

A DEVELOPMENT OF THE CYBERPSYCHOLOGY MODEL  
FOR ADOLESCENT

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## ABSTRACT

The adolescent period is considered as a difficult and critical phase because these youngsters suffer from identity crisis, eager to explore and addiction to the internet. Their inability to manage the internet usage causes functional impairment and creates psychological difficulties. Thus, investigating and understanding the behavior underlying the cyberpsychology factors among these adolescents is an important task. This research examined cyberpsychology factors associated with internet addiction among adolescents and developed an integrative model. This study applied a quantitative approach using a survey conducted on 265 adolescents whose age range from 13-17 years, and were purposively selected from three schools in Johor. In the questionnaire, cyber psychology factors were assessed using The Behavior Scale that measure four facets, namely The Impulsivity Scale, The Passion Scale, Social Provisions Scale and Self-rating depression scale. Partial Least Square (PLS) method based on Structural Equation Modelling (SEM) was applied in the analysis process using SmartPLS 3.0 software. The findings showed that, reassurance of worth, opportunity of nurturance, sensation seeking, depression, urgency, obsessive passions, harmonious passions, time spent on internet and lack of perseverance were relevant factors of internet addiction among the adolescents. Next, these findings were used to develop an integrative model. The model was analysed further using path analysis and the results revealed a positive relation between Internet addiction and specific impulsivity components (lack of perseverance and urgency); depression; and obsessive passion. Besides, these positive relations were observed between obsessive passion and opportunity for nurturance, reassurance of worth, sensation seeking and harmonious passion. These results have shown that, Internet addiction and obsessive passion are important and complementary facets of problematic Internet use. As a conclusion, this study has contributed to a better understanding of cyberpsychology factors of internet addiction among adolescents.

## ABSTRAK

Masa remaja dianggap sebagai fasa yang sukar dan kritikal kerana anak-anak muda ini mengalami krisis identiti, tidak sabar untuk meneroka dan ketagihan kepada internet. Ketidakupayaan mereka untuk menguruskan penggunaan internet menyebabkan kerosakan fungsi dan mewujudkan kesukaran psikologi. Oleh itu, mengkaji dan memahami tingkah laku yang mendasari faktor psikologi siber di kalangan remaja ini adalah satu tugas penting. Kajian ini mengkaji faktor psikologi siber yang dikaitkan dengan ketagihan internet di kalangan remaja dan membangunkan model integratif. Kajian ini menggunakan pendekatan kuantitatif menggunakan kaji selidik yang dijalankan pada 265 remaja yang berumur 13-17 tahun dan dipilih secara rawak dari tiga buah sekolah di Johor. Dalam soal selidik, faktor psikologi siber dinilai dengan menggunakan Skala Perilaku yang mengukur empat aspek, iaitu Skala Dorongan, Skala Keinginan, Skala Ketentuan Sosial dan Skala kemurungan diri. Kaedah Kuasa dua Terkecil Separa (PLS) berdasarkan Model Persamaan Struktur (SEM) telah digunakan dalam proses analisis menggunakan perisian SmartPLS 3.0. Dapatan menunjukkan bahawa, keyakinan yang bernilai, peluang penuaan, pencarian sensasi, kemurungan, kesegaran, keinginan obsesif, keinginan harmonis, masa yang dihabiskan di internet dan kekurangan ketabahan adalah faktor yang berkaitan dengan ketagihan internet di kalangan remaja. Seterusnya, dapatan ini digunakan untuk membangunkan model integratif. Model ini dianalisis dengan lebih lanjut menggunakan analisis jalur dan hasilnya menunjukkan hubungan positif antara ketagihan Internet dan komponen impulsif tertentu (kekurangan ketekunan dan keperluan yang mendesak); kemurungan; dan keinginan obsesif. Selain itu, hubungan positif ini diperhatikan antara keinginan yang obsesif dan peluang untuk pemeliharaan, keyakinan yang bernilai, mencari sensasi dan semangat harmoni. Keputusan ini menunjukkan bahawa ketagihan internet dan keinginan obsesif merupakan aspek penting dan melengkapinya dalam penggunaan Internet yang bermasalah. Sebagai kesimpulan, kajian ini telah menyumbang kepada pemahaman yang lebih baik mengenai faktor siber psikologi ketagihan internet di kalangan remaja.

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## LIST OF ABBREVIATIONS

IA	-	Internet Addiction
LP	-	Lack of Perseverance
UR	-	Urgency
ON	-	Opportunity for Nurturance
RW	-	Reassurance of Worth
DEP		Depression
SS	-	Sensation Seeking
SI	-	Social Integration
OP	-	Obsessive Passions
HP	-	Harmonious Passions
TS	-	Time Spent
AVE	-	Average Variance Extracted
CR	-	Composite Reliability
CA	-	Cronbach's Alpha
LV	-	Latent Variable

## LIST OF SYMBOLS

$R^2$	-	Coefficient of Determinant
$f^2$	-	Effect Size
$q^2$		Effect Size
$Q^2$	-	Predictive Relevance
P	-	Estimated probability of rejecting the null hypothesis ( $H_0$ ) of a study question when that hypothesis is true

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# CHAPTER 1

## INTRODUCTION

### 1.1 Overview

Psychology is closely related to an individual behavior and human mind, which explains diverse issues related to conscious and unconscious individual experiences. The aim of studying psychology fields are by using various research methods and tools to analyze the mental state and capabilities of an individual (Ahuja and Alavi, 2017). There are various dimensions of applied psychology including clinical psychology, educational psychology, consumer psychology, organizational psychology, social psychology, sports psychology and another fast emerging area is the cyber psychology.

Since the use of Internet became an important element in our daily lives, many people have started looking up to the Internet as a savior, a friend and a source of coping stress. Additionally, it is also one of the platforms for them to express their thoughts and feelings. The ease of usage and navigation, makes the Internet a virtual domain thronged by people of all ages (Nurhilyana, Zaid, and Aminatul, 2013). Needless, in present times, adolescent spend a huge amount of time on the internet, making this habit a threat for them. Furthermore, over usage of the internet is leading to problems such as depression, low self-esteem, and social isolation, sleep deprivation, eating disorders and anxiety disorders (Jared and Gordon, 2015). They also gradually abstained from other social activities, thus makes them feel isolated and depressed.



A high incidence of such cases has increased the interest of researchers associated with psychological disorders, thus making the field of cyber psychology very relevant in the modern era (John Charlton et al., 2014). Internet addiction has been described as “excessive use or urges, or behaviors regarding computer use and internet access that leads to impairment or distress” (Shaw and Black, 2008). Internet addiction is quickly becoming a sensitive issue, thus people should show enough courage to stop the overuse of internet.

Exposure to excessive Internet usage by adolescent without control will give a negative impact. Besides, it will also affect their behavior, which might be considered as a psychological disorder. The excessive misuse of the Internet may affect the social development, psychological and biological in negative site (Caplan, 2002). Obsessive use of the Internet activities makes them suffer from depression, difficult to complete homework, behavior changes, and also academic failure (John Charlton et al., 2014). In addition, Internet when used unconsciously and without control may lead to anxiety and fear on an individual by affecting their personal development.

## **1.2 Problem Background**

The usage of internet among adolescent nowadays has been increasing rapidly and also transforming their lives. Surfing the Internet is a must for them, since they are exposed to different types of technologies every day. A survey conducted showed 94% of adolescent have Internet access at home after going back from school (Smith et al., 2014). Adolescent frequently use the Internet as a platform to gather information regarding their homework, search worldwide access for news and events for their extra knowledge. The adolescent period is considered as a difficult and critical phase because during this stage they are going through identity crisis which intend them to explore and easily being addicted to the Internet. Thus

Internet addiction has become one of the most important issues needed to consider (Teong and Ang, 2016). Overuse of the Internet may lead to an individual psychology issue including mental and emotional. Moreover, the impact of Internet addiction is closely related to the changes of behavior of an individual which interferes with their normal life.

Internet addiction was reported having slightly negative influence on the group of adolescent and it caused depression, academic failure, physical and health problem and stress among family, friends, and people around (Wanajak, 2011). According to The Malaysia Times (2013), negative effect such as misuse of social media, depression, suicides and death are a subsequent result of internet addiction and internet related problems. Furthermore, addictive to the internet are becoming a problem to the whole world especially to the adolescent which are still enjoying their student life. Since the relationship between internet addiction and psychology of an individual is closely related most of the researcher is still undergoing the investigation to overcome the problem.

Clearing these issues has become harder in recent decades. There are many previous researches that studied the field of cyber psychology and it includes the behavior in cyberspace, internet addiction, online gender switching, online identity, personality in cyberspace and online relationship (Jones, 2011). Basically cyber psychology is a field within applied psychology, focusing on the impact of emerging technology on human behavior. Due to inability to control the internet usage among school teenagers, functional impairment and psychological difficulties are caused (Jonathan et al., 2015).

Moreover, the impact of Internet addiction is closely related to the changes of behavior of an individual which interferes with their normal life. Internet addiction has been reported of having a slightly negative influence on school teenagers and caused depression, academic failure, physical and health problem and stress among family, friends, and people around (Wanajak, 2011).

Recently, a previous researcher had highlighted the cyber psychology factors model which may help to deeply identify the level of internet addiction of an individual as well as the relevant cyber psychology factors that contribute to internet addiction among adolescent. This analysis has been used over the years by the researcher to investigate and identify the relevancy model. In addition, research conducted by Enwereuzor et al. (2016), proposed a model with the relationship between passions, smartphone addiction and schoolwork engagement. This research highlights students' activities and revealed that students spend much more time on internet gambling with their smartphone during school time.

Next, another study concentrated on the youth well-being and social provision. Mancini and Bowen (2013) relate the relationship of social provision and academic performance among military youth. Additionally, the findings conducted by Mancini et al. (2015), revealed the positive relationship between provision and school performance but not for depression. Another researcher comes out with the relationship of role of affect in the passions psychological well-being (Vallerand, 2012), Vallerand & Rousseau, 2008).

On top of that, it explains the role of obsessive and harmonious passions in leading positive affect in promoting the increase in psychological well-being. From the psychology aspect, these two factors (obsessive and harmonious), may lead to happiness relevant activities. Harmonious passions refer to an automatic internalization that brings an individual to choose to involve in an activity they like (Richard et al., 2003). Meanwhile, obsessive passions refer to a controlled internalization that brings an individual to create an internal pressure involving activities they love (Burnay et al., 2014).

According to Burnay et al. (2014), the factors (impulsivity, passions and social provision) are selected to define the relationship with Internet addiction. They added, from the previous research, there is no study that includes all these factors to examine the relationship with Internet addiction. The study also highlighted that

there was a multidimensional relationship influenced by impulsivity and passions. Additionally, it includes the factors that influence internet addiction including age, lack of perseverance, urgency and depression. Meanwhile, factors that influenced obsessive passions include reassurance of worth, opportunity for nurturance and sensation seeking. Next, the only factors that influence harmonious passions were depression.

Although the cyber psychology factors model has helped to predict the level of internet addiction, there is still deficiency in the analysis (Teong and Ang, 2016). Some limitations are highlighted regarding to the existing model. Fatemah et al. (2017) suggested the cyber psychology factors selection may be needed to improve and change due to various every day addition of technology and the behavior of an individual are not consistently the same.

This is the gap that needs to be filled to make sure the information are easy to attain and understandable. Another researcher, Vondrackova (2012), also added, the key point to find out which cyber psychology factors are relevant to explain internet addiction among adolescent is one of the critical phase. This is because different factors are related to different focusing groups of study and also its effect on the environment, daily life, the use of internet daily and others. Hence, the background problem leads into the next section which will provide a problem statement of this research.

### 1.3 Problem Statement

Developing adequate information to explain the relevant cyber psychology factor among adolescent is an important task (Ibrahim Tas, 2017). While identifying the cyber psychology factors may give an overall picture on the internet addiction behavior in cyberspace among adolescent. In previous works, cyber psychology factors model were used to examine a multidimensional relationship which influenced the Internet addiction. Furthermore, previous studies also predicts and examined the relation between both passion and Internet addiction.

Some others factors includes depression, impulsivity, social provision and other (Jonathan et al., 2015). However, there are still deficiencies in the analysis which lead to the related problem unsolved. Additionally, addiction to the internet has become a worldwide problem especially to the adolescent whom is still enjoying their student life. Another issue that could be highlighted is, regarding the behavior of internet addiction among adolescent brings negative impact to the psychology of an individual and is closely related to the school achievement, school problems, and academic achievement.

This situation makes it harder day by day due to the installment of various social media networks. Apart from that, another important task is, the cyber psychology factors selection may be needed to improved and changed due to different technology that arise every day and the behavior of an individual is not consistently same. The main questions in this research are as follows:

- i. What are the relevant cyber psychology factors that contribute to Internet addiction among adolescent?
- ii. How to develop a model for cyber psychology factors that contribute to Internet addiction among adolescent?

## **1.4 Research Objectives**

Based on the problem statement described in the previous section, the researcher suggests research objectives that act as a guidance throughout the research process. Subsequently, there are two research objectives developed for this research:

- i. To identify the cyber psychology factors that contributes to Internet addiction among adolescent.
- ii. To develop a model for cyber psychology factors that contributes to Internet addiction among adolescent.

## **1.5 Scope and Limitations**

The scopes of this research are as follows:

- i) This research is restricted to finding out the relevancy of cyber psychology factors that contribute to internet addiction among adolescent.
- ii) This research focused on the ranging age from 13-17 years old which including forms 1 until form 5 students.
- iii) This research study is limited to the 265 students in Johor Bahru. Three school was selected which is Sekolah Menengah Kebangsaan Kangkar Pulai, Sekolah Menengah Kebangsaan Taman Universiti and Sekolah Menengah Kebangsaan Skudai.
- iv) This research concerned on the group of the adolescent selected because a lot of characteristics of a person are formed during this range of age including interest, relationship, emotion and those related to the psychology role.

## 1.6 Significance of Study

This study addressed the potential factors of cyber psychology in contributing to a better understanding of psychology aspect in cyberspace. By exploring the adolescent behavior in cyberspace, it gives the current situation and visualizes the psychology approach on Internet usage among adolescent. The model developed in this study can be used by researcher and educator to understand and concentrate on the factors that may influence the behavior of adolescent. This research also hoped to help give a better understanding to overcome the problem related to the internet addiction among adolescent in cyber psychology perspective. As a result, the particular study may serve to a better environment in cyber world among adolescent. Other significant are as follows:

- i) Theoretical
  - a) The potential factors that are relevant to explain internet addiction among adolescent are determined
  - b) The different platform of the research implementation context might be the reason for the difference in the predictive power and although the theoretical basis is similar.
  - c) This study presented Impulsivity and passions were found to be particularly important to explain internet addiction
  
- ii) Practical
  - a) Provide deeper and better understanding of cyber psychology factors involved in internet addiction among adolescent.
  - b) Provide information on cyber psychology factors – Beneficial for researcher and educator
  - c) From the cyber psychology factors finding – An action on these factors could involve helping individuals deals with internet addiction

## 1.7 Thesis Structure

This thesis is organized in six chapters. Chapter 1 is the introduction while Chapter 2 is literature reviews made by the researcher based on previous studies. Chapter 3 discusses the methodology of this research study and Chapter 4 provides the explanation in the development of structural model, development of hypotheses and presentation of a pilot study of the data analysis. Chapter 5 provides the result and analysis based on the methodology used by the researcher. The last chapter is Chapter 6 which provides the conclusion, recommendation and future works under this research. The content of these chapters are briefly explained as follows:

### i) Chapter 1

This chapter discusses the basics; importance and objectives of the study. It also discusses the background problem, problem statement, research questions, and contributions of this study and the scope of this study.

### ii) Chapter 2

The basic of literature review was done to investigate the domain area that overlook the project study. The literature review helped the researcher to get thorough comprehension on the project domain. This chapter presents a review of the literature in the main areas of relevant theories of cyber psychology, Internet addiction in cyberspace among adolescent, cyber psychology factors and the relationship of cyber psychology factors and internet addiction among adolescent.



iii) Chapter 3

This chapter discusses a detailed explanation of the research methodology and resource used. Methodology is one of the important parts in a project or in a research. It discusses the flow of technique being used in the studies in order to achieve the goals of the project. The technique or method are explained in detail in this chapter's subtopic. While the operational framework describes the overall picture of the project flow and the summarize table explains the activities done in match with the research phases. Explanation of phases in research framework are detailed up in this chapter.

iv) Chapter 4

This chapter explains the development of structural model, development of hypotheses and presents a pilot study data analysis. The first section of this chapter discusses the development of structural model, which explains the development of the hypotheses. Then it continues to discuss the development of measurement model and finally discusses the pilot study data analysis where validity and reliability test value is presented.

v) Chapter 5

This chapter comprises and describes the detailed of chosen methodology used by the researcher. The methodology presents steps involved to meet the research objective and obtain the specific outcomes. Also, this chapter describes the analysis of data, the discussion of the findings and the presentation of the final model. Data were analysed using SmartPLS3 with the purpose to identify, explore and describe the significant or insignificant each of the hypotheses proposed in the previous chapter.

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