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Article:	Online Gaming, Impulsiveness, Aggression and Academic Performance among University Students
Author(s):	Iqra Durez Department of Applied Psychology, School of Professional Psychology, University of Management & Technology
	Humera Hameed Department of Applied Psychology, School of Professional Psychology, University of Management & Technology
	Ahmed Bilal Department of Applied Psychology, School of Professional Psychology, University of Management & Technology
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Author(s) Note:	Iqra Durez is from Department of Applied Psychology, School of Professional Psychology, University of Management & Technology
	Humera Hameed is from Department of Applied Psychology, School of Professional Psychology, University of Management & Technology
	Ahmed Bilal is from Department of Applied Psychology, School of Professional Psychology, University of Management & Technology Correspondence: ahmed.bilal@umt.edu.pk

ABSTRACT

The current study was aimed to find out that how online gaming affect the student's impulsiveness, aggression and academic performance for that purpose Game Addiction Scale for Adolescents Lemmens & Valkenburg (2009), The Plutchik Impulsiveness Scale Plutchik & Praag (1989) and Buss-Perry Short- Form Aggression Questionnaire Smith & Bryant (2001) was used to measure the effect between variables. The quantitative method was used for current study. The study was carried out on 250 students by using purposive sampling strategy. The results of Pearson product moment correlation showed that online gaming was found to have strong positive correlation with impulsiveness also Pearson product moment correlation revealed that age was found to have negative significant relationship with gender, semester GPA and CGPA. Gender was found to have positive significant relationship with semester GPA and CGPA. The results of hierarchical multiple regression analysis showed that online gaming only have a strong influence on student's impulsiveness it has no effect on aggression or academic performance.

Keywords: Online Gaming, Impulsiveness, Aggression and Academic Performance.

Introduction:

The increase in internet usage can cause many changes in everyday life. Some people who play online games, internet act as main role, due to which it interfere with daily life, work and personal relationships due to its increase because these players are always busy in playing game and they spend more time on games which influence their lifestyle . Especially, this increase has also increased online gaming. The online game has become one of the most addictive activities on the Internet. In online gaming, where multiple players can play and have their players from different locations around the world. There are several types of online gaming like massively multiplied online games (MMOGs) and massively multiplayer online role-playing games (MMORPGs) which include millions players in the game. Online games are still in many genres such as action, adventure, simulator and many people. Some online gaming, which are popular among the youth, is a clash of dot, PUBG, and Fortnite today. According to verge, the total active players in PUBG are 200 million users and about 30 million users have registered daily in the PUBG were reported in September 2018 (Andian, 2018).

Today, the impact of computers and video games on youth can be seen (Mangrum, Holmes, & Annetta, 2009) Many investigations made to study their effects on youth lifestyle and behavior especially. Currently, the online games are the most popular activity among students, youngsters.

Every person who plays online video game they have different reasons to play like someone is playing for the entertainment while other people play for enhance their social group etc. and each person who playing online games has different effects. There is an emphasis on childhood upbringing, peoples' influence, schools and family problems, with the effect of gaming on people. For some people it is said that there are several reasons for running video games, because it can relieve from different challenges and stress (Natale & Claudia , 2018).

Recently in London, cases were reported where the 12-year-old boy's mother faced £ 7,000 or RM36 666 bill, after which his son spend money on a popular online game on his phone. In Malaysia, more people now spend money in online gaming because they can easily get debit cards and some young players steal their parents using their parent card (Eulalio, 2018).

Nowadays, we see so much discussion over the impact of video gaming on various factors such as academic performance, student's impulsiveness, aggression etc. (Terry, 2018). There are many popular video games that has negative effect on student's life and our research in on PUBG (Player Unknown's Battlegrounds) it is also a violent video game and our objective of research is to find out how PUBG game effect the students' academic performance, impulsiveness and aggression.

PUBG (Player Unknown's Battlegrounds)

PUBG is an online game nowadays that has a lot of popularity. It is online video game with exotic features and graphics. The objective of the game is very simple basically it means all against all, where you start with zero and go in search and looted homes to collect different weapons and equipment's and be the last man standing (Hall, 2018).Some people are accustomed to this game, so it has become a major concern for many. It is a wonderful game but it leads to some of the addicted mental and physical health issues that cannot be aware of you. It is also been under examination because of a violent content in the game. Maximum

violence can produce ideas that are more aggressive, feelings and behavior that affects the player's psychological wellbeing (Kumari, 2019).

Not only mental health due to playing excessive PUBG game can harm physical health. The player continuously sits for several hours, which leads to poor physical health. The player can slow down and can face difficulty to meet day-to-day work and reduce energy because you become a habit of sitting longer (Vats, 2019). It has been also reported that in January at the beginning of this year, a person from Jammu Kashmir, a professional fitness trainer, has lost mental balance because of playing pubg and has harmed himself and he was admitted to the hospital. According to a leading daily, it is a holiday case that is in Jammu with the same effect of PUBG online games (Shubham , 2019).

Currently it has also been reported by Dr. Radhika Acharaya, a clinical psychiatrist in Hyderabad, said that she also supports the decision of banned the PUBG game. She mentioned a young patient who locks herself in her room to play game, she threatens to kill her parents if they disturb. She said that, PUBG stun the teens and harms their emotional development. It is all about the success of violence and affecting the pain. It has drastic impact on children, students and even older people too (Dhillon, 2019).

Impulsiveness

It is the inability to practice actual willpower when we are doing certain activities that have reward and punishment (Irles, 2015). American Psychological Association formed a group which is known as substance related and addictive conditions in the fifth revision of Psychiatric Diagnosis and Statistical Manual (American Psychiatric Association 2013, 2013). This group now includes gambling, which was already considered as a continuous impulse control disorder. The revision also suggested that it is related condition of internet gaming disorder which have some basic features of Impulsiveness and addiction, it can also understand the role of impulsiveness in online gaming (Škařupová, 2016).

The researchers made visual focus on video games, but it also reduced the impulsivity, a person who played the game in which he shoots another for his survival will have to decide immediately. Researchers have found that a faster decision-making player spends the ability to increase the player's visual skills, but applies, reduces the ability to delay the impulsive behavior (Mitterova, 2016).

Academic Performance

Academic performance is the noticeable and accessible behavior of an individual in a specific context usually in educational context (Simpson, 1989). It means that academic performance can access the particular behavior. In educational context, the student academic performance is the particular situation which is noticeable and accessible. Smith (2007) suggested that academic success can be led by complex game problem solving, delicate thinking, and a player engaged in creativity. Skoric (2009) found that excessive gaming causes negative academic performance, moderate engagement in gaming can improve performance in an educational setting (Wright, 2011).

Aggression

According to Anderson and Bushman (2011) Aggression is define as to harm someone else who is encouraged to avoid this loss. This is not an effect, passion, aggressive thinking, plan, or desire. Anderson (2015) said that when an individual play an online video game, they rewarded on their actions because there is a direct reinforcement behind their movements. They

get enormous rewards like verbal phrases of doing well performed, after getting rewards they complete the levels and obtaining the goals.

According to Chang (2009) study, online gaming stated as electronic gaming. It was a gathering of players with a common game using local regional networks where they could be on the same settings. Online gaming have good and bad effect. For those who have good effect know their limits and bad for those people who target themselves for long periods and reduce communication with the rest of the world (Hussain. 2012). A study revealed that people who are playing online video games excessively they have following hallmarks firstly they spent all the time on video game playing and cannot get rid of it, secondly online video gaming become their first priority, thirdly playing video game become the necessary part of their daily routine and they show withdrawal behavior and always have a urge for a bigger adventure than before (Fredrick, 2018).

Objective of the Study

- The general objective of this study is to examine the relationship between aggression, impulsiveness and academic performance

Hypotheses

- Online gaming is likely to increase Impulsiveness.
- Online gaming is likely to increase aggression.
- Impulsiveness is likely to decrease academic performance.

Method

The current study aims to explore the relationship between online games, impulsiveness, aggression and academic performance. Quantitative method was used in current study and correlational design was used to examine the relationship between variables. Purposive sampling technique was used because the main purpose of this sampling techniques focuses on the particular features of the population that are of interest. There were 250 students which were selected from different educational institutes of Lahore. The sample selected was within the age range of 18-25 years. Data was collected by using face to face administration of survey questionnaires and only those participants were included who have informed consent of the current study.

Assessment Measures

Demographic Information. A demographic questions was developed for the current study asked general information, including age, gender, and education, time duration of playing game, GPA of current semester and previous semester, rank in game and personal information.

Scale of Game Addiction for Adolescents. The 7 item scale is develop by Valkenburg and Lemmens, 2009 to measure computer and online games addiction. There is a long and short version of this scale. Long version have 21 questions and short versions are only 7. There was a high level of reliability of both versions but short version was used in current study with a Cronbach alpha of .87. Each question is related to Salience, tolerance, relapse, conflict, and withdrawal and mood modification. Students have to response on Agree, almost never, sometimes, often and very often.

The Plutchik Impulsiveness Scale. This scale is developed by (Plutchik & Van Praag, 1989), the scale have 15-items and students have to response on a Likert type scale like Never,

Sometimes, Often and very often. The scale have a high level of reliability which had a Cronbach's alpha of 0.73.

Short-form Buss-Perry Aggression Questionnaire. This scale was developed by Bryant and smith in 2001 and in initial it consist of 29 items then its short form was modified by Arnold. H buss and Mark Perry and they were the teachers of University of Texas at Austin for the journal of Personality and Social psychology and it consist of 12 questions and this scale was revised and verified using the Analytical element analysis. Using 5 point scale which indicate that each of the following statements tells you agree or strongly disagree. This scale demonstrated good internal stability and high level of reliability.

Procedure

Research was started by taking the permission of the scales used by their respective authors. For getting targeted sample official permission was given to authorities from different universities to allow, through the letter provided from University of Management and Technology University, Lahore. Questionnaire was explained to the participants and they filled them. Participants will have the option to return to any stage. The participants were convinced about the privacy of their own personal information.

Results

The results revealed that online gaming only have a strong influence on one's impulsiveness it has no effect on aggression or academic performance of an individual.

Table 4.1

Cronbach's Alpha and Descriptive Statistics of Game Addiction, Impulsiveness and

Variables	K	M	SD	Ranges		α
				Actual	Potential	
Game						
Addiction	7	19.7520	4.93192	8	34	.632
Impulsiveness	15	34.1920	5.32282	22	48	.547
Aggression	12	36.0120	7.51250	16	54	.722

Aggression. (N=250).

Note: k = no. of items, Ranges = Maximum-Minimum

Table 4.1 signifies that the reliability of aggression is valid, the reliability of game addiction and impulsiveness is less than 0.7 but Clark and Watson (1995) argued that co-efficient greater than .55 or .60 is permissible (Clark and Watson, 1995). The means and standard deviations of all variables is shown in table

Table 4.2

Variables	1	2	3	4	5	6	7
1. Age	-	-.276**	-.135*	-.145*	.078	.060	-.006
2. Gender	-	-	.164**	.182**	.093	.110	-.014
3. Semester GPA	-	-	-	.521***	.022	.022	.018
4. CGPA	-	-	-	-	.005	-.046	.046
5. Online Gaming	-	-	-	-	-	.321***	-.064
6. Impulsiveness	-	-	-	-	-	-	-.036
7. Aggressiveness	-	-	-	-	-	-	-

Correlation Analysis among Online Gaming, Academic Performance, Impulsiveness and Aggressiveness Study Variables (N=250)

Note. Current GPA= Current Semester Academic Performance and GPA = Overall Academic

<i>Predictors</i>	<i>Impulsiveness</i>	
	ΔR^2	<i>B</i>
Step 1	.021	
Gender		.137
Age		.098
Step 2	.113***	
Online Gaming		.307***
Total R^2	.134***	
<i>F</i>	10.488	

*Performance *p<.05, **p<.01, ***p<.001*

<i>Predictor</i>	<i>Academic Performance</i>	
	ΔR^2	β
Step 1	.036	
Gender		.137
Age		-.097
Step 2	.00	
Online Gaming		.017
Total R^2	.072	
<i>F</i>	3.057*	

Pearson Product Moment Correlation was carried out to assess relationship among demographic variables i.e. age and gender and study variables i.e. semester GPA, CGPA, online gaming, impulsiveness and aggressiveness. Results revealed that age was found to have negative significant relationship with gender, semester GPA and CGPA. Gender was found to have positive significant relationship with semester GPA and CGPA. Lastly, online gaming was found to have strong positive correlation with impulsiveness

Table 4.3

Hierarchical Multiple Linear Regression Analysis Predicting Academic Performance from Online Gaming (N=250)

Note: Control Variables = gender, age. *p<.05, **p<.01, ***p<.001*

Hierarchical Multiple Linear Regression Analysis was carried out through Hierarchical Multiple Linear Regression analysis where dependent variables were assessed individuals to check whether they predict online gaming. In step 1 gender and age were not found to be significant predictors of academic performance. Whereas, online gaming was also found to have no significant prediction for academic performance.

Table 4.4

Hierarchical Multiple Linear Regression Analysis was carried out through Hierarchical Multiple Linear Regression analysis where dependent variables were assessed individuals to check whether they predict online gaming. In step 1 gender and age were not found to be significant predictors of impulsiveness. In step 2 online gaming was found to be positive significant predictor of impulsiveness.

Hierarchical Multiple Linear Regression Analysis Predicting Impulsiveness from Online Gaming (N=250)

Note. Control Variables = gender, age. * $p < .05$, ** $p < .01$, *** $p < .001$*

Table 4.5

Hierarchical Multiple Linear Regression Analysis; Predicting Aggressiveness from Online Gaming (N=250)

<i>Predictors</i>	<i>Aggression</i>	
	ΔR^2	β
Step 1	.000	
Gender		-.017
Age		-.011
Step 2	.004	
Online Gaming		-.063
Total R^2	.004	
F	.343	

Note. Control Variables = gender, age. * $p < .05$, ** $p < .01$, *** $p < .001$*

Hierarchical Multiple Linear Regression Analysis was carried out through Hierarchical Multiple Linear Regression analysis where dependent variables were assessed individuals to check whether they predict online gaming. In step 1 gender and age were not found to be significant predictors of aggressiveness. Whereas, in step 2 online gaming was also not found to be significant predictor of aggressiveness

Discussion

The present study examined the relationship of impulsiveness, aggression, and academic performance with online gaming. The results showed a significant relationship between online gaming and impulsiveness but did not affect aggression and academic performance so they showed insignificant relationship with online gaming.

It was hypothesized that online gaming has significant relationship with impulsiveness. This hypothesis was supported by the results. The relationship between online gaming and impulsiveness was found to be significant. The results showed that people who played online games had higher levels of impulsiveness than those who did not. Evidence also suggested that impulsiveness was important and a strong predictor of online gaming. A study was conducted on players to examine the relationship of impulsiveness with online gaming where a sample of 1,510 players were completed the questionnaire and results showed a significant relationship which means that online gaming increase impulsiveness. Another study that supported the results and stated that people who played online gaming showed constantly high level of impulsivity as compared to those who did not play. More exposure to online gaming leads to high level of impulsivity (Gentile & Walsh, 2004).

The second hypothesis was that online gaming is likely to increase aggression. The results do not support this hypothesis. The relationship between online gaming and aggression has not been significant. The results show that online gaming did not increase players' aggression so there is no link between online gaming and aggression. There is an evidence which support the results. A study found that aggression were predicted to be bullying behavior and not to play violent video games themselves. Researchers also found that peer pressure seem to be reason of aggression. There is no effective relationship was found between online games

and aggression such as violent behavior and this could mean that there were other factors that induce aggression in people when they were playing not online gaming are the core reason. There is another strong evidence that supported the results. A research was conducted on video games found not to be associated with adolescent aggression and results also found that there is no significant relationship between online gaming and aggression in adolescent. Although no correlation was found between video games and aggressive behavior among youngsters, researchers emphasize that this does not mean that some gaming situations do not create angry feelings or reactions among players but this feeling was a temporary reaction to the game that did not apply in real life situations. So it can be assumed that this were the reasons behind the relevant results.

The third hypothesis of the present study stated that impulsiveness is likely to decrease academic performance. The results do not support the notion that academic performance is decrease due to impulsiveness. There is insignificant relationship between impulsiveness and academic performance. So the academic performance of the students was not affected because impulsiveness. There is an evidence that support the results which states that Outcomes may not show a causal relationship between impulsiveness and academic achievement, but results suggest that higher involvement in various activities, such as games, leaves less time to engage in academic work and may impact academic performance. Therefore, the reason behind our findings may be that impulsiveness does not impair academic performance, but there may be other factors that influence academic performance.

The results were also suggests the relationship among demographic variables i.e. age and gender and study variables i.e. semester GPA, CGPA. The results revealed that age was found to have negative significant relationship with gender, semester GPA and CGPA (Academic Performance). It means that the age have inversely proportional to gender, semester GPA and CGPA. If age increases then other variables decrease and vice versa. This result was proved by the evidence according to Crosser (1991), Kinard (1986) older students perform better academically than their younger. On the other hand, Gilmore (1985) used research evidence on the relationship between age, gender and academic performance and results shows that older and more mature students perform better in the classroom than in the lower class classmates. Also found that with the age female were perform better academically than male.

There is another point from present study that gender was found to have positive significant relationship with semester GPA and CGPA (Academic Performance). The confirmation that support this point was research conducted to study the relationship between student gender and academic performance. The questionnaire was given to 275 students from both private and public schools. It was concluded that there is a significant difference between student's gender and students' academic performance. Male students were performed better than the female

Conclusion

The results of this study have shown that online gaming only has a strong impact on one's impulsiveness, it has no effect on an individual's aggression or academic performance. Therefore, online gaming has a significant relationship with education and has nothing to do with aggression and academic performance. The study also suggests the relationship among demographic variables i.e. age and gender and study variables i.e. semester GPA, CGPA. Age was found to have negative significant

relationship with gender, semester GPA and CGPA. Gender was found to have positive significant relationship with semester GPA and CGPA.

Limitations

- The current study focuses on university students and their age range is 18-25, and thus the results of this study may not be generalizable to a large sample of population.
- This study focused only on participants who played violent video games rather than all other forms of online gaming so that there was a limit to a specific violent video game.

Suggestions

- It is suggested that the future research should study more diverse patterns of age, level of education.
- It is also suggested to repeat this research using a longitudinal research design. There is a need to monitor the academic performance of students who continue to play video games and increase their playing time compared to other students who do not play the game.
- It has also been suggested that future research needs to work on a larger sample size of children and adolescents who play online video games, with the result being more generalizable and also helps to understand both the positive and negative video game effects.

Implications

The present study contributes widely to indigenous literature.

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