Violent Video Games Play and Adolescent Students' Aggressive Behaviour: Are they Significantly Related?

[1]Chinyere A. Nwajiuba, [2]Chiedu Eseadi, [1]Paul N. Onwuasoanya, [3]Emenike N. Anyaegbunam,
[2]Godfrey Chinweike Nji, [1]Oluchi Queen Onwudinjo, [1]Rowland C. Uwakwe,
[1]Ngozi Awoke, [1]Kelechi Mezieobi and [2]Michael Eskay
[1]Faculty of Education, Alex Ekwueme Federal University Ndufu-Alike Ikwo,
Ikwo, Ebonyi State, Nigeria
[2]Faculty of Education, University of Nigeria Nsukka,
PMB 410001 Nsukka, Enugu State, Nigeria
[3]Faculty of Management and Social Sciences,
Alex Ekwueme Federal University Ndufu-Alike Ikwo, Ikwo, Ebonyi State, Nigeria

Abstract: Using a correlational research design, this study ascertained the relationship between violent video games play and aggressive behaviour among adolescent students in Onitsha Education Zone of Anambra state, Nigeria. The population of this study comprised of 34472 adolescent students in the public secondary schools in the Education Zone. The participants of this study were 603 adolescent students. Two data collection instruments were used in this study. To answer the research question, Pearson product moment correlation was used while simple linear regression statistic was used to test the hypothesis. Results showed that the relationship between playing violent video games and aggressive behaviour among the adolescent students is very high. Violent video games play positively correlated with aggressive behaviour among adolescent students. The results further indicated that a statistically significant relationship exist between violent video games play and aggressive behaviour among the adolescent students.

Key words: Aggressive behaviour, gender, adolescent students, violent video games, Education Zone, relationship

INTRODUCTION

Violence encompasses any act or condition that generates an atmosphere which makes individuals to develop fearful feelings or feelings of intimidation (Aluede, 2011; Batsche and Knoff, 1994). Violence refers to aggression aimed at causing severe physical harm like injury and/or death. Thus, the pushing down of an individual by another individual deliberately could be seen as an act of aggression and not an act of violence. Additionally, a person deliberately shooting, kicking, hitting or stabbing another person can be described as an act of violence (Anderson and Huesmann, 2003). Anderson and Huesmann (2003) opined that violence refers to physical aggression at the farthest end of the aggression scale, like aggravated assaults and murder.

Other researchers agreed that the extreme act of aggression can be used to describe violence and it is meant to harm and/or kill (Brehm *et al.*, 2005; Myers, 2005). Bernstein, Penner, Clarke-Stewart and Roy noted that aggressive behaviour is an act with an intention to hurt another individual. Colman (2003) noted that a behaviour whose major intention is to physically or psychologically hurt a person is referred to as aggressive behaviour. Myers (2005) stated that aggression is physical or verbal behaviour that is intended to hurt a person. Brehm *et al.* (2005) described aggressive behaviour as behaviour that is intended to injure another individual. According to Onukwufor (2013), aggressive behaviour is used to describe any intentional or deliberate act aimed at harming, hurting or destroying.

Video games may contain either violent or nonviolent contents. Any video game that portrays and teaches players the act of violence is referred to as violent video game (Eseadi, 2016). Video games are played for various reasons. Sherry and Lucas (2003) listed six main motives for playing video games by individuals and they include: competition (aiming to become the best player of the game); challenge (pressing on oneself to beat the game or advance to the next highest level); social interaction (playing as a social experience with friends); diversion (playing to pass time or to alleviate boredom); fantasy (playing to do things that one cannot do in real life such as driving race cars or flying) and arousal (playing because the game is exciting). Anderson and Dill (2000) opined that violent video games poses three distinctive

Corresponding Author: Godfrey Chinweike Nji, Faculty of Education, University of Nigeria Nsukka, PMB 410001 Nsukka, Enugu State, Nigeria

threats that are probably more injurious compared to media contents: the player have control over character's action and typically views the video game via. the eyes of the character. Thus, the major character can be likened to the game player and this probably heightens the game's effect; the main role of the video game player is to decide to aggress and act in an aggressive manner. For Anderson and Dill (2000), the choice and action element of video games could result in the creation of full aggressive script; the motivating features of violent video games could facilitate the acquisition and role-playing of aggressive scripts. Thus, the objective of this study was to ascertain the relationship between violent video games play and aggressive behaviour among a select group of adolescent students in Onitsha Education Zone of Anambra state, Nigeria.

Research question: What is the relationship between violent video games play and aggressive behaviour among adolescent students?

Hypothesis: There is no statistically significant relationship between violent video games play and aggressive behaviour among adolescent students.

Theoretical review
Transactional analysis theory: Eric Berne in 1970 propounded the transactional analysis theory (Berne, 1970). Early in life, according to transactional analysts, most people are scripted with the command of "Thou shalt not kill" (Vaughan, 2004). From the transactional analysis perspective because of how repetitive and interactive video games are, inadvertent script change are developed to override the previous "Thou shalt not kill" decision and strengthen an "I'm OK, You're Not OK" life position (Vaughan, 2004). Also, given the possibility that in adolescence stage, individuals can make significant script decisions, it is important to acknowledge that there is a greater tendency for violence among individuals at this stage. The playing of violent video games might possibly result in unintentional and potentially harmful script decisions regarding aggressive behaviour. According to the transactional analysts, video games gives room for the most favourable learning condition wherein the player can prime aggressive thoughts and develop aggressive scripts that are repeatedly accessible in real-life situations due to its reinforcing, interactive and repetitive mode.

MATERIALS AND METHODS

This study used correlational survey to determine whether violent video games play relates to aggressive behaviour among adolescent students in Onitsha Education Zone of Anambra state, Nigeria. The study population comprised all the senior secondary adolescents in public schools in Onitsha Education Zone of Anambra state, Nigeria. There were 22 public secondary schools in the zone with a population of 34472 in-school adolescents as at the time of this study. The study sample size was 603 (348 males and 255 females) adolescent students. The sample was selected using a multi-stage sampling procedure. First, a purposive method of sampling was adopted to select the senior secondary class II in-school adolescents from the two LGAs in the zone. Second, the researchers used proportionate sampling technique to select one-third of the SSS II population in each school (1610 in-school adolescents) for the pre-survey in the 22 public secondary schools in the zone. The pre-survey was conducted by the researchers in order to identify those in-school adolescents who play violent video games. Third, purposive sampling technique was used to select a total of 603 adolescent students. The inclusion criteria involved scoring 2.50 (mean score) and above in at least one violent video game listed in the questionnaire. Besides, the adolescent must be in senior secondary school class two and should have assented to participate in the survey. Data collection was done using Violent Video Games Questionnaire (VVGQ) (0.82 alpha), a validated self-report questionnaire which had a list of 20 violent video games that elicits the extent to which the adolescents play each of the violent video games using a 4-point scale: Always (A), Very Often (VO), Sometimes (S) and Never (N) (Eseadi, 2016). The second data collection tool was In-school Adolescent's Aggressive Behaviour Questionnaire (IAABQ) (0.83 alpha) which is also a validated self-report questionnaire with 29 items measuring aggressive behaviour on a 4-point scale of Always (A), Very Often (VO), Sometimes (S) and Never (N) (Eseadi, 2016). The questionnaires were distributed and retrieved from the adolescent students with the help of a research assistant. In each of the schools, the respondents were enlightened about the research aim and their informed assent was obtained prior to completing the questionnaires. We used mean, standard deviation, Pearson product moment correlation in answering the research questions whereas linear regression analysis was employed in the test of the research hypothesis at 0.05 probability level. The following guidelines were used to determine the degree of the relationship: 0.80 and above (very high relationship); 0.60-0.79 (high relationship), 0.40-0.59 (moderate relationship), 0.20-0.39 (low relationship), 0.01-0.19 (very low relationship), 0.00 (no relationship).

RESULTS AND DISCUSSION

Demographic characteristics: The demographic characteristics of respondents in the study were presented in Table 1 as follow: Table 1 showed that male adolescent students were 348 (57.71%) while the adolescent students were 255 (42.29%).

Table 1: Respondent's gender

Demographic variables	N	Percentage
Gender		
Male	348	57.71
Female	255	42.29

Table 2: Pearson correlation analysis showing the relationship between violent video games play and aggressive behaviour among adolescent students

Variables	N	$\bar{X}$ SD	r	Decision
Violent video games	603	3.34±0.29	0.87	
Aggressive behaviour		3.37±0.36		Very high relationship

r = pearson correlation coefficient; N = total number of respondents

Table 3: Summary of regression analysis for the relationship between violent video games play and aggressive behaviour among adolescent students

Variables	N	F	R^2	B	Sig.	Decision
Violent video games	603	1799.03	0.750	0.866	0.000	Rejected
Aggressive behaviour						

Predictors: (Constant), violent video games. Dependent variable: aggressive behaviour; df = 1.602; p<0.05

Research question: What is the relationship between violent video games play and aggressive behaviour among adolescent students?

From Table 2, it is observed that in-school adolescents had mean score of 3.34 with standard deviation of 0.29 in the violent video games play and mean score of 3.37 with standard deviation of 0.37 in their display of aggressive behaviour. The value of the correlation coefficient (r) which is 0.87 indicate that the relationship between violent video games play and aggressive behaviour among adolescent students is very high. Violent video games play positively correlated with aggressive behaviour among adolescent students.

Hypothesis: There is no statistically significant relationship between violent video games play and aggressive behaviour among adolescent students.

Results in Table 3 show that violent video games play significantly predicted aggressive behaviour among adolescent students, $R^2 = 0.75$, F(1, 602) = 1799.03, $\beta = 0.87$, p<0.05. The R^2 value of 0.75 shows that violent video games accounted for 75% of the variance in aggressive behaviour among the adolescent students.

This study demonstrated that violent video games play positively correlated with aggressive behaviour among adolescent students. Furthermore, our study revealed that violent video games play significantly related to aggressive behaviour among adolescent students. This finding is consistent with Thomas and Levent (2012) and Eseadi *et al.* (2019) who showed that violent video games playing is related to aggressive behaviour. The finding is also in line with Gutierrez *et al.* (2009) and You *et al.* (2015) who found that exposure to violent video games significantly predicted aggressive behaviours. Furthermore, the finding supports that by Milani *et al.* (2015) who found that violent video games act as risk factor for aggressive behaviour problems during adolescence period. The present finding is also in

line with that by Przybylski *et al.* (2009) who confirmed that players high in aggressive behaviour are more likely to have a preference for games with violent contents. The finding of this study further supports Bartholow and Anderson (2002) who confirmed that playing violent video games could result in more aggression than playing video games with nonviolent content. The finding is also consistent with those by Anderson (2004), Anderson and Bushman (2001), Moller and Krahe (2009), Wallenius and Punamaki (2008) that violent video games are positively associated with aggressive behaviour. However, the present finding contradicts that by Ferguson *et al.* (2008) (2014) who observed that exposure to violent video games did not predict the aggressive behaviour of the players. The present finding further contradicts Puri and Pugliese (2012) who found no statistically significant relationship between video games play and aggressive behaviour. Therefore, the school curriculum could be modified to provide time for school counsellors (where available) to offer group counselling intervention to students on video games play. Further research could investigate the efficacy of group cognitive-behavioural therapy on aggressive behaviour of adolescent students who play violent video games.

CONCLUSION

This study demonstrated that violent video games play positively correlated with aggressive behaviour among adolescent students. The extent of the relationship between violent video games play and aggressive behaviour among adolescent students was very high. Finally, it was concluded that there is a statistically significant relationship between violent video games play and aggressive behaviour among adolescent students. Therefore, the school curriculum could be modified to provide time for school counsellors (where available) to offer group counselling intervention to students on video games play.

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