



***FACTORS PREDICTING CYBER AGGRESSION VICTIMIZATION
MEDIATED BY INTERNET ADDICTION AMONG URBAN YOUTH IN THE
KLANG VALLEY, MALAYSIA***

SARINA BINTI YUSUP

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By

SARINA BINTI YUSUP

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfillment of the Requirements for the Degree of Doctor of Philosophy**

October 2018

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

This thesis is humbly dedicated to my dearest mother and in loving memory of my respected father; to my beloved husband and my beautiful children, for without their inspiration, enthusiasm and undivided support, none of this would have happened.



DEDICATION

For my Mom, Mrs Jubaida Mohamad, thank you for giving birth to me, caring for me and raising me with a great patience and affection. I can barely find the correct words to express my thanks for all the sacrifices you have made for me, and for which I am forever grateful. I Love You, Mom!

For my late Dad, Mr Yusuf Sangka, I have always looked up to you: you are my inspiration, and you are my role model. I want to be like you: never giving up, optimistic and very positive. I promise, no matter what happens, I will never give up on life. I love you and miss you immensely. May ALLAH forgive your sins and grant you Jannah, Amin.

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

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IN THE KLANG VALLEY, MALAYSIA**

By

SARINA BINTI YUSUP

October 2018

Chairman : Professor Bahaman Abu Samah, PhD
Institute : Social Science Studies

Undeniably, the usage of the Internet and other related technologies has never been without any consequences. A new form of abusing someone online, commonly referred to as cyber aggression, has become a new growing problem in today's society; it offers convenient opportunities to humiliate, bully, or harass another person online. Global studies on cyber aggression found that youths who were aggressed online are reported feeling depressed, anxious, afraid, poor academic performance, eating disorders, and substance abuse usage such as drugs and alcohol. According to experts, this phenomenon becomes insidious when the behaviour develops into a form of psychological cruelty and in some extreme cases, those consequences can lead victims to suffer from severe mental illness and the worst, when it ends with committing suicide.

The renowned general aggression model (GAM) and media system dependency (MSD) theories were integrated to develop a holistic theoretical foundation into the study framework. Therefore, it is important for this study to identify the variables that significantly affect the incidents of cyber aggression victimization among youths in order to reduce the prevalence of the incidents. Previous studies have discussed in details that the personal and situational factors of the GAM may influence the experience of victimization among youths and adolescents, and the MSD may be useful to understand the behavior occurs in the cyber space. On that account, the main aims of this study are to investigate the interrelationships among predictor factors (peer attachment, parent's attachment, Internet exposure, self-esteem, and narcissistic personality); mediating factor (Internet addiction) and moderating factor (gender) on cyber aggression in the context of victimization among youths.

A sample of 430 urban youths (231 male and 199 female) aged from 13 to 18 years were randomly selected from four districts in Klang Valley. Data were gathered through a self-report questionnaire and later analyzed using SPSS and AMOS. Two types of data

analyses were conducted; first, the descriptive analysis to identify the pattern and levels of all the related variables, and second, the inferential analysis is performed using structural equation modelling (SEM) to test nine hypotheses drawn from the research model.

This study revealed several noteworthy findings; first, it was found that the majority of respondents were using the Internet approximately 7 to 21 hours per day especially during weekends. The main purpose of engaging themselves during those hours is socializing in social media, followed by entertainment and playing online games. Second, this study discovered relatively significant number of youth had been engaged with cyber victimization through the act of aggression compared to the other local studies. The main forms of victimizing someone online are the written-verbal and online exclusion. Third, the SEM analysis indicated the Internet exposure is the strongest predictor that associated with cyber aggression victimization. Fourth, the bootstrapping analysis showed Internet addiction as the significant mediator factor between parental attachment, Internet exposure and cyber aggression victimization. Fifth, gender does not moderate the relationship between predictors and cyber aggression victimization. Finally, this study confirmed all the predictors jointly explained 21% of the variance in cyber aggression victimization. Based on these findings, the implications and recommendations for future investigations with reference to the current theoretical framework and empirical findings on cyber aggression victimization are thoroughly discussed.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**FAKTOR-FAKTOR YANG MERAMAL PEMANGSAAN SIBER AGRESI
DIPERANTARAKAN OLEH KETAGIHAN INTERNET DALAM KALANGAN
BELIA BANDAR DI LEMBAH KLANG, MALAYSIA**

Oleh

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Tidak dinafikan bahawa penggunaan Internet dan teknologi lain yang berkaitan tidak akan wujud tanpa sebarang akibat. Satu cara baru penderaan seseorang atas talian, yang biasanya dirujuk sebagai siber agresi, telah menjadi masalah baru dalam masyarakat hari ini; ia memberi ruang yang mudah untuk memalukan, membuli, atau mengganggu orang lain. Kajian siber agresi di peringkat global mendapati bahawa belia yang terancam atas talian dilaporkan berasa tertekan, cemas, takut, kemerosotan prestasi akademik, gangguan pemakanan, dan penggunaan barang larangan seperti dadah dan alkohol. Menurut pakar, fenomena ini menjadi lebih bahaya apabila tingkah laku tersebut berubah menjadi satu bentuk kekejaman psikologi dan dalam beberapa kes yang ekstrem menyebabkan mangsa mengalami penyakit mental yang serius dan paling buruk, bila ia berakhir dengan kejadian membunuh diri.

Model agresi umum (GAM) dan model kebergantungan sistem media (MSD) yang terkenal telah diintegrasikan untuk membangun teori asas secara holistik ke dalam kerangka kajian ini. Oleh itu, penting bagi kajian ini untuk mengenal pasti pemboleh ubah yang memberi kesan kepada kejadian pemangsaan siber agresi dalam kalangan belia bagi mengurangkan kebarangkalian kejadian tersebut. Kajian lepas telah membincangkan dengan terperinci mengenai faktor personal dan situasi dalam teori GAM yang boleh mempengaruhi pengalaman sebagai mangsa dalam kalangan belia dan remaja; dan MSD amat penting untuk memahami tingkah laku tersebut di alam siber. Oleh sebab itu, matlamat utama kajian ini adalah untuk mengkaji hubungan antara faktor-faktor ramalan (kelekatan rakan sebaya, kelekatan ibu bapa, pendedahan Internet, harga diri, dan keperibadian narsis); faktor pengantaraan (ketagihan Internet) dan faktor penyederhanaan (jantina) terhadap siber agresi dalam konteks pemangsaan belia.

Seramai 430 sampel belia bandar (231 lelaki dan 199 perempuan) berusia 13 hingga 18 tahun telah dipilih secara rawak dari empat daerah di Lembah Klang. Data dikumpul

melalui borang soal selidik dan kemudian dianalisis menggunakan SPSS dan AMOS. Dua jenis data analisis dijalankan; pertama, analisis diskriptif yang digunakan untuk mengenalpasti corak dan tahap setiap pembolehubah yang berkaitan; dan kedua, analisis inferensi menggunakan SEM (*structural equation modelling*) untuk menguji sembilan hipotesis yang diambil daripada kerangka kajian.

Kajian ini mendedahkan beberapa penemuan penting; Pertama, didapati bahawa majoriti responden menggunakan Internet sekitar 7 hingga 21 jam sehari terutama pada hujung minggu. Tujuan utama untuk melibatkan diri pada waktu tersebut adalah untuk bersosial di media sosial, diikuti dengan hiburan dan bermain permainan atas talian. Kedua, kajian ini mendapati bilangan belia yang agak signifikan telah terlibat dengan pemangsaan siber melalui perlakuan agresi berbanding dengan kajian tempatan yang lain. Bentuk utama perlakuan memangsai seseorang adalah secara bertulis-lisan dan pengecualian atas talian. Ketiga, analisis SEM menunjukkan pendedahan Internet adalah peramal paling kuat yang berkaitan dengan pemangsaan siber agresi. Keempat, analisis *bootstrapping* menunjukkan ketagihan Internet sebagai faktor pengantara penting dalam hubungan kelekatan ibu bapa, pendedahan Internet dan pemangsaan siber agresi. Kelima, jantina tidak menyederhanakan hubungan di antara semua peramal dan pemangsaan siber agresi. Akhirnya, kajian ini mengesahkan semua peramal menjelaskan 21% varians dalam pemangsaan siber agresi. Berdasarkan penemuan ini, implikasi dan cadangan untuk kajian di masa hadapan dengan merujuk kepada kerangka teoritikal semasa dan penemuan empirikal mengenai pemangsaan siber agresi akan dibincangkan dengan teliti.

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I certify that a Thesis Examination Committee has met on 25 October 2018 to conduct the final examination of Sarina binti Yusup on her thesis entitled “Factors Predicting Cyber Aggression Mediated by Internet Addiction among Urban Youth in Klang Valley” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The committee recommends that the student be awarded the Doctor of Philosophy.

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LIST OF ABBREVIATIONS

AGFI	Adjusted Goodness of Fit Index
AT	Attachment Theory
AVE	Average Variance Extracted
BC	Bias-Corrected
CAT	Cyber Aggression Typology model
CBQ	Cyberbullying Questionnaire
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Confidence Intervals
CMC	Computer-Mediated Communication
C-ME	Content Media Exposure Scale
CMIN	Value of Chi-Square
CR	Construct Reliability
CS	Cyberbullying Scale
CYVIC	Cyber Aggression Victimization
Df	Degree of Freedom
DBKL	<i>Dewan Bandaraya Kuala Lumpur</i>
DUN	<i>Dewan Undangan Negeri</i>
ECIPQ	European Cyberbullying Intervention Project Questionnaire
EDA	Exploratory Data Analysis
EFA	Exploratory Factor Analysis
GAM	General Aggression Model
GFI	Goodness of Fit Index
GOF	Goodness Of Fit
IAT	Internet Addiction Test
I-E	Internet Exposure Scale
IFI	Incremental Fit Index
IPPA	Inventory of Parents and Peers Attachment
ICT	Information and Communication Technology
KDB	Klik Dengan Bijak
KMO	Kaiser-Meyer-Olkin
LB	Lower Bound
M	Mean
MB	<i>Majlis Bandaran</i>
MCMC	Malaysian Communication and Multimedia Commission
MGA	Multi-Group Analysis
MLM	Maximum Likelihood Method
MP	<i>Majlis Perbandaran</i>
MSD	Media System Dependency
NRB	Non-Response Bias
NFI	Normed Fit Index
NPI	Narcisctic Personality Inventory
OFCOM	Office of Communication
PCA	Principal Component Analysis
RCBI	Revised Cyberbullying Inventory
RMSEA	Root Mean Square Error of Approximation
RSES	Rosenberg Self-Esteem Scale

S.E	Standard Error
SES	Self-Esteem Scale
SD	Standard Deviation
SEM	Structural Equation Modelling
SES	Social-Economic Status
SIE	Standardized Indirect Effect
SMK	<i>Sekolah Menengah Kebangsaan</i> (National Secondary School)
SMS	Short-Message System
SNS	Social Networking System
SPSS	Social Package for Social Science
TLI	Tucker-Lewis Index
TV	Television
UB	Upper Bound



CHAPTER 1

INTRODUCTION

Background of the Study

Developments in information and communication technology (ICT) have significantly affected the way people communicate and live. With the emergence of the Internet, especially Web 2.0 and other accompanying technologies such as smartphone, iPad, personal computer and laptop; youth, particularly millennial, are increasingly becoming enmeshed in their use (Alam et al., 2014; Teong & Ang, 2016). The term youth also refers to the generation Y or the millennials. Nearly a half (46%) of the total global population are said to be millennials. Youth is defined as a person who is still in their formative years, personality development, undergoing character modelling and occasionally receiving training to enhance their human capital development (Ali Salman, 2015; Strauss & Howe, 1991). Furthermore, various terms have been used to describe this generation, including 'net-generation,' 'digital immigrants,' 'millennium generation' and 'digital natives' (Tapscott, 2009; Bulik, 2010; Jones & Shao, 2011; Prensky, 2001). These labels mostly identify broad groups of young persons who grew up during the expansion of the Internet in the media-rich environment and from an early childhood get exposed to and access technology as a way of life for various purposes, e.g., social interaction, expressing of identity and media production (Mesch, 2009). Early studies in Internet usage suggested that this generation of youth are the most vulnerable group of online users, as they are more adaptable to the fast changing of the Internet realm (Kapahi, Choo, Ramadass, & Nibras, 2013).

With its pervasive appeal and ubiquity, the Internet has provided enormous benefits to people, especially the youngsters (Daud et al., 2014; Guan & Subrahmanyam, 2009; Lenhart, Madden, & Hitlin, 2005). The Internet affords youth many benefits such as providing them with access to tools, software and applications to enhancing their communication skills, expand their social connection and even improve their technical skills (O'Keeffe & Clarke-Pearson, 2011; Ito, Horst, & Bittani, 2008). Past studies have established that majority of youth use the Internet mainly as a tool for computer-mediated communication (CMC) such as email and text messaging on smartphone, instant messaging via, e.g., Whatsapp, Snapchat and Instagram, social networking sites (SNS) such as Facebook and Twitter and personal web blogs (Ofcom, 2016; Lenhart et al., 2015). A clear majority of youth (93%) are shown to have used email, most of them (76%) have used instant messaging, social media (78%) and uploading photos or videos online (80%) (Ofcom, 2016). Youth's dependence on technology in the context of CMC is chiefly because of the easy access to unlimited information resources online and unprecedented innovations in communication devices such as smartphones, tablets, Wi-Fi and broadband services. Hence, the emergence of this generation of youth as the most informative and knowledgeable compared to their earlier counterparts (Sasson & Mesch, 2014).

Although the Internet has many benefits, it has also engendered myriad of problems for users especially younger users. In recent years, there have been reports about the rising waves of child online risky behaviours often involving adolescents and teenagers, a phenomenon that is consistently shown to have severe implications for their health, life prospects and well-being. Copious studies have found links between youth's Internet use duration and psychiatric symptoms such as depression, loneliness, obsessive compulsion and anxiety (Budnikas, 2013; Kelleci & İnal, 2010; Sinkkonen et al., 2014; Alam et al., 2014). In fact, according to the findings of other studies, children whose spent excessive time online are more likely to get involved in various harmful online experiences such as sexual predation (Noh & Ab Rahman, 2013), sexting (Baumgartner et al., 2014), cyber grooming and pornography (Livingstone & Bober, 2005), and cyberbullying (Mishna et al., 2010). Worst still, the impacts of using the Internet among children have led to other severe consequences including physical and mental injuries, and even suicidal ideation (Hinduja & Patchin, 2010; Raskaukas & Stoltz, 2007).

In recent years, another form of online abuse known as cyber aggression has been lurking in the Malaysian cyberspace. This online youth problem has been reported occurring in many countries around the world. In 2007, The Reader's Digest magazine reported that in Malaysia, 60 cases of Internet harassment were reported to the country's cybersecurity agency (McKenna, 2010). In 2010, the same agency reported that the number of cases dramatically rose to 354 (Cyber Security, 2011). Validating the agency's report, Azizan (2012) found that 30% of girls reported having been involved in sexual harassment in social networks. Based on the statistics provided by CyberSecurity Malaysia agency, one in three Malaysian children reported having been involved in cyberbullying as victims ("Cyberbullying reports up 55.6% in 2013" February 24, 2014); 27% of Malaysian schoolchildren reported having harassed someone online, and 13% reported having been bullied online by their peers (Cyber Security, 2013). Many (20%) young children aged 12 years were involved in involved Internet aggression (Ismail, 2011) 17.6% of whom got bullied online, and 2.4% bullied others. Similarly, a survey found that a majority (83%) of school-going children aged 9 to 17 got exposed to the risky online behaviours: 64% received malicious and offensive images or messages online, and 70% got involved in cyber-based abuse incidents such as cyberbullying and online harassment (DiGi CyberSAFE, 2014). All the findings and statistics showed that aggressive youth behaviour online is prevalent in Malaysia. Unfortunately, there is a serious literature void in local research on the impact of electronic media and aggression consequent upon which many policies and programs might have been formulated and implemented without a solid research foundation.

Background of Research Problem

Engaging in the risky and harmful behaviour during online is one of the most critical problems faced by the younger youth in the 21st century. As these group of youth tend to solve their conflicts by using their expertise with the current technology advantages to aggress and humiliate their peers online (Werner, Bumpus, & Rock, 2010) in what is referred here as cyber aggression. Despite the mounting concerns and a corresponding increase in research on aggressive online behaviours, the concept itself remains poorly conceptualised (Dooley et al. 2009; Tokunaga 2010). As a result, studies conducted without the standard definitions and measurement tools to analyse and identify the true

nature of the phenomenon (Tokunaga, 2010; Vivolo-Kantor et al., 2014). Although the term of ‘cyberbullying’ often used interchangeably with the term of ‘cyber aggression’, both are the different entity as cyberbullying is a fraction from the definition of cyber aggression (Grigg, 2010; Alvarez-Garcia et al., 2016). Based on these discrepancies, cyberbullying may not be the most fitting terms to measure the harmful behaviours during online.

Inevitably, the inconsistency of definition in this field of study has also led to the absence of a standard measurement tool. Since the year 2004, there are nearly 650 tools existed to measure the incidence of cyberbullying (Berne et al., 2013). However, the existing tools are unable to measure the diverse functions of cyberbullying, as most of the studies conducted were using a mixed concept to measure the behaviour (Berne et al., 2013; Griggs, 2010; Tokunaga, 2010; Vivolo-Kantor et al., 2014).). Hitherto, the unified framework that can be used to identify such behaviours is ambiguous, as there is still an absence of standard definition and measurement to evaluate such behaviours. Thus, this study tested the most recent model of cyber aggression by Nocentini et al (2010) measurement proposed by Alvarez-Garcia et al (2015; 2017), to develop a robust theoretical framework and to understand thoroughly the prevalence of cyber aggression as well as cyberbullying (Mehari, Farrel, and Le, 2014) which probably will address the issue much better.

There is a substantial amount of empirical evidence for factors predicting cyber aggression among youth in other nations (e.g., Amichai-Hamburger & Ben-Artzi, 2003; Amiel & Sargent, 2004; Kim, LaRose & Peng, 2009) but there is a dearth of similar literature in Malaysia (e.g., Faryadi, 2011; Abu Bakar, 2013; Balakrishnan, 2015; Yusuf et al., 2018a & b; Teimouri et al., 2014); the limited available literature mainly focused on cyberbullying. To the best knowledge of the author, the present study is one of the few pioneering studies in cyber aggression in Malaysia. However, there are several national surveys and local studies focusing on cyberbullying. For example, the Malaysian Cyber Security department has conducted several surveys on the effect of cyber threats on children and adolescents on social networking sites (mainly Facebook) (see Cyber Security, 2012; 2013; 2014). Furthermore, a cross-sectional study was performed to analyse the emotional state of cyber victims (Faryadi, 2011) critically. Despite the limited literature on cyberbullying among Malaysian youngsters, a study conducted by Balakrishnan (2015) found that cyberbullying did occur among Malaysian youth. The study, however, suggested that the occurrence of the phenomenon among the respondents of the study (youth aged 17 to 30 years old) not be as prevalent as it was among teenagers and young children (below 17 years old), and that social networking sites were the most likely domains that cyberbullying incidents took place (Balakrishnan, 2015). Hence, it is essential for the current study to investigate the prevalence of cyber aggression among Malaysian younger youth to contribute some knowledge to the emerging cyber aggression literature in the country.

In light of the related literature and findings from various studies, it is possible to highlight the urgency to understand the determining factors influencing involvement in cyber aggression. For the record, there is an abundance of factors that possibly influence cyber aggression occurrences. However, there are four primary variables consistently

emerged in the literature that might have strong associations with cyber aggression, namely, parental attachment (Butler et al., 2007; Hoeve et al., 2012), peer attachment (Ji et al., 2014; Wright et al., 2015) personality traits (Ang, Tan & Mansor, 2011; Barlett & Anderson, 2012; Wiedeman et al., 2015; Lafko, 2015; Pimentel, 2016) and Internet exposure (Escobar-Chavez & Anderson, 2008; Wiedeman, Black, Dolle, Finney, & Coker, 2015; denHamer & Konijin, 2015). Anderson and Bushman (2002) have also been pointing out the most relevant variables that may influence the effects of cyber aggression among younger youth are their characteristics such as being more hostile in personality and having poor emotion regulation abilities. Other researchers suggested the situational factors such as, having parents who do not monitor or limit their Internet consumption, the negative influence of peers and current media exposure (number of exposures per minute, per day and per week) (Parsa et al., 2014); and the content of the media (educational, violent, and non-violent) (Escobar-Chaves & Anderson, 2008; Den Hamer & Konijin, 2015) are also significantly associated with cyber aggression.

Therefore, past studies in the field of aggression and bullying have suggested that the primary factors affecting those negative behaviours were child's psychological attachment with their parents followed by their peers (Armsden & Greenberg, 1987; Soh, 2011; Apple, 2014). Poor parental attachment and lack of parental monitoring on children's Internet usage are also consistently related to youth's involvement in aggressive online behaviours, whether as targets or perpetrators (Ybarra & Mitchell, 2004; Wang et al., 2009). A very recent study has increased the amount of literature on cyber aggression by proposing that the lack of communication, the absence of trust and ignoring children emotional states may increase cyberbullying behaviour intensely among youth (Yusuf et al., 2018a & b). Parents are not the only influential factors in youth's development processes. Youth expands their social realm by intensifying the significance of the relationships they possess with their peers (DenHamer & Konijin, 2015).

Friendship has been consistently reported to be necessary for the psychological health and adjustment in adolescence (Armsden & Greenberg, 1987; Wilkinson & Kraljevic, 2004). Research shows that healthy peer relationships have a positive psychological influence on youth (Durlak, Weissberg & Pachan, 2010; Piaget, 1965). Other researchers found that youth's attitudes and behaviours mirror each other and that peers provoke more negative and deviant behaviours compared to positive ones (Brechwald & Prinstein, 2011; Albert & Steinberg, 2011; Zahrt & Lange, 2011). Armsden and Greenberg (1987) suggested that the nature of the bonds during child's developmental stages and younger youth are explained by the attachment theory, which is well-accepted, empirically validated theory in developmental psychology (Nickerson & Nagle, 2005). According to the theory, the way youth formed attachments in their early formative years with their parents and peers shapes the underlying patterns of thought, feeling and motivation in their later adulthood (Bowlby, 1980).

Furthermore, because of the increased awareness that cyber aggression has become a significant threat to the young user, efforts to explain why and how youth are deeply involved in this behaviour have immediately become essential research issues (Alvarez-Garcia et al, 2014; Grigg, 2010; Runions et al., 2016; Runions, Shapka, Dooley, &

Modecki, 2013b; Wright et al., 2015). Scholars and theorists of aggression and personality postulated that personality variables are significant predictors of aggressive behaviour (Anderson & Huesmann, 2003). Thus, some literature has proposed that individual personality traits may influence certain individuals to act aggressively when online, and that past studies have principally examined the links between narcissism, self-esteem and physical and verbal aggression (Locke, 2009; Ooi, Ang, Fung, Wong, & Cai, 2006; Pabian, De Backer, & Vandebosch, 2015; Thomaes, Bushman, Stegge, & Olthof, 2008).

Scholars of aggression and media reached a consensus on the fact that over the last one and a half decades of extensive studies, they have found a constant link between the type of media and aggressive behaviours (see Anderson et al., 2003; den Hamer & Konijn, 2015; Tang & Fox, 2016). A substantial body of research supports the claim that youth exposure to media violence leads to increased aggressiveness. Therefore, given the abundant media usage of today's youth, hence the need to identify and determine the specific content of media that can influence cyber aggression among the youth. Thus, to investigate the relationship, this study applies the Media System Dependency Theory (MSD) (Ball-Rokeach and DeFluer, 1976). This theory suggests that the more a person depends on media to meet their needs, the more critical the media will be to them and the more effects the media will have on the person.

Additionally, over the years, Internet addiction has become a global concern to the public, and some have classified it as a social health issue. A study conducted among Malaysian youth on Internet addiction behaviour has reported that the drastic increase of Internet usage was associated with increased incidents related to online threats and risks such as depression, pornography, and even suicides (Kapahi et al., 2013). Studies found the Internet addiction is indirectly affecting online harassment; however, the link becomes significant only with the presence of Internet addiction as a mediating factor (Eksi, 2013). Other studies suggest the Internet addiction also significantly influences the relationships between attachment and risky online behaviours (Carter, 2014; Soh & Hoi, 2014) as well as exposure to the harmful media contents and risky online behaviours (denHamer & Konijn, 2015). Therefore, the present study hypothesised that Internet addiction mediates the four predictors of cyber aggression because the more users are addicted to the Internet, the more susceptible they become to involve as victims.

Studies on aggression performed several years ago have found that gender is one of the factors that influence the incidence of aggression (Balakrishnan, 2015; Buss & Shackelford 1997; Lafko, 2015; Schoffstall & Cohen, 2011; Orue, 2014). As proposed by Anderson and Bushman (2002), the gender variable is one of the sociographic factors that moulded the general aggression model (GAM) in addition to personality traits, attitudes, values and beliefs. Similarly, a considerable amount of study shows that males were more likely to engage in and perpetrate aggressive cyber acts compare to females (e.g., Dehue et al., 2008; Kowalski et al., 2008; Olweus, 1993; Raskauskas & Stoltz, 2007; Walrave & Heirman, 2011). Other studies have found girls to be involved in cyberbullying behaviour more often (Balakrishnan, 2015; Beckman et al., 2013) and yet other studies have found no significant gender differences (Calvete et al., 2010; and Hinduja & Patchin, 2008).

Statement of the Problem

In 2012, Malaysia ranked 17th out of 25 countries that were surveyed as the highest in cyberbullying incidences (Microsoft Global Youth Online Behaviour Survey, 2012). The study also reported that 33% of school-going children aged between 8 to 17 years old had been engaged to other forms of aggression during online such as defamation, online harassment and impersonation. Two years after the study, further research revealed that cyber aggression incidents among children in Malaysia were on the rise, with 13 to 15-year-olds being the most common targets or victims of cyber aggression (Teimouri et al., 2015). Further, based on the statistics compiled by the CyberSecurity Malaysia, about 300 cases of cyber harassment were documented in 2012, 512 in 2013, 550 in 2014, 442 in 2015 and 529 in 2016 (The Star Online, 2017). The aggressive cyber acts among youth are reported to be more dangerous, with 250 cases reported in 2012, 389 in 2013, 291 in 2014, 256 in 2015 and 338 in 2016 according to the MCMC (2016), the number is increasing every year without any hints of slowing down soon. In total, there were 1,524 cyberbullying cases documented over the past five years although the number is insignificant compared to more than five million school-going students across the country, the statistics solely based on the cases that were reported to the agency regardless of many unrecorded cases.

Investigations of cyber aggression phenomenon are beginning to emerge in the scientific literature because of their implications to the youth development. This particular behaviour has various consequences on victims, such as low self-confidence, social isolation, self-harm, low academic scores, depressive symptoms and social anxiety (Hinduja & Patchin, 2008; Soh & Hooi, 2010; Tokunaga, 2010). Thus, it is crucial for the current study to probe the issue from the perspective of victims, as according to Corcoran et al. (2015), the cyber aggression is a much worse scenario for the victim compared to the perpetrator due to the harmful and damaging impacts it has on them. Numerous studies on cyber-based abuse agreed that the aggressive behaviours could inherently lead to many others harmful consequences. In some extreme cases, those consequences can lead victims to suffer from severe mental illness (Alvarez-Garcia et al., 2015; Bonanno & Hymel, 2013) and the worst is when it ends with committing suicide (Van Geel, Vedder, & Tanilon, 2014; Hinduja & Patchin, 2010; Kowalski et al., 2014).

The term of cyberbullying was coined more than a decade ago, there are 636 studies on cyberbullying were using numerous definitions (Berne, et al., 2013) including Internet aggression (e.g., Werner et al. 2010), electronic aggression (e.g., Hertz and David-Ferdon, 2011), online aggression (e.g., Law and Shapka. 2012), cyber aggression (e.g. Schoffstall and Cohen 2011) and online harassment (e.g., Ybarra & Mitchell, 2004). This inconsistency has also led to the existence of nearly 650 measurement tools of cyberbullying (Berne et al., 2013; Tokunaga, 2010; Vivolo-Kantor et al., 2014). However, because cyberbullying is a relatively recent phenomenon, according to Tokunaga (2010), researchers appear interested not in bullying by itself, but more broadly in aggression that conducted towards the victim via ICT. Therefore, cyber aggression victimization throughout this thesis will be referring to “suffering peer aggression by computer-mediated communication (e.g., Internet and smartphone), which mainly consist of written-verbal, visual, exclusion, and impersonation” (Nocentini et al., 2010), and

testing the most recent Cyber Aggression Victimization (CYVIC) measures by Alvarez Garcia et al (2017).

Due to the inconsistency in the standard definition and measurement tools of cyber aggression, it is a challenge to understand the most suitable or appropriate predictive factors that may influence the incidences of cyber aggression victimization. There is abundance of factors that possibly influence such behaviours especially that conducted through a systematic investigation such as meta-analytic reviews. The first review by Hawker and Boulton (2000) was a cross-sectional study of peer victimization published between 1978 and 1997. The authors reported victimization significantly associated with depression, loneliness, reduced self-esteem and self-concept, as well as anxiety. After more than two decades, meta-analysis shows that victimization through the Internet that applying the general aggression model (GAM) as a framework found that more than twenty predictive factors have a significant link with the cyber victimization with various adverse effects (Chen et al., 2016; Kowalski et al., 2014).

However, there are four primary variables consistently emerged in the literature that might have strong associations with cyber aggression among victims; namely, parental attachment (Butler et al., 2007; Hoeve et al., 2012), peer attachment (Ji et al., 2014; Wright et al., 2015) personality traits (Ang, Tan & Mansor, 2011; Barlett & Anderson, 2012; Wiedeman et al., 2015; Lafko, 2015; Pimentel, 2016) and Internet exposure (Escobar-Chavez & Anderson, 2008; Wiedeman, Black, Dolle, Finney, & Coker, 2015; denHamer & Konijin, 2015). The results obtained from the studies of these particular variables are inconclusive or even contradictory. For example, prior studies have generally found a positive relationship between peer attachment, personality trait, exposure to media content and cyber victimization (Xiuqin et al., 2010; Patchin and Hinduja, 2010). There are also negative relationships between those variables (Tomé and Matos, 2012) and other studies found no relationship (Thomae et al., 2008). The relationship between the four predictive factors, i.e. personality traits, parental attachment, peer attachment and Internet exposure has not yet been elucidated; thus, it is not apparent which factor is a stronger predictor to the cyber aggression victimization. Consequently, many researchers have concluded that more research is needed in this area to understand further the occurrences of such phenomenon (e.g., Berne et al., 2013; Tokunaga, 2010; Hinduja and Patchin, 2007).

Cyber aggression from the victim perspectives studies have become an international public health concern among youth, and as such, abundance of researches were conducted globally across cultures and countries to understand this public issue much better (e.g., Tsitsika et al., 2015; Chen et al., 2016; Camacho et al., 2014). Most of the research on cyber aggression victimization has been reported from Europe, followed by the Americas and other Asian countries. However, the group of indistinguishable research in Malaysia stays restricted and merely focusing on cyberbullying (i.e., Abu Bakar, 2013; Balakrishnan, 2015; Faryadi, 2011; Ghazali et al., 2017; Teimouri et al., 2014; Yusuf et al., 2018). Thus, as far as the researcher concerns, there are limited, or none study has conducted in Malaysia regarding neither cyber aggression nor cyber victimization for that matter. Few studies were carried out on cyberbullying in Malaysia have suffered from small sample size and focusing mostly on the descriptive perspectives

(Faryadi, 2011; Balakrishnan, 2015). Therefore, it is essential to conduct this study in order to contribute to some new knowledge in the field of youth and new media effects, especially literature enrichment from the Malaysians point of views.

All the interrelationships between variables mentioned above are explained clearly in the cyber victimization model that was designed by Kowalski et al. (2014) from the general aggression model framework (GAM) (Anderson and Bushman, 2002). The GAM pointing out that the personal and situational factors influence a person's present internal state (e.g., cognition, affect, and arousal) which in turn affects their emotional, cognitive, social and behavioural outcomes (Anderson & Bushman 2002; Kowalski et al., 2014). According to scholars like Gullone and Robertson (2008), and Vannucci et al. (2012), the GAM offers a rigorous hypothetical structure to understand aggression, and it has been utilised in previous studies to understand such behaviour much better. However, according to Kowalski et al (2014), the theoretical framework of this model can also be applied to help understand the personal and situational factors involved in cyber aggression victimization. Therefore, to ensure the relevancy of the unique nature of cyber-based aggression from the victims' perspectives, this study attempted to develop a theoretical framework by integrating several models and theories to measure the incidence of cyber aggression victimization and eventually developing a treatment and preventive measures of cyber aggression victimization among youth. Among the theories and models that supporting these variables affiliations are, cyber aggression typology model (CAT) by Nocentini et al (2010); media system dependency theory (MSD) by DeFleur and Ball-Rokeach (1989); attachment theory (AT) by Ainsworth and Bowlby (1991) and GAM as the underpinning theory of the study.

In response to the above problem, the study of predictive factors for cyber aggression victimization is relatively recent and still presents many gaps and inconsistencies. Therefore, this study is attempting to contribute to define the independent predictive capacity of each one of the variables analyzed, as well as to identify possible intervening factors (mediator and moderator variables) based on the GAM model. The goal of this work, therefore, is to determine the predictive capacity of personal factors (i.e., gender, personality traits, Internet exposure, and Internet addiction) and situational factors (i.e., parent attachment and peer attachment) for the probability of suffering occasional or severe cyber aggression victimization in a sample of Malaysian urban youths that live in Klang Valley. These lines of research have thus far not integrated into a coherent chain of events, and the role of mentioned predictors on cyber aggression victimization barely investigated although youth are the avid Internet users.

Research Objectives

The general objective of this study is to explore the parental attachment, peer attachment, personality traits and Internet exposure as the predictors of cyber aggression among Malaysian urban youth. Specifically, the research objectives of the study are:

1. To obtain a pattern of Internet use among Malaysian urban youth
2. To determine the level of cyber aggression among Malaysian urban youth

3. To determine the level of parental attachment, peer attachment, personality traits and exposure to Internet content among Malaysian urban youth
4. To determine the relationship between parental attachment, peer attachment, personality traits and Internet exposure towards cyber aggression among Malaysian urban youth
5. To determine the mediating role of Internet addiction on the relationship between parental attachment, peer attachment, personality traits and Internet exposure toward cyber aggression among Malaysian urban youth
6. To determine the moderating effect of gender on the relationship between parental attachment, peer attachment, personality traits and Internet exposure toward cyber aggression among Malaysian urban youth

Scope and Limitation of the Study

The main scope of this study is to determine the predictor factors of cyber aggression and the mediating factor of Internet addiction among urban youth in Klang Valley. This study only investigated the relationship between four independent variables i.e., personality traits (self-esteem and narcissism), parental attachment, peer attachment, Internet exposure; a mediating factor of Internet addiction and; a moderating factor of gender and the experience of cyber aggression victimization among youth. While there could be many other possible factors influencing the occurrences of cyber aggression victimization, the subject of interest in the current study focusing on the abovementioned factors that might affecting the phenomenon.

The study focused on youth between the ages of 13 to 18 years old that use the Internet as a computer-mediated communication (CMC) tool for the purpose of socializing through e.g., Facebook, WhatsApp, Twitter and Instagram. The scope of this study was also restricted to the experience of cyber aggression as a victim. Other parties involved in the cyber aggression activities such as the perpetrator; the perpetrator/victim; and the bystander were not included in this study. This research conducted in the Klang Valley (i.e., Selangor and Kuala Lumpur) which, according to MCMC reports (2013; 2014; 2016; 2017) is the area with the highest number of Internet users in Malaysia. However, this study should not be generalized in Malaysia, as it only involves several regions of Klang Valley and just focusing on urban youth as the respondents.

Besides the mentioned scopes, the present study also has several limitations that warrant discussion. The first and foremost limitation is the fact that the data are based on a self-report instrument. Self-report may be subject to response misrepresentations that might reduce the relations between outcome and independent variables (MacKenzie, Podsakoff, & Podsakoff, 2011; Navarro-González, Lorenzo-Seva, & Vigil-Colet, 2016). Respondents may wish to present themselves in a favourable light to the researcher who collected the data and, therefore, may provide answers that do not accurately reflect their actions or beliefs (Paulhus, 1991). Due to the nature of some of the questions asked, it is possible that the participants over-reported (e.g., narcissist) or under-reported (e.g., cyber

aggression) engagement in these behaviours due to the social desirability (or undesirability) of these activities. For example, participants who desired people admiration and sense of self-importance may over-report engagement in narcissist personality and under-report relationally cyber aggressive behaviours.

Second, as the study applied self-report instrument, one possible problem with its application could be its length. The instrument alone had a total of 105 items with seven indicators which, when applied to younger people, can be problematic. Thus, justifying the overall low-level responses of cyber aggression since the indicator has the most items. Some participants have also mentioned that the length of the instrument was burdensome. They said they had grown weary of answering questions by the time they had approached the pattern of Internet usage (final) section. However, the researcher and enumerators had encouraged all the participants to continue answering questions by reading each item aloud, and asking each student to respond immediately. Thus, testing the reduced version of the instrument would be appropriate in the future due to its practical utility.

The third limitation of the study that is worth noting is that 15 items out of 105 items from the instrument were reverse-coded; unpredictably, all the 15 items were deleted during the EFA. According to Cicero et al. (2010), reverse-coded items have a tendency to be the awful fitting items in factor analyses, or that the factor structure of scales comprises a factor with uncomplicated wording compared to a reverse-coded factor, thus, explaining why all the 15 reverse-coded items were removed in this study. Albeit some methodologists declare that reverse scoring is important to maintain a strategic distance from quiet submission among respondents, this view should be regarded with a caveat. There are reports that the reverse-coded items might be complicated to respondents, that the opposite of a construct reverse-coded may be fundamentally distinct from the original construct. Awareness of these issues is necessary and inevitable for future studies to choose between avoiding agreement among respondents and preventing some other problems related to the use of reverse codes.

Fourth, respondents of this study were selected from the Klang Valley region which has the highest number of Internet users among the Malaysian population. However, this study cannot be generalised to all communities that use the Internet in this country because the experiences and the level of cyber aggression among them are likely to vary considerably. Besides that, the demographic profile of the respondents warrants caution in generalising the current results to the broader population of urban youths. Although the study instrument has been verified with a broad and randomly selected sample, it was extracted from a specific population that limits to specific demographic profiles. For example, the study indicated that a majority of the participants were Malays. However, study suggests that cyber aggression presents across racial or ethnic groups (e.g., Wright et al., 2015). Therefore, it cannot be assumed that the Malay ethnicity affected by cyber aggression in this population will exhibit the same magnitude of influence in a different population

Although this process may potentially be similar for other ethnicities, it cannot be generalised to the current population without empirical evidence. Furthermore, based on

Balakrishnan (2015) suggestions, this study only sampled youths aged from 13 to 18 years old that live in the urban areas around Klang Valley region since according to her findings, the prevalence of cyber aggression occurred is probably the highest among youths between those ages that live in the urban area. However, there might be a possibility that the youths sampled are not from the intended areas, since the sampling was randomly distributed and mostly in public areas (e.g., libraries, cyber café, youth centre). Hence, research should seek to use more diverse samples with consideration of other demographic profile including ethnic, age, gender and area of living when examining cyber aggression.

Fifth, previous literature indicated that the majority of the measurement tools measuring cyber-based abused especially cyberbullying and cyber aggression were taken from many Western countries including European and North America (Berne et al., 2013). For example, the current study adopted the CYVIC (Cyber Aggression Victimization) scale that originated from Spain. However, due to the different background cultures and values of this country, the prevalence of cyber aggression was always under-reported, in contrast to many reports from agencies that conducted a national survey (e.g., MCMC, 2015; CyberSecurity, 2012; Norton Family Report, 2010). Thus, the current study may inaccurately measure the true social culture or values representing the victims of cyber aggression as the measurement adopted mostly from the Western context. Due to this argument, there are some issues that worth consideration; firstly, there were many sensitive phrases and words in the adopted instrument, such as 'having sex' or 'sexually', that was mostly against the culture of this country. Secondly, although researcher might have a standard definition of cyber aggression, youths themselves might have viewed the incidence differently, and maybe they did not agree with the questions, thus, any other aggressive acts in which they deliberately involved remain unexamined. Finally, cultural differences in personality traits (self-esteem and narcissistic personality) regarding face-to-face and cyber aggression victimization are likely to exist and have an impact on the current study results. Therefore, it is crucial for this country to have its cyber aggression instrument that trails the behaviours and values of its youths.

Finally, besides Internet addiction acting as a mediator of this study, there may be other omitted mediating variables that can be considered. It is possible that other variables not included in the present study could be stronger mediators of the relationship between parent attachment, Internet exposure and cyber aggression. For instance, loneliness, anger, depression, and youth delinquency are significantly higher among youths who report experiencing cyber aggression (Brighi et al., 2012; Kowalski et al., 2014), and these factors could be potential mediators. In addition to the mediator, the moderator of the study is limited to the gender alone. However, the current study suggests that there might be other moderating variables that can be used to identify the relationship between predictors and cyber aggression including age, parental influence and peer rejection. For example, Wright and Li (2013) found that peer rejection is a strong moderating influence between cyber victimization and cyber aggression among schoolchildren. Thus, it is necessary to test other moderating factors since gender is not significant for the current study.

Significance of the Study

The findings of this study expected to affect the government and other key policy-makers and implementers particularly in information and technology, child and youth well-being, education, public health and law and order departments. The strength of this study lies in its methodology and the contribution to the cyber aggression literature through the construction of a consensus definition and measurement tools. The results are expected to help toward formulating new initiatives for policy-makers, schools and families to disseminate the knowledge of the potential adverse impacts of cyber aggression.

The significance in term of knowledge is elaborated in three sub-points, which is towards the extensions of the applied theory, to the enhancement of youth literature and the development of methodological research. In terms of theoretical approach, this study is proposing an integrated model between two models and a theory, which are General Aggression Model (GAM) by Anderson and Bushman (2002), a Typology Cyber Aggression Model by Nocentini et al. (2010), and the Attachment Theory (AT) by Bowlby (1969) to predict and reduce the occurrences of cyber aggression among urban youth in Malaysia. This study is guided by the general aggression model (GAM), which suggests uncontrolled interactions in the cyclical relationship between an individual and the environment will influence the individual's emotions that will cause any form of aggressive behaviours to take over. The outcome of this interaction is the aggressive cyber behaviour that projected through four forms, i.e., written, verbal, exclusion, impersonation. For a further understanding of parents and peer attachment towards cyber aggression, this study will use the renowned AT (Bowlby, 1969) to explain the relationships much better.

In accordance with the arising issue, the current study is expected to simultaneously contribute to the methodological literature regarding conducting appropriate and effective cross-sectional research. While the vast majority of the accessible literature has a tendency to be qualitative and descriptive, the utilization of the quantitative approach is imperative to comprehend this new type of aggression in light of the fact that cyber aggression happens in a virtual world and frequently private environments, distinguishing it through direct monitoring from parents or teachers can be problematic. Indeed, even focus groups or interview with young people can be unsuccessful because for the most part informants feeling reluctant or fear of acknowledging such occasions of cyber aggression. Subsequently, applying self-administered in which young people are asked to what extent they lead or experience the ill effects of cyber aggression might be more suitable. Moreover, the self-administered approach is more practical as a screening measure since they can survey numerous individuals swiftly, it permits coding and investigation of the acquired data more effectively than other approaches.

Apart from that, the application of structural equation modelling (SEM) in the data analysis is also expected to give this study a rigorous framework of the relationships between the proposed factors and cyber aggression. Moreover, since cyber aggression study is still at the development stage in Malaysia (Abu Bakar, 2012), the current study is expected to contribute to the literature gap which exists between the dependent and independent variables by incorporating Internet addiction as the mediator and gender as

the moderator in the relationships. Thus, conducting quantitative research to discover the adverse environment of the Internet would undoubtedly provide a profound insight into the field of youth online behaviour especially the harmful and risky online behaviour.

Regarding practice, this study is significant in the long-run as the effort is to prevent the transition of any form of cyber aggression during the lifespan of youth settings from school to university and adult life. Therefore, the implementation of a programmatic approach to change is needed to advocate awareness of this issue among youth in the society. Due to the adverse outcomes of cyber aggression phenomenon, which in extreme circumstances can result in suicide, student counsellor in school or university should organise workshops to instruct students about the mental and psychological effects of cyber aggression. Besides, the academicians and scholars such as professors and lecturers as well as counselling educators could plan optional school advocates in preparing to give informative workshops on cyber aggression information for parents and their children. The current study is additionally anticipated to provide additional understanding in the parent-child relationship in Malaysian homes on the best way to deal with online threats, in the meantime completely use the open doors offered by the Internet particularly in regards to the adolescent and youths.

Regarding policy-making, this study can be substantially beneficial in providing some insights into the formulation of an Act or a Penal Code of cyber aggression to secure the privileges of children and youths who have encountered extreme cyber aggression. Making a definitive move against any person who is discovered liable of executing cyberbullying act which adversely affects the well-being (i.e., health, psychology and mental) ought to likewise be considered by policy-makers. Moreover, laws and regulations concerning online ethics involving youths, peers, parents, schools and other related government agency ought to be executed to provide a guide on the utilisation of Internet-related technology.

Operational definition of terms

Alienation – This term refers to feelings of avoidance or rejection (estrangement) obsessing a young individual which often arises from poor parent-child/peer-to-peer relationships which can tremendously influence their behaviour and attitude (Armsden & Greenberg, 1987).

Communication – This term refers to the active, two-way social interaction occurring between an individual young person and their parents and peers, which is a reliable way to develop healthy emotional bonds within the relationships (Armsden & Greenberg, 1987)

Cyber – The term cyber is used interchangeably within this thesis to refer to the ‘Internet, ‘online’, or ‘electronic’ concerning the typical characteristics of computers, information technology, and virtual reality (Oxford, 2010), which is more relevant to the current study circumstances.

Cyber Aggression – This term refers to violent, intimidating and threatening behaviour intentionally perpetrated by an individual youth against others online with the aim of harming that person (Grigg, 2010). The threat may be inflicted through various technological means such as, text message, email, social media, blogs and provocative images (Kowalski et al., 2008).

Cyber aggression Victimization – Refers to any behaviour enacted through the use of information and communication technologies that is intended to harm another person(s) that the target person(s) wants to avoid, which mainly consist of written-verbal, visual, exclusion, and impersonation (Nocentini et al., 2010),

Internet Exposure – This term refers to two key variables regarding the Internet, namely access and usage with a person at their core. Internet exposure means an individual user's ability to get into an Internet-compliant environment, retrieve the Internet service and use it (surf the Internet) for a particular length of time (duration) in a particular period, which usually determined in hours. For example, a child's experiencing an Internet-enabled environment such as home, school library, lecture hall, ability to log on to it (via their devices) and be in the state of using the Internet for a specific duration in a particular time is that child's Internet exposure. In this dissertation, it presumed that the higher the exposure of an individual youth to the Internet, the higher their likelihood to get involved in aggressive cyber behaviours. Youth's exposure to violent, mean and disturbing behaviour on the Internet influences them to be aggressive towards their peers online (denHamer & Konijn, 2015).

Internet Addiction – This obsessive behaviour of cravingly over-dependence on the accessing and use of the Internet for unusually longer durations in a particular time is what is referred to as Internet addiction in this dissertation. It also refers to online-related compulsive acts which impede healthy living and causes serious anxiety and stress on a person, their friends, loved ones and one's work environment (Young, 1995). The frequent usage of the Internet also falls under this definition of the term.

Narcissism – Current study defines narcissism based on Atay (2001) definition, which is "a constant pattern which starts at early adolescence and emerges under the different situation and consists of a feeling of superiority, the need to be liked and not being able to establish empathy". The narcissistic individual is likewise experiencing issues in conveying good relationships with others since they are partial to their solace, continually expecting something from others and they frequently have a tendency to be aggressive in conduct (Köroğlu & Bayraktar, 2007).

Parent Attachment – This term alludes to the social bonds existing between a parent or guardian and their youngster. As indicated by Nickerson and Nagle (2005), a parental attachment is built up through safety, security and proximity that is presented by a parent and experienced by a child. Be that as it may, a parental attachment is conveyed through fluctuating levels of communication, trust and alienation (Armsden and Greenberg,

1987). For this thesis, the parental attachment is the impression of a social bond experienced between the studied respondent and their parent(s) or guardian(s).

Peer Attachment – This term refers to the relational bonds existing between individuals of equal relational standing, e.g., friends, colleagues, mates. As indicated by Nickerson and Nagle (2005), peer attachment is also built up through proximity and time investment of an individual; however, it can also be conveyed through varying levels of communication, trust and alienation (Armsden & Greenberg, 1987). For this dissertation, peer attachment is the impression of a social bond experienced between the studied respondent and their peers.

Personality Traits – This dissertation adopted the definition offered by Carver and Scheier (2000) as “a dynamic organisation, inside the person, of psychophysical systems that create the person’s characteristic patterns of behaviour, thoughts and feelings” (p. 5). In this study, the term ‘personality dimension’ was used when referring to the two personality constructs, namely narcissism and self-esteem. However, the term personality trait is used when alluding to the measured concepts that available in the literature on aggressive and online aggressive behaviours.

Self-esteem – Self-esteem indicates the positive regards which a person has toward him/her selves. It consists of “any evaluation that makes up himself/herself. In fact, what a child thinks about himself/herself comprises the attitude and feel that he/she has about themselves” (Rosenberg, 1965). Self-esteem according to Rosenberg (1965) is self-respect which leads to behaving conscientiously towards others.

Trust – Trust of attachment refers to the secure feelings an individual child has from the person in their life, with a firm belief that that person is reliable and consistently there to satisfy their emotional needs (Armsden & Greenberg, 1987).

Urban Youth – This study defined urban youth as a Malaysian citizen aged between 13 and 19 years who lives in the country’s most industrialised area. The age-based definition is based on various sources of youth’s definition, i.e., United Nation (15 to 24 years old); Commonwealth (15 to 29 years old); and Malaysia (15 to 40 years old). However, to capture the relevance of the phenomenon, this study adopted the definition offered in MCMC (2014), i.e., 13 to 18 years old.

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