Hot brains: A predictive study of game addiction, aggression and self-control

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Abstract
The study has been done to find out whether Game Addiction is a predictor of Aggression and Self-Control. The study is done on adolescents. Gaming Addiction implies the unstoppable urge to play games all day long and it surely affects the daily life of the person. Aggression is a verbal or a physical act which is intended to harm a person. Self-control means the ability of a person to control his temptations, aggression, anger, temper and to stay calm and relaxed in harsh circumstances of life. A sample of 147 (92 males and 55 females) adolescents has been used as population for the study. All of them are students of 11th class and have been taken from Bhiwani city of Haryana state from India. The study uses three questionnaires to collect the data. These are namely Game Addiction Scale, Aggression Questionnaire and Self-Control scale (self report). Three groups were made namely Group 1, Group 2, Group 3 on the basis of scores of game addiction scale and the descriptive statistics show that Group 1 who scored highest on game addiction scale has highest level of aggression and lowest level of self-control. Then Group 1 has been used to test whether Game Addiction predicts Aggression and Self-Control or not. To do so, the study uses regression analysis as a statistical tool. The confidence interval is 95%. The results show that game addiction predicts aggression among adolescents and it is not a good predictor of self-control.

Keywords: Game addiction, aggression, self-control, regression, adolescents

1. Introduction
This study aims to find out whether gaming addiction predicts aggression and self-control. The time is high when every person has accessibility to mobile phones, laptops and internet. In past decades the use has increased too much. The trends show that there is an increase in the number of people who play games online. This study aims to find the gaming addiction, aggression and the level of self-control of adolescents.

Addiction has been defined as a habit which is harmful and damages or jeopardizes one’s life and it can cause trauma when tried to be ceased. Gaming addiction means that the gaming becomes too intense that the persons loses control over self and can’t stop playing it. If he is made to stop it the person becomes harmful for himself and for others as well. Aggression has been defined as a practice or habit of launching attacks. It is physically and verbally harming a person. Self-control may be defined as a state when a person is able to control the temper, temptation and his acts.

Recently the world has seen a rapid increment in the world of online gaming. Recent trends have shown that gaming addiction is increasing day by day at a relatively high speed. Youngsters, adolescents along with kids have fallen prey to the online games. The modern era, the 21st century is a boon for technological development. Lives have become easier because of the accessibility of technology and there is whole lot advancement in the field of android gaming. Basically, most of us play games on our mobile phones, iPads, laptop and other digital devices. These are handy and very easy to use. Just on a single click you can play various games of numerous genres and this led to addiction of gaming in various age groups.

The games that adolescents play these times are of very aggressive nature. They include fighting, killing, destruction and it ends with defeating your opponent just by killing and destroying him. Adolescents, these days, have access to mobiles, androids, iPads and laptops. The today’s generation always wants a win-win situation in each and every sphere of life. In India, the days’ need is to get a decent job and get settled in life. The employment
conditions in India are very poor. The economy of India is falling at a very high pace. There is a burden on every person to buy earning and to live a good life. India is still developing and the population of India is 1.37 billion. There is a lack of jobs up here along with that the education system is very hectic. Adolescents are under a huge pressure of education. Some get along with it but some others lack behind in this blind race of getting good job and earning a good enough life. Due to this burden of studies and becoming perfect in every field adolescents become frustrated. This burden of the desire to achieve something leaves them exhausted and they feel themselves worn out. Out of this situation, they divert themselves towards gaming which makes them feel a little better. They try to cover up everything with the help of online gaming and try to relieve themselves from the burden of this exhausted educational system and the aspiration to become successful. They try to decrease this load and to put this off of their shoulder by playing games, which they are at least good at.

The famous games that this generation is playing these days include, but not limited to, mortal kombat, call of duty, PUBG, guns of boom, red dead redemption, mini militia, shadow fight, Tekken, counter strike condition zero, battle field, fortnite, assassin’s creed, God of war, GTA, vice city, resident evil, etc. to name a few. All these games are brutal in nature. They include battling, killing, destroying, devastation, etc. The players need to kill to win. To add a few adjectives, some games are exceptionally rude, brutal and insane, inhumane, gory, vicious, vulgar and cruel. Gamers need to win to rewards, to go onto the higher positions. This satisfies a need to achieve. This is like compensation to the studies that they can’t get along with easily but they are exceptionally good at playing games. To satisfy the desire to be at top gaming is another platform which is easily available. Due to the availability of these games the adolescents have enough sources to satisfy the need to be at top.

The adolescents who are not good enough in studies try to release the frustration of studies on games. The adolescents not good in studies along with real games turn themselves towards online gaming. There they feel they are the kings. They can kill, they can destroy and they can beat the opponent. In this way they get satisfaction by earning themselves liberty, freedom and happiness from the devastation of the day. They feel like being in heaven, lives have become easier. In this chase of self-satisfaction, to be the best, at least, somewhere they fall prey to the blind alley of online gaming. Slowly-slowly they become addicts. This addiction leads to aggression in many ways. They start losing control over themselves.

There have been many researches in this area around the globe but no study has ever been done in Bhiwani city of Haryana state of India. Numerous researches and studies in this area have shown that online gaming addiction is highly as well as positively related to aggression. Various studies on various data samples were carried out to find if online gaming addiction, in any way, related to higher level of aggression among adolescents. Other studies show that online gaming addiction is negatively related to self-control or in other words, high level of gaming addiction is related to low level of self-control. All the studies found a very high correlation between high level of aggression and high level of gaming addiction along with this low level of self-control. After studying a whole lot of studies, review suggests that gaming addiction leads to aggression and is a cause of losing control over oneself.

In 2007, researchers Yen, Ko, Wu and Yang found that internet addiction causes aggression, loss of self-control, losing ability to make effective decisions and causes anxiety and depression as well.

Many studies reveal that internet gaming disorder (IGD) plays an important role in making adolescents aggressive and losing self-control. IGD has been related to depression, anxiety, state anxiety and other personality disorders along with loss of internal and external self-control. Studies in different countries show the same trends. Different samples have been taken from different countries by different researchers and the results reveal the same thing. A study by Kim et al. (2008) claims a positive relationship between gaming addiction and aggression and a negative relationship between gaming addiction and self-control. This means that aggression will increase if person is game addict and henceforth, he will lose self-control easily. The study was conducted on adolescents.

In 2014 a study conducted by Teng, Li and Lin reveal that there is a high correlation between violent online gaming and low self-control among students. Vyiyanthi, Makkaram, Afraz and Gajrekar (2014) did a study on online gaming, internet addiction and a comparison was carried out and it showed that the addiction was higher in males than among females.

Mehwash, Mehroof and Mark D Griffiths conducted a study and the result showed a very high correlation between aggression and violent online gaming. The results were significant. Another study done by Ahmed Bani, Ismail and Najeh Zawahreh (2017) aimed to seek the relationship between self-control, internet addiction. The sample was taken from Najran University students. The results showed that the students who possess low self-control were having level of internet addiction.

2. Material and method

Objectives
1. To find out if game addiction predicts aggression among adolescents.
2. To find out if game addiction predicts self-control among adolescents.

Hypotheses
1. Game addiction will predict aggression among adolescents.
2. Game addiction will not predict self-control among adolescents.

Sample
147 adolescents have been taken from private school of Bhiwani city of Haryana state. All of them were regular players of online games. The games include all the aggressive games where there is a need to kill the opponent/opponent team to win the game). Out of these 147 adolescents, 92 were males and 55 were females. All of these play games especially online games on various platforms including androids, mobiles, laptops etc.

3. Procedure
First of all private school was visited and adolescents studying in 11th class were taken. The total students who were included in the study were 147 out of which 92 were males and 55 were females. Three groups were made. The 1st group consisted of game addicts (who scored more than average). Out of 49 addicts 11 were females and 38 were males. The 2nd group consisted of 49 adolescents (who
problems. Then a smaller version of Game Addiction Scale was developed and validated by Jeroen S. Lemmens, Patti M. Valkenburg, and Jochen Peter. This scale was developed for adolescents to measure the game addiction. The scale consisted of 21 items which cover seven criteria and these are salience, tolerance, mood modification, relapse, withdrawal, conflict, and problems. Then a smaller version was also created containing 7 items only. Both the versions are highly reliable and valid. The short version (7 item version) has been used for this research. All the items are to be measured on a 5-point rating scale starting from: (1) never, (2) rarely, (3) sometimes, (4) often, to (5) very often.

4. Result

Table 1: Descriptive statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>Game Addiction</td>
<td>49</td>
<td>21.23</td>
<td>3.589</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
<td></td>
<td>33.29</td>
<td>8.490</td>
</tr>
<tr>
<td></td>
<td>Self-Control</td>
<td></td>
<td>29.40</td>
<td>7.284</td>
</tr>
<tr>
<td>Group 2</td>
<td>Game Addiction</td>
<td>49</td>
<td>14.15</td>
<td>1.442</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
<td></td>
<td>29.54</td>
<td>7.499</td>
</tr>
<tr>
<td></td>
<td>Self-Control</td>
<td></td>
<td>30.73</td>
<td>5.167</td>
</tr>
<tr>
<td>Group 3</td>
<td>Game Addiction</td>
<td>49</td>
<td>9.32</td>
<td>1.509</td>
</tr>
<tr>
<td></td>
<td>Aggression</td>
<td></td>
<td>28.42</td>
<td>6.628</td>
</tr>
<tr>
<td></td>
<td>Self-Control</td>
<td></td>
<td>32.55</td>
<td>5.885</td>
</tr>
</tbody>
</table>

As the descriptive statistics show Group 1 has highest level of game addiction, aggression and lowest level of self-control. In the same way the level of game addiction, aggression is less for group 2 and it has a little higher level of self-control than group 1. Accordingly, the group 3 has lowest level of game addiction, aggression and highest level of self-control.

Table 2: Regression Analysis: Game Addiction as predictor of Aggression.

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Standardized Coefficient (Beta)</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.406</td>
<td>.165</td>
<td>.147</td>
<td>7.843</td>
<td>0.406</td>
<td>9.080</td>
<td>0.004</td>
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</tr>
<tr>
<td>a. Predictors: (Constant), Game Addiction p value&lt;0.05 and p&lt;0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

The very first objective of the study is to find out whether Game Addiction is predictor of Aggression. As the table 2 shows Game Addiction predicts 14.7% variance of aggression. So, the hypothesis number 1 has been accepted here which states that game addiction will be a predictor of aggression.

Table 3: Regression Analysis: Game Addiction as predictor of Self-Control.

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Standardized coefficient (Beta)</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.131</td>
<td>.017</td>
<td>-.004</td>
<td>7.299</td>
<td>-0.131</td>
<td>0.808</td>
<td>0.373</td>
<td></td>
</tr>
<tr>
<td>a. Predictors: (Constant), Game Addiction p^2&gt;0.05</td>
<td></td>
<td></td>
<td></td>
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</table>

The final objective of the study is to find out whether Game Addiction is predictor of Self-Control. As the table number 3 shows Game Addiction predicts -0.4% variance of self-control. This value is not significant. So, the hypothesis number 2 has been accepted here which says that game addiction will not predict self-control.

5. Discussion

As the results show that both the hypotheses have been accepted. Actually, the reason behind playing online games here is, maybe, the burden of education on the adolescents. The participants were talked on the matter of playing online games too much revealed that they are under a tremendous burden of education along with pressure of their parents and teachers to do good in exams and to achieve a decent life. It is difficult for each and every student to excel in every subject and those who couldn’t get good grades lag behind in the race and are criticized by their teachers and parents as well. To do better and to get more they face pressures by the society and in this chase they find life disturbing and to get away with it they play online games. Due to accessibility of

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devices on which they can play games, this becomes an important and inevitable part of their lives. By playing various kinds of brutal games online and the frustration they face every day mingles up and they become more aggressive and lose control over themselves easily. Many studies done abroad shows that gaming addiction leads to aggression and it is a factor in losing self-control. The study done here also shows the same result and confirms the same scenario here in private school of Bhiwani city of Haryana state. There is a high need to do something in this field. There are news of suicide and violent act committed by adolescents. There is a high possibility that this is because of playing violent games online. The parents should be made more aware about the condition and teachers should also be given knowledge about the current scenario. Students should not be burdened and they should have choice of choosing the subjects they want. If students are unable to get good marks or grades they should not be criticized but helped and counseled. In this way, these adolescents can be helped and this condition can be ceased from getting worse.

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References