

Aggression among Collage and School Students Who Play Violent Video Games

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Abstract

Present study aimed to investigate that playing violent video games in process with time duration levels may produce differences in level of aggression in boys. It was hypothesized that 1) there will likely to be significant differences in the level of aggression on the basis of the intensity of violence in video games, and 2) there will likely to be significant differences in the level of aggression on the basis of duration of playing violent video games) separately, and 3) there will likely to be significant interactive relationship between intensity of violence and duration of playing video games on aggression scores of college students. Between groups research design was used for this purpose. Sample consisted of 100 male students (Age: 15-20 years) obtained through non probability purposive sampling technique from private colleges Lahore. The Aggression Questionnaire by Buss and Perry (1992) was used for assessment of aggression. The Entertainment Software Rating Board ESRB (2013) was used to divide intensity of violence in video games. Two-Way ANOVA concluded no significant differences in any hypotheses. Which can be concluded as the playing video violent games does not associate with presence of aggression. This research has implications in the field of social psychology, behavioural psychology and in the field of gaming and surfing.

Keywords: Violent Video Games, Aggression and Boys

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Introduction

With the advent of the computer games, violent games are being launched every day and getting popular, especially games in which the player can physically harm other characters in the game it is been reported to be reinforcing and increasing aggressive cognitions, affect and arousal (Bluemke, 2010; Spear, 2000). The present research aimed at investigating the differences of the level of aggression among college students who play violent video games with reference to 3 levels of intensity of violence and 4 levels of duration of playing video games.

Violent video game is any game providing the opportunity to impose imaginary, fantasy, physical harm (Goldstein, 1999) or imitation of aggression that is different from the real things in countless ways (Thompson & Haninger, 2001). Playing violent video games have been reported to be directly connected to youth aggression (Adachi, & Willoughby, 2011). In this light Lieberman, (1988) elaborated about the students who play violent video games are prone to be aggressive in replying impulsively in a real world situation causing lack of empathy towards victims, a key of characteristic of many violent criminals. Furthermore excessiveness of violent video games is associated with health problems such as obesity and poor heart health, social isolation and poorer grades too (Caserone, 2003).

The first commercially available video game entered the homes of America, named as Pong in 1972 (Williamson, 1987). The history of video games can be divided into 3 eras, 1) the Atari era (1977-85), due to the fact that Atari consoled that the dominating video game market was to provide little violence, because of internal rule of absence of violence against people (Cohen, 2000). 2) Nintendo era (1985-95), dominated largely by Nintendo console games, common on desktop computers and in hand held mini game with the killing games, including action shooting enemies with one kind of weapon or another (Anderson & Dill, 2000). 3) the present era (1995-present) game market is largely dominated by the Sony Play Station and the most current plat form, by 2001 violent video gaming has evolved into more violent gaming with more realistic graphics with emerging trend of online games that provide numerous games played on local area networks and over the Internet (Walsh, 2001).

Nowadays there are games to witness terror, bloodshed and violence in which, Counter Strike, a first person revolver game in which the players joins either the terrorist team, or the counter terrorist team and witness lots of bloodshed, was published by Sierra Entertainment

Vivendi Universal Games (Valve, 1999). Tekken Three Game, the third instalment in the popular was released on arcades in March 1997 and for the play station in mid-1998 found to be one of the best fighting games of all time (Station, 2009). GTA Vice city came out in 2002 with rating as intense violence (Station, 2009). Call of Duty a World War II person shooter published by activation and developed by Infinity Ward with mild violence rating (Ward, 2003), Hit Man is another video game with intense violence rating (Danish, 2000), whereas snow bros moderate violence rating (Nick & Tom, 1990). Players of such violent video games are prone to be aggressive.

In context with elongation of duration of playing video games Russell & Sabella, (1995) reported that students playing for more than 1 hour per day or, on the average, 7-10 hours per week, may sacrifice needed homework, negatively impact academic performance. And this scenario effect on physical development, vision and eye problems, problems in the bones, joints, and muscles further social isolated and aggressive behaviour. This increment in use of violent video games in college students has reported as gender differences too as boys are more likely to play violent games than girls but the amount of time spent on violent games appears to be increasing for all subgroups (Cooper & Mackie, 1986).

Aggression is an action reformed with the deliberately intentions of harming or injuries to another person (Bandura, 1973) and in this regard reduction in physical activities on account of playing violent video games, increase aggressive thoughts, feelings, and behaviours (Buss & Durkee, 1957).

Positive effects of playing videos games among college students are been reported too but since the 1990's, video games have been a subject of controversy to the public eye. In discussions of violence, Government officials, News reporters, and parents alike have all pointed the finger at video games and their developers in one way or another, for poisoning the minds of their children and college students. As a result, video games have become an easy scapegoat for numerous violent tendencies antisocial behaviours (Meixsell, 2012).

Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences in which attention plays an important role including various factors in context of increase or decrease the amount of attention paid. Further retention is remembering what you paid attention to includes symbolic coding, mental images, cognitive

organization, symbolic rehearsal, motor rehearsal. On the next step reproduction is reproducing the image including physical capabilities, and self-observation of reproduction. Social learning theory has sometimes been called a bridge between behaviourist and cognitive learning theories because it encompasses attention, memory, and motivation which also emphasize the importance of aggressive behaviour (Bandura, 1973). General Aggression Model a socio-cognitive theory explains the theoretically how playing violent video games induce aggression in boys, as , the existence of aggressive stimulation as situational factor, genes as biological factors, personality traits as psychological factors that may affect thoughts, feelings, and physiological arousal in order to raise aggressive tendencies. And thus the last stage determines whether these aggressive tendencies find way out using as aggressive behaviours or are get to be suppressed (Bushman & Anderson, 2002).

Whilst literature found that the students playing non-violent video games have pro social behaviour and the players of violent video games have anti-social behaviour (Calvert, 1999). In the same align Anderson and Ford (1986) conducted an experiment on playing violent video games with three conditions, playing a highly aggressive game, mildly aggressive game and no playing games (control condition). The results showed that players in both aggressive game conditions listed significantly more hostile thoughts than the control condition group in which highly aggressive videogame players showed more hostility and anxiety. Further Silvern and Williamson (1987) found similar results as college students imitated the aggressive behaviour of the character in the violent video games they played before.

On the other side in context with duration of playing video games Fling, Smith, Rodriguez, Thornton, Atkins, and Nixon, (1992) reported that the more time young people play violent videogames, the more aggressive they are considered by their teachers and the more these young people think of themselves as behaving aggressively.

Anderson and Dill (2000) found that college student reports on violent video game play in prior years were positively related to aggression that would be considered criminal. Anderson and Bushman (2001) also conduct the review of literature about exposure to violent video games causes increased aggression, in which experiments showed that aggression was increased by playing violent video games in men, women and in children and college students.

Bickham (2006) collected data on 1356 college students to examine how playing violent video games and watching violent TV affected social integrity. It is reported that increasing amounts of social isolation among college students with higher levels of exposure to violent TV programming and playing violent video games. To explain this finding, Bickham speculated that, since violent TV and playing violent video games are linked with aggressive behaviour in college students, they become more aggressive, and that aggression is making it more difficult for them to interact with people.

A review by Krish (2006) addressed the violence raised by cartoons in adolescents and children. He pointed out the comedic animated violence causes violence in adolescents and proposed a potential mechanism to reduce this influence. According to Kutner, Olson, Simon and Schuster (2008) conducted a study on the effects of video games on young teenagers and found the strong association between violent video game violence and real world violence concluding that video games lead to social isolation and poor interpersonal skills.

Anderson (2010) reviewed 130 studies on 130,000 participants around the world and found that violent video games increase aggressive thoughts, angry feelings, physiological arousal (e.g., heart rate, blood pressure), and aggressive behaviour further decrease helping behaviour and feelings of empathy for others. Another review by Huesmann, (2007) with focus on what attracted college students to violent video games, learned aggressive behaviours among violent video game players, and potential future research on the positive use of video games. Results showed that college students that played violent video games were more likely to engage in aggressive behaviours as compared to other college students that played non-violent video games

In the same line Harris (2013) conducted a surveyed on 2,278 adults. The finding of this survey is that 58% of adults believe video game violence does contribute aggressive behaviours in adults, 38% of adults were completely unaware of the Electronic Software Rating Board's (ESRB) labelling, with 33% of adults charter their children play whatever they want.

Jan, Sultan, Kareem (2012) found that aggressions was associated with various variables like English movies, Indian movies, Indian drama, Pakistan movies, Pakistan drama, stage show, games, sports, Cartoons, Music, Graphics, Learning & national geography.

In the light of above mentioned literature review and relevant researches, it may be inferred that there is contradictory empirical evidence about aggression among college students on account of playing violent video games. Unfortunately, very few scientific researchers have been carried out on college students who playing violent video games in Pakistan. Therefore, the current research aimed as one of the few in Pakistani society, to explore the playing violent video games, social isolation and aggression among college students. The findings of this research may enable us to understand the impact of playing violent video games on aggression and social isolation among college students. The parents, teachers and students may benefits from the findings of this research and help the college students in order to decrease their aggression and social isolation.

Hypotheses

- There will be significant differences in aggression scores of college students and the level of violence of video games played.
- There will be significant differences in aggression scores of college students who play violent video games for 30 minutes, 1 hour, 2 hours and 3 or more hours per day.
- There will be significant interactive relationship between intensity of violence in video game (less violent, moderate violent and intense violent video games) and hours of playing violent video games (30 minutes, 1 hour, 2 hours and 3 or more hours per day) effecting the aggression scores of college students.

Methods

This section included information about research design, sample, sampling strategy, assessment tools, procedure, ethical considerations and statistical analysis for the present research.

Research Design

Between groups research design was used to investigate the differences of level of aggression among college students who play violent video games with reference to 3 levels of intensity of violence and 4 levels of duration of playing video games.

Sample and Sample Strategy

Non-probability purposive sampling strategy was used to draw the sample. The sample were consisted of college students who played violent video games (N=100, boys) with age group of 15 to 20 years old (M=17.20 and SD=.94).

Inclusion Criteria

- The college students who play violent video games for at least 30 minute per day were included.
- Only private colleges were included to control the contrasting environment effect.

Exclusion Criteria

- Female participants were excluded to reduce confounding as literature found gender difference in the preferences for playing violent video games.
- Students reported to be having any psychological disorder or physical illnesses were excluded.
- Students living with single parenting were excluded.

Main demographical information is provided in the table 3.3 below:

Table 1

Demographic characteristics of participants (N=100)

Variables	<i>f</i> (%)
Intensity of Violence in Video Games	
Mild violence	42(42.0)
Moderate violence	18(18.0)
Intense violence	40(40.0)
Duration	
30minutes	6(6.0)
1hour	36(36.0)
2hours	35(35.0)
3 or more than three hours	23(23.0)

Note: *f* = frequency, M = Mean, SD = Standard Deviation

Operational Definitions

Violent Video Games. A violent video game is any game in which players have the opportunity to impose imaginary or fantasy physical harm upon another character in the game like grand theft auto, counter strike, Taken three (Goldstein, 1999).

Aggression. Any behaviour intended to physically, or emotionally harm another individual or thing. In subtypes anger become the predominant feelings behaviourally. Physical aggression involves hurting others physically by slugging, tackling or yelling at them. Verbal Aggression elaborates outbursts and inappropriate language used in socially inappropriate settings. Hostility can be defined as feeling or showing empty or ill will (Buss & Perry 1992).

Assessment Measures

Demographic Sheets. The demographic sheet was used to get information about gender, age, education, academic achievement, duration of video games and video game type with name.

Violent Video Games. Violent video games were approximately defined in terms of games which provide facility to display aggression towards other characters in the video and violence of video games was rated using The Entertainment Software Rating Board ESRB (2013).

The Aggression Questionnaire (Buss and Perry, 1992). It consisted of 29 items. The item 7 and 18 was reversed coding. The participants were asked indicate their degree of characteristic on a seven point scale that ranged from extremely uncharacteristic to extremely characteristic of aggression. The BPAQ measured four factors of aggression that are anger, physical aggression, hostility, and verbal aggression. There were 7 items measuring anger factor, 9 items measuring physical aggression factors, 8 items that indicate the hostility factors and 5 items indicate the verbal aggression factors. The total score of aggression is the sum of total factors scores. Alpha reliability of scale in the present study for aggression total , anger physical aggression , hostility and verbal aggression factors are .72, .35, .52, .60, and .44 respectively.

Procedure

An authority letter explaining the nature presented to front of the participants to authenticate the researcher's identity and the topic under investigation in concerned colleges. Formal permission for data collection was sought from two private colleges of Lahore the participants after explaining the nature and purpose of the research. The students participants were introduced with the topic and its importance in the society. They were informed about how they should be attempting it. The researcher was guiding them if they have any problem during the whole process. At the end the researcher were say thank to the participants for their co-operation. All the queries were answered by the researcher. Demographic Information Questionnaire and the Aggression Questionnaire by Buzz and Perry (1992) to measure aggression were administered on sample of 100 students. The data was entered in SPSS for analysis. The results were discussed in both qualitative and quantitative ways.

Ethical Considerations

In order to conduct this research following ethical consideration were strictly followed:

- Institutional letters were signed by the authorities of the concerned departments of university of the Punjab, Lahore before conducting data collection.
- The participants are briefed about the objectives and procedures of the research and assurance of the information confidentiality.
- A consent form is filled by each participant that is showed their agreement.
- Researcher assured the anonymity participant that their confidentiality will be maintained in their information will not be provided to anyone else or will not be used for any other purpose.

Statistical Analyses

First of all, the data screening was done by checking frequencies which revealed that The Aggression Questionnaire minimum scores was 1 and maximum was 7, accurate according the scale. The reverse coding of item7, 18, from The Aggression scale was done as (1=7, 2=6, 3=5, 4=4, 5=3, 6=2, and 7=1). A two ways ANOVA was used to assess the main effect of two independent variables: intensity of violence in video games and duration of playing video games per day on dependent variable aggression further interaction between two independent variables

intensity of violence in video games and duration of playing video games per day, for social isolation among college students.

Results

The data analytic strategy involves performing Two Way ANOVA. Following are the descriptive values of the scores.

Table 2

Difference of Aggression Scores with reference to 3 levels of intensity of violence in video games and 4 levels of duration of playing video games

Source	SS	MS	F	p	η^2
Aggression					
Intensity of violence in video games	2269.99	1134.99	1.17	.18	.03
Duration of violence in video games	2872.50	957.50	1.44	.23	.04
Intensity of violence in video games*duration	5744.29	957.38	1.44	.20	.09
Physical Aggression					
Intensity of violence in video games	46.43	23.21	.21	.81	.01
Duration of violence in video games	213.02	71.00	.63	.59	.02
Verbal Aggression					
Intensity of violent video games	173.12	86.56	2.05	.13	.04
Duration of violence in video games	339.70	113.23	2.68	.05	.08
Intensity of violence in video games *duration	258.36	43.06	1.02	.41	.06
Anger					
Intensity of violence in video games	103.85	51.92	.70	.49	.02
Duration of violence in video games	336.71	112.23	1.52	.22	.05

games						
Intensity of violence in video games*duration	630.95	105.15	1.42	.22	.09	
		Hostility				
Intensity of violence in video games	333.43	166.72.	1.98	.14	.04	
Duration of violence in video games	208.70	69.57	.83	.48	.02	
Intensity of violence in video games*duration	787.504	131.25	1.56	.16	.09	

*Note**p < .05, SS (Sum of Squares), MS (Mean of Squares), η^2 (effect size)

Results of Two Way ANOVA showed that there are no differences in aggression scores of college students who play less violent, moderate violent and intense violent video games. Further, the aggression scores of college students who play violent video games for 30 minutes, 1 hour, 2 hours and 3 or more hours per day are not significantly different. Results also showed that there is no interaction between intensity of violence in video game (less violent, moderate violent and intense violent video games) and hours of playing violent video games (30 minutes, 1 hour, 2 hours and 3 or more hours per day) on aggression scores of college students.

Discussion

The present research was conducted to investigate playing violent video games, aggression among the college students. The results revealed no significant differences in aggression scores of college students and the level of violence of video games played consisted with the study by Ballard & Lineberger (1999), Scott (1995), and Winkel, Novak and Hopson (1987), the level of aggressive content in video games had no effect on subjects' aggressive behavior. In this reference Scott (1995) measured the aggressiveness of university students with the Buss-Durkee Hostility Inventory and the Eysenck Personality Questionnaire and found that there were not significant differences in aggressiveness after playing a nonaggressive game, a moderately or a highly aggressive video game. One possible reason behind this scenario is explained by Markey (2016) as the association between playing violent video games and aggression is small in effect size for temporary period of time whereas the positive effects of the video games are quite visible. If the local research is

notified in the similar context Talat (2016) reported that violent video game can reduce aggressive thoughts, feelings and urges by sublimation of all aforementioned concepts virtually. In the same line McCarthy, Coley, Wagner, Zengel, and Basham, (2016) conducted a research to find out the efficacy of playing violent video games on aggression in which results revealed that playing a violent video games do not increase aggressive inclinations (the consistent results with the present study. The results revealed no significant differences in aggression scores of college students on the basis of 3 aforementioned conditions of duration of playing violent video games which was not consistent with Sherry (1998) report on presence of smaller effect of violent video games on aggression than with television. This effect was positively associated with type of game violence and negatively related to time spent playing the games as there is possibility of desensitization.

A recent column published in News Pakistan Inam (2016) reported that Barbra found in his study that violent video games have been found to be source of lessening emotional feelings like guilt and contrary to this Dr Methew Gizzard found that players of violent video games become more sensitive morally in actual life situation.

The results further revealed that intensity of violence in video game and duration of playing violent video games did not lead to aggression scores of college students. This could be related to the model statement by Lin (2011) that social environmental factors not only provide a model for imitating aggression with children, but also develop aggressive attitudes that constrict aggressive cognition networks in children's head. Children who live in an environment filled with violence causes them to be more aggressive. Another finding that highlights the importance of context is that of parent child communication. A correlational study sought to examine the roles of age, social intelligence and parental communication in the relationship between violent video games exposure and direct and indirect aggression. The finding showed that where parent child communication was poor, effects on aggression and socially isolation tended to be higher, particularly among the younger group (Wallenius & Punamaki, 2007). In another research Lin (2013) conducted a research on 102 male students for the comparison of 3 conditions (playing violent video games, watching recorded violent video games and watching violent movies) on the level of aggression and results found that the players of violent video games had highest scores on aggression among three groups, but this effect was short term.

Conclusion

There are no significant differences in social isolation and aggression scores of college students on the basis of intensity of violence in video games or on the basis of duration of playing violent video games. Interaction between intensity and duration of playing violent video games was also not found to lead any of the score of social isolation or aggression among college students.

Limitations and Suggestions

Each research has its own limitations and set of problems in administration. Therefore some limitations and recommendation for future research are high lightened so that the hidden dimensions can be found out in forthcoming researches.

Following are the limitations of the present study:

- Increment in the level of aggression among children and youth is the leading problem; future studies should find other models effecting this aggression in the present era.

Implication

This research has implications in the field of social psychology, behavioural psychology, gaming and surfing, learning through virtual world.

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