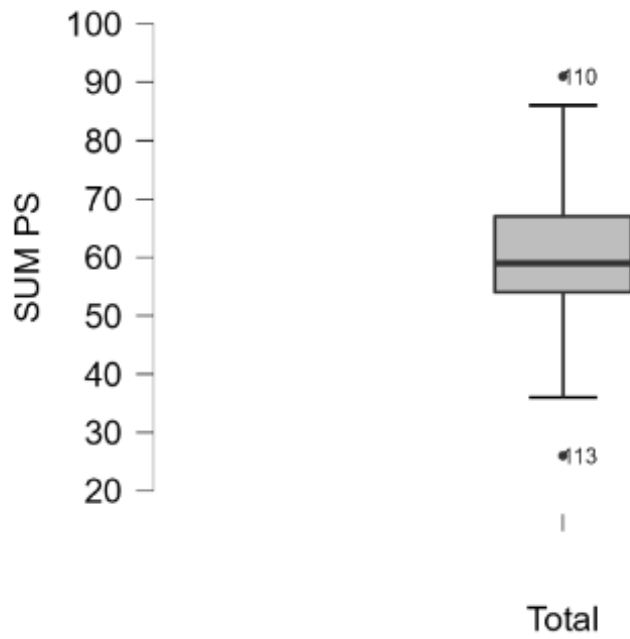Boxplot for Each Distributions with Outliers

Social Anxiety

Procrastination

Boxplots

SUM PS

Total

Self-esteem

Total
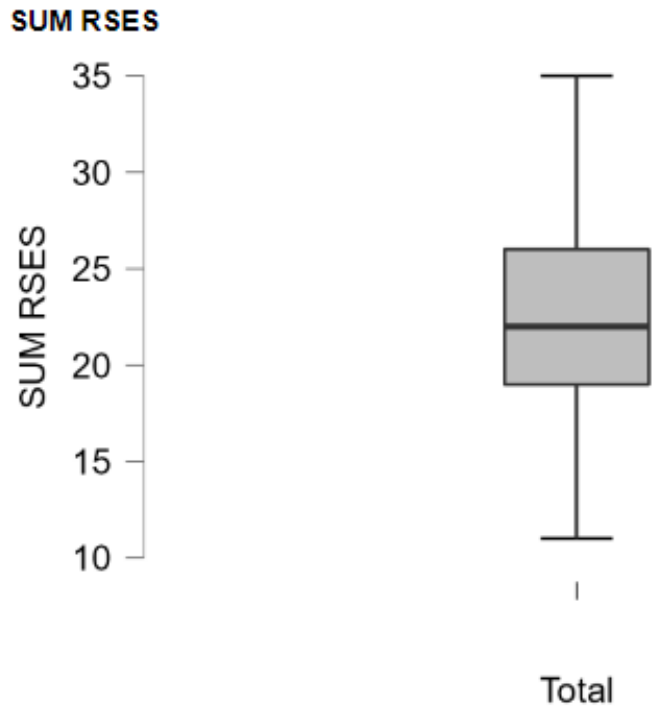
INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Internet Gaming Addiction

Total
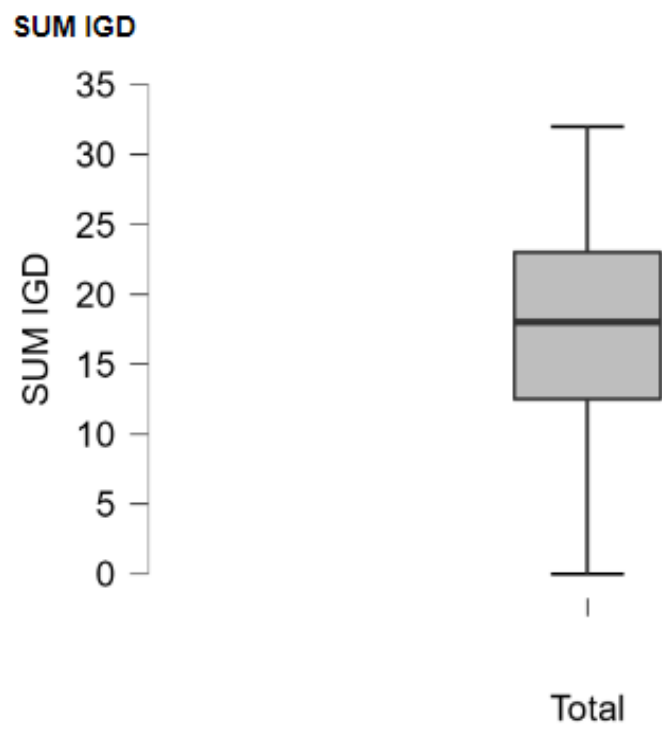
INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Appendix C

Descriptive Statistics

Social Interaction Anxiety Scale

Descriptive Statistics

	SUM SIAS
Valid	111
Missing	0
Mode	42.000
Median	42.000
Mean	42.631
Std. Deviation	12.259
Skewness	0.012
Std. Error of Skewness	0.229
Kurtosis	-0.201
Std. Error of Kurtosis	0.455
Shapiro-Wilk	0.983
P-value of Shapiro-Wilk	0.158
Minimum	10.000
Maximum	68.000
Sum	4732.000

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Procrastination Scale

Descriptive Statistics

	SUM PS
Valid	111
Missing	0
Mode	54.000
Median	59.000
Mean	60.775
Std. Deviation	10.760
Skewness	0.348
Std. Error of Skewness	0.229
Kurtosis	-0.220
Std. Error of Kurtosis	0.455
Shapiro-Wilk	0.976
P-value of Shapiro-Wilk	0.045
Minimum	36.000
Maximum	86.000
Sum	6746.000

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Rosenberg Self-esteem Scale

Descriptive Statistics

	SUM RSES
Valid	111
Missing	0
Mode	21.000
Median	23.000
Mean	22.586
Std. Deviation	4.917
Skewness	0.103
Std. Error of Skewness	0.229
Kurtosis	0.014
Std. Error of Kurtosis	0.455
Shapiro-Wilk	0.990
P-value of Shapiro-Wilk	0.561
Minimum	11.000
Maximum	35.000

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Internet Gaming Disorder

Descriptive Statistics

	SUM IGD
Valid	111
Missing	0
Mode	18.000
Median	18.000
Mean	16.901
Std. Deviation	7.821
Skewness	-0.373
Std. Error of Skewness	0.229
Kurtosis	-0.417
Std. Error of Kurtosis	0.455
Shapiro-Wilk	0.974
P-value of Shapiro-Wilk	0.027
Minimum	0.000
Maximum	32.000

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Action Plan of UAPC3093 Project Paper II

Supervisee CHOO YUN EN

Supervisor MS. NUR SHAKILA IBHARIM

Task Description	Date	Supervisee's Signature	Supervisor's Signature	Supervisor's Remarks	Next Appointment Date/Time
Methodology Submit Chapter 3: Methodology Amend Chapter 3: Methodology	 10.11.2022 15.11.2022	*[signature]*	*[signature]*		
Results & Findings Submit Chapter 4: Results Amend Chapter 4: Results	 15.11.2022 22.11.2022	*[signature]*	*[signature]*		
Discussion & Conclusion Submit Chapter 5: Discussion Amend Chapter 5: Discussion	 22.11.2022 26.11.2022	*[signature]*	*[signature]*		
Abstract	26.11.2022	*[signature]*	*[signature]*		
Turnitin Submission	28.11.2022	*[signature]*	*[signature]*	Generate similarity rate from Turnitin.com	

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Amendment	1.12.2022				
Submission of final draft	5.12.2022			Submission of hardcopy and documents	
Oral Presentation	12.12.2022				

Notes: **1. Deadline for submission cannot be changed, mark deduction is as per faculty standard.**

2. Supervisees are to take the active role to make appointments with their supervisors.

3. Both supervisors and supervisees should keep a copy of this action plan.

4. This Action Plan should be attached as an appendix in Project Paper 2.

Universiti Tunku Abdul Rahman			
Form Title : Supervisor's Comments on Originality Report Generated by Turnitin for Submission of Final Year Project Report (for Undergraduate Programmes)			
Form Number: FM-IAD-005	Rev No.: 0	Effective Date: 01/10/2013	Page No.: 1of 1

FACULTY OF ART AND SOCIAL SCIENCE

Full Name(s) of Candidate(s)	Choo Yun En
ID Number(s)	1906709
Programme / Course	BACHELOR OF SOCIAL SCIENCE (HONS) GUIDANCE AND COUNSELLING
Tittle of Final Year Project	The relationship between Social Anxiety, Procrastination, Self-esteem and Internet Gaming Disorder among University students in Malaysia

Similarity	Supervisor's Comments (Compulsory if parameters of originality exceeds the limits approved by UTAR)
Overall similarity index: 17%	
Similarity by source Internet Sources: 14% Publications: 3% Student Papers: 4%	
Number of individual sources listed of more than 3% similarity: 1	

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.

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

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: Ms Nur Shakila Binti Ibharim

Date: 5 . 1 2 . 2 0 2 2

Signature of Co-Supervisor

Name:

Date:

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

FYP 2 Chapter 3 - 5

ORIGINALITY REPORT

17%	14%	3%	4%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	eprints.utar.edu.my Internet Source	10%
2	Submitted to Universiti Tunku Abdul Rahman Student Paper	1%
3	Submitted to Bournemouth University Student Paper	1%
4	www.scirp.org Internet Source	<1%
5	Submitted to Leiden University Student Paper	<1%
6	Submitted to Napier University Student Paper	<1%
7	www.adscientificindex.com Internet Source	<1%
8	Submitted to HELP UNIVERSITY Student Paper	<1%
9	Yi-Chun Yeh, Peng-Wei Wang, Mei-Feng Huang, Pai-Cheng Lin, Cheng-Sheng Chen, Chih-Hung Ko. "The procrastination of	<1%

Internet gaming disorder in young adults: The clinical severity", Psychiatry Research, 2017
Publication

10 Submitted to Victoria University
Student Paper
<1%

11 Submitted to University of Makati
Student Paper
<1%

12 Alex Clarke, Andrew Thompson, Elizabeth Jenkinson, Nichola Rumsey, Rob Newell. "CBT for Appearance Anxiety", Wiley, 2013
Publication
<1%

13 lhw-cn.blogspot.com
Internet Source
<1%

14 mdpi-res.com
Internet Source
<1%

15 Ayenew Kassie, Simegnew Handebo, Asmamaw Adugna, Kegne Shitu. "Violence against girls during COVID-19 pandemic and associated factors in Gondar city, North West Ethiopia", Epidemiology and Infection, 2022
Publication
<1%

16 oira.unc.edu
Internet Source
<1%

17 researchonline.ljmu.ac.uk
Internet Source
<1%

www.frontiersin.org

18   Internet Source   <1%

19   Jesse Andreetta, Justin Teh MSc, Tyrone L.   <1%
     Burleigh, Rapson Gomez, Vasileios
     Stavropoulos. "Associations between
     comorbid stress and Internet Gaming
     Disorder symptoms: Are there cultural and
     gender variations?", Asia-Pacific Psychiatry,
     2020
     Publication

20   citeseerx.ist.psu.edu   <1%
     Internet Source

21   Lorna J. Walsh, Allan J. Anstey, Anne Marie   <1%
     Tracey. "Student perceptions of faculty
     feedback following medication errors – A
     descriptive study", Nurse Education in
     Practice, 2018
     Publication

22   doi.org   <1%
     Internet Source

23   libres.uncg.edu   <1%
     Internet Source

24   repository.tudelft.nl   <1%
     Internet Source

25   www.ncbi.nlm.nih.gov   <1%
     Internet Source

UNIVERSITI TUNKU ABDUL RAHMAN DU/012(A)

Wholly owned by UTAR Education Foundation   Co. No. 578227-M

Re: U/SERC/111/2022

1 June 2022

Dr Pung Pit Wan
Head, Department of Psychology and Counselling
Faculty of Arts and Social Science
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak.

Dear Dr Pung,

Ethical Approval For Research Project/Protocol

We refer to the application for ethical approval for your students' research project from Bachelor of Social Science (Hons) Guidance and Counselling programme enrolled in course UAPZ3013/ UAPC3083. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	The Relationship Between Self-Esteem, Social Support, Stress and Social Anxiety During the Transition to Endemic Stage of Covid-19 Among University Students in Malaysia	Loo Chi Ying	Pn Nur Shakila Binti Ibharim	1 June 2022 – 31 May 2023
2.	The Relationship Between Social Anxiety, Procrastination, Self-esteem and Internet Gaming Disorder Among University Student in Malaysia	Choo Yun En		
3.	Perceived Social Support, Loneliness and Anxiety Among Malaysian Undergraduate Students During the COVID-19	Tan Lei Gee	Pn Anisah Zainab Binti Musa	

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.

(4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

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 Ts Dr Faidz bin Abd Rahman
Chairman
UTAR Scientific and Ethical Review Committee

c.c   Dean, Faculty of Arts and Social Science
        Director, Institute of Postgraduate Studies and Research

Universiti Tunku Abdul Rahman			
Form Title : **Sample of Submission Sheet for FYP/Dissertation/Thesis**			
Form Number : **FM-IAD-004**	Rev No: **0**	Effective Date: **21 June 2011**	Page No: **1 of 1**

FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN

Date: ___5/12/2021_____

SUBMISSION OF FINAL YEAR PROJECT

It is hereby certified that ___Choo Yun En____ (ID No.: ___1906709____) has completed this final year project titled "_The relationship between Social Anxiety, Procrastination, Self-esteem and Internet Gaming Disorder among University students in Malaysia" under the supervision of _Ms Nur Shakila Binti Ibharim_____ (Supervisor) from the Department of Psychology and counselling, Faculty of Arts and Social Science.

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: Choo Yun En

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF ARTS AND SOCIAL SCIENCE

DEPARTMENT OF PSYCHOLOGY AND COUNSELLING

UAPC3093 PROJECT PAPER II

Quantitative 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%.'*

Project Title: The relationship between Social Anxiety, Procrastination, Self-esteem and Internet Gaming Disorder among University students in Malaysia

Supervisor: Ms Nur Shakila Binti Ibharim

Student's Name: Choo Yun En	Student's ID 1906709

INSTRUCTIONS:

Please score each descriptor based on the scale provided below:

1. Please award 0 mark for no attempt.

2. Please mark only **3(A)** or **3(B)** for **Proposed Methodology**.

3. For criteria **7**:
   Please retrieve the marks from "**Oral Presentation Evaluation Form**".

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

1. ABSTRACT (5%)	Max Score	Score
a. State the main hypotheses/research objectives.	5%	
b. Describe the methodology: • Research design • Sampling method and sample size • Location of study • Instruments/apparatus/outcome measures (if applicable) • Data gathering procedures	5%	
c. Describe the characteristics of participants.	5%	
d. Highlight the outcomes of the study or intervention, target behaviour and outcomes.	5%	
e. Conclusions, implications, and applications.	5%	
Sum	25%	/25%
Subtotal (Sum/5)	5%	/5%
Remark:		

2. (A) METHODOLOGY (25%)	Max Score	Score
a. Research design/framework: • For experiment, report experimental manipulation, participant flow, treatment fidelity, baseline data, adverse events and side effects, assignment method and implementation, masking (if applicable). • For non-experiment, describe the design of the study and data used.	5%	
b. Sampling procedures: • Justification of sampling method/technique used. • Description of location of study. • Procedures of ethical clearance approval.	5%	
c. Sample size, power, and precision: • Justification of sample size. • Achieved actual sample size and response rate. • Power analysis or other methods (if applicable).	5%	
d. Data collection procedures: • Inclusion and exclusion criteria. • Procedures of obtaining consent. • Description of data collection procedures. • Provide dates defining the periods of recruitment or repeated measures and follow-up. • Agreement and payment (if any).	5%	
e. Instruments/questionnaire used: • Description of instruments • Scoring system • Meaning of scores • Reliability and validity	5%	
Subtotal	25%	/25%
Remark:		

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

2. **(B) METHODOLOGY – SINGLE-CASE EXPERIMENT (25%)**	**Max Score**	**Score**
a. Research design/framework: • Identify the design, phase and phase sequence, and/or phase change criteria. • Describe procedural changes that occurred during the investigation after the start of the study (if applicable). • Describe the method of randomization and elements of study that were randomized (if applicable). • Describe binding or masking was used (if appliable).	5%	
b. Participants AND Context AND Approval: • Describe the method of recruitment. • State the inclusion and exclusion criteria. • Describe the characteristics of setting and location of study. • Procedures of ethical clearance approval. • Procedures of obtaining consent.	5%	
c. Measures and materials used: • Operationally define all target behaviours and outcome measures. • Reliability and validity. • Justify the selection of measures and materials. • Describe the materials.	5%	
d. Interventions: • Describe the intervention and control condition in each phase. • Describe the method of delivering the intervention. • Describe evaluation of procedural fidelity in each phase.	5%	
e. Data analysis plan: • Describe and justify all methods used to analyze data.	5%	
Subtotal	25%	/25%
Remark:		
3. **RESULTS (20%)**	**Max Score**	**Score**
a. Descriptive statistics/Sequence completed: • Demographic characteristics • Topic-specific characteristics • For single-case study, report the sequence completed by each participant, trial for each session for each case, dropout and reason if applicable, adverse events if applicable	5%	
b. Data diagnostic and missing data (if applicable): • Frequency and percentages of missing data (compulsory). • Methods employed for addressing missing data. • Criteria for post data-collection exclusion of participants. • Criteria for imputation of missing data. • Defining and processing of statistical outliers. • Data transformation. • Analyses of data distributions.	5%	

	Max Score	Score
c. Appropriate data analysis for each hypothesis or research objective.	5%	
d. Accurate interpretation of statistical analyses: • Accurate report and interpretation of confidence intervals or statistical significance. • Accurate report of p values and minimally sufficient sets of statistics (e.g., dfs, MS, $MS\ error$). • Accurate report and interpretation of effect sizes. • Report any problems with statistical assumptions.	5%	
Subtotal	20%	/20%
Remark:		

4. **DISCUSSION AND CONCLUSION (20%)**	Max Score	Score
a. Discussion of findings: • Provide statement of support or nonsupport for all hypotheses. • Analyze similar and/or dissimilar results. • Justifications for statistical results in the context of study.	5%	
b. Implication of the study: • Theoretical implication for future research. • Practical implication for programs and policies.	5%	
c. Relevant limitations of the study.	5%	
d. Recommendations for future research.	5%	
Subtotal	20%	/20%
Remark:		

5. **LANGUAGE AND ORGANIZATION (5%)**	Max Score	Score
a. Language proficiency	3%	
b. Content organization	1%	
c. Complete documentation (e.g., action plan, originality report)	1%	
Subtotal	5%	/5%
Remark:		

6. **APA STYLE AND REFERENCING (5%)**	Max Score	Score
a. 7th Edition APA Style	5%	/5%
Remark:		

*ORAL PRESENTATION (20%)	Score	
Subtotal	/20%	
Remark:		

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

PENALTY	Max Score	Score
Maximum of 10 marks for LATE SUBMISSION, or POOR CONSULTATION ATTENDANCE with supervisor.	10%	
FINAL MARK/TOTAL		/100%

***Overall Comments:

_____

_____

_____

_____

_____

Signature: _____ **Date:** _____

Notes:

1. **Subtotal**: The sum of scores for each assessment criterion
2. **FINAL MARK/TOTAL**: The summation of all subtotal score
3. Plagiarism is **NOT ACCEPTABLE**. Parameters of originality required and limits approved by UTAR are as follows:
    (i) **Overall similarity index is 20% or 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 is compulsory for the supervisor/examiner to give the overall comments for the research projects with A- and above or F grading.

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

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

INDIVIDUAL ORAL PRESENTATION EVALUATION FORM (FACE TO FACE/VIRTUAL PLATFORM)

UAPC3093 PROJECT PAPER II

Student's Name	ID	*Total (40%)	**Final score (20%)
Choo Yun En	1906709		

**Final Score: (   ) / 40 marks ÷ 2 = (   ) / 20 marks
*to be converted into 20%

Date: _____   Time: _____

SCORE \ TRAITS	SCORE	EXCELLENT 4	GOOD 3	AVERAGE 2	LACKING 1
POSTER PRESENTATION PREPARATION					
Organisation		Title/author of paper clearly displayed. Concise presentation of introduction, review of literature, methodology, findings and conclusions.	Shows title/author. Adequately presents introduction, review of literature, methodology, findings and conclusions.	Shows title/author. Presents main ideas of introduction, review of literature, methodology, findings and conclusions.	Title/author are missing. Insufficient coverage of main points of introduction, review of literature, methodology, findings and conclusions.
Competency		Student demonstrates competent knowledge of the subject by explaining the subject with details. Able to answer questions posted by the audience/examiners fluently with confidence.	Student is able to provide sufficient information to enable audience to understand main ideas. Able to answer questions posted by the audience/examiners with noticeable interval.	Student is able to provide basic information with vague and disjointed ideas. Student tried to answer the questions posted by the audience/examiner using common-sense rather than evidence-based answer.	Student is unable convey the information fluently to the audience/examiner. Student is not able to answer the questions posted by the audience/examiner.

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Visual Presentation		Visually appealing poster with appropriate colours, organization, and font sizes enhance readability. Strategically positioned graphics and text.	Overall visually appealing. Organisation of content enhances readability. Appropriate font size enhances readability. Content arrangement easily understood. Graphics enhances text.	Visual appeal is adequate. Colours and layout somewhat cluttered. Font size affects readability. Confusing content arrangement. Graphics help to highlight some content.	Visuals lack appeal. Colours and layout cluttered. Hinders readability. Inconsistent font sizes and content arrangement Mismatch of graphics and text.
Mechanics		The slides are flawless with no misspelling, punctuation, or grammatical errors. Provide essential sources and citations using 7th edition APA style.	2 – 3 misspelling, punctuation and/ or grammatical errors in the slides. Provided excessive and cluttered sources and citations.	4 misspelling, punctuation and/ or grammatical errors detected in the slides. Inconsistent citation styles detected.	Slides are riddled with multiple spelling, punctuation and/ or grammatical errors. Does not cite sources.
SCORE \ TRAITS	**SCORE**	**EXCELLENT 4**	**GOOD 3**	**AVERAGE 2**	**LACKING 1**
VERBAL SKILLS					
Enthusiasm		Demonstrates a strong, positive feeling about topic during entire presentation.	Occasionally shows positive feelings about topic.	Shows little positive feelings toward topic presented.	Shows absolutely no interest in topic presented.
Delivery		Uses a clear voice and speaks at a good pace so audience can hear presentation. Does not read off slides.	Presenter's voice is clear. The pace is a little slow or fast at times. Audience can hear presentation.	Presenter's voice is low. The pace is much too rapid/slow. Audience has difficulty hearing presentation.	Presenter mumbles or talks very fast and speaks too softly for audience to hear and understand.
Language		Excellent and competent use of subject-related vocabulary and correct pronunciation.	Presentation shows competent use of subject-related vocabulary and correct pronunciation.	Some parts of lapse into colloquialism with inappropriate vocabulary and pronunciation.	Mostly inappropriate vocabulary and pronunciation.
NON-VERBAL SKILLS					
Eye Contact		Student maintains eye contact with audience, seldom returning to notes.	Student maintains eye contact most of the time but frequently returns to notes.	Student occasionally uses eye contact, but still reads most of report.	Student reads all of report with no eye contact.
Body Language & Facial Expression		Movements seem fluid. Displays relaxed, self-confident nature about self, with no-mistakes.	Made movements or gestures that enhance articulation. Makes minor mistakes, displays little or no tension.	Rigid movement or descriptive gestures. Displays mild tension; has trouble recovering from mistakes.	No movement or descriptive gestures. Tension and nervousness are obvious; has trouble recovering from

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

		Appropriate facial expression without a zoned-out or confused expression.	Occasionally demonstrate either a zoned-out or confused expression during presentation.	Occasionally demonstrate both zoned-out or confused expressions during presentation.	mistakes. Consistently zoned-out or displays confused expression during presentation.
Timing		Within 10 to 15 minutes of allotted time.	Within 17 minutes of allotted time OR too short (<10 minutes).	Within 20 minutes of allotted time OR too short (<5 minutes).	Too long (>20 minutes) or too short (<3 minutes).
*TOTAL					

INTERNET GAMING DISORDER AMONG UNIVERSTY STUDENTS

Comments:

_____

_____

_____

Evaluated by:

_____

(NAME OF EVALUATOR: _____)

Department of Psychology and Counseling
Faculty of Arts and Social Science
UTAR Perak Campus