

## **VIOLENT OR NON-VIOLENT VIDEO GAMES & EXTRAVERSION AS A PREDICTOR OF AGGRESSION**

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### **ABSTRACT**

Debate regarding the psychological & behavioral effects of playing violent video games has recently led to claims that violent video games increase aggression effects in adolescents, & that this issue has now been settled. Over the past decade countless studies have arisen supposedly proving a causal link between video games, violent behavior. Violent video games have raised concerns, particularly from the media, certain regulatory bodies & mental health professionals. The current study aim is to explore violent video games & extraversion as a predictor of aggression. A between group design was followed for conducting the present study. In this study, the adolescent students of Chittagong city, Bangladesh were the target population. A total of 50 school students were purposely selected in the current study. The result demonstrated that violent video games significantly produced more aggressive responses than nonviolent video games. It was also demonstrated that by a simple Pearson's correlation was computed to examine the relation between extraversion & aggression. Contrary to the second hypothesis, extraversion was not significantly related to aggression ( $r = .47, p > .05$ ). A step-wise regression analysis was computed to examine whether or not extraversion moderated the effect of violent video games on aggression. In this analysis, it is found that extraversion significantly moderated the effect of video game condition.

*Key words:* video games, extraversion, aggression.

## **BACKGROUND INFORMATION**

Computer games as a leisure activity have become an ever-increasing part of many young people's day-to-day lives (Griffiths & Davis, 2005; Durkin, 2006). It has become a major form of entertainment. Video games first began their foray into popular media in the 1970's (Kent, 2001). Their popularity grew steadily from the 1980's to the mid-1990's, after which time it grew exponentially. At present, the video game industry rivals the movie & music industries in terms of revenue (Entertainment Software Association, 2012). Throughout this rise in the popularity of video games, there has also been consistent concern on the part of parents, lawmakers, and researchers that exposure to video game violence may have negative consequences. The most common concern about video games is that the interactive nature of the games will result in increased aggressive behavior (Anderson & Bushman, 2001; Bartholow & Anderson 2002; Cooper & Mackie, 1986), & violent behavior in those who are exposed to violent video games in short-term. It also causes aggressive thoughts (Bushman, 1998; Calvert & Tan, 1994; Kirsh, 1998), aggressive affect (Anderson & Ford, 1986; Ballard & Weist, 1996), & aggressive schemata (Bushman & Anderson, 2002), & decreases in pro-social behavior & attitudes (Carnagey, Bushman, & Anderson, 2005).

While some games have educational content, many of the most popular games emphasize negative themes & violent in nature & feature death & destruction (Dominick, 1984; Loftus & Loftus, 1983). These games also promote the killing of people or animals, use & abuse of drugs & alcohol, criminal behavior, disrespect for authority & the law & sexual exploitation & violence toward women, sexual, & gender stereotypes. In a survey reported by Bowman & Rotter (1983), 85% of games that were examined (n = 28) involved participants in acts of simulated destruction, killing or violence. Children & adolescents can become overly involved with videogames. They may have difficulty controlling the amount of time they play.

The term aggression is very general & can refer to & influence a large number of personality traits & behaviors. Connor, Steingard, Cunningham, Anderson, & Meloni (2004) defined two specific types of aggression. Reactive aggression is an angry, defensive response to a threat or frustration (getting revenge on someone that has done you wrong). Proactive aggression is a deliberate behavior that is controlled by external reinforcements & is usually a means of reaching a desired goal (robbing a bank to get money). General Aggression Model (GAM) proposed by Anderson & Bushman (2002) to account the interactive effects of person logical & situational influences on aggression. It attempts to explain both the development of aggression & individual differences in susceptibility to the influence of violent video games. The internal state contains cognitions (thoughts), affects (feelings) & arousals (physical). All three of these items influence each other, & each has effect on an individual's interpretation of an aggressive act. Once the brain's interpretation is complete, decision-making processes start to occur. For understanding how media violence exposure can lead to aggression, GAM recently has been used as a theoretical framework (Carnagey & Anderson, 2003).

The GAM also states that violent video games have both short term & long term effects. In the short term, the games are a situational variable, causing an increase in aggressive cognitions, affects & arousal. The long term effects are just hypothesis, as insufficient research has been done to test its effect's. Anderson & Bushman (2002) hypothesized that violent video games influence behavior by promoting aggressive beliefs & attitudes, thus creating aggressive schema, aggressive behavioral scripts, & aggressive expectations. They also claim that it desensitizes individuals to aggression. The GAM helped to show how complicated of an issue the relationship between violence, video game, & aggression really is. Gentile et al. (2004) claim it has an additive effect. This means that those whom already are high in certain factors, mainly hostility, are much more at risk to become more aggressive due to influence by violent video games. Those subjects who are rated as low in hostility have been found to have almost no affect on their aggression levels when

influenced by playing violent video games.

Kirsch (2003) was the first to apply the GAM specifically to adolescents. Because of the large amount of biological & physical changes that occur during puberty, exposure to violent games should affect the processes that operate within the GAM. These processes are already in place at adolescence, but during this time they are still influenced by current environments (Kirsch 2003). During adolescence there is a general increase in the aggression (Lindemann, Harakka, & Keltikangas-Jaervinen, 1997). This aggression combined with the exposure to violent media will reinforce & increase aggressive cognitions, affects & arousal. This interaction has a negative effect on the internal state, leading to increased aggression. The effects of this exposure are greater during early adolescence than middle & later adolescence. This is because the amount of physiological arousal is greatest during this time (Spear, 2000).

Video games are a unique form of entertainment because they encourage players to become a part of the game's script. Today's sophisticated video games require players to pay constant attention to the game. Players involve on deeper level physically & emotionally than people do when watching a movie or TV. Some studies show that, children are living in a media-saturated world & have experienced consistent increases in media exposure (e.g., television, video games, music). It continues to be very rare to find a home that does not have at least one television, as TVs are found in 99% of homes. In fact, the average home in the study had 3 or more televisions. Children & teens today are inundated with electronic media. Kids have grown up with access to cell phones, computers, iPads, & all too often violent video games. Video game systems continue to grow in availability, with 87% of homes having at least one video game console, up 4% from the prior study (Roberts et al., 2005). In addition, 93% of homes have a computer, which is another avenue for children & adolescents to access video games (Rideout et al., 2010). It is also likely that children who do not have the means to play a video game in their own home will access video games in the home of a friend, at the library, or at an

internet café. A survey of 1,102 adolescents found that 97 percent had played video games in the past day.

Extraverts tend to enjoy human interactions & to be enthusiastic, talkative& assertive (John & Srivasava, 1999). It is "the act, state, or habit of being predominantly concerned with obtaining gratification from what is outside the self". They take pleasure in activities that involve large social gatherings, such as parties, community activities, public demonstrations, & business or political groups. An extraverted person is likely to enjoy time spent with people & find less reward in time spent alone. They tend to be energized when around other people, & they are more prone to boredom when they are by themselves. According to Bakker et al. (2006) "extraversion is characterized by a tendency to be self-confident, dominant, active, & excitement seeking. Extraverts show positive emotions, higher frequency & intensity of personal interactions, & a higher need for stimulation." The relationship with aggression & extraversion are mixed. Extraversion negatively correlated with aggressive behavior (Sharpe & Desai, 2001). Extraversion is related to positive emotions & sociability (Benet-Martinez & Jhon, 1998).

Extraversion & physical aggression are found positively related (Gallo & Smith 1998). There are at least three basic characteristics of extraversion that make it important to study:

First, extraversion has emerged as one of the fundamental dimensions of personality (Costa & McCrae, 1992a; Digman, 1990; Eysenck, Himmelweit, Lewis, 1947; Goldberg, 1990; Norman, 1963). As such, extraversion has the potential to explain the co variation of a wide variety of behaviors, which is one of the central concerns for the field of personality (Funder, 2001).

Second, extraversion predicts effective functioning & well-being across a wide variety of domains (Ozer& Benet-Martinez, 2006) from cognitive performance (Matthews, 1992) & social endeavors (Eaton & Funder, 2003) to social economic status (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007).

Third, extraversion predicts risk & also resilience for different forms of psychopathology (Trull&Sher, 1994; Widiger, 2005).

## **LITERATURE REVIEW**

There is a link between violent video games & higher levels of aggression in players. Study conducted by Hollingdale & Greitemeyer (2014), examined the effect of playing online violent video game & the impact of game on levels of aggression. This study found that playing a violent video game in comparison to a non-violent video game significantly increased levels of aggression.

Evidence from both correlational & experimental research was reviewed in a meta-analysis by Anderson & Bushman (2001) which included 35 studies. Their finding exposed that playing violent video games increases aggressive behaviour, aggressive cognitions & aggressive affect as well as decreased the level of prosocial behaviour. Krahe & Moller (2004), examined between exposure to & preference for violent video games & aggressive behavior as well as hostile behavior. Significant gender differences in usage & attraction to violent electronic games were found, boys scoring higher than girls. Result also showed significant relationships between attraction to violent electronic games & physical aggression.

Kirsh (1998) & Greitemeyer (2014), studied the relation between playing violent video game & a hostile attribution style in an experimental study with participants aged 9–10 years. After playing video game (violent or non-violent), they were asked to answer a series of questions about ambiguous scene, referring to the intent of, likely responses to & potential punishments for the provocateur. A short-term hostile attribution tendency was observed in children who played the violent game, but only when subjects responded to the scenarios in an open-ended format. When predefined response options were provided, the effect of the video game bias was not found.

Lee (2010), investigated the effects of playing video game (violent & non-violent) as a character who is gender matched (male or female character) in the game & levels of aggression. Their result revealed

that the gender matching had no significance effect on passive & active aggression & attitudes towards violence. But participants who played the violent video game demonstrated a higher active aggression level than those who played the non-violent game. Barlett & Rodeheffer (2009) conducted a research study on the effect of violent video games (realistic versus non-realistic) on aggressive thoughts & physiological arousal. They found that participants who played the realistic violent video game had higher heart rates & higher aggressive feelings compared with those who played the unrealistic violent video game. Engelhardt, Bartholow & Sauls (2011), investigated whether violent video game influences aggression as a moderator of individual differences in trait anger. A sample of 83 (age 18-22 years) undergraduate students randomly played violent & non-violent video after that they completed a task in which they could behave aggressively. Results showed that participants high in trait anger & who played violent video game first were the most aggressive.

Hasan, Bègue, Scharkow & Bushman (2013), worked upon the cumulative long-term effects of violent video games on hostile expectations & aggressive behavior over 3 consecutive days. Their sample size was 70. Each participant played video games (violent & nonviolent) 20 min per day for 3 consecutive days. After finishing the video game they could blast a confederate with loud unpleasant noise through headphones, & then hostile expectations were measured. After that sample read equivocal story stems about potential interpersonal conflicts, & listed what they thought the main characters would do or say, think, & feel as the story continued. Result revealed Hostile expectations & aggression increased over 3 days for violent video game players & hostile expectations mediated the effect of violent video games on aggression while nonviolent video games did not influence hostile expectations or aggression.

Giumetti & Markey (2007), worked on violent video games & anger as predictors of aggression. They tested a supposition of the GAM (General Aggression Model) by examining if the inherent trait of

anger moderated the connection between violent video games & aggression. 167 undergraduate students first completed a measure of anger & then randomly assigned to play either a non-violent or violent video game. After the, period of video game play, participants completed ambiguous story stems in order to assess aggression. Their results showed that anger significantly moderated the effect of video game violence on aggression. Specifically, participants who were angry were more affected by violent video games than participants who were not angry. Past research studies have proposed a link between a person's personality and video game play.

Tenibiaje, & Tenibiaje(2014), investigated the influence of gender & personality characteristics on violent behaviour among adolescents in Nigeria. The findings showed that gender had no significant influence on violent behaviour among adolescence. Personality traits agreeableness has a significant effect on violent behaviour than adolescents with neuroticism, extraversion, openness or conscientiousness personality traits. Fang & Zhu (2011) Studied on association between extraversion & computer game play. Their findings showed that, extraversion have significant effect on a game players behavior during game play, & also has effect on how he or she choice to play the game.

Chory& Goodboy (2011), worked on the relationship among personality and violent and non-violent video game play and preference. They found individual who are more open and extroverted but less agreeable and neurotic like to play violent video games. Johnson, Wung, Sutherland& Norman (2013), examined the relationships between Five Factor Personality Inventory with their liking and disliking of four distinct category of video games (fighting, racing, dancing, first-person shooter). Results showed that extraversion has positive correlation with both liking & perceived ease of dancing games. Edmunds (2010), studied the extraversion, neuroticism & different aspects of self-reported aggression with university students. Different forms of aggression were found to have different personality correlates, & the

correlation matrices of the male & female samples were largely dissimilar. The direction of sex differences in subtest scores seemed to depend on the type of aggression measured. Socioeconomic class was not significantly related to any of the aggression scales.

## **RESEARCH QUESTIONS**

A detailed review of the relevant literature indicates that violent video games & extraversion may effect on children or adolescents behavior. Violent video games are linked to various negative behaviors & cognitions, & aggression. On the other hand, previous research found a positive correlation between aggressive emotions & extraversion. But, none of the studies distinguished between violent & nonviolent video games. So, the proposed study seeks to answer the following question: Does the trait of extraversion moderates the effect that violent video games have on aggression?

## **JUSTIFICATION/ RATIONALE OF THE STUDY**

Over the past decade countless studies have arisen supposedly proving a causal link between video games, violent behavior. Violent video games have raised concerns, particularly from the media, certain regulatory bodies & mental health professionals. There may be a relationship between the use of violent video games & subsequent aggressive or antisocial behavior. The APA state that more than 90% of children in the US play video games, with this figure increasing to around 97% among adolescents aged 12-17. Playing violent video games has been found to account for a 13% to 22% increase in adolescents' violent behavior; by comparison, smoking tobacco account for 14% of the increase in lung cancer (American academy of pediatrics, committee on public education, 2001).

Many studies have recognized a relationship between violent video games & aggressive behaviors. However, there is presently no empirical evidence on whether playing a violent video game increases accessibility of aggressive thoughts. The research to date on video game effects is sparse & weak in a number of ways in Bangladesh. Such research would also contribute to the field's understanding of

violent video games violence effects in general. The results of this study could have important implications for parents & policy makers. If a person with a certain type of personality (e.g., extraversion) is more likely to become aggressive in the short-term after playing a violent video game, then perhaps a parent will want to know this when they are making decisions about whether or not their child should play violent video games. Perhaps those children, teenagers, or young adults who have a certain type of personality will be discouraged from playing violent video games because of the increased likelihood that they may become aggressive. It does suggest that individuals are not “blank slates” & that one’s general disposition moderates the effect of violent media. It appears that general policy recommendations based on the notion that violent video games are simply “bad” & that individuals who play violent video games will inevitably become aggressive may be unwarranted. Instead, it appears that it is crucial to consider the dispositional characteristics of the person playing the video game when predicting what type of effect the violent video game might have on his or her thoughts & behaviors.

The present study findings will enable the researchers & policy makers to develop awareness about violent games’ detrimental effects on adolescent’s psychological health. It will help them to apply appropriate interventions as well as counseling programs on how to alter Extraversion, aggression, & poor school performance of adolescents.

### **HYPOTHESES**

Much of the experimental research suggest that there is some type of causal relationship between the two; violent video games & aggression. According to GAM, the link between exposure to a situational variable (e.g. violent media) & the output variable of aggression is mediated by one’s cognition, affect & arousal (Anderson & Bushman, 2001; Anderson & Ford, 1986; Anderson & Bushman, 2002). The GAM also noted that aggressive behavior is best predicted by considering the person within & situation. The current study utilizes a methodology similar to Bushman & Anderson’s (2002) study, which found that exposure to violent video games, caused participants

to ambiguous story stems in an aggressive manner. However, these findings will be expanded in order to determine if the main effect of playing violent video games is moderated by the personality trait of extraversion. In light of the previous researches, the following hypotheses were taken:

- a) Participants who play violent video games would be more likely to respond to ambiguous story stems in an aggressive manner,
- b) There would be a significant positive relationship between extraversion & aggression, and
- c) Extraversion would moderate the effect of violent video games on aggression.

## **METHODOLOGY**

### **Study Design**

A between group design was followed for conducting the present study.

### **Participants**

Fifty secondary English-medium school students (class five to nine) purposively selected participated in the current study. Among them, 32 were male (64%) & 18 were female (36%). Age of the respondents ranged from 13 to 18 years with mean of 11.90 years (SD = 1.69 years). On an average, the participants completed 5.76 years of education (SD = .96). Participants performed the study one at a time with the assistance of an experimenter. All the participants participated in this experiment voluntarily without any payment for the participation. In addition, according to ethical guidelines, written informed consent was taken prior to participation in this study.

### **Phase 1: Questionnaire Completion**

Participants were given as much time as needed to complete the

following questionnaires related to the current study.

Personal information form (PIF). PIF consisted of the information about participants' name, age, gender, education level, socio-economic status & physical condition.

### **Bangla version of extraversion questionnaire**

The extraversion questionnaire originally developed by McCrae & Costa (1999) was used to assess the tendency for emotional arousal & the preparation of aggressive behaviors. It was a subscale of big five personality scale which has five dimensions such as openness to experience, conscientiousness, extraversion, agreeableness & neuroticism. The Bangla version of extraversion questionnaire has 8 items. For each item, respondents were required to respond with an answer like strongly agree, agree, undecided, disagree & strongly disagree. However, items 2, 5, & 7 were to be score reversed. People who score high in extraversion tend to be anxious, hostile & self-conscious. Significant ( $p < .01$ ) correlation between English & Bangla version  $r = .86$  (Muhammad, et al., 2011) indicated translation reliability of the test. Test-retest reliability co-efficient  $r = .92$  (Muhammad, et al., 2011) were also significant ( $p < .01$ ). Finally, for construct validity, each item to total items score correlation was  $r = .92$  which indicated construct validity of the scale.

### **Phase 2: Video Game Play**

After completing the questionnaires, participants were randomly assigned to play one of three violent video games (Bangla GTA; House of the Dead; or Cadillacs & Dinosaurs) or one of three non-violent video games (Snake; Super DX-Ball; or Motoracing) for a period of 15 min on a 13-inch screen. Participants were given a sheet of paper that listed the controls for the game they played so that they would be familiar with the controls.

### **Phase 3: Aggression Measure**

Once participants finished playing the video game, the video game was turned off & participants were presented with two story stems

that were adapted from Rule, Taylor & Dobbs (1987). The story stems used for the current study are entitled, "The Car Accident," & "Going to a Restaurant." Each of these story stems presented a brief scenario that involved a negative outcome for the main character (e.g., getting into a car accident). After reading a story stem participants were asked to write down 10 unique things they thought the main character might do, think, or feel. Therefore, each of the two story stems produced 10 responses resulting in each participant providing a total of 20 responses that could be examined for aggressiveness. These story stems have been successfully used in past research examining aggression (Bushman & Anderson, 2002). As a more direct demonstration of the story stems validity, Dill et al., (1997) found that aggressive individuals provided significantly more aggressive & hostile responses than nonaggressive individuals.

In order to assess the average aggressiveness of participants' responses, three under-graduate research assistants coded the 20 responses provided by each participant. This was done by having each judge code responses as being either aggressive or nonaggressive. Therefore each judge provided an aggressiveness score for each participant that could range from 0 (i.e., none of the responses were aggressive) to 20 (i.e., all of the responses were aggressive). The coefficient alpha of the three judge's aggressiveness score was .92. Because of the high level of agreement obtained by the judges, their summed scores were averaged in order to provide an assessment of the aggressiveness of each participant's responses.

### **Procedure**

After providing informed consent, each participant was told that they were going to be asked to complete a number of different types of tasks that would help the researchers select stimuli for future research projects. Participants completed the study in three phases. In phase one, participants completed a questionnaire packet, consisting of a demographics questionnaire, a measure of extraversion. In phase two, participants engaged in a brief video game play period. In phase three, participants completed a measure of aggression as well as other unrelated questionnaires in order to maintain the cover story.

## STATISTICAL ANALYSES

In analyzing the data, the independence sample t – test, bivariate correlations, & step-wise regression analyses were computed to test all the hypotheses.

## RESULTS

The first hypothesis of the current study set out to replicate past research indicating a general adverse effect of video game violence on aggressive behavior. It is evident from table 1 that violent video games significantly produced more aggressive responses than nonviolent video games.

Table 1: *Comparison of Aggressive Score in Violent & Non-violent Video game Condition*

Game Condition	N	M	SD	T
Violent	25	5.08	2.23	
Non-violent	25	1.33	1.13	- 7.40**

\*\*  $p < .01$ .

A simple Pearson’s correlation was computed to examine the relation between extraversion & aggression. Contrary to the second hypothesis, extraversion was not significantly related to aggression ( $r_{50} = .47, p > .05$ ).

Table 2: *Pearson Correlation of Extraversion with Aggression*

Correlation of aggression with	R
Extraversion	.47

A step-wise regression analysis was next computed to examine whether or not extraversion moderated the effect of violent video games on aggression. In this analysis, video game condition & extraversion were entered in the first step & the interaction between these variables was entered in the second step. To reduce issues associated with multi-collinearity, the trait of extraversion was

centered & the video game condition was dummy coded (0 = nonviolent video game & 1 = violent video game) before computing the interaction term (Cohen & Cohen, 1983). Consistent with the third hypothesis, extraversion significantly moderated the effect of video game condition (see Table 3).

Table 3: *Multiple Regression Analysis Predicting Number of Aggressive Responses*

Variables	B	SE B	B
Step 1 ( $\Delta R^2 = .56^*$ )			
Constant	1.33		
Video game condition (VC	3.93	.49	.77**
Extraversion (E)	.13	.05	.22
Step 2 ( $\Delta R^2 = .60^*$ )			
Constant	1.26		
VG	3.92	.47	.76
E	.003	.07	.01
VG×E	1.12	.47	.31*

Note. n = 50. \*\*  $p < .01$ . \*  $p < .05$ .

## DISCUSSION

Taken together, result paints interesting pictures. This study investigated how violent or non-violent video games & extraversion as a predictor of aggression. The sample of this study comprised of 50 students who are selected from English medium school children located in Chittagong city. The study derived out information about violent or non-violent video games, extraversion & aggressive behavior.

The result demonstrated that violent video games (M=5.08 & SD=2.23) and non-violent video games (M=1.33 & SD=1.13) which indicated that violent video games had significant effect on producing more aggressive responses ( $t = -7.40, p < .01$ ) than nonviolent video games. Consistent with the findings, violent video game significantly increased the level of aggression in comparison

to non-violent video game (Bushman & Anderson, 2002; Anderson & Dill, 2000; DeLisi, Vaughn, Gentile, Anderson, Shook, 2013; Krahe, Mo'ller, 2004). In violent video games, players participate as a character, & even choose which weapons they'll use while fighting other characters. Video games by their very nature require active participation rather than passive observation. Repetition increases learning. Video games involve a great deal of repetition. If the games are violent, then the effect is a behavioral rehearsal for violent activity. Rewards increase learning, & video games are based on a reward system. Early research confirms those concerns. A study by Gentile, Lynch, Linder & Walsh (2004) found that teens who play violent video games for extended periods of time tend to be more aggressive, are more prone to confrontation with their teachers, may engage in fights with their peers, see a decline in school achievements. It can create aggressive behavior which may cause of various factors such as family problem, peer rejection & other deprivation & which may derive children to aggression. But non-violent video games don't have any effect on children. The current study extended these findings by examining if the extroversion personality trait moderated the effect of violent and non-violent video games on aggression.

Consistent with the first hypothesis, participants who had played a violent video game register significantly more aggressive responses to three story stem than did participants who played non-violent video games. Contrary to the second hypothesis, Simple Pearson's correlation showed extraversion was not significantly related to aggression ( $r = .47, p > .05$ ). Current study found no association between extraversion and aggression. Because its relations with aggression is mixed. Supporting the findings that the correlation between self-reported physical aggression and Extraversion is negative (Sharpe and Desai, 2001), whereas Gallo and Smith (1998) found a positive relation between Extraversion and aggression.

However, consistent with the third hypothesis that extraversion significantly moderated the effect of video games on aggression. Markey (2000) determined that a certain combination of personality

traits can help predict which young people will be more adversely affected by violent video games. Some study also shows that video game violence can increase aggression in some individuals, depending on their personalities. The researchers also suggest that information on the effects of video games on different genders & the effects of games for the duration of a child's development is presently lacking, & these gaps in knowledge warrant further study. These results also consistent with the GAM based prediction that exposure to violent video games leads to increases in aggressive behavior (Bushman & Anderson, 2001). Violence in society, of course, is not solely caused by violent media. But research shows that continuous exposure to violent media causes people to believe that violence can be an acceptable, positive way to solve problems.

### **LIMITATIONS**

The study was also not free from drawback or limitation. The sample is not selected through probabilistic sampling & sample was not representation of the whole population of Chittagong city of Bangladesh because of the time constraint factor. Sampling has narrowed the scope of the present study in terms of generalizing the finding & therefore, the number of the participants was only 50 which were not enough for the generalization for the findings. This study could be done to see area difference, family type, religion etc which is another drawback of this study.

### **RECOMMENDATIONS**

This study may have important recommendations. Findings may indicate that family, teacher, other relatives need to pay attention what type of video game children are playing. This should be ensured that the government needs to make some restriction and playing & browsing those video games site encouraging the use of proper video games which may decrease aggressive behavior. It also demands of society to identifying parents who are more likely to encounter difficulties dealing with the impacts of video games on their children

and provide them necessary support to handle their children.

## CONCLUSION

Video games (violent-nonviolent) are a continued issue both in the science of psychology, as well as in the public at large. The effect of violent video games appears to be cognitive in nature. In the short term, playing a violent video game appears to affect aggression by priming aggressive thoughts. Longer-term effects are likely to be longer lasting as well, as the player learns & practices new aggression-related scripts that become more & more accessible for use when real-life conflict situations arise. Sensible parents have long recognized that the way kids react to video game violence varies according to their personalities. Give a proper guideline about video gaming & its effects among children.

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