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VIOLENT VIDEO GAMES AND AGGRESSIVE BEHAVIOUR WITH PARENTAL MONITORING AS MODERATOR AMONG ADOLESCENTS IN PETALING, SELANGOR, MALAYSIA

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By

AZIMAH BINTI AHMAD ZAKI

Thesis Submitted to the School of Graduate Studies, Universiti Putra
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There is growing interest in linking media violence with aggressive behaviour in adolescence. Some argue that with sufficient parental monitoring, such influence will reduce. Though studies have been conducted in the west, fewer found in the eastern contexts such as Malaysia. Other factors influencing aggressive behaviour include sex, age, family income, and religiosity. Thus, this study aims to determine the relationship between exposure to violent video games and personal background in relation to aggressive behaviour; examine the moderating effects of parental monitoring; and determine the factors that uniquely predict aggressive behaviour. For this quantitative study, respondents were selected using multiple-stage sampling. There were 206 respondents age 13 to 14 years old. Self-administering questionnaire was used to collect data using four valid and reliable instruments which includes the General Media Habits Questionnaire - Child Version (Gentile, Lynch, Linder, & Walsh, 2004), Daily Spiritual Experience Scale (Underwood, 2006), Adult Involvement in Media Scale – Child Version (Gentile, Nathanson, Rasmussen, Reimer, & Walsh, 2012), and Buss-Perry Aggression Scale (Buss & Perry, 1992). The result on variables score shows that respondents score high in religiosity while low in aggressive behaviour. While scores for violent video games exposure and parental monitoring are nearly equal distribution of high and low scores. The correlation analysis demonstrates significant correlation between sex, family income, and violent video games exposure with aggressive behaviour, though correlations are low. Hierarchical multiple regression analysis presents that parental monitoring significantly moderate the interaction between violent video games exposure and aggressive behaviour. Interaction between violent video games exposure and aggressive behaviour is strongest for high parental monitoring. The findings of the study suggest that violent video games exposure, sex, and family income are related to aggressive behaviour. The results also suggest that high parental monitoring can reduce the effects of

violent video games exposure on aggressive behaviour. The results provide implication for parents, policy makers, non-profit organisations, and society of possible effects of exposure to violent video games, sex, and family income on aggressive behaviour, and develop prevention and intervention programmes against aggressive behaviour among adolescents.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

PERMAINAN VIDEO GANAS DAN TINGKAH LAKU KELANGSANGAN DENGAN PENGAWASAN IBUBAPA SEBAGAI PENYEDERHANA DALAM KALANGAN REMAJA DI PETALING, SELANGOR, MALAYSIA

Oleh

AZIMAH BINTI AHMAD ZAKI

Mei 2017

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Hubungan di antara keganasan media dengan tingkah laku kelangsangan remaja semakin diberi perhatian. Beberapa pandangan menyatakan bahawa pemantauan ibu bapa yang mencukupi akan mengurangkan kesannya. Walaupun banyak kajian telah dijalankan di barat, dan hanya sedikit dijalankan dalam konteks timur seperti di Malaysia. Pelbagai faktor yang dapat mempengaruhi tingkah laku kelangsangan antaranya termasuk, jantina, umur, pendapatan keluarga, dan keagamaan. Oleh itu, kajian ini bertujuan untuk mengenal pasti hubungan antara pendedahan terhadap permainan video ganas dan latar belakang peribadi berkaitan dengan tingkah laku kelangsangan; mengkaji kesan daripada pemantauan ibu bapa; dan menentukan faktor-faktor yang secara unik meramalkan tingkah laku kelangsangan. Bagi kajian kuantitatif, responden dipilih menggunakan sampel pelbagai peringkat. Sebanyak 206 orang responden dalam lingkungan umur 13 hingga 14 tahun. Soal selidik mengenai pengurusan diri telah digunakan untuk mengumpul data dengan menggunakan empat instrumen yang sah dan boleh dipercayai termasuklah General Media Habits Questionnaire - Child Version (Gentile, Lynch, Linder, & Walsh, 2004), Daily Spiritual Experience Scale (Underwood, 2006), Adult Involvement in Media Scale – Child Version (Gentile, Nathanson, Rasmussen, Reimer, & Walsh, 2012), dan Buss-Perry Aggression Scale (Buss & Perry, 1992). Keputusan skor-skor pembolehubah menunjukkan bahawa skor responden yang tertinggi adalah dalam keagamaan manakala terendah dalam tingkah laku kelangsangan. Sementara itu markah untuk pendedahan terhadap permainan video ganas dan pemantauan ibu bapa mempunyai taburan skor yang hampir sama iaitu skor tinggi dan rendah. Analisis korelasi menunjukkan hubung kait yang penting di antara jantina, pendapatan keluarga, dan pendedahan permainan video ganas dengan tingkah laku kelangsangan, namun begitu korelasinya adalah rendah. Analisis regresi hierarki berganda menunjukkan bahawa pemantauan ibu bapa dengan

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ketara menyederhanakan interaksi antara pendedahan permainan video ganas dan tingkah laku kelangsangan. Interaksi antara pendedahan permainan video ganas dan tingkah laku kelangsangan adalah kukuh dengan pemantauan ibu bapa yang ketat. Hasil kajian menunjukkan bahawa pendedahan permainan video ganas, jantina, dan pendapatan keluarga berkait rapat dengan tingkah laku kelangsangan. Keputusan kajian juga menunjukkan bahawa pemantauan ibu bapa yang tinggi boleh mengurangkan kesan-kesan pendedahan permainan video ganas terhadap tingkah laku kelangsangan. Hasil kajian membuktikan implikasi kepada ibu bapa, pembuat dasar, pertubuhan badan bukan kerajaan, dan masyarakat tentang kemungkinan kesan daripada pendedahan permainan video ganas, jantina, dan pendapatan keluarga terhadap tingkah laku kelangsangan, serta membangunkan program-program pencegahan dan campur tangan terhadap tingkah laku kelangsangan di kalangan remaja.

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I certify that a Thesis Examination Committee has met on 18 May 2017 to conduct the final examination of Azimah binti Ahmad Zaki on her thesis entitled "Violent Video Games and Aggressive Behaviour with Parental Monitoring as Moderator among Adolescents in Petaling, Selangor, Malaysia" 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 Master of Science.

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I hereby confirm that:
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Declaration by Members of Supervisory Committee

This is to confirm that:
- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

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Name of Chairman
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Committee:

Signature:
Name of Member of
Supervisory
Committee:

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INTRODUCTION

1.1   Background of Study

Adolescents in present time are facing complex challenges in transitioning into adulthood; while many succeeded, others might not (Santrock, 2009). Adolescence is "the development period of transition from childhood to early adulthood" (Santrock, 2009, p. 17). At this stage, they go through drastic interconnected processes of physical, cognitive, emotional, social, and behavioural development (American Psychological Association, 2002). Apart from that, they are also predisposed to risky behaviour such as aggressive and violent behaviour during their transition (Escobar-Chaves & Anderson, 2008).

Aggression, as defined by Anderson and Bushman (2002), is "…any behaviour directed toward another individual that is carried out with the proximate (immediate) intent to cause harm … the perpetrator must believe that the behaviour will harm the target and that the target is motivated to avoid the behaviour." (p. 28). Violence refers to the extreme form of aggression (Bushman & Huesmann, 2010). Aggression further distinguishes into forms and functions. Forms of aggression include physical, verbal, relational, direct, indirect, displaced, passive, and active aggressions; functions, on the other hand, include reactive and proactive aggressions (Bushman & Huesmann, 2010).

The occurrence of aggression is common among adolescents (Baharudin, Krauss, Yacoob, & Tan, 2011; Santrock, 2009). Karriker-Jaffe, Foshee, Ennett, and Suchindran (2008) study indicates that adolescent's development of aggression follows a curvilinear process; aggression increases during early adolescence and peaks at age 14 to 15, then gradually declines as they reach early adulthood.

In Malaysia, the Institute for Public Health (2015) reported that 16.7% of children age five to 15 are involved in conduct problems including aggressive behaviour. A study in Sarawak and Sabah found nearly 70% of adolescents' exhibit aggressive behaviour (Rahman et al., 2012). Similarly, Yahaya, Boon, Ramli, Hashim, and Idris (2010) study found the most frequent form of aggression exhibit by adolescents is aggressive behaviour, followed by verbal aggression. Moreover, the Ministry of Women, Family and Community Development [MWFCC], and the United Nations Children's Fund Malaysia [UNICEF Malaysia] (2013) reported that the numbers of juvenile crimes have increased.

For location, six states under the National Key Result Areas (NKRAs) for crime rates include Selangor (Ministry of Home Affair, 2012). The Institute for Public Health (2015) stated that Selangor is among the states with the highest frequency rate of conduct problems among children and adolescents. Petaling, a district in Selangor, recorded the highest juvenile cases (Department of Statistics Malaysia, 2013). Additionally, a study conducted among secondary school students in Petaling, reveals that 91% are involved in delinquency; the highest act of delinquency is aggression (Abdullah@Dolah, Hasan, Hassan, Ismail, & Omar, 2009).

Aggression among adolescents is a major concern for many. Not only is it harmful to the victim and perpetrator, but also for others around them, and it compromises their future, causes maladjustment behaviour, disability, and death (Card, Stucky, Sawalani, & Little, 2008; Escobar-Chaves & Anderson, 2008). Furthermore, the outcomes of their actions can be very costly. For example, Malaysia invested more than fifteen million Ringgit Malaysia on remand and rehabilitation facilities for child offender (MWFCC & UNICEF Malaysia, 2013). In addition, aggression that emerges in childhood and continues in adolescence is a predictor of anti-social or violent behaviour in adulthood (Bushman & Huesmann, 2010; Huesmann & Taylor, 2006; Lee, Abdullah, Elias, & Uli, 2010).

Continuous intervention and preventive measures are needed to control this behaviour. Thus, it is important to study the factors that contribute to its development. Aggression is the result of various factors including situational, personal, biological, and environmental factors (Bushman & Huesmann, 2010). There has also been a growing interest in linking video games with adolescent's aggression (Bushman & Huesmann, 2010; Choo et al., 2010; Escobar-Chaves & Anderson, 2008). Greitemeyer and Mügge (2014) meta-analysis shows that violent video games increase aggressive behaviour, cognition, and affect while decreases pro-social behaviour and affect. Although many recognised the effect of television violence; some believe stronger effects of video games. The reasons for that contention are (1) game players are active rather than passive viewers, (2) identification with game character, and, (3) reinforcement gain from playing (Bushman & Huesmann, 2010; Whitaker & Bushman, 2009). Comparison studies on violent television and video games found larger effects of video games (Escobar-Chaves & Anderson, 2008).

Another reason to believe the stronger effect of video games is due to its fast-growing popularity. The video games industry is the fastest growing industry in the entertainment industry (Wallenius & Punamäki, 2008). American consumers spent 30.4 billion US dollars on gaming contents, hardware, and accessories (Entertainment Software Association, 2017). Video games devices exist in more than 80% of household irrespective of socioeconomic background (Entertainment Software Association, 2015). Fascination with video games has also caught on by South-east Asian countries (Rajasakran et al., 2014). The average hours' Singaporean adolescents and children spent on video games are 20.4 hours per week, higher than other studies, while 8.7% are pathological

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games player (Choo et al., 2010). In Malaysia, the average hours of violent video games in Kumarasuriar, Pangiras, Sinnapan, and Koran (2011) study is slightly lower than of Gentile, Li, Khoo, Prot, and Anderson (2014) on Singaporean, but not much difference.

Other concern of video games is that the most popular video games played by youth contain violence (Escobar-Chaves & Anderson, 2008; Möller & Krahé, 2009; Wallenius & Punamäki, 2008; Whitaker & Bushman, 2009). In addition, current video games have become more sophisticated, realistic, and violent (Kirsh, 2003). Though the Entertainment Software Rating Board (ESRB) has set up rating system, Escobar-Chaves and Anderson (2008) study shows that 30% of the video games rated suitable for all and 90% rated for age ten and above contain violence, while 70% of nine to 18 years old play video games rated mature and contain graphic violence (p. 168). Akin to the western studies, eight out of ten most played games by Malaysian adolescents in Kong, Abdullah, and Roslan (2013) study contains violent elements.

Despite its impacts on players; parents' involvement can moderate the effects of video games. Parental monitoring protects against negative outcomes such as aggression (Broll, Crooks, Burns, Hughes, & Jaffe, 2013). Since parental monitoring buffer against behavioural problems, the same effect is predicted for violent video games. In the study of Laird, Criss, Pettit, Dodge, and Bates (2008), parental monitoring moderates between media violence and aggressive behaviour. Browne and Hamilton-Giachritsis (2005) emphasise that parents should monitor and take notice of games rating, especially age restriction. However, this practice is lacking as demonstrated by Gentile, Nathanson, Rasmussen, Reimer, and Walsh (2012). Parental monitoring gradually decreases as children reach adolescence (Graber, Nichols, Lynne, Brooks-Gunn, & Botvin, 2006). While more freedom increases trust bond between parent-child, however, it also leaves room for experimentation with risky behaviour (Borawski, Ievers-Landis, Lovegreen, & Trapl, 2003).

Apart from violent video games, studies demonstrate a relationship between sex, age, family income, and religiosity with aggressive behaviour. Generally, men are more aggressive than women (Lim, Hasbullah, Ahmad, & Wu, 2013; Wallenius & Punamaki, 2008). Recent studies, however, reveal that women are also aggressive, but exhibit a different form aggression; women exhibit more relational aggressions while men resort to physical aggressions (Batanova & Loukas, 2011). The pattern for aggressive tendency also differs from one developmental stage to another. Wallenius, Punamäki, and Rimpelä (2007) discover that early adolescent boys engage in aggressive behaviour more than middle childhood. Family income also associates with aggressive and violent-related behaviour (Celbis, Karaoglu, Egri, & Ozdemir, 2012; Wahl & Metzner, 2012). For religiosity, Sinha, Cnaan, and Gelles (2007) highlight that religious aspects protect individuals from involving in risky behaviour such as aggression. Parental and individual religiosity acts as a buffer from aggression (Holmes & Lochman, 2012).

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1.2   Statement of Problem

A problem statement, according to Faryadi (2012) is a statement of "a specific condition that needs urgent attention and a possible solution." and how researchers try to contribute to the existing findings by filling the gap in the literature (pg. 112).

Prevalence of aggressive behaviour among adolescents is a constant concern for many, from parents to authorities alike (Simons-Morton, Hartos, & Haynie, 2004). Aggression during childhood and adolescence is related to various externalising behaviour, internalise problems, adjustment problems, and school dropout (Batanova & Loukas, 2011; Graber et al., 2006; Masoumeh, Mansor, Yaacob, Talib, & Sara, 2014; Rahman et al., 2012). Furthermore, the outcomes of their actions can be very costly; financially and socially (Sinha et al., 2007). Several factors are found to relate to aggressive behaviour namely violent video games, sex, age, family income and religiosity. (Bushman & Huesmann, 2010; Celbis et al., 2012; Kong et al., 2013; Kumarasuriar et al., 2011; Santrock, 2009; Wahl & Metzner, 2012).

Despite numerous findings done on media violence effects, many remain unaware of its risk, while others are sceptical of its effects. Debates on the effects have been ongoing for over a span of 50 years (Escobar-Chaves & Anderson, 2008). Though there are studies on media violence such as television, comparably fewer studies focus on video games, and fewer studies conducted in eastern countries like Malaysia. Bushman (2013) reviews on violent video games reveal that violent video games correlate positively with aggressive behaviour, cognition, affect, attitude, physiological arousal, and desensitisation, while correlating negatively with pro-social behaviour.

Studies suggest that the effect of violent video games on aggressive behaviour moderated by parental monitoring (Laird et al., 2008; Wallenius et al., 2007; Wallenius & Punamäki, 2008). Hoeve et al. (2009) meta-analysis suggests parental monitoring may be more effective with children and early adolescents. Yet, Gentile et al. (2012) study demonstrates low scores of parental monitoring on video games consumption. Apart from that, according to Gentile, Lynch, Linder, and Walsh (2004), few studies have been done on video games and the moderating effect of parental monitoring compared to television, while other studies found mix results (Gentile, Li, et al., 2014; Wallenius & Punamäki, 2008).

Some suggest that early adolescents are more vulnerable due to many changes occur at this stage of development; including aggressive attribution at its peak (Kirsh, 2003; Möller & Krahé, 2009; Wallenius & Punamäki, 2008). Wahl and Metzner (2012) study demonstrates a u-shape development of aggressiveness in which aggressiveness gradually decreases from late childhood, but rises again during early adolescence, especially for boys. In

Malaysia, Teoh (2010) reports that aggressiveness prevalence among primary and secondary school students are above 20%. In addition to that, late childhood and early adolescence play the most video games (Holtz & Appel, 2011; Kirsh, 2003) and children ages 6 to 18 spend more time with the media than with parents or school (Slotsve, Carmen, Sarver, & Villareal-Watkins, 2008).

Therefore, the aim of the present study is to determine the relation between violent video games exposure, personal background of sex, age, family income, religiosity, and aggressive behaviour. Additionally, it aims to examine whether parental monitoring can moderate between violent video games and aggressive behaviour. Lastly, it is to determine what factors predict aggressive behaviour among adolescents in Petaling, Selangor, Malaysia.

The research questions for this study are as follow:

1. What are the level of violent video games exposure, religiosity, parental monitoring, and aggressive behaviour among adolescents in Petaling?

2. Does personal background (sex, age, family income, and religiosity) significantly relate with aggressive behaviour among adolescents in Petaling?

3. Does violent video games exposure significantly relate with aggressive behaviour among adolescents in Petaling?

4. Does parental monitoring moderates the relationship between violent video games exposure and aggressive behaviour among adolescents in Petaling?

5. What factors are predictive of aggressive behaviour among adolescents in Petaling?

1.3   Research Objectives

The following states the general and specific objectives of the study.

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1.3.1 General Objective

Generally, this study aims to determine the relationship between violent video games exposure and aggressive behaviour with parental monitoring as a moderator among adolescents in Petaling, Selangor, Malaysia.

1.3.2 Specific Objectives

Specific objectives of the study are as follows:

1. To describe level of religiosity, violent video games exposure, parental monitoring, and aggressive behaviour among adolescents in Petaling.

2. To determine the relationship between personal background (sex, age, family income, and religiosity) and aggressive behaviour among adolescents in Petaling.

3. To determine the relationship between violent video games exposure and aggressive behaviour among adolescents in Petaling.

4. To examine the moderating effect of parental monitoring on the relationship between violent video games exposure and aggressive behaviour among adolescents in Petaling.

5. To determine what factor uniquely predicts aggressive behaviour adolescents in Petaling.

1.4 Significance of Study

The findings contribute to the literature on video games, parental practices, and aggression, as well as the practical and policy aspects of managing aggression for prevention and treatment programmes.

Firstly, this study contributes to the field of psychology and media. It adds empirical support in relation to video games, parental monitoring, and aggression literature. Although studies have been conducted on media violence, particularly television, yet, studies on violent video games or video games, in general, are lesser. This study explores the relationship between all three variables in the Malaysian context. It also contributes to the developmental studies on the effect towards early adolescents. Based on the

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literature, there are yet studies done in Malaysia exploring the relationship between the three variables taking on developmental perspective. In addition, this study helps to explore the influences of gender, age, family income, and religiosity on aggressive behaviour. It also adds to the direction of future research such as implication and methodology issues as did by other studies.

Secondly, this study helps policymakers, parents, and societies understand the influences of violent video games on adolescent's aggressive behaviour. For policy makers, this finding helps policy makers such as Ministry of Communications and Multimedia Malaysia (KKMM) take preventive measures or develop social policy and programmes to minimise the effect of video games. Preventive measures include reviewing and developing a standard on video games that are suitable to Malaysian standards and age appropriateness. The government can also develop proper video games rating systems to restrict Malaysian adolescents and children from easy access to detrimental video games.

As for parents and society, the findings provide awareness to the possible influences of violent video games on adolescents' aggression. Parents should monitor and put more restriction on their child video games selection and play time. They should also be more inform or take notice of the rating label. The findings also help society increase the awareness on the effect of violent video games, and take interventive and preventive measure against violent video games.

1.5   Theoretical Background of the Study

This research is based on the Ecological Theory and the General Aggression Model (GAM).

1.5.1   Ecological Theory

The ecological theory suggests that an individual development is the result of dynamics interaction between the individual with his/her environment. It composes of personal attributes, social contexts (immediate and distance), and processes (Bronfenbrenner, 1988). These elements work together, entwine, and affect one another. Moreover, responses differ and distinct from one individual to another, because of different environment and experience they are in (Bronfenbrenner, 1988), as explain by the proximal processes of ongoing interaction between individual and its environment (Bronfenbrenner, 1994).

Bronfenbrenner purposes five systems that interact with the individual which are microsystem, mesosystem, exosystem, microsystem, and chronosystem as shown in Figure 1.1:

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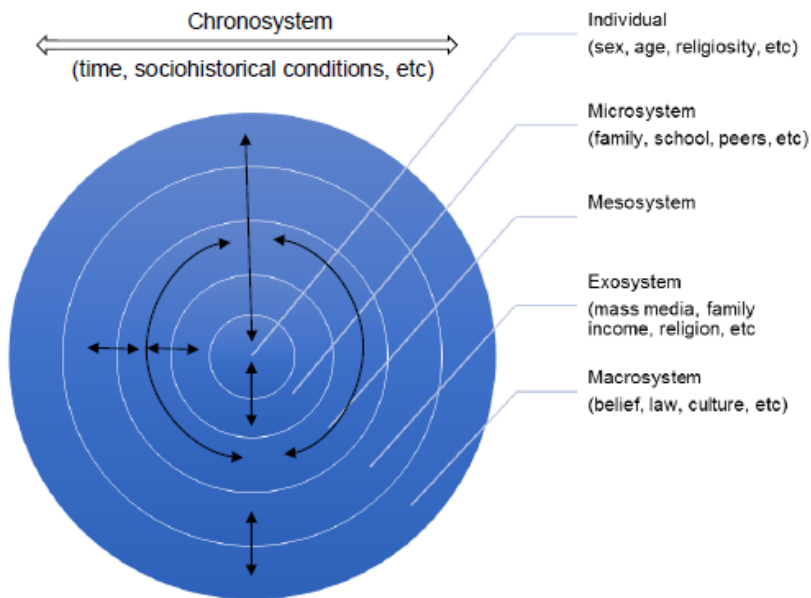
Figure 1.1: Bronfenbrenner's Ecology Model of Development
(Adapted from Parke and Gauvain, 2009, p. 14)

Influence of aggressive behaviour in this study explains mainly through centre and microsystem. At the centre of the system is the individual, which consists of biological and personal attributes such as sex, age, religiosity, and so on. It connects to every layer of the system, either directly or indirectly. Certain biological and personal factors act as risks factors for aggressive behaviour. For example, the sex of a person usually predicts aggressive behaviour, men more aggressive than women. Bronfenbrenner describes the individual as active, who shapes the environment, stimulate responses, and give responses (Darling, 2007, p. 204).

The microsystem is immediate and direct settings between the individual and environment that they live. These contexts include family, school, peers, religious institution, and so on. This system directly influences the individual, as it is the closest context that they interact with, compares to other layers of the systems. This theory also suggests that proximal processes that act as a protector are more effective with the present of risk factors (Darling, 2007). For example, the presence of risk factors (i.e. violent video games, sex, age, and family income) trigger an individual to act (i.e. increasing parental monitoring) or take preventive measure to ensure that it would not lead to a negative outcome (i.e. aggressive behaviour). This may also explain parent's lack of monitoring on violent video games due to few number of as risks. However,

Huh, Tristan, Wade, and Stice (2006) emphasise that problematic children can also influence parents parenting practices.

The other two systems that indirectly influence aggressive behaviour are exosystem and chronosystem. Exosystem indirectly influences the individual through microsystem. For example, exposure to mass media increase the risk for aggressive behaviour, and with low monitoring and restriction from parents increases the influence. Chronosystem also influences aggressive behaviour, for example, the 21st century presents a surge of modern technologies, and its impact not only benefits greatly to everyone but also brings countless of harms too.

The development of aggressive behaviour, thus, as suggests by the ecological theory, is the result of personal attributes (i.e. sex, age, and religiosity) social addresses (i.e. parental monitoring, violent video games exposure, and family income) and the processes (proximal processes) (Baharudin et al., 2011, p. 510).

1.5.2   General Aggression Model (GAM)

According to Anderson and Bushman (2002), the General Aggression Model (GAM) incorporates several theories of aggression. This model suggests that aggression is the result of knowledge structures through experiences (Anderson & Bushman, 2002). Figure 1.2 below displays GAM framework:
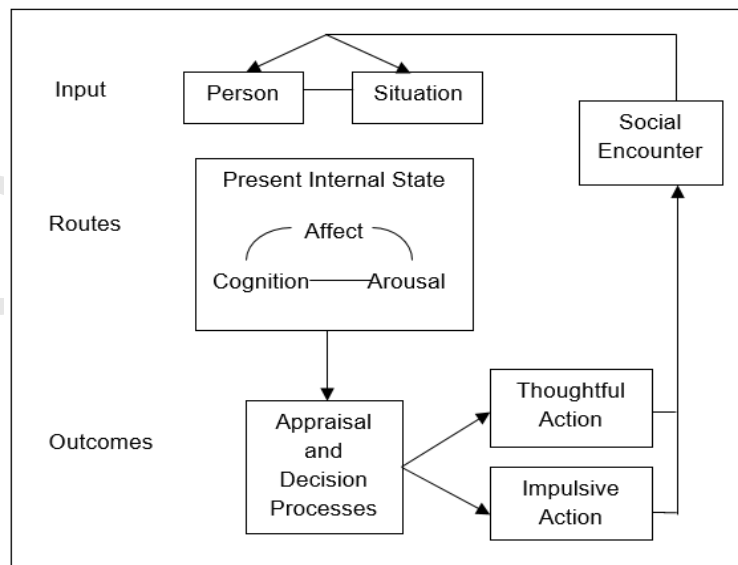
Figure 1.2: The General Aggression Model Episodic Processes
(Adapted from Anderson and Bushman, 2002, p. 34)

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The GAM outlines the development of aggression and the action taken through a cycle or episodic processes starting from inputs variables to the outcomes. In the input variables, situation and person factors interconnect and influence aggressive behaviour (Anderson & Bushman, 2002). Person factors include sex, age, traits, beliefs, and attitudes, while situational factors are factors in the situation that influences aggression such as aggressive cues (i.e. violent video games), provocation, and frustration.

In the route process, both situational and person factors influence and activate the present internal state, composes of cognition, affects, and arousal. All three states interconnect, affect one another, and influence interpretation of aggression. After the process of interpretations, the information will go through the appraisal and decision processes to determine whether the outcome of the behaviour is aggression or not. Information that is appraised automatically leads to impulsive action or aggression, while heavily controlled appraisal leads to thoughtful action or non-aggression. The action will become a part of the knowledge structures for the next social encounter, which explains the cyclical processes of aggression.

This model not only explains the short-term effect of aggression but also the long-term effect of exposure to aggression. Repeated processes of aggression will stimulate and strengthens knowledge structures relating to aggression, reinforce normative beliefs of aggression, becomes automatise, desensitise, and makes it harder to change that may become a part of their personality (Möller & Krahé, 2009). This model explains the development of aggression by the process of interaction between situational factor (i.e. violent video games), and person factors (i.e. sex and family income) which influence the present internal state and interpret whether the action to be taken as aggressive or not, depending on the appraisal process.

1.6   Conceptual Framework of the Study

The conceptual framework for this study is developed according to the ecological theory and general aggression model (Figure 1.3).
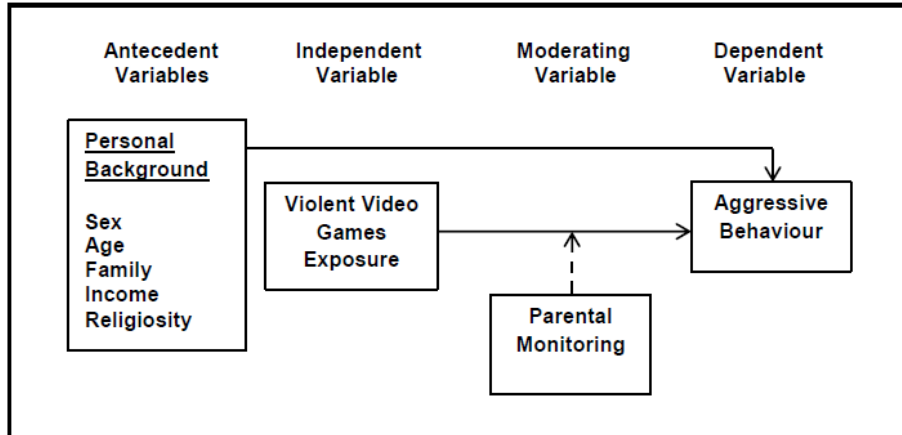
Figure 1.3: Conceptual Framework for the Study on "Violent Video Games and Aggressive Behaviour with Parental Monitoring as a Moderator among Adolescents in Petaling, Selangor, Malaysia"

The framework presents the relationship between antecedent variables (personal background), the independent variable (violent video games exposure), moderating variable (parental monitoring), and the dependent variable (aggressive behaviour). The ecological theory explains the complex interaction of individual and their personal attributes (sex, age, and religiosity) with different context or environment (violent video games exposure and family income) and processes, and how it affects the individual either directly or indirectly leading to the development of aggressive behaviour. The theory also explains how parental monitoring moderates the effect of violent video games by restricting access (Browne & Hamilton-Giachritsis, 2005). However, Darling (2007) infers that parenting practices (i.e. parental monitoring) are applied depending on the development period, as well as the risk at present. GAM model, on the other hand, explains the processes that would decide an action of aggressive or non-aggressive behaviour through situational (violent video games exposure) and personal factors (sex, age, family income, and religiosity) and how the information is interpreted and processed.

The ecological theory and GAM also emphasise on multiple factors influencing aggression behaviour. Bushman (2013) and Huesmann (2007) state that no single factor should be account for aggressive behaviour, but treat as a risk factor that predicts those behaviours. While some factors that influence aggressive behaviour cannot be controlled like sex and age, other factors such as violent video game can (Bushman, 2013). In addition, Rappaport and Thomas (2004) highlight the possibility that these risk factors lead to a certain outcome, depends on the development period.

Taking everything into consideration, the present study considers the relationship between personal background (sex, age, family income, and

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religiosity), violent video games exposure and aggressive behaviour, and parental monitoring as a moderator. Lastly, the study determines variables that predict aggressive behaviour among adolescents in Petaling, Malaysia.

1.7 Hypotheses

Corresponding with the objectives of the study and to answer the research questions, the following hypotheses are formulated to determine the relationship between personal background (sex, age, family income, and religiosity), violent video games exposure, parental monitoring, and aggressive behaviour:

Ho1: There is no significant relationship between sex and aggressive behaviour among adolescents in Petaling.

Ho2: There is no significant relationship between age and aggressive behaviour among adolescents in Petaling.

Ho3: There is no significant relationship between family income and aggressive among adolescents in Petaling.

Ho4: There is no significant relationship between religiosity and aggressive behaviour among adolescents in Petaling.

Ho5: There is no significant relationship between violent video games exposure and aggressive behaviour among adolescents in Petaling.

Ho6: The relationship between violent video games exposure and aggressive behaviour is not moderate by parental monitoring.

Ho7: The regression coefficient for sex, age, family income, religiosity, and violent video games exposure equal to zero when regressed against aggressive behaviour.

1.8 Conceptual and Operational Definitions

1.8.1 Adolescence

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Conceptual Definition

Adolescent development period starts from 10 or 12 years old and ends at 18 or 21 years old. It is the transition period from late childhood to early adulthood. Three stages of development start from early adolescence (11 to 14 years old), middle adolescence (15 to 17 years old), and late adolescence (18 to early adulthood) (Santrock, 2009; American Psychological Association, 2002).

Operational Definition

For this study, respondents are early adolescents. Only secondary school students include in the study, with form one and form two students who are at the age of 13 and 14 years old respectively.

1.8.2   Religiosity

Conceptual Definition

Religiosity refers to "beliefs and practices relating to an organised religious affiliation or a specified divine power." (Hernandez, 2011, p.1). Spirituality and religiosity are overlapping concepts (Underwood, 2006).

Operational Definition

Respondent's level of religiosity measures by the 16 items of Daily Spiritual Experience Scale (Underwood, 2006) (See Appendix B). High scores indicate high in religiosity.

1.8.3   Violent Video Games Exposure

Conceptual Definition

Violent media are any type of media that display contents portraying characters, either cartoon or real characters or anything in between, that purposely attempts to cause harm on other(s) (Huesmann, 2007). Thus, exposure to violent video games is individual who plays or expose to the violent video games genre.

Operational Definition

Respondent's violent video games exposure measures by the 6 items of the General Media Habits Questionnaire (Child Version) (GMHQ-C) (Gentile et al., 2004). (See Appendix B). High score for GMHQ-C indicates high exposure.

1.8.4   Parental Monitoring

Conceptual Definition

Parental monitoring refers to parent action in monitoring children behaviour consists of tracking, controlling, and soliciting children activities and whereabouts (Stattin & Kerr, 2000).

Operational Definition

Respondent's level of parental monitoring on violent video games measure by 11 items of the Adult Involvement in Media Scale – Child Version (AIM-C) (Gentile et al., 2012). (See Appendix B). High score indicates high parents' monitoring of violent video games exposure.

1.8.5 Aggressive Behaviour

Conceptual Definition

Aggression is "…any behavior that is intended to harm another person who does not want to be harmed… Aggression is an external behavior that you can see." (Bushman & Huesmann, 2010, p. 833).

Operational Definition

Respondent's level of aggressive behaviour measures by 9 items of Buss-Perry Aggression Scale (BPAQ), using the domains measuring aggressive behaviour, specifically physical aggression. (Buss & Perry, 1992) (See Appendix B). High score indicates higher level of aggressive behaviour.

1.9 Organisation of the Thesis

This thesis consists of five chapters. The first chapter introduces the topic of the study. The second chapter reviews earlier findings and research gaps. The third chapter discusses the methodological aspects of the study. The fourth chapter presents the findings of the study as well as discusses the findings and answers the research questions of the study. The last chapter concludes the major findings of the study, as well as implications and recommendations for future research.

1.10 Chapter Summary

This chapter starts with the discussion on the backgrounds and problem statements of the study, which highlights violent video games influence on aggressive behaviour. Next, the discussion moves to the objectives and significance of the study. Discussion also touches on the theoretical background which gives ground to the conceptual framework of this study. Then, seven hypotheses consider for testing are developed. Finally, lists of conceptual and operational definition of all the variables in the study.

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