

**AN ONLINE CROSS- SECTIONAL SURVEY OF INTERNET
ADDICTION AND PSYCHOLOGICAL DISTRESS AMONG
UNIVERSITY STUDENTS**

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INTERNET ADDICTION AND PSYCHOLOGICAL DISTRESS

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UNIVERSITY STUDENTS**

By

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ABSTRACT

Background: Internet is considered as the fastest growing educational medium due to its multiple advantages such as user interface, flexible time, learner friendly formats and contents. The importance of the internet in higher education has continued to rise over the past decade. Therefore, more time is spent for internet application and access. The inability to control the desire for internet leads to addiction. Many studies have found out that internet addiction can affect the quality of life and mental health among students.

Aim: The main purpose of this study is to identify the association of internet addiction and psychological distress among university students.

Methodology: An online questionnaire is distributed among the university students in Universiti Tunku Abdul Rahman. A total of 233 respondents were there for the survey and 3 of the questionnaires were incomplete and have been excluded from this study.

Results: Out of 230 participants, 44% (n= 101) are in the mild level of internet addiction; followed by 42% (n= 96) are in the normal internet addiction level; 14% (n= 33) are in the moderate level of internet addiction. There are 21% of male university students in moderate level of internet addiction and 10% of female university students are in moderate level of internet addiction. There is no difference in level of internet addiction and ethnicity.

Conclusion: Based on the findings of this study, there is a need for future investigation for recovery treatment and therapy for students addicted to internet. Numerous in depth studies should be carried out to interact with the social implications especially in this era of communication and technology.

Keywords: Internet addiction, psychological distress, university student

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Last but not least, we would like to dedicate this research report to our loved-ones, especially our beloved parents, family members, and close friends for their spiritual support along the research project period.

APPROVAL SHEET

This thesis entitled “**AN ONLINE CROSS-SECTIONAL SURVEY OF INTERNET ADDICTION AND PSYCHOLOGICAL DISTRESS AMONG UNIVERSITY STUDENTS**” was prepared and submitted by GOH LIM HUEI, KIKI OOI ZIA HUI, and WONG WAN KUN as partial fulfillment of the requirements for the Bachelor of Physiotherapy (Hons) at Universiti Tunku Abdul Rahman, Malaysia.

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Dear Mr Nizar,

Ethical Approval For Research Project/Protocol

We refer to your application dated 25 October 2013 for ethical approval for your research project and are pleased to inform you that your application has been approved under expedited review.

The details of your research project are as follows:

Research Title	An online cross-sectional survey of internet addiction and psychological distress among university students
Investigator(s)	Mr Nizar Abdul Majeed Kutty (PI) Goh Lim Huei (UTAR Student) Kiki Ooi Zia Hui (UTAR Student) Wong Wan Kun (UTAR Student)
Research Area	Medical and Health Sciences
Research Location	UTAR Campuses
Research Costs	Self-funded
Approval Validity	2013 – 2014

The conduct of this research is subject to the following:

- (1) The participants' informed consent have to 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.

c.c Dean, Faculty of Medicine and Health Sciences
Director, Institute of Postgraduate Studies and Research

FACULTY OF MEDICINE & HEALTH SCIENCES

UNIVERSITI TUNKU ABDUL RAHMAN

Date: 09.12.2013

SUBMISSION OF THESIS

It is hereby certified that Goh Lim Huei (ID No: 11UMB02770), Kiki Ooi Zia Hui (ID No: 11UMB06719); Wong Wan Kun (ID No: 10UMB04728) have completed this thesis entitled “AN ONLINE CROSS-SECTIONAL SURVEY OF INTERNET ADDICTION AND PSYCHOLOGICAL DISTRESS AMONG UNIVERSITY STUDENTS” under the supervision of Mr. Nizar Abdul Majeed Kutty and Ms. Manisha Parai from Department of Physiotherapy, Faculty of Medicine & Health Sciences.

We understand that the university will upload the softcopy of our thesis in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,

GOH LIM HUEI

KIKI OOI ZIA HUI

WONG WAN KUN

DECLARATION

Date: 09.12.2013

We, Goh Lim Huei, Kiki Ooi Zia Hui and Wong Wan Kun hereby declare that the thesis is based on our original work except for quotations and citations which have been duly acknowledged. We also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.

(GOH LIM HUEI)

(KIKI OOI ZIA HUI)

(WONG WAN KUN)

TABLE OF CONTENTS

	Page
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iv
APPROVAL SHEET.....	v
SUBMISSION SHEET.....	vi
DECLARATION.....	vii
LIST OF TABLES.....	x
LIST OF FIGURES.....	xi

CHAPTER

1.0 INTRODUCTION

1.1 Background.....	1
1.2 Problem Statement.....	4
1.3 Importance of Study.....	5
1.4 Operational Definition.....	5
1.5 Hypotheses.....	6
1.6 Objectives of Study.....	7

2.0 LITERATURE REVIEW8

2.1 Internet Usage.....	8
2.2 Effect of Internet Use.....	9
2.3 Prevalence of Internet Addiction.....	10
2.4 Internet Addiction among Students.....	10
2.5 Gender Differences in Internet Addiction.....	11
2.6 Psychological Distress and Internet Addiction.....	12

3.0 METHODOLOGY.....	14
3.1 Study Design.....	14
3.2 Participants.....	14
3.2.1 Inclusion Criteria.....	14
3.2.2 Exclusion Criteria.....	15
3.3 Instruments.....	15
3.3.1 Twelve Items General Health Questionnaire(GHQ-12).....	16
3.3.2 Internet Addiction Test(IAT).....	17
3.4 Statistical Analysis.....	17
 4.0 RESULTS.....	 19
4.1 Socio- demographic Data.....	19
4.2 Internet Access.....	21
4.3 Internet Addiction and Psychological Distress.....	24
4.4 Socio- demographic Data and Internet Addiction.....	25
 5.0 DISCUSSION.....	 28
5.1 Internet Addiction and Psychological Distress.....	28
5.2 Gender Differences and Internet Addiction.....	29
5.3 Ethnicity Differences and Internet Addiction.....	29
5.4 Phenomenon of Most Frequently Used Internet Application.....	30
5.5 Phenomenon of Hours Spend on Internet per week.....	32
5.6 Experience of Using Internet.....	34
5.7 Place that Most Frequently Use Internet.....	34
5.8 Limitations and Recommendations.....	35
 6.0 CONCLUSION.....	 36
REFERENCES.....	37
APPENDIX A.....	42

LIST OF TABLES

Table	Page
3.1 Interpretation score of IAT.....	17
4.1 Frequency of males and females in sample.....	19
4.2 Frequency of different ethnicity in sample.....	20
4.3 Frequency of age in sample.....	20
4.4 Frequency of faculty in sample.....	21
4.5 Most frequently used internet application among university students.....	24
4.6 Level of internet addiction and psychological distress among university student.....	25
4.7 Gender differences and level of internet addiction.....	26
4.8 Mean, standard deviation and standard error of mean of gender differences of IAT.....	26
4.9 Ethnicity differences and level of internet addiction.....	27

LIST OF FIGURES

Figure	Page
2.1 Internet users in the world distribution by world regions.....	8
4.1 Experience of using internet among university students.....	21
4.2 Hours spend on internet per week among university students.....	22
4.3 Places that most often use the internet among university students.....	23
4.4 Level of internet addiction among university students.....	24

CHAPTER 1

INTRODUCTION

1.1 Background

The internet has revolutionized education and social communication in the 21st century with a rapid and unfettered increase in the number of people accessing a relatively unrestricted internet. In this 21st century, internet has been included as part of most of individual's life due to the growth of Information and Communication Technology (ICT) in various sectors. Apart from that, the internet usage is also becoming popular among developing countries because more places which include the homes, mall, libraries, schools, colleges, university, workplace, public sectors, and cyber cafe are creating opportunity for people to participate in online activity. Engagement of common online activity are writing emails, preparing school assignment, playing online games, reading latest news, watching movie, searching for information, online shopping and many more.

According to International Telecommunication Union (ITU) database (2013), the universal growth in uptake has rapidly influence people especially in the developing countries by delivering ICT applications in various fields: education, government, health, and environment. Until February 2013, over 2.7 billion people are using the Internet, which corresponded to almost 40% of the world's population. In the developing countries, 31% of the population is online,

compared to 77% in the developed countries. Based on the statistics, Europe has the highest penetration rate in the world (75%), followed by the America (61%) whereas Malaysia classified under the category of Asia and Pacific with the internet penetration rate of 32%.

Young (2004) stated that the rapid expansion and penetration of internet has provided better opportunities for communication, information and social interaction, even though some individuals are showing excessive and uncontrollable internet use has led to the emerging concept of emergence of internet addiction. Widyanto and McMurran (2004) also discussed that the concept of internet addiction is not easy to define because it depends on a substance or activity done by an individual.

In addition, Young (1996) explained that addiction to the internet is the same as addiction to gambling, drugs, and alcohol. Yellowless and Marks (2005) mentioned that there is no doubt that some internet users develop problematic behavior. This behavioral addiction has been grown and shown positive relationship with the use of machines such as playing video games, using computer, laptop, mobile cellular, and playing amusement machines.

Studies have shown that younger internet users and males are at risk of addiction, which has been linked to intermediate psychosocial variables such as avoidance (escapism) among males than the females (Billieux 2011) and the type of internet applications such as online games (Tao 2010). Excessive internet usage has been associated with psychiatric conditions such as anxiety, depression, social phobia, impulsivity, and substance abuse (Chuang 2006). In addition, excessive internet

use has also shown to be associated with induction of seizures, insufficient sleep, and also social isolation.

In our country, more young Malaysians are resorting to the internet for information and entertainment needs which is the emerging media of choice. Research conducted in 2010 by an international marketing firm (TNS) observed the habits and behavior of internet users. This research has found that the largest number of social network partners belongs to Malaysian internet users. Malaysian citizens have an average of 233 digital friends and a comparison with their peers in other countries shows that this is the largest number (Zamhari2010).

Another survey conducted by Microsoft on 2800 respondents in 11 countries region in Asia-pacific has showed that 71% of Malaysian internet users spend more than one hour per day for cyber social activities and the largest number of internet users' friends on Facebook belongs to Malaysian internet users (Batthyany2009).

However, internet addiction has already becoming a crisis for many countries in the world. This condition can worsen as time goes and affect even more population especially the youngsters in term of quality of life and mental health. It requires the attention from various organizations, parents, teachers, health care professional team, and public to control the addiction to internet and prepare a suitable program to improve the quality of life of addicted persons by eliminating their suffering.

1.2 Problem Statement

As the total number of internet users increases rapidly every single year, it leads to the growth of internet addiction among part of the internet users. Indirectly, this situation can bring to impairments of cognitive, physical as well as psychological health of an individual. For students, this can cause problem in academic performances and relationship with peers and lecturers.

Adalier and Balkan (2012) studied the relationship between internet addiction and psychological symptoms among university students in North Cyprus. The results of this study has shown that there is a significant correlation between internet addiction and psychological symptoms as somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism.

In Japan, Sato (2006) conducted a study review to understand the current status of Japan on the prevalence of internet addiction among students. He found out that the dramatic changes in the use of internet in recent years have led to pathological changes; the effect includes the impairment of academic performance, psychological well-being, and interaction with peers and family member.

The study regarding internet addiction has started in many countries; however it is less conducted in Malaysia. Thus, the internet addiction among Malaysian

university students and the effect of addiction on psychological distress still require further investigation.

1.3 Importance of Study

The research project on internet addiction and psychological distress is able to provide information on severity of addiction to internet, especially among the university students. It shows the impact of addiction to internet in student's daily life, signs and symptoms produced by excessive and inappropriate online activity. It plays a significant role in allowing the authorities to solve the negative influences of internet on mental health among students, preventive measures for addiction, and create awareness among parents, school teachers, lecturers, and public.

In a nutshell, the studies from various countries have reported about internet addiction and the effects of internet over-use on psychological distress among university students, yet very few have been reported from Malaysia. We aim to assess the frequency of using various internet applications and explore the association of compulsive internet use with psychological distress and demographic factors among university students.

1.4 Operational Definition

- a) Internet addiction is defined as excessive or uncontrolled preoccupations, urges or behaviors regarding computer use or internet access which leads

to impairment and distress. Based on Kimberly Young, internet addiction known as a new clinical disorder alludes to recent reports about “on-line users becoming addicted to the internet in the same way that others become addicted to drugs, alcohol or gambling, which led to academic failure” (Young 1996)

- b) Psychological distress is largely defined as a state of emotional suffering characterized by symptoms of depression (e.g., lost interest; sadness; hopelessness) and anxiety (e.g. restlessness; feeling tense) (MirowskyandRoss2002).
- c) In our study University students are defined as full time students enrolled in Universiti Tunku Abdul Rahman (UTAR). They include the students from the following faculty: Centre for Foundation, Faculty of Accountancy and Management, Faculty of Arts and Social Science, Faculty of Business and Finance, Faculty of Creative Industries, Faculty of Engineering and Science, Faculty of Information and Communication Technology, Faculty of Medicine and Health Sciences, and Faculty of Science.

1.5 Hypotheses

The research hypothesis is divided into null (Ho) and alternate hypothesis (H1).

Null hypothesis: There is no association between internet addiction and psychological distress among university students.

Alternate hypothesis: There is an association between internet addiction and psychological distress among university students

1.6 Objectives of Study

The main objective of this research study is to investigate the association of internet addiction and psychological distress among university students.

Meanwhile, the sub objectives are:

- a) To determine the frequency of using various internet applications.
- b) To identify the level of addiction to internet among university students.
- c) To explore association of socio- demographic data and level of addiction to internet.

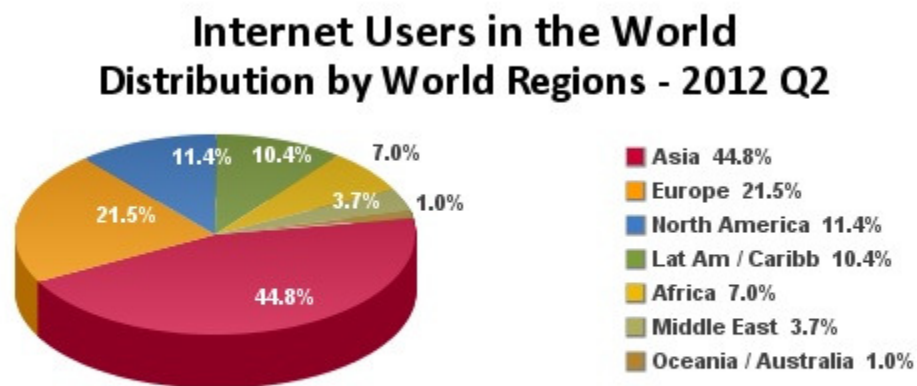
CHAPTER 2

LITERATURE REVIEW

2.1 Internet Usage

The 21st century is a digital generation which daily life is influenced by this advanced technology. With the rapid increase internet user population, internet addiction is broadly getting attention due to its proposed risk to impairment of psychological well- being and diseases. According to the Internet World Statistics, Asian population covered 44.8% of the internet users in the world. As the below pie chart showed:

Figure 2.1: Internet Users in the World Distribution by World Regions



Source: Internet World Stats - www.internetworldstats.com/stats.htm
Basis: 2,405,518,376 Internet users on June 30, 2012
Copyright © 2012, Miniwatts Marketing Group

From the world internet usage and population statistics on June 30, 2012, the growth between 2000 and 2012 is 566.4%. There are 3,700,000 internet users in

the year 2000 and it has increased to 29,179,952 internet users in the year of 2012. And among of these internet users, out of 13,589,520 are Facebook users.

2.2 Effect of Internet Use

The use of internet can bring both positive and negative effect to students. Yellowless and Marks (2005) mentioned that, there is no doubt that some internet users develop problematic behaviour. Most of them are probably pre-morbidly vulnerable people who often have a history of impulse control and addictive disorders, and whose abnormal behaviour is a response to specific online content and activities. It is unlikely that “internet addiction”, as a disorder in its own right, exists. According to a study by Chien (2000) about internet addiction, usage, gratification, and pleasure experience among the Taiwan college students, it is found that internet addicts spent almost triple the number of hours connected to the internet as compared to non-addicts especially on BBSs, the WWW, e-mail and games. The addict group rated internet impacts on their studies and daily life routines significantly more negatively than the non-addict group. Sato (2006) conducted a study review to understand the current status of Japan on the prevalence of internet addiction among students. He found out that the dramatic changes in the use of internet in recent years have led to pathological changes; the effect includes impairment of academic performance, psychological well-being, and interaction with peers and family members.

2.3 Prevalence of Internet Addiction

With regards to prevalence of internet addiction in adolescents, various studies have been conducted in different countries. According to Park et al. (2008), 10.7% of middle and high school students in South Korea (60.5% middle school seniors, 39.5% high school students (12.4% freshman, 27.1% juniors)) are addicted to internet. Cao et al. (2011) also found that 8.1% students with problematic internet use in China. Liberatore et al. (2011) studied on adolescent outpatients in Puerto Rico, Latin America found that 11.6% of them are addicted to internet. The above three studies are using Young's IAT as a measurement for internet addiction. Higher prevalence rates have been reported in South East Asian countries, for example Taiwan, Singapore, South Korea and China (Kuss et al., 2013). There are few studies from Malaysia too. Hasmda et al. (2011) carried out a study to investigate the prevalence of internet addiction among university students in Malaysia. Hasmda et al have distributed 150 questionnaires to students at three different universities. The results showed that a minority of respondents (2.6%) showed unhealthy internet use which could lead to internet addiction.

2.4 Internet Addiction among Students

According to Pallanti, Bernardi and Quercioli (2006), internet addiction can be found at any age and in any social conditions, but in most of the researches major attentions have focused on adolescents because adolescence seem to be a critical period of addiction vulnerability. According to Kuss et al. (2013), students, they

typically have (i) free and unlimited access, (ii) flexible schedules, and (iii) freedom from parental interference. Hence, they are the risk population for internet addiction. Majority of the social networking user are students, where the uses of social application is increasing, the risk of internet addiction also dramatically increases. Besides that, Kandell (1998) also studied that college students are particularly vulnerable to pathological internet use due to several factors. These factors include (a) the psychological and developmental characteristics of late adolescence/young adulthood, (b) ready access to the internet, and (c) an expectation of computer/internet use. They always deal with the developmental tasks of identity formation and establishment of intimate relationships may be particularly susceptible to pathological internet use.

2.5 Gender Differences in Internet Addiction

A study conducted by Tsai (2009) and his colleagues about the risk factors of internet addiction have found that there was a positive relationship between internet addiction and male gender, neuroticism scores and the Chinese Health Questionnaire score. In addition, the freshmen who skipped breakfast and those who had poorer social support also had a higher probability of internet addiction. Internet addiction is prevalent among university freshmen in Taiwan. Mostafaei and Khalili (2012) carried out a research to study the relationship between internet addiction and mental health among male and female Payame-Noor university students. During this research, Internet Addiction Scale (IAS) and General Health Questionnaire (GHQ- 28) were used. The results of the study

showed that majority of students are in the range of average and low addiction to internet. However, females have signs of internet addiction more than males. Females in comparison with males are more socially neglected and have high expectations. Wartella, Lee and Caplovitz (2002) stated that numerous studies have shown on gender differences in the use of digital media and the type of service girls and boys preferred are different. According to Hiroshi and Zavodny (2005) internet use in different locations or countries have different result in gender differences. In the United States, internet use at various locations increased over time among women relative to men. In 1997 and 1998 there are less likely for people to use internet anywhere or at home but they were more likely to do so by 2001. Nevertheless, women in Japan are much less likely to use the internet than men regardless of location, and this difference has not narrowed significant over time. In general, this research has found that gender inequality in labor markets and human capital development carry over to gender difference in IT use. In contrast, there are patterns of IT access and use in United State and Japan which reflected differences in the structure of social organization and labor market institution in two cultures.

2.6 Psychological Distress and Internet Addiction

Tonioni and her colleagues have conducted a study to investigate psychopathological symptoms, behaviors and hours spent online in patients with internet addiction disorder (IAD). From the results, it showed that IAD patients have significantly higher scores in the IAT compared to subjects of the control

group. These findings suggested the association between misuse of internet and psychological symptoms such as anxiety and depression. From the study which is conducted by Yao and Zhong (2013), it is found that online social contacts with friends and family are not an effective alternative for offline social interactions in reducing feelings of loneliness. They concluded that it is a vicious cycle between loneliness and internet addiction.

CHAPTER 3

METHODOLOGY

3.1 Study Design

In this study, an online cross sectional survey is used as the study design. This study took seven weeks to complete. The data was collected during October to November, 2013. Convenient sampling was used as sampling method.

3.2 Participants

The data was collected through an online questionnaire which was conducted among fulltime students of all campuses of UTAR, Malaysia. A total of 233 respondents were there for this survey. 3 questionnaires were excluded from analysis due to incomplete data.

3.2.1 Inclusion Criteria

The main criteria are the participants must be studying and registered any courses under UTAR, Malaysia. Next, the participants need to be full time students in order to join this study. Besides that, in order to participate in this study, the participants must have the ability to access internet. Lastly, participants should be able to read and understand English to complete the survey.

3.2.2. Exclusion Criteria

The students who are registered as part time students are excluded to participate in this study.

3.3 Instruments

The survey was designed using an online questionnaire. Consent was taken from the participants of the survey when they were linked to the questionnaire.

Confidentiality and anonymity about the survey responses were assured for all the participants. It consists of four sections including socio- demographic information, internet access, Internet Addiction Test (IAT) and 12- items General Health Questionnaire (GHQ- 12). Socio- demographic information such as age, gender, ethnicity, relationship status, and course enrollment are collected. Second section asked about the availability of internet and the typical number of hours spent online per week and applications or purpose for which internet was used. Frequency of using various internet applications such as gaming, social network, e-mails and others were assessed on a five-point Likert scale as ‘never’, ‘seldom’, ‘sometimes’, ‘often’ and ‘always’ is also included. A pilot study was conducted with a group of students (n= 15). Modification is done so that reliability could be improved.

As some of the questions in IAT and GHQ are not applicable for university students, few modifications are made. In IAT, the 2nd question ‘How often do you neglect household chores to spend more time on-line?’ It has been given

example for household chores. Question number 8 in IAT, ‘How often does your job performances or productivity suffer because of internet?’ since we only included full time students in our study. Hence, we noted that this question is only applicable for students who work part time otherwise select ‘Does not apply’. For GHQ- 12 question number 3 ‘Have you recently felt that you are playing a useful part in things?’ This question is confusing, so there are examples for this question like, playing useful part in things is as a committee member, leader. The questionnaire used in this study can refer to Appendix A.

3.3.1 Twelve Items General Health Questionnaire (GHQ- 12)

The GHQ- 12 is a widely used, instrument to identify psychological distress. It consists of 12 questions. The GHQ- 12 is easy to administer, simple, short and requires less than 7 min to be completed by participants. According to Quek et al (2008), high degree of internal consistency was observed for each of the 12 items with Cronbach’s alpha value of 0.39- 0.79, while total scores was 0.79 in the population study. Test-retest correlation coefficient for the 12 items score was highly significant. Intra-class correlation coefficient was high (0.35- 0.79). GHQ- 12 uses a four-point Likert scale. For example the options given for each question in GHQ-12 and the scores assigned are ‘better than usual’ [0], ‘same as usual’[1], ‘less than usual’ [2], and ‘much less than usual’[3]. GHQ-12 scores are calculated by summing up scores of all 12 items giving a score range of 0 to 36. Interpretation of the score as following:

Score >15 suggests an evidence of distress;

Score >20 suggests severe problems and psychological distress.

3.3.2 Internet Addiction Test (IAT)

Internet addiction was assessed by the Internet Addiction Test (IAT) developed by Dr. Kimberly Young. Internet Addiction Test has acceptable psychometric properties and is a valid and reliable tool that may be used in psychological and psychiatric studies in order to screen normal internet users and internet addicts. IAT consists of 20 items that measures mild, moderate and severe level of internet addiction. Total up the scores for each question will be the final score. The higher the score, the greater will be the level of internet addiction. Sum of the scores for each question will be the final score. The higher the score, the greater will be the level of internet addiction (Table 3.1).

Table 3.1: Interpretation Score of IAT

Total Score	Level of Addiction
0 – 30	Normal
31 – 49	Mild
50 – 79	Moderate
80 – 100	Severe

3.4 Statistical Analysis

Data from questionnaire survey were extracted into Microsoft Excel and converted into standard statistical database for analysis. Descriptive statistics and

proportions of participants with psychological distress were calculated. Data were presented in the form of cross tabulation table, bar chart and pie chart.

CHAPTER 4

RESULT

This chapter will talk about the findings and analysis of the data. First part, we are going to determine the socio- demographic data of the participants. Second part, we will identify internet access of participants. Third part, we will investigate the level of internet addiction to the psychological distress. Lastly, we will relate the socio- demographic data to the level of internet addiction.

4.1 Socio- demographic Data

Over the three weeks of data collection, 233 questionnaires were collected. However, three questionnaires are excluded from this study, because the forms were incomplete. Thus, a total of two hundred and thirty sample size we have (n= 230). Of the 230 university students, 67% (n= 155) are females; while 33 % (n= 75) of participants are males (Table 4.1). Out of 230 participants, majority of them are Chinese (Table 4.2).

Table 4.1: Frequency of Males and Females in Sample

	Males	Females	Total
Frequency	75	155	230
Percentage (%)	33	67	100

Table 4.2: Frequency of Different Ethnicity in Sample

	Chinese	Indian	Malay	Others	Total
Frequency	212	9	3	6	230
Percentage (%)	92	4	1	3	100

Table 4.3: Frequency of Age in Sample

Age	Frequency	Percentage (%)
18- 20	101	44
21- 23	126	55
> 23	3	1
Total	230	100

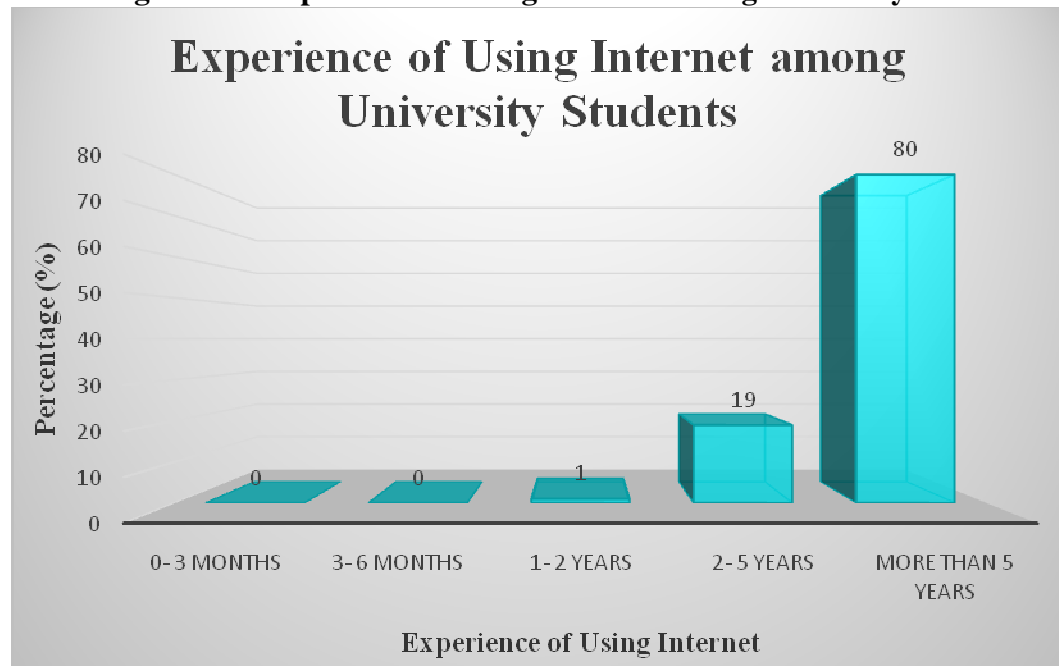
Age of the participants is presented in Table 4.3(range: 18- 38; mode: 21; median: 21; mean: 20.7; standard deviation: 1.74). Among all the participants, 96% (n= 221) of them are single, 4% (n= 8) of them are engaged. The sample is also made up of 40% (n= 92) students from Faculty of Medicine and Health Science (FMHS); followed by 29%(n= 67) of students from Faculty of Accountancy and Management (FAM); 12% (n= 27) of students from Faculty of Engineering and Science (FES); 6% (n= 13) is from Faculty of Business and Finance (FBF); students from Faculty of Science (FS) and Faculty of Arts and Social Science (FASS) consists of 3% (n= 8, n= 7); and 1% (n= 3) of students from Faculty of creative Industries (FCI) (Table 4.4).

Table 4.4: Frequency of Faculty in Sample

Faculty	Frequency	Percentage (%)
Centre of Foundation	12	5
Faculty of Accountancy and Management	67	29
Faculty of Arts and Social Science	7	3
Faculty of Business and Finance	13	6
Faculty of Creative Industries	3	1
Faculty of Engineering and Green Technology	1	0
Faculty of Engineering and Science	27	12
Faculty of Science	8	3
Faculty of Medicine and Health Sciences	92	40
Total	230	100

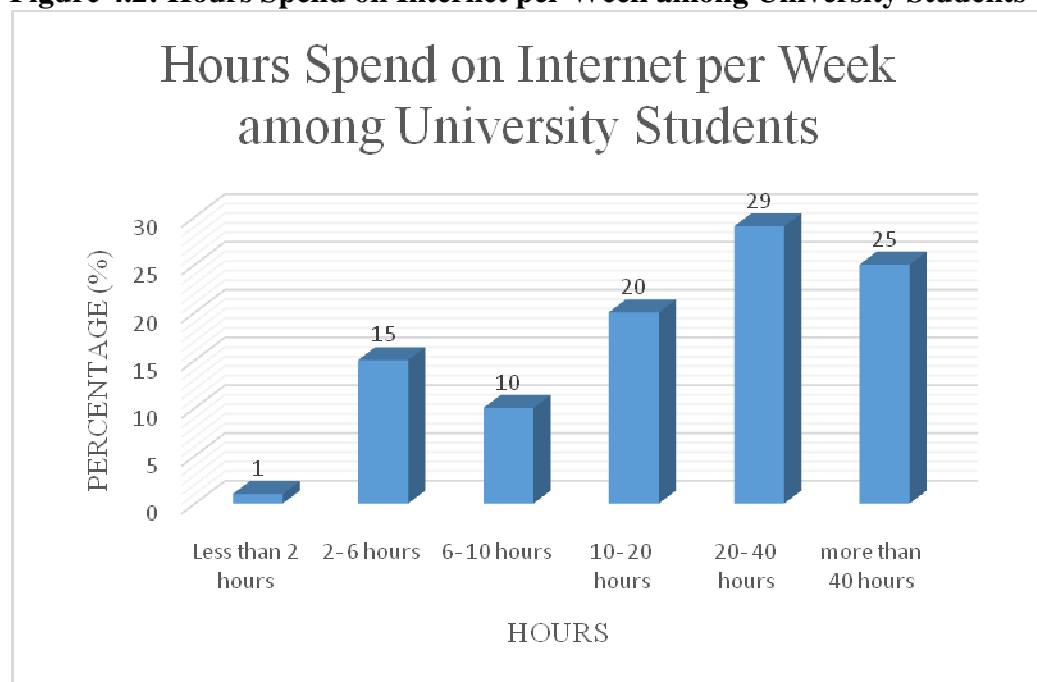
4.2 Internet Access

According to the findings, 80% (n= 183) of the university students are having experience of more than 5 years using internet (Figure 4.1).

Figure 4.1: Experience of Using Internet among University Students

Based on the findings, 19% (n= 43) of university students are having the experience of 2 to 5 years of using internet. Lastly, there is only 1% (n= 3) having 1 to 2 years of internet use experience (Figure 4.1). Among university students, 29% (n=67) of them spend 20 to 40 hours on internet per week (Figure 4.2). Out of 29% of them, 27% are in mild level of internet addiction and 10% of them are in moderate level of internet addiction. For university students who spend more than 40 hours per week, majority of them are in mild level of internet addiction (59%), this followed by 26% are in moderate level of internet addiction.

Figure 4.2: Hours Spend on Internet per Week among University Students



The most frequent place to use internet is at home (93%, n= 215); followed by others (hostel, computer lab, office and whenever I go); then 2% use internet at campus; and 1% use internet at cyber cafe (Figure 4.3). From the question of most frequently used internet application, the samples always used social networking

(Table 4.5). They also often use internet for the academic related surfing, YouTube and movie websites, general information search and downloading. Among them, they rarely or never used gaming websites, gambling websites, dating websites and erotic websites.

Figure 4.3: Places That Most Often Use the Internet among University Students

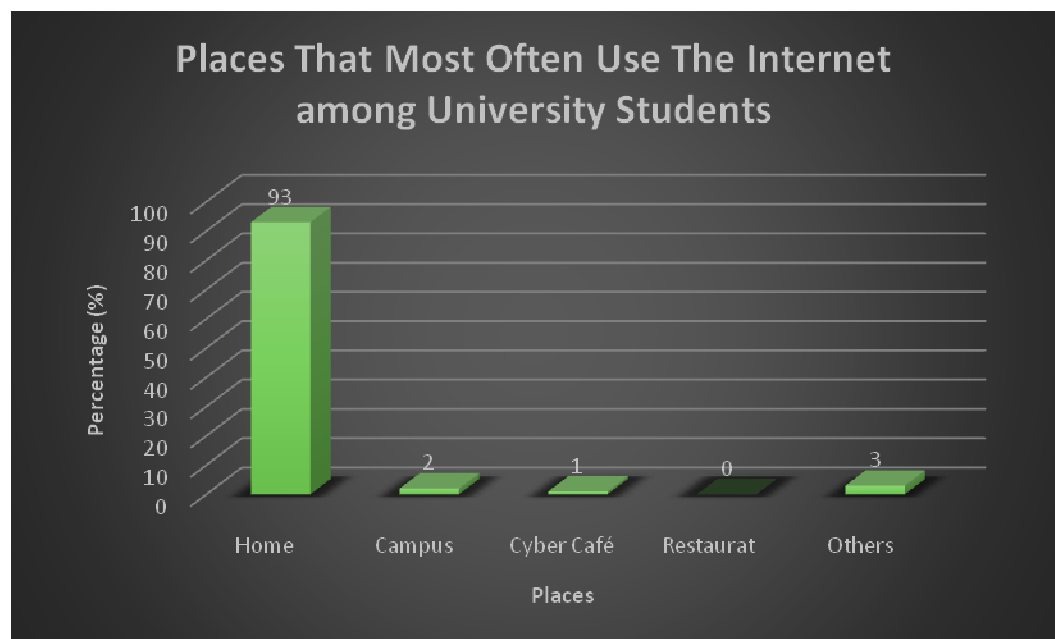
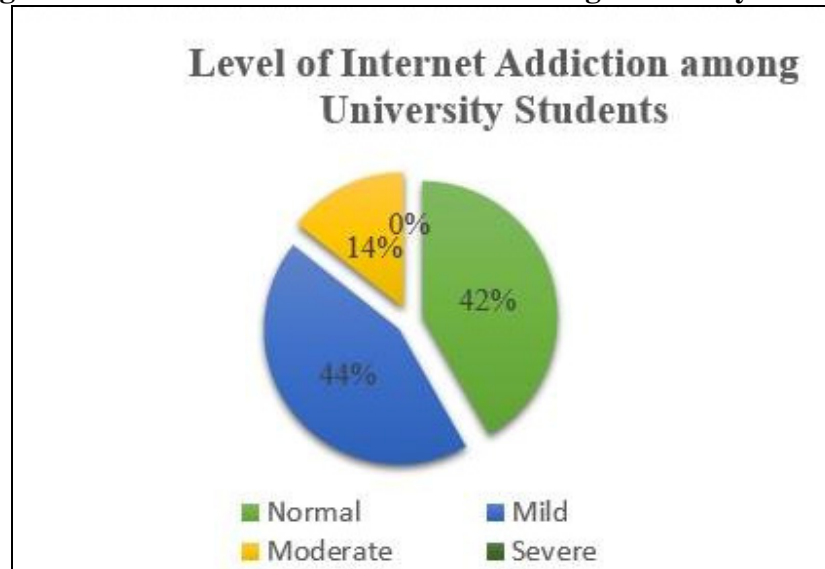


Table 4.5: Most Frequently Used Internet Application among University Students

Internet Application	Never		Seldom		Sometimes		Often		Always	
	n	%	n	%	n	%	n	%	n	%
Social networking	0	0	5	2	17	7	48	21	160	70
Gaming websites	52	23	91	40	53	23	23	10	11	5
Gambling websites	193	84	31	13	5	2	1	0	0	0
Dating websites	207	90	15	7	6	3	2	1	0	0
Personal e- mails	3	1	32	14	69	30	85	37	41	18
Office/ college e- mails	15	7	57	25	86	37	54	23	18	8
Academic related surfing	1	0	19	8	60	26	99	43	51	22
Erotic websites	136	59	54	23	31	13	8	3	1	0
YouTube and movie web	1	0	11	5	52	23	101	44	65	28
General information search	0	0	11	5	81	35	83	36	55	24
Downloading	3	1	32	14	50	22	83	36	62	27

4.3 Internet Addiction and Psychological Distress

Out of 230 university students, 44% (n= 101) are in the mild level of internet addiction; 42% (n= 96) are in the normal internet addiction level (Figure 4.5).

Figure 4.4: Level of Internet Addiction among University Students

The mean values for IAT is 35.43 which is in the mild level of internet addiction; with standard deviation of 13.60; standard error of mean is 0.90. Based on the

results, out of 44% mild level internet addiction of university students, 28% are suggested an evidence of distress and 11% are suggested severe problems and psychological distress (Table 4.6). In the case of moderate internet addiction, there are 30% of them are suggested an evidence of distress and 24% are suggested as severe problems and psychological distress.

Table 4.6: Level of Internet Addiction and Psychological Distress among University Students

Level of Internet Addiction GHQ- 12	Normal		Mild		Moderate		Severe	
	n	%	n	%	n	%	n	%
Normal	79	82	62	61	15	45	0	0
Evidence of Distress	9	9	28	28	10	30	0	0
Psychological Distress	8	8	11	11	8	24	0	0
Total	96	100	101	100	33	100	0	0

4.4 Socio- demographic Data and Internet Addiction

According the findings, 45% (n= 69) of female students are in the mild level of internet addiction; while 43% (n= 32) of male students are in mild level of internet addiction (Table 4.7).

Table 4.7: Gender and Level of Internet Addiction

Level of Internet Addiction	Gender			
	Males		Females	
	n	%	n	%
Normal	27	36	69	45
Mild	32	43	69	45
Moderate	16	21	17	10
Severe	0	0	0	0
Total	75	100	155	100

Table 4.8: Mean, Standard Deviation and Standard Error of Mean of Gender of IAT

Gender	Mean	Standard deviation	Standard error of mean
Males	35.14	13.20	1.52
Females	35.35	13.63	1.09

Table 4.9 shows the comparison between the ethnicity differences and level of internet addiction. It shows that majority of Chinese and Indians are in mild level of internet addiction; Malay and others ethnic both are having same percentage for normal and mild addiction to internet.

Table 4.9: Ethnicity Differences and Level of Internet Addiction

Level of Internet Addiction	Ethnicity							
	Chinese		Indian		Malay		Others	
	n	%	n	%	n	%	n	%
Normal	87	41	4	44	1	50	3	50
Mild	92	43	5	56	1	50	3	50
Moderate	33	16	0	0	0	0	0	0
Severe	0	0	0	0	0	0	0	0
Total	212	100	9	100	2	100	6	100

In the age group between 18 and 20, 43.56% of them do not have internet addiction, 42.57% of them are in mild level of internet addiction, and 13.86% are in moderate level of internet addiction. Compared to age group between 21 and 23, 45.24% are in mild level of internet addiction, followed by 40.48% does not have internet addiction, and 14.29% of them are in moderate level of internet addiction. For age more than 23, the result shows that they have same percentage for both mild and moderate level of internet addiction (33.33%).

CHAPTER 5

DISCUSSION

This chapter involves the analysis of data and discussion on the result. Apart from that, it also discuss on the limitation of this research study, and several recommendations for future investigation or research.

5.1 Internet Addiction and Psychological Distress

Internet is an ordinary device which is an ocean of information to facilitate learning process. However, an overuse of internet will lead to psychological distress. When an individual is not able to control his or her internet use, this will adversely affects to physical health, social activity and academic performances. Based on the results, among 230 university students, 44% (n= 101) are in the mild level of internet addiction, 42% (n= 96) are in the normal internet addiction level and 14% are in the moderate level of internet addiction. Out of university students with moderate internet addiction, 30% of them are having evidence of distress and 24% of them are having psychological distress. The possible negative impact of internet addiction is a major concern nowadays. Without the internet, individual may lose confidence, depression, and sleep deprivation, joyless and worthless. According to Young (1999), feelings of excitement, euphoria, and exhilaration typically reinforce addictive patterns of internet use. For example, the longer a

patient is away from the internet, the more intense such unpleasant feelings become. The driving force for many patients is the relief gained by engaging in the internet.

5.2 Gender Differences and Internet Addiction

According to the collected demographic data (gender, ages, ethnicity), the gender of participants is not an important component in internet addiction. Several studies have found evidence of a male preponderance in internet addiction among adolescents. However, we did not find any evidence of gender difference in our data. Thus, the existence of a gender difference among younger people with internet addiction remains equivocal. The results of our study are consistent with the findings of a study conducted in Hong Kong by King-wa Fu et al (2010).

Out of 155 female students, 45% are classified as normal, 44% as mild level, and 11% as moderate level of addiction. Among the male participants, 35% of them are normal, 44% are in mild and 21% are in moderate addiction to internet. However, education policies might have played an important role in bridging the gap by providing equal opportunities to access the internet (Lin and Yu 2008).

5.3 Ethnicity Differences and Internet Addiction

In this study, most of the participants were Chinese students (92%), followed by Indian (4%), Malay (1%) and others (3%). According to Su and Cao (2006),

although the rate of internet use among Chinese adolescents was high, the incidence rate of internet addiction was low. The study concluded that the incidence of internet addiction is not rare in Chinese adolescents; specifically adolescent males are more likely than females to be internet addicts. Therefore, gender appears to be an important moderating variable to be studied rather than races of an individual.

According to previous chapter, a total of 230 participants with the age ranging from 18 to 38 years participated and have shown that university students who are around same age exhibited almost similar “usage levels” of the internet, including the hours spend on internet per week and place with most frequently use for internet access. There are no differences on ethnicity and level of addiction to internet. In addition, 212 out of 230 Chinese students have 41% of normal and 43% of mild level of internet addiction. The results showed that 44% of Indian students are under normal category and 56% are in mild addiction level. Lastly, 50% of Malay and other race students fall each under normal and mild category.

5.4 Phenomenon of Most Frequent Used Internet Application

The internet addiction happens rather rapidly from one’s first introduction to the service and products. As the users became competent, this leads to a feeling of happiness when their online technical mastery improved. This finding reflects the perception of satisfaction among internet users and proves that one can get addicted to internet applications.

Online recreation such as playing online games has become the most popular online activity as players not only play with the computer but with other players who link to the internet (Gorriz and Medina, 2000). Our findings are contradictory the findings of previous studies on online gaming activity. Based on the result of our study, only 11 out of 230 students always involve in gaming websites, a majority of 91 students seldom participate in online gaming activity. University students spend time for online games; this is probably related to the age.

According to the statistics, out of 230 students, 100% of students used internet for social networking. Social networking has grown exponentially during the last several years and a considerable amount of research on social networking has been published. Out of 230 participants 160 always spend time online for their social networking; especially homepage will likely contribute for internet addiction phenomena as discussed in the previous study conducted by Lu and Wang (2008). They explained that internet addiction is brought about by highly interactive applications like online chatting, dating and online gaming.

Besides that, Ferguson and Perse (2000) has also found that entertainment was the most salient motive for internet use, followed by passing time, acquiring social information and relaxation. However, in this study the number of students who often involve in academic related surfing and movie websites were 99 and 101 students respectively. The result is consistent with a study by Papacharissi and Rubin (2000), which stated that information seeking and entertainment were equally important motives for using the internet among students.

In their articles, Young (1998) and Davis (2001) explained that internet addiction is an individual's inability to control his or her use of the internet eventually causing psychological, social, school or work difficulties in a person's life. Hence, internet addiction can link to psychological distress among university students. Based on our findings, out of 101 students with mild internet addiction, though 61% of the students have normal GHQ-12 value, 28% are dealing with distress condition and 11% suffer from severe psychological distress problem. Bellamy and Hanewicz (2001) suggested that the criteria in determining internet addiction are when users feel preoccupied with the internet and have the need to use the internet with increasing amounts of time in order to achieve satisfaction. Furthermore, they lack of control on when to access the internet and feel irritable, restless, or depressed when offline. In addition, they remain online longer than intended all the time. In severe cases, they even jeopardize losing significant relationships, their education and career opportunity. Sometimes they lie to family members, friends or therapists to conceal the extent of their involvement with the internet.

5.5 Phenomenon of Hours Spend on Internet per Week

The internet has now become an essential tool and is truly entangled in many Malaysians' everyday lives and activities. From the result of the study, 29% of the participants spent 20-40 hours surfing internet. It is then followed by 25% where the students spent more than 40 hours. According to Nielsen (2011), the digital consumers surveyed in Malaysia spend on average 19 hours and 48 minutes

online each week. Nielsen also examined the digital media habits and attitudes of Southeast Asian consumers, revealed that Singaporean digital consumers were the heaviest internet users in the region, averaging 25 hours online per week, followed closely by digital consumers in the Philippines and Malaysia who averaged 21.5 hours and 19.8 hours online per week, respectively.

Chan and Fang (2007) found that the internet plays a prominent role among young people in Hong Kong. In their study, a majority of respondents aged 15-24 spent one to three hours a day on the internet. The internet was the preferred media choice for information-driven activities, listening to music and for fun. The study also indicated that more males were found to use the internet more frequently for playing games and making friends than female respondents.

A survey conducted at a college in the United States by Cotten and Jelenewicz (2006) found that 97% of students reported accessing the internet several times a day. They also reported that women used the internet for communicating with others and gaining knowledge, whereas men used the internet as a source of entertainment with greater frequency than women. This study also found that college students who are around same age exhibited similar “usage levels” of the internet.

Meanwhile, another study by Hechanova and Czincz (2008) on internet addiction in Asia found that 12% of youth surveyed in China, Hong Kong, Taiwan and Korea were addicted to the internet. It was also found that addiction rates were higher among college students compared to high school students.

5.6 Experience of Using Internet

There is rapid diffusion of internet into a daily life especially during today's modern generation. However there are levels of digital skills appear to be different among internet users. According to the findings from the study, 80% of the university students have more than 5 years' experience of using internet. This means that most of the students are being able to recognize and click links that are embedded in different formats such as text, images, menus and website lay-outs. There are only 19% student have the experiences of using internet 2-5 years and followed by 1% which has 1-2 years experiences of using internet.

The digital skill has a strong effect on the internet use of individuals after they reached physical access to the internet according to digital divide research since 2000 (Norris 2001; Hargittai 2003; Solomon et al., 2003; Mossberger et al., 2003; Warschauer 2003). From the results, there are 1% of students having only 1-2 years' experience of using internet so their knowledge about the internet is not as broad as the students who have been using since 5 years and above. The operational and formal skill can be learned in practice using the social network and from computer books and courses, the higher order information and strategic skills will require special educational intervention to teach information selection, processing, evaluate and use on the internet (Solomon et al., 2003).

5.7 Place that Most Frequently Use Internet

According to the findings, 93% of the students use internet at home (93%). Among them, females are using internet at home two times more than males. One of the reasons is that the students spend more time at home compared to other places. In addition, the internet speed at home is better as well as there are less people will be surfing internet if compared to the campus or cyber café. According to Hiroshi and Zavodny (2005) internet use in different location or countries have different result in gender differences. In the United State internet use at various locations increased over time among women relative to men.

5.8 Limitation and Recommendation

Limitations of the study include self-reporting on internet addiction and the cross-sectional nature of the study provides only associative results, which are insufficient to draw any causal inference. Apart from that, the participants were mostly from the Chinese race. Further research is required that is sampled in such a way as to ensure that the findings can be generalized to all university students in all institutions in Malaysia. This is because the geographic territory of our research was limited to the four UTAR campuses. Thus, investigators in future studies should recruit more numbers of subjects. Moreover, it is also recommended that more variables can be taken into consideration in order to determine the level of internet addiction. However, the present study provides groundwork for future studies on the topic of internet addiction among university students.

CHAPTER 6

CONCLUSION

In this era of information, communication and technology (ICT), usage of internet and its penetration rate among university students growth in number as it create a better opportunity in teaching and learning. However, the inappropriate used of internet might lead to some pathological changes in term of physical and mental alteration among internet users, especially students.

The research findings showed that there is a normal, mild to moderate level of addiction toward internet. Out of 230 participants, 44% (n= 101) are in the mild level of internet addiction; followed by 42% (n= 96) in the normal internet addiction level; 14% (n= 33) are in the moderate level of internet addiction. Thus, the general observations on internet addiction among students have mild control over usage of internet in their daily life. Most commonly used internet application is social networking. Definitely, social networking has a great impact in the student's life. Clinicians should be aware that psychological stress might be a comorbidity of internet addiction. Based on the findings of this study, there is a need for future investigation for recovery treatment and therapy for students addicted to internet.

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APPENDIX A

An online cross-sectional survey of internet addiction and psychological distress among university students.

Dear students,

We are undergraduate physiotherapy students from Universiti of Tunku Abdul Rahman (UTAR), Sungai Long campus, currently conducting a survey as part of our research project.

This study is aimed to investigate the association of internet addiction and psychological distress among university students in Malaysia. Participation in this study is voluntary. If you don't wish to take part, you don't have to.

It will take approximately 10 minutes to complete the questionnaire. Your response will assist us in better understanding this topic. There is no right or wrong answer to the question asked. All information gathered as a result of your participating in this study will be treated with confidentiality. No personal identifiable information will be collected, and you will remain anonymous throughout the process.

If you have any enquiry, kindly email to skirt_wwk@hotmail.com

Thank you.

Regards,

Goh Lim Huei

Kiki Ooi Zia Hui

Wong Wan Kun

UTAR Students.

Consent form

Please tick the box.

- ☐ () I have read and understand information about this study.
- ☐ () I have been given the opportunity to ask question about the project.
- ☐ () I understand and that my entire question has been answer to my satisfaction.
- ☐ () I consent voluntarily to participate as a participant in this study.

If you disagree with the terms above, you may withdraw from this questionnaire.
Thank you.

Questionnaire

Section A: Socio-demographic information (Mark only options)

1. Age:

2. Ethnicity:

☐ Chinese ☐ Indian

☐ Malay ☐ Others

3. Gender:

☐ Female ☐ Male

4. Relationship status:

☐ Single ☐ Engaged ☐ Married

☐ Divorced ☐ Widowed

5. Which faculty are you in UTAR?

☐ Centre for Foundation

☐ Faculty of Accountancy and Management

☐ Faculty of Arts and Social Science

☐ Faculty of Business and Finance

☐ Faculty of Creative Industries

☐ Faculty of Engineering and Science

☐ Faculty of Information and Communication Technology

☐ Faculty of Medicine and Health Sciences

☐ Faculty of Science

Section B: Internet Access

1. How long you have been using internet?

- ☐ 0-3 months ☐ 3-6 months ☐ 1-2 years
☐ 2-5 years ☐ more than 5 years

2. How many hours you spend on internet per week?

- ☐ less than 2 hours ☐ 2-6 hours
☐ 6-10 hours ☐ 10-20 hours
☐ 20 to 40 hours ☐ more than 40 hours

3. Where do you use the internet most often?

- ☐ Home ☐ Campus
☐ Cyber café ☐ Restaurant (e.g. fast food restaurant, café)
☐ Others: _____

4. How often do you use the following application available on the internet?

	Never	Seldom	Sometimes	Often	Always
Social networking					
Gaming websites					
Gambling websites					
Dating websites					
Personal e-mails					
Office/ college e-mails					

Academic related surfing					
Erotic websites					
YouTube and movie websites					
General information search					
Downloading (software, movies, music)					

Section C: Internet Addiction Test (IAT)

IAT is a reliable and valid measure of addictive use of internet, developed by Kimberly Young. It consists of 20 items that measures mild, moderate, and severe level of internet addiction.

1. How often do you find that you stay on-line longer than you intended?

- () 0: Does not apply () 1: Rarely
 () 2: Occasionally () 3: Frequently
 () 4: Often () 5: Always

2. How often do you neglect household chores (i.e. cleaning, washing, ironing) to spend more time on-line?

- () 0: Does not apply () 1: Rarely
 () 2: Occasionally () 3: Frequently
 () 4: Often () 5: Always

3. How often do you prefer the excitement of the internet to intimacy with your partner?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

4. How often do you form new relationships with fellow on-line users?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

5. How often do others in your life complain to you about the amount of time you spend on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

6. How often do your grades or school work suffers because of the amount of time you spend on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

7. How often do you check your email before something else that you need to do?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

8. How often do your job performances or productivity suffer because of internet?
(Only applicable for student who work part time otherwise select 'Does not apply'.)

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

9. How often do you become defensive or secretive when anyone asks you what you do on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

10. How often do you block out disturbing thoughts about your life with soothing thoughts of the internet?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

11. How often do you find yourself anticipating when you will go on-line again?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

12. How often do you feel that life without the internet would be boring, empty, and joyless?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

13. How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

14. How often do you lose sleep due to late-night-log-ins?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

15. How often do you feel preoccupied with internet when off-line, or fantasize about being on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

16. How often do you find yourself saying “just a few more minutes” when on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

17. How often do you try to cut down the amount of time you spend on-line but fail?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

18. How often do you try to hide how long you've been on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

19. How often do you choose to spend more on-line over going out with others?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

20. How often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back on-line?

- | | |
|---|-------------------------------------|
| <input type="radio"/> 0: Does not apply | <input type="radio"/> 1: Rarely |
| <input type="radio"/> 2: Occasionally | <input type="radio"/> 3: Frequently |
| <input type="radio"/> 4: Often | <input type="radio"/> 5: Always |

Section D: General Health Questionnaire

We want to know how your health has been in general over the last few weeks.

Please read the questions below and select each of the four possible answers.

1. Have you recently been able to concentrate on what you're doing?

- | | |
|--|---|
| <input type="radio"/> 0: Better than usual | <input type="radio"/> 1: Same as usual |
| <input type="radio"/> 2: Less than usual | <input type="radio"/> 3: Much less than usual |

2. Have you recently lost much sleep over worry?

- | | |
|---|---|
| <input type="radio"/> 0: Not at all | <input type="radio"/> 1: No more than usual |
| <input type="radio"/> 2: Rather more than usual | <input type="radio"/> 3: Much more than usual |

3. Have you recently felt that you are playing a useful part in things (i.e. as a committee member, leader)?

- | | |
|---|---|
| <input type="radio"/> 0: More so than usual | <input type="radio"/> 1: Same as usual |
| <input type="radio"/> 2: Less so than usual | <input type="radio"/> 3: Much less than usual |

4. Have you recently felt capable of making decision about things?

- | | |
|---|---|
| <input type="radio"/> 0: More so than usual | <input type="radio"/> 1: Same as usual |
| <input type="radio"/> 2: Less so than usual | <input type="radio"/> 3: Much less than usual |

5. Have you recently felt constantly under strain?

- | | |
|---|---|
| <input type="radio"/> 0: Not at all | <input type="radio"/> 1: No more than usual |
| <input type="radio"/> 2: Rather more than usual | <input type="radio"/> 3: Much more than usual |

6. Have you recently felt you couldn't overcome your difficulties?

- | | |
|---|---|
| <input type="radio"/> 0: Not at all | <input type="radio"/> 1: No more than usual |
| <input type="radio"/> 2: Rather more than usual | <input type="radio"/> 3: Much more than usual |

7. Have you recently been able to enjoy your normal day to day activities?

- () 0: More so than usual () 1: Same as usual
() 2: Less so than usual () 3: Much less than usual

8. Have you recently been able to face up to your problems?

- () 0: More so than usual () 1: Same as usual
() 2: Less so than usual () 3: Much less than usual

9. Have you recently been feeling unhappy or depressed?

- () 0: Not at all () 1: No more than usual
() 2: Rather more than usual () 3: Much more than usual

10. Have you recently been losing confidence in yourself?

- () 0: Not at all () 1: No more than usual
() 2: Rather more than usual () 3: Much more than usual

11. Have you recently been thinking of yourself as a worthless person?

- () 0: Not at all () 1: No more than usual
() 2: Rather more than usual () 3: Much more than usual

12. Have you been feeling reasonably happy, all things considered?

- () 0: More so than usual () 1: Same as usual
() 2: Less so than usual () 3: Much less than usual

End of questionnaire.

