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DARK TRIAD PERSONALITY AND CYBER- AGGRESSION: THE MEDIATION OF ANTISOCIAL BEHAVIOUR

KONG KWOI TAT



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ABSTRACT

The present study aims to investigate the mediating effect of antisocial behaviour on the relationship between the dark triad personality and cyber-aggression. The study had three research objectives which it to investigate the mediating effects of antisocial behaviour on the relationship between (1) Machiavellianism, (2) Psychopathy, and (3) Narcissism on the different types of cyber-aggression (impulsive-appetitive, impulsive-aversive, controlled-appetitive, controlled-aversive). The present study is a quantitative research which uses a cross-sectional research design to collect data from undergraduate students who were currently enrolled in either a public or private university in Malaysia, at least 18 years old, and actively uses social media daily. The present study used the Dirty Dozen Scale, Subtypes of Antisocial Behaviour Scale, and Cyber-Aggression Typology Questionnaire which were distributed using the online survey method. In total, 266 responses were analyzed using Structural Equation Modelling. The results show that there were no mediation effects of antisocial behaviour on the relationships between Machiavellianism and narcissism with all forms of cyber-aggression. However, mediating effects of antisocial behaviour have been found on the relationship between psychopathy and impulsive-appetitive cyber-aggression ($ab = .524, p < .001$), impulsive-aversive cyber-aggression ($ab = .489, p < .001$), controlled-appetitive cyber-aggression ($ab = .552, p < .001$), and controlled-aversive cyber-aggression ($ab = .519, p < .001$). The results could be used by mental health professionals to design intervention plans. The results suggest that individuals with high levels of psychopathy would only engage in cyber-aggressive acts if they are involved in antisocial behaviours, effectively making it a risk factor. Therefore, mental health professionals could formulate intervention plans which focus on antisocial behaviour to prevent cyber-aggression amongst individuals with high levels of psychopathy. As only direct relationships were found between Machiavellianism and narcissism and all forms of cyber-aggression, mental health professionals should consider this relationship when trying to identify individuals at risk of engaging in cyber-aggression.



PERSONALITI TRIAD GELAP DAN KEAGRESIFAN-SIBER: KESAN PENGANTARAAN TINGKAH LAKU ANTISOSIAL

ABSTRAK

Kajian ini bertujuan untuk mengkaji kesan pengantaraan tingkah laku antisosial terhadap hubungan antara personaliti triad gelap dan keagresifan-siber. Kajian ini terdapat tiga objektif kajian iaitu untuk mengkaji kesan pengantaraan tingkah laku antisosial terhadap hubungan antara (1) Machiavellianisme, (2) Psikopati, dan (3) Narsisisme terhadap jenis keagresifan-siber yang beza ('impulsive-appetitive', 'impulsive-aversive', 'controlled-appetitive', 'controlled-aversive'). Kajian ini adalah kajian kuantitatif yang menggunakan reka bentuk penyelidikan keratan rentas untuk mengumpul data daripada pelajar Ijazah Sarjana Muda Institut Pengajian Tinggi Awam (IPTA) dan Institut Pengajian Tinggi Swasta (IPTS) di Malaysia, yang berumur antara 18-21 tahun, dan aktif dalam penggunaan media sosial setiap hari. Kajian ini telah menggunakan Skala Dirty Dozen, Skala Subtypes of Antisocial Behaviour dan Soal Selidik Cyber-Agression Typology yang diedarkan menggunakan kaedah tinjauan dalam talian. Secara keseluruhan, 266 respons dianalisis menggunakan Pemodelan Persamaan Struktur. Hasil kajian menunjukkan bahawa tiada kesan pengantaraan tingkah laku antisosial terhadap hubungan antara Machiavellianisme dan narsisisme dengan semua bentuk keagresifan-siber. Walau bagaimanapun, kesan pengantaraan tingkah laku antisosial telah ditemui pada hubungan antara psikopati dan keagresifan-siber impulsive-appetitive ($ab = .524, p < .001$), keagresifan-siber impulsive-aversive ($ab = .489, p < .001$), keagresifan-siber controlled-appetitive ($ab = .552, p < .001$), dan keagresifan-siber controlled-aversive ($ab = .519, p < .001$). Hasil kajian ini boleh digunakan oleh profesional dalam bidang kesihatan mental untuk mereka bentuk rancangan intervensi. Dapatan kajian menunjukkan bahawa individu yang mempunyai tahap psikopati yang tinggi hanya akan terlibat dalam tindakan keagresifan-siber jika mereka terlibat dalam tingkah laku antisosial dan menjadikannya satu faktor risiko. Oleh itu, profesional dalam bidang kesihatan mental boleh merancang rancangan intervensi yang fokus pada tingkah laku antisosial untuk mencegah keagresifan-siber di kalangan individu yang mempunyai tahap psikopati yang tinggi. Dapatan kajian menunjukkan bahawa hanya terdapat hubungan langsung antara Machiavellianisme dan narsisisme dan semua bentuk keagresifan-siber. Profesional dalam bidang kesihatan mental harus mempertimbangkan hubungan ini apabila ingin mengenal pasti individu yang berisiko untuk melibatkan diri dalam keagresifan-siber.



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LIST OF ABBREVIATIONS

AMOS	Analysis of a Moment Structures
AVE	Average Variance Extracted
BC	Bias Corrected
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMIN	Chi-square
CR	Composite Reliability
DF	Degree of Freedom
GFI	Goodness of Fit
HTMT	Heterotrait-Monotrait Ratio of Correlations
IFI	Incremental Fit Index
M.I	Modification Indices
NFI	Normed Fit Index
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modelling
SPSS	Statistical Package for the Social Sciences
SRMR	Standardized Root Mean Square Residual

STAB Subtypes of Antisocial Behaviour

CHAPTER 1

INTRODUCTION

1.0 Background of Study

The current generation of Malaysian university students are well-versed with the usage of computer and internet due to universities in Malaysia incorporating these technologies in the delivery of curriculum through free to use computing facilities and the use of web-based learning environment (Lai et al., 2017). The internet platform allows users to engage in social activities such as sharing text, videos, pictures with other individuals, either privately or publicly, through social medias (Kuss & Griffiths, 2011). As much benefits as these technological advancements brings, it also acts as a gateway to a new form of aggression, known as cyber-aggression (Pornari & Wood, 2010). Cyber-aggression occurs when threats of harm or actual harm towards another



individual is done through the use of internet while having the option to remain anonymous (Pornari & Wood, 2010; Slonje & Smith, 2008). One of the most common forms of cyber-aggression is cyberbullying (Corcoran, Mc Guckin, & Prentice, 2015) while also encompassing cyber harassment and other methods of online aggression (Grigg, 2010; Pyzalski, 2012). Cyber-aggression includes verbal aggression, impersonation of others, boycotting others in an online context, or the use of compromising or contemptuous images (Nocentini et al., 2010). In fact, Malaysia ranked seventeenth in the prevalence of cyber bullying out of twenty-five countries by Microsoft Global Youth Online Behavior Survey (2012). Several studies done on Malaysian university students have shown that the rate of cyber-aggression such as cyberbullying is steadily increasing (Balakrishnan, 2015; Lai et al., 2017; Qais, 2011).

Cyber-aggression is also conducted in anticipation of desirable outcomes such as reproductive gains, increase in social rank or dominance, or non-social rewards (Volk, Dane, & Marini, 2014).

Cyber-aggression can be linked to the personality traits from the dark triad of personalities (Pabian, De Backer, & Vandebosch, 2015). The dark triad is a term used to describe three distinct undesirable personality traits (Jonason, Baughman, Carter, & Parker, 2015). The dark triad of personality includes Machiavellianism, narcissism, and psychopathy (Paulhus & Williams, 2002). Machiavellianism refers to the extent to which an individual is willing to employ deceit, emotional detachment, and flattery in order to manipulate others (Christie & Geis, 1970). A person with high Machiavellianism is more likely to exploit others for their own benefit while reserving minimal concern on others' wellbeing (Jakobwitz & Egan, 2006). These





Machiavellians engage in manipulation and aggression as a mean to maintain their status and power within their social group (LaFontana & Cillessen, 2002).

Narcissistic values were derived from a pathological form of self-love (Freud, 1914). A narcissistic person is characterized by vanity, attention-seeking and extreme self-focus (Millon & Davis, 1996). Narcissists are found to have a sense of grandiosity, entitlement, inflated self-worth, and arrogance (Paulhus & Williams, 2002). Narcissists are expected to thrive in an online environment as they would have more control over on to present their image online and the relationships online are often shallower (Buffardi & Campbell, 2008). Although narcissists may try to put on a formidable exterior, what lies beneath the inflated exterior, is a vulnerable ego (Morf & Rhodewalt, 2001). When a narcissist's self-view is challenge, it will lead to a hostile and aggressive response (Gammon, Converse, Lee, & Griffith, 2011). The Theory of Threatened Ego discussed by Bushman and Baumeister (1998) proposes that narcissism can lead to aggression as a defense mechanism to protect their brittle self-esteem. The aggression caused by this phenomenon is often direct aggression (Kerig & Stellwagen, 2010).

The psychopathy trait refers to elements of arrogance, deceitful, impulsive behaviors, and lack of affection (Cooke & Michie, 2001; Cooke, Michie, Hart, Clark, 2004). Psychopathy is commonly linked to unprovoked, direct, physical aggression (Reidy, Zeichner, Seibert, 2011). Subclinical psychopathy is characterized by a lack of empathy and remorse, impulsivity, a tendency to seek for thrills, being carefree, and getting bored easily (Hare, 2003; Paulhus & Williams, 2002). Impulsivity has been found to be a risk factor for cyber-aggression (Vazsonyi, Machackova, Sevcikova,





Smahel, & Cerna, 2012). Empathy on the other hand, has been found to be a protective factor against cyber-aggression perpetration (Brewer & Kerslake, 2015). Various research has shown that sensation seeking, one of the main characteristics of psychopathy, is positively correlated to aggressive acts (Bacon, Burak, & Rann, 2014; Wilson & Scarpa, 2011; Zuckerman, 2007). Zuckerman (1994) has defined sensation seeking as “the seeking of varied, novel, complex, and intensive sensations and experiences”. The individuals are also willing to take physical, social, legal, and financial risks for the sake of such experiences.

All three dark triad traits of personality have been linked to dishonesty (Book, Visser, & Volk, 2015) and callousness (Jones & Paulhus, 2010). It has been put forth by several studies that callousness is linked to dispositional aggression (Hare & Neumann, 2010; Mahmut et al., 2011). This supported the results from a previous study conducted by Jonason and Webster (2010) which has found that the dark triad of personalities are linked to a disposition towards aggression. Book et al., (2015) also put forth that the dark triad of personality shares a common core which is the lack of honesty/humility. The personalities in the dark triad are all related with a sense of privilege and superiority (Giammarco & Vernon, 2014). Individuals who have high dark triad personality traits tend to exploit others for their own agenda due to their lack of empathy and remorse (Giammarco & Vernon, 2014).

Traits of the dark triad of personality such as impulsivity, sensation-seeking, and lack of self-control has been linked to antisocial behavior such as delinquency (Jolliffe & Farrington, 2009; Zuckerman, 2006). The relationship between impulsivity





and antisocial behaviors has also been repeatedly proven in adolescent sample (Caspi, 2000; Luengo, Carrillo de la Pena, Otero & Romero, 1994; Romero, Luengo, & Sobral, 2001). Studies among undergraduate students have also repeatedly highlighted the relationship between impulsivity and antisocial behavior such as aggression (Berg et al., 2015; Carlson, Pritchard, & Dominelli, 2013; Hecht & Latzman, 2015). Individuals who score higher on the dark triad of personality tend to use a myriad of tactics in order to achieve their social and interpersonal goals, in spite of their antisocial personality (Jonason & Webster, 2012).

It has been suggested that antisocial individuals are able to achieve their goals dishonestly through two methods, manipulation, and aggression (Makros et al., 2015).

Cyber-aggression activities have been related to a general pattern of antisocial behavior (Alvarez-Garcia, Barreiro-Collazo, Nunez, Dobarro, 2016). For example, antisocial behavior in an academic institution such as physical aggression against peers has been identified as an important risk factor that increases the likelihood of an individual participating in cyber-aggression (Festl et al., 2015; Fletcher et al., 2014; Sticca et al., 2013; Vazsonyi et al., 2012). Different forms of antisocial behavior such as animal abuse, larceny, damage of private properties, and consumption of alcohol, illegal drugs, and tobacco aggression has also been found to have a strong positive correlation with cyber-aggression (Buelga, Iranzo, Cava, & Torralba, 2015; Chan & La Greca, 2016; Sticca et al., 2013). As previous literatures have shown that the dark triad of personalities, antisocial behavior, and cyber-aggression are related to each other, the present study aims to investigate whether antisocial behavior plays a mediating role in the relationship between the dark triad of personality and cyber-aggression.



1.1 Problem Statement

The progression of technology, such as the internet has been a double-edged sword as it can both benefit the users by erasing the borders between individuals allowing easier communication, while also providing them a direct gateway to psychological distress (Michel & Heirman, 2011). A study conducted amongst Malaysian university students has shown that the introduction of technologies in their daily life has caused a large number of students worrying about being targeted for acts of cyber aggression and the actual victims have been reported to suffer from declining academic performance and emotional stress (Qais, 2011). The effects of cyber-victimization have been found to include depressive symptoms and in severe cases, suicidal ideation (Arce, Velasco, Novo, & Farina, 2014; Gini & Espelage, 2014). This has been true for a 20-year-old college victim who committed suicide in the year 2017 allegedly due to cyberbullying in Malaysia in recent years (Chiam & Lo, 2017). This serve as evidence that cyber aggression acts in Malaysia is a real threat to college students, university students or the young adult population.

However, cyber-aggression does not only cause problems for the undergraduate students. During the 2013 election period in Malaysia, threats of violence and abuse towards the general public of all ages through social media were also made by parties in order to trigger racial division (Shankar, 2013). These cases evidenced that cyber aggression is a growing concern among Malaysia's society. Acts of cyber-aggression can also cause large economic damages as demonstrated by a slandering case by an anonymous user who spread false news that AgriBioTech was going bankrupt which

causes its stocks to fall from \$29.50 to \$9.75 (Chiger, 2002). The perpetrators have the ability to remain anonymous, retain less sympathy for their victims compared to traditional abusers (Pornari & Wood, 2010), while being able to traverse the boundaries of social institution such as schools (Slonje & Smith, 2008) has been factors in causing the widespread of cyber-aggression.

Previous studies have found that the perpetrators of the aggressive acts are at risk to report high level of depression as well (Forero, McLellan, Rissel, & Bauman, 1999; Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999, Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000; Kumpulainen & Rasanen, 2000; Roland, 2002; Salmon, James, & Smith, 1998). There has also been an agreement that an individual who has both been a victim and a perpetrator of aggressive acts are at an increased risk of depression (Fekkes, Shrira, & Campbell, 2004; Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999, Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000). This is a serious issue as it has been found that it could lead to suicide ideation in the victims (Rigby & Slee, 1999; van der Wal, de Wit, 2003) and the perpetrator (Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999; Roland, 2002). These ideations have also been found to lead to suicide attempts in both the victims (Cleary, 2000; Eisenberg, Neumark-Sztainer, & Story, 2003; Mills, Guerin, Lynch, Daly, Fitzpatrick, 2004) and the perpetrator of the aggressive acts (Kim, Koh, & Levanthal, 2005).

In the Malaysian context, it has been found that undergraduate students between the age of 18 to 25 spent an unhealthy amount of time in the cyber world (Ling,

Ramadas, Altaher, & Arjuman, 2011). A study found that the longer an individual spend time on the internet, the more likely they are to be victimized in a case of cyber-aggression (Hinduja & Patchin, 2008; Smith et al., 2008). According to the Malaysia Crime Prevention Foundation (2017), a total of 1524 cases of cyberbullying have been recorded among tertiary education students from the year 2012 to 2016. This actual number of this form of cyber-aggression is likely to be higher than stated as there are many unreported cases due to the fear of shame the victims might face if they report the activities. Lingam and Aripin (2016) has put forth that cyber-aggression in the form of flaming or making ridiculous comments on social media platforms such as YouTube is a growing concern in Malaysia that need to be taken seriously.

Other than cyber-aggression, antisocial behavior in an academic institution has been found to lead to lower academic performance (Schwartz, Gorman, Nakamoto, & Toblin, 2005). Riopka, Coupland, and Olver (2015) has also found that antisocial behavior amongst undergraduate students has been found to be positively correlated with acceptance of law violation and criminal thoughts. Undergraduate students who are under stress has been reported to turn antisocial behavior as a coping mechanism such as by abusing alcohol and illegal drug (Flaherty & Richman, 1993; Newbury-Birch, White, & Kamali, 2000; Pickard, Bates, Dorian, & Saint, 2000; Yousafzai et al., 2009). These results are similar with a study conducted by Devi et al., (2013) which discovers that Malaysian undergraduate students are also prone to turn to alcohol when under stress despite knowing the possible health hazards it may bring. A study conducted by Teixeira and Rocha (2010) has found that a majority of undergraduate students also participate in antisocial behavior such as academic cheating. This form of



antisocial behavior exists among undergraduate students across the globe and is an issue that should be taken seriously (Kayaoglu et al., 2015; Teixeira & Rocha, 2010).

A worrying issue is that cyber-aggressive acts has been linked to the dark triad of personality (Ang, Tan, & Talib Mansor, 2011; Gibb & Devereux, 2014; Sara, Charlotte, & Heidi, 2015). Individuals who have personality trait from the dark triad are usually self-absorbed, impulsive, and holds little regard to others (Jakobwitz & Egan, 2006). A problem caused by the dark triad personality traits of lack of ability to control behaviors and impulses is that is has also been found to be positively correlated to acts of crime (Jolliffe & Farrington, 2009; Jones, Miller, & Lynam, 2011; Pratt & Cullen, 2000). This is especially true for individuals who scored high on psychopathy as they are characterized by their impulsivity tendency to make risky decisions which may lead them to conduct acts which may put themselves and others in harm's way (Dean et al., 2013). All of these traits are closely linked to individuals such as criminal offenders who have acted against the norms of the society and have broken the rules due to their sensational interests (James, Kavanagh, Jonason, Chonody, & Scrutton, 2014). Results from previous studies have shown that individuals who scored higher on the dark triad of personality traits are more likely to engage in substance use, problematic gambling, social media addiction, unsolicited internet pornography, and lower well-being (Aghababaei & Blachnio, 2015; Casale & Fioravanti, 2018; Chung, Morshidi, Yoong, & Thian, 2019; Shim, Lee, & Paul, 2007; Stenason & Vernon, 2016; Trombly & Zeigler-Hill, 2017).





The problem based on previous literatures is that many studies have focused on using the term ‘cyberbullying’ in their research (Balakrishnan, 2015; Lai et al., 2017; Qais, 2011). This is because bullying is just a subset of aggression (Smith, 2004). Hence, the term ‘cyberbullying’ may not encompass the different forms of aggressive acts which occurs in the cyber-world. Another problem with the term ‘cyberbullying’ used in previous studies lies with its definition. Cyberbullying can be defined as “...behavior performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others” (Tokunaga, 2010). There have been other researchers who have tried to define cyberbullying, but they do so by basing it on the traditional form of bullying which includes criteria such as intent to cause harm, power imbalance, and repetition (Smith, Mahdavi, Carvalho, Fisher, Russell, & Tippet, 2008). Cyberbullying also suggests that it is similar to traditional forms of bullying in a cyberspace without taking into account that the feature of this cyberspace makes it difficult to apply the criteria of traditional bullying to it (Corcoran, Mc Guckin, & Prentice, 2015). For example, bullying is also a term which implies that the aggressive event occurs due to an existence of an imbalance in power between two parties in a situation (Owens, 1993; Smith, Schneider, Smith & Ananiadou, 2013) and this imbalance of power rarely present itself in acts of cyber-aggression (Grigg, 2010). Hence, studies using the term cyberbullying may be leaving out certain areas of aggression which may compromise the results of the studies.

Another problem revolving the studies on the dark triad of personalities and aggression is that most studies focus on relating the dark triad of personalities to aggression in general terms (Jones & Neria, 2015; Jonason & Webster, 2012). Jones





and Figueredo (2013) mentioned that high dark triad of personality is associated to manipulative tendencies and callousness which may lead to aggression. Thus, it is vital to investigate the differences in their motivations, as well as how they express their behaviors. This notion is supported by Jones and Neria (2015) who found that the dark triad of personality traits are multifaceted and are related to different aspects of aggression. For example, Machiavellians who focuses on using lies and deceit in order to make use of others to get what they want (Jakobwitz & Egan, 2006) would be different than the lack of behavioral control of psychopathy (Jonason & Tost, 2010). Based on descriptions of these personality, individuals who scored higher on psychopathy should be more likely to engage in more impulsive forms of aggression while individuals who scored higher in Machiavellianism are more likely to participate more in more controlled forms of aggression. Hence, studying the dark triad of personality and its relationship with cyber-aggression in general may cause a difference in results between studies.

The above problems warrant a need to conduct the present study in order to comprehensively address these issues. This study aims to better understand how the Dark Triad of personality relates to cyber-aggression as well as investigate the possible mediating role of antisocial behaviour. The findings from this study can help explain the aforementioned problems, as well as to provide more data for current and future intervention programs.



1.2 Research Objectives

1. To investigate the mediating effect of antisocial behaviour on the relationship between Machiavellianism and the different forms of cyber-aggression (impulsive-appetitive, impulsive-aversive, controlled-appetitive, controlled-aversive).
2. To investigate the mediating effect of antisocial behaviour on the relationship between psychopathy and the different forms of cyber-aggression (impulsive-appetitive, impulsive-aversive, controlled-appetitive, controlled-aversive).
3. To investigate the mediating effect of antisocial behaviour on the relationship between narcissism and the different forms of cyber-aggression (impulsive-appetitive, impulsive-aversive, controlled-appetitive, controlled-aversive).

1.3 Research Questions

1. Does antisocial behaviour mediate the effect between Machiavellianism and the different forms of cyber-aggression (impulsive-appetitive, impulsive-aversive, controlled-appetitive, controlled-aversive)?
2. Does antisocial behaviour mediate the effect between psychopathy and the different forms of cyber-aggression (impulsive-appetitive, impulsive-aversive, controlled-appetitive, controlled-aversive)?

3. Does antisocial behaviour mediate the effect between Narcissism and the different forms of cyber-aggression (impulsive-appetitive, impulsive-aversive, controlled-appetitive, controlled-aversive)?

1.4 Hypotheses

H₁: Antisocial behaviour mediates the relationship between Machiavellianism and impulsive-appetitive cyber-aggression.

H₂: Antisocial behaviour mediates the relationship between psychopathy and impulsive-appetitive cyber-aggression.

H₃: Antisocial behaviour mediates the relationship between narcissism and impulsive-appetitive cyber-aggression.

H₄: Antisocial behaviour mediates the relationship between Machiavellianism and impulsive-aversive cyber-aggression.

H₅: Antisocial behaviour mediates the relationship between psychopathy and impulsive-aversive cyber-aggression.

H₆: Antisocial behaviour mediates the relationship between narcissism and impulsive-aversive cyber-aggression.

H₇: Antisocial behaviour mediates the relationship between Machiavellianism and controlled-appetitive cyber-aggression.

H₈: Antisocial behaviour mediates the relationship between psychopathy and controlled-appetitive cyber-aggression.

H₉: Antisocial behaviour mediates the relationship between narcissism and controlled-appetitive cyber-aggression.

H₁₀: Antisocial behaviour mediates the relationship between Machiavellianism and controlled-aversive cyber-aggression.

H₁₁: Antisocial behaviour mediates the relationship between psychopathy and controlled-aversive cyber-aggression.

H₁₂: Antisocial behaviour mediates the relationship between narcissism and controlled-aversive cyber-aggression.

1.5 Theoretical Framework

1.5.1 Quadripartite Violence Typology

The quadripartite violence typology (refer to Figure 1.0) is proposed by Howard (2011) based on two dimensions which are orthogonal. This model seeks to represent aggressive acts through motivation goals (aversive vs. appetitive) and regulatory control (controlled vs. impulsive). This model of aggression has also been adapted by Runions et al. (2017), in order to study cyber-aggression. Impulsive acts occur when minimal or subconscious is paid to environmental factors which subsequently prompt a strong tendency or urge to act and an affective response (Baumeister, Vohs, DeWall, & Zhang, 2007). In this model, impulsive acts are often acted upon for immediate gratification without first considering the consequences (Howard, 2011). Controlled



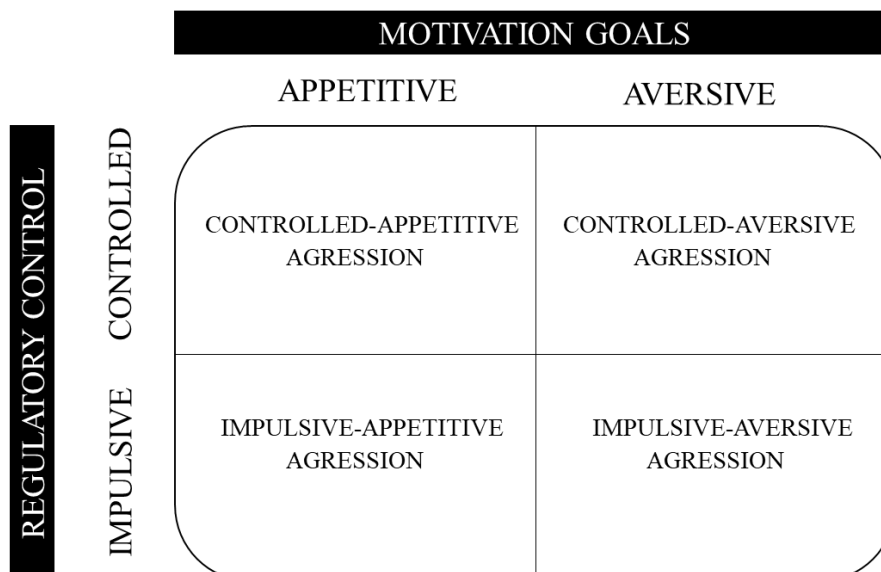
acts on the other hand are conducted with self-control driven by a desire to reach a goal. Appetitive motivation is driven by a desire to obtain positive affect for the aggressor while aversive motivation is characterized by a desire to reduce negative affect such as guilt, sadness, fear, distress, threat and shame. Aversive motives can also be seen as retaliatory as it may include painful experiences such as being harassed or victimized (Runions et al., 2017).

Impulsive-appetitive forms of aggression is motivated by a desire to increase one's own positive affect by harming or making others suffer. This type of aggression can cause the aggressor to feel excitement and exhilaration. In terms of an online context, impulsive-appetitive cyber-aggression may manifest itself as activities of making joke of others without first considering their feelings in order to have fun. Howard (2011) has identified the type of anger which triggers this form of aggression as "thrill-seeking anger". The other form of impulsive aggression in this model is impulsive-aversive aggression. The goal of this form of aggression is to reduce negative affect felt by removing the interpersonal threat. This form of aggression is caused by a feeling of fear and distress and an immediate desire to eliminate the threat. Howard (2011) identified the anger which will cause this type of aggression to be "explosive/reactive anger". Impulsive-reactive cyber-aggression may occur when an individual immediately employs the usage of internet technological resources, such as social media, to take revenge on others who they feel have wronged them.

Controlled-appetitive aggression is aimed to achieve some form of positive outcome desired by the aggressor. It is stimulated by the positive feelings one feels



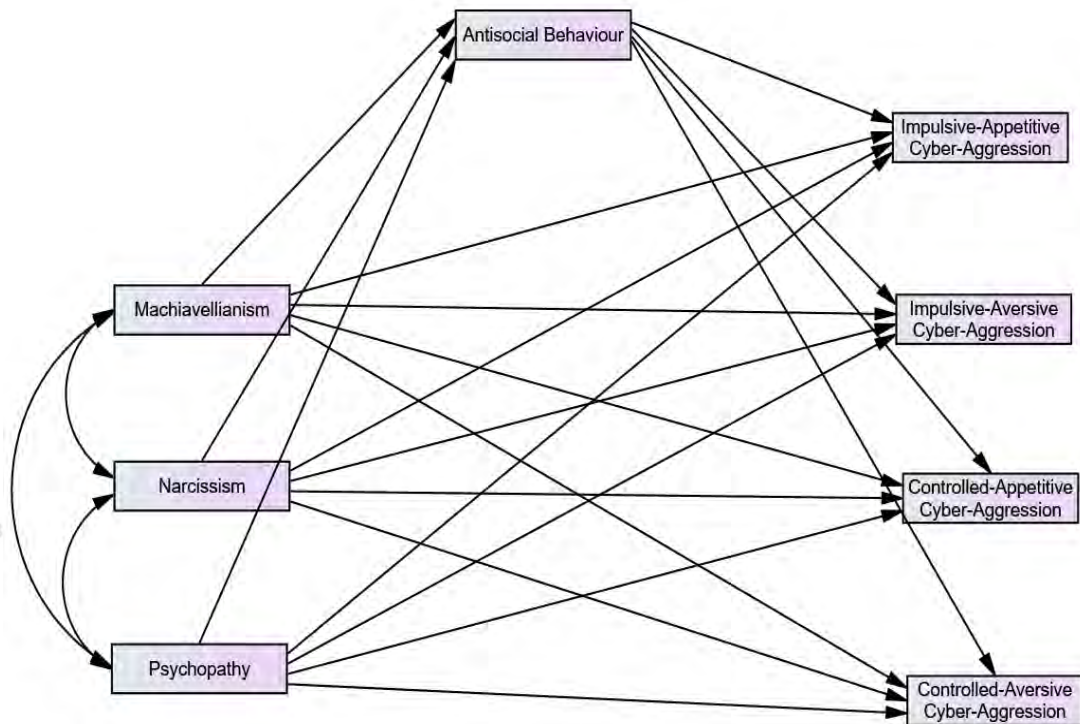
when anticipating something desirable. Howard (2011) labelled the anger type which stimulates this form of aggression as “coersive anger”. In terms of the cyber context, controlled-appetitive cyber-aggression can be conducted when an individual seeks to proactively hurt someone or make someone look bad through the internet in order to fulfil a self-goal. Controlled-aversive aggression on the other hand is similar to impulsive-aversive aggression as it is also motivated by a desire to remove negative affect through the elimination of interpersonal threat. However, with controlled-aversive aggression, it is done so through carefully planned and considered actions. This form of aggression is elicited by feelings of vengeance and the desire to get-even with the target of aggression. Howard (2011) has labelled the type of anger which will lead to this form of aggression to be “vengeful/ruminative anger”. Controlled-aversive cyber-aggression occurs when an individual carefully plans a revenge on someone and harm them through employing internet technology resources.

Figure 1.1*Quadripartite Violence Typology*

1.6 Conceptual Framework

Figure 1.2

Conceptual Framework of the Mediation Effects of Antisocial Behaviour on the Relationship between Dark Triad and Cyber-Aggression



The present study has integrated the Quadripartite violence typology by Howard (2011) with the traits from the dark triad of personality (Machiavellianism, psychopathy, and Narcissism), antisocial behaviour, and the four types of cyber-aggression (impulsive-appetitive cyber-aggression, impulsive-aversive cyber-aggression, controlled-appetitive cyber-aggression, and controlled-aversive cyber-aggression) in order to develop a conceptual framework which will guide this study. The impulsive forms of aggression are caused by a lack of self-control to inhibit impulses (Howard, 2011). Lack

of self-control, impulsivity and the disregard for future consequences are the main characteristics which embodies psychopathy (Jones & Paulhus, 2010) and neuroticism (Hymel, Rocke-Henderson, & Bonanno, 2005). Therefore, it has been predicted that both psychopathy and narcissism would be able to predict impulsive-appetitive cyber-aggression and impulsive-aversive cyber-aggression positively. As both the controlled form of aggression requires the aggressor to plan and think ahead, psychopathy and neuroticism were predicted to affect controlled-appetitive cyber-aggression and controlled-aversive cyber-aggression negatively.

On the other hand, Machiavellians are often willing to use lies and deceit in order to make use of others to get what they want (Jakobwitz & Egan, 2006). These characteristics suits the description of controlled-appetitive cyber-aggression and controlled-aversive cyber-aggression in the Quadripartite Violence Typology by Howard (2011) which states that both of these forms of aggression rely on premeditated planning in order to carry out the aggressive act. Hence, Machiavellianism has been expected to predict both the forms of controlled aggression positively.

Another dimension strongly highlighted by the Quadripartite Violence Typology by Howard (2011) is the motivation factors, appetitive or aversive. Both of these factors are emotion focused. Appetitive aggression focused more on obtaining a positive affect while aversive aggression is conducted to reduce a negative affect.

Various studies have found that impulsivity is one of the main traits which leads an individual to partake in antisocial behavior (Carlson et al., 2013; Derefinko et al.,

2011; Lynam & Miller, 2004; Maneiro et al., 2017). These findings may point to a prediction similar to psychopathy whereby antisocial behavior can positively predict impulsive-appetitive and impulsive-aversive aggression. However, Blair (2003) has suggested that individuals who scored high on antisocial behavior has the ability to use instrumental aggression. Instrumental aggression is usually conducted in a carefully planned manner (Anderson & Bushman, 2001). Overlooking these conflicts in findings, it is without a doubt that various research have linked antisocial behavior to both physical and cyber-aggression (Baldry, Farrington, & Sorrentino, 2015; Den Hamer, Konjin & Keijer, 2014; Jones & Neria, 2015). Hence, it is expected that antisocial behaviour is related to all forms of cyber-aggression.

It has also been found by Duggan and Howard (2009) that there is no clear causal relationship between personality disorders and aggressive act. They have put forth the notion that a mediator will mediate the relationship between the personality disorders and aggressive acts (Duggan & Howard, 2009; Gross, 2008). Thus, the present study has introduced antisocial behavior as a mediator on the relationship between the dark triad of personality (Machiavellianism, psychopathy, and Narcissism) and the four types of cyber-aggression (impulsive-appetitive cyber-aggression, impulsive-aversive cyber-aggression, controlled-appetitive cyber-aggression, and controlled-aversive cyber-aggression). Traits from the dark triad of personality have been linked to both antisocial behaviour (Azizli et al., 2015; James et al., 2014) and cyber-aggression (Pabian, De Backer, Vanderbosch, 2015). Antisocial behavior by itself has also been linked to the occurrence of cyber-aggression (Den Hamer, Konjin & Keijer, 2014). Therefore, it is proposed that the dark triad of personalities lead to

cyber-aggression through antisocial behaviour. Through this, it is possible to shed light on the role antisocial behaviour plays on how the dark triad of personalities affect the channel of their aggression.

1.7 Significance of Study

On the individual level, the present study will be able to help shed light on Malaysian undergraduate students' mental health status in terms of their participation in antisocial behavior. Serious cases of participation in antisocial behavior may lead to antisocial personality disorder as described by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). The diagnosis criteria of DSM-5 for antisocial includes being unable to adhere to social norms and engaging in unlawful behaviour, deceitfulness, impulsivity, irritability and aggressiveness, disregard of others and self-safety, consistent irresponsibility, and a lack of remorse. At least three of the above criteria, including disregard for and violation of rights of others have to be met since the age of 15 (American Psychiatric Association, 2013). Hence the results of this study can provide a brief overview of individuals who are at risk of antisocial personality disorder.

The findings from this study can also highlight the prevalence of cyber-aggression activities amongst undergraduate students in Malaysia. It is important to bring into light of the pervasiveness and severeness of cyber-aggression amongst the undergraduate student population in Malaysia as the perpetration of cyber-aggression



can lead to mental health implications (Arce, Velasco, Novo, & Farina, 2014; Gini & Espelage, 2014). By understanding how does the dark triad of personalities, antisocial behaviour, and the different forms of cyber-aggression, we can get a clearer insight in to which type of cyber-aggression is most common amongst undergraduate students as well as the personality type which causes that form of cyber-aggression. Although there have been several studies in Malaysia which focuses on acts of cyber-aggression (Balakrishnan, 2015; Faryadi, 2011), few has focused on cyber-aggression as a multi-faceted construct. Hence, the present study can help to identify which type of cyber-aggression is more common amongst Malaysian population, as well as paving way for future study for more in-depth analysis of how different forms of personality traits predict different forms of cyber-aggression.



On a societal level, the results of this study can also be used to formulate for effective intervention plan to combat cyber-aggression. By identifying the types of personality traits behind each type of cyber-aggression, future intervention plans can be designed to more focused on the traits leading to the identified aggression types. Qais (2011) states that cyber-aggression can lead to mental health stress and academic problems. Hence, by contributing to the prevention and solution of cyber-aggression, it also helps to prevent any mental health problems the students may face as a result of participating in or being a victim of cyber-aggression activities. Other than that, preventing the occurrence of cyber-aggression amongst Malaysian undergraduate student may also lead to the development of a better community and environment which is more conducive for the students and prevent any deterioration of academic achievements.



This study can improve the designs on future studies by better defining aggressive acts over the internet by using the term cyber-aggression. Cyber-aggression is an umbrella term which encompasses different forms of aggressive acts online, such as cyber harassment and by investigating cyber aggression which incorporates both cyberbullying and other instances of aggression not found in tradition forms of bullying while reducing the stigmatization of both the perpetrators and victims, this could influence better coverage and more accurate results in similar future studies. This study also serves as a purpose to help future research in the same area transition from the term cyberbullying to cyber-aggression to overcoming the shortcomings of aggression studied over the internet.

Another contribution which this study will bring to future research is the usage of a more efficient model to study aggression within the cyber world. The present study will be employing a quadripartite model of aggression previously proposed based on the Quadripartite Violence Typology by Howard (2011). Several present studies on cyber-aggression has focused on using the reactive-proactive model (Calvete, Oruem Estevez, Villardon, & Padilla, 2010; Dooley, Pyzalski, & Cross, 2009). As it has been found that revenge and recreation factors are what commonly drives cyber-aggression amongst adolescent samples and college students are found to engage in cyber-aggressive acts for social gain and excitement (Rafferty & Vander Ven, 2014; Raskauskas & Stoltz, 2007), the reactive-proactive model used to study cyber-aggression is unsuitable. (Dodge, 1991). Howard (2011) has also stated that the reactive-proactive approach to aggression is limited by its confliction of motive and self-regulation. Hence, the present study will be using a quadripartite model which



covers impulsive-appetitive aggression, impulsive-aversive aggression, controlled-appetitive aggression, and controlled aversive aggression as it shows that not all reactive aggression is impulsive while not all proactive aggression is controlled (Runions et al., 2017).

1.8 Definition of Terms

The present study has conceptually and operationally defined the dark triad of personality (Machiavellianism, psychoticism, and narcissism), antisocial behavior, and the four types of cyber-aggression (controlled-appetitive cyber-aggression, controlled-aversive cyber-aggression, impulsive-appetitive cyber-aggression, and impulsive-aversive cyber-aggression).

1.8.1 Dark Triad of Personality.

Conceptual definition. The dark triad of personality refers to Machiavellianism, narcissism, and psychopathy, three aversive personalities that are still within the normal functioning range (Paulhus & Williams, 2002). The three of these traits often exhibit differential correlates but can be identified by their shared callous-manipulations (Furnham, Richards, & Paulhus, 2013). Machiavellianism is a personality trait whereby an individual is likely to rely on deceit and manipulation to maintain self-interest (Jakobwitz & Egan, 2006). Narcissism is a persistent pattern of grandiosity, lack of





empathy and has a constant need for admiration (American Psychiatric Association, 2013). Psychopathy, on the other hand, is conceptualized as disinhibition of impulse control, meanness, and boldness (Patrick, Fowles, & Krueger, 2009).

Operational definition. The present study utilizes The Dirty Dozen scale by Jonason and Webster (2010) in order to measure each variable of the Dark Triad. It consists of 12 items and there are four items each in each subscale (Machiavellianism, psychopathy, and narcissism). The items are scored on a seven-point Likert scale and a higher score on a subscale means the individual has a stronger personality trait of that subscale.



1.8.2 Antisocial Behaviour

Conceptual definition. Antisocial refers to actions that goes against the social norms, bring harm to others, and/or intrude upon the other individuals' personal and property rights (Burt & Donnellan, 2009). Antisocial behavior has been linked with aggression, rebellion, low empathy, risk-taking behavior, and irresponsible behaviors (T'ng & Baharudin, 2014). Examples of antisocial behavior may include getting into physical fights, stealing, use of harsh language, delinquency, destruction of properties, and different forms of social aggression. As there are different forms of antisocial behavior, the type of antisocial behavior which manifest itself differs from one individual to another (Lahey & Waldman, 2003).



Operational definition. In the present study, antisocial behaviour is measured by the Subtypes of Antisocial Behaviour (STAB) scale (Burt & Donnellan, 2009). This scale consists of 32 items measured on a five-point Likert scale. It measures antisocial behavior through three main subtypes, rule breaking, social aggression, and physical aggression.

1.8.3 Cyber-Aggression

Conceptual definition. Corcoran, Mc Guckin, and Prentice (2015) proposed that cyber-aggression should be defined as behavior conducted through communication and information technologies to cause harm to another person who wants to avoid being harmed. Meanwhile, the intent to cause harm should be based on how a reasonable would judge them (Corcoran, Mc Guckin, & Prentice, 2015).

The present study will be focusing on four dimensions of cyber-aggression based on motivation factors (appetitive motives and aversive motives) and self-regulatory factors (impulse and control) as postulated by Runions et al., (2017). The first of which is impulsive-appetitive cyber-aggression. This form of aggression is caused by low self-control and motivated by increase in positive affect. The next is impulsive-aversive cyber-aggression which is characterized by low-self-control and is driven by a motivation to reduce negative affect such as guilt, embarrassment, or shame. Another form of cyber-aggression which will be examined in this study is the controlled-appetitive cyber-aggression whereby the perpetrator carries out the

aggressive acts deliberately with self-control in order to produce positive affect. Lastly, the controlled-aversive aggression which is characterized by aggressive acts carried out with self-control in order to decrease negative affect.

Operational definition. The type of cyber-aggression engaged in by an individual is identified with the Cyber-Aggression Typology Questionnaire by Runions et al., (2017). It consists of 19 items covering four different forms of cyber-aggression (impulsive-appetitive cyber-aggression – 5 items, impulsive-aversive cyber-aggression – 12 items, controlled-appetitive cyber-aggression – 6 items, and controlled-aversive cyber-aggression – 6 items). The items are measured on a four-point Likert scale and a higher score on a subscale represents higher engagement of an individual on the form of cyber-aggression.

1.9 Summary of Chapter

This chapter starts by discussing the background of the study. This section provides details on the key variables (cyber-aggression, Machiavellianism, psychopathy, neuroticism, and antisocial behavior) which will be focused on throughout this study. It also lightly explained how the key variables interacts with one another. The problem statements then highlighted the social, interpersonal, mental health issues were then discussed. This section also discussed the problems caused by previous research gaps. The next section then discussed about the research objectives, research questions, and hypothesis of this study. Next, this chapter has discussed about the conceptual



framework which uses the quadripartite gratification theory to guide the direction of this research. The significance of study in terms of benefits to individuals' mental health, societal benefits, and implication for future research are then presented. Finally, the chapter provided the conceptual and operation definition for the key variables in the present study.

