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## **ABSTRACT**

The fact that most video games have aggressive features has been one of the main criticisms levelled against gaming time and again. This has led a lot of people to claim that this might be terrible for people who play these kinds of games. Among others, PUBG Game is under heavy criticism. This study sought to understand how playing PUBG game affects Pakistani Players' aggressive behaviour. A survey method using the snowball sampling technique was used, in which self-rated responses of 1000 players (male and female) were obtained. The study's findings showed that the majority of PUBG players are heavy users. The level of aggression among male and female users is also identified. On both the genders male and female players' aggression, a positive significant connection was found at (0.05). The study makes the following recommendation, among others: 1. making a policy for limiting time in playing PUBG and 2. Creating awareness among users about probable risks associated with playing the game.

**Key Words:** PUBG Play, Violent Video Games, Aggressive Behaviour

## **Introduction:**

With the recent advancements in technology and the enormous growth in information, which has reduced the world to the size of a small village, both positive and harmful behaviours have resulted. This psychological outcome may emanate from how this technology is applied. Especially youth in the majority is now spending their time using technology, particularly playing video games. Electronic games in general and video games, specifically are the most significant phenomenon that has preceded scientific advancement and the digital revolution. Keeping in mind the public craze in video gaming, those with an interest in programming languages have been fast to create these games more challenging and highly interesting which have caught the world's attention and have been well-received and popular in most groups in society (Morford, 2014).

Youth behaviour is impacted by these games and they develop aggressive personalities. The youngsters are unaware of how harmful these games are to morals, beliefs, customs, and personalities. As a result of playing these games repeatedly, the aggression in youth has increased, and they are now more likely to commit crimes and irrationally kill others. Additionally, these games caused the players to acquire a tendency toward social isolation and introversion, which is detrimental to their intellectual, social, and personal growth (Krossbakken et al. 2018).

Most kids play video games and emulate their favourite characters. This is what drives their propensity for imitation, which has long-term effects on their personalities, reliance on themselves, and faith in themselves (Queider, 2012). According to Greenfield (2017), Anderson, a professor and the dean of the psychology department at the Ohio State University and a renowned expert on video game violence, has made the following claims that video games encourage aggressiveness in players, especially children. Increased aggressive ideas, which increase the likelihood that any mild or vague provocation will be interpreted as aggressive, increased aggressive feelings, increased general excitement (e.g., increased heart rate), which increases the tendency towards aggressive behaviours, and direct imitation all contribute to an increase in the tendency towards aggression after direct exposure to violence in the media.

There has been significant discussion about the relationship between watching violent television and being more violent yourself. People who watch violent television typically become more aggressive themselves (Anderson & Bushman, 2018). In light of this, Johnson et al. (2019) pointed out that there are certain similarities and impacts to live streaming and the video gaming industry, including (a) entertainment factors, (b) violent material, and (c) many physical features (such as action, speed, and visual variation).

Several authors assert that most video games are violent and depict death and devastation (Ferrari et.al 2019). According to longitudinal research by Kühn et.al (2019), 85% of the games that were looked at featured players in acts of simulated violence, damage, or killing. Only seven of the 47 popular Nintendo games that Provenzo (1991) examined did not feature any violence, according to a more recent assessment of computer game content. Findings such as these prompted Provenzo to argue that video games foster misogyny, violence and racism by teaching children to understand the world in the same manner that they see on their computer screen.

Researchers have concluded that numerous video games are violent after analysing their content, although they did not necessarily choose the most popular games for their assessments (Markey et al. 2015). One can see that many of the most well-known games are unquestionably not "violent" by looking at any of the "Top 10 Games" charts in the plethora of monthly video game magazines (for example, Super Mario, in which the actor jumps on mushrooms and turtles without killing either, Sonic the Hedgehog, in which the actor jumps on shapes and spiky wildlife to reveal cute animals, Pacmania, in which the actor eats dots or spots, etc.).

Little is currently known about the effects of playing violent video games, especially in the context of Pakistan, although there are a lot of worries that they may be more harmful to the younger generation than television due to their active participation. The new generation is now moving from the preference of watching television to playing video gaming (Casas, 2013).

For kids and teenagers, video games have emerged as a key form of entertainment. As a pastime, they spend a lot of time playing. Studies have indicated that the bulk of video games that kids and teenagers play is loaded with violence, conflict, and combat. In recent years, South Asian Countries in general and Pakistan, in particular, have seen a significant increase in the popularity of these games (Khokher, 2021). This is a result of the unique elements of video games as a form of recreation, as they closely resemble the real world. Additionally, they are simple to use because they can be practised anywhere and on a variety of devices, including board games, laptops, desktop computers, smartphones, and laptops.

The need to understand the behavioural, health and safety implications of playing electronic games is urgent due to the inadequacy of the control devices limiting the game usage at homes and at game centres. The lack of parental supervision while children are playing, and the lack of awareness of the risks of these games' and anti-social effects on kids required the attention of all stake holders. In particular following the real-life incidences, which carry live situations replicating what they practise through electronic games, the spread of games that rely on thrills to intimidate, kill, and steal other people's property has proven harmful consequences on user behaviour (Salamhe & Al-Ajeely, 2016).

Youth are therefore more likely to imitate the actions and movements they witness, readily transitioning from playing to practising. Given the foregoing, the researcher believes that PUBG game has a significant impact on the younger generation. As a result, this study sought to determine the effect of video games on the growth of aggressive behaviour in a sample of Pakistani users by addressing the following questions:

- What percentage of Pakistani PUBG players play video games?
- What percentage of Pakistani PUBG players exhibit hostile behaviour?
- To what extent playing video game and violent behaviour among Pakistani PUBG players?
- To what extent difference in the use of video games and aggressive behaviour between males and females in Pakistani PUBG players?

### **Study Objectives**

This investigation sought to:

- Determining the extent of PUBG usage among Pakistani users.
- Determining the degree of aggressive conduct among Pakistani PUBG players.

- The identification of an association between the use of video games and aggressive conduct among Pakistani PUBG players.

### **Significance of the research**

The study is important for those who have been interested to determine the exact situation of game playing and developing aggressive tendencies. Moreover, it also assists in educating youth about their violent behaviours and all the other stakeholders working to control the growing violence in society. Therefore, the study's conclusions and suggestions can be used as a guideline for game usage, parents' concerns and a general narrative for society as a whole.

### **Limitations**

The study's scope was restricted to only Pakistani PUBG Players. The sample, measuring methods, and the accuracy and precision of the tools all affect the study's conclusions. Only the population from which the sample was collected and comparable populations may be used to interpret the study's findings.

### **Literature Review**

The literature review in this study is heading under the following method.

- Video Gaming and PUBG
- Aggressive behaviour
- Synthesis of literature

### **Video Gaming and PUBG**

The term "video game" refers to a collection of media-related activities, comprising visuals with an interactive component that were developed more than 30 years ago in Japan and the United States. This sector is thriving. Numerous specialised groups and development teams have created video games, most prominently (Nimrod, 2008):

1. Displaying game-based design, such as regulations, visuals, and a lovely environment, need experienced designers.
2. Visual content creators have expertise in creating mobile gaming characters including heroes, monsters, balls, and automobiles.
3. Technical programmers were experts in creating the game engine, the steering wheels, and other types of controls.

Among entertainment, sport, and culture, the video game affects numerous participants and actors who are involved in its creation, promotion, development, and professionalization as journalists, advertisers, and owners of the world wide web and owners of the halls of channels and organisers of periodicals, and in the end is traded for money to create a video game that is "a true social phenomenon" (Falak, 2009).

On the one hand, the qualities of video games might be restricted to being a tool that effectively promotes the idea and contents to the child, making it an effective influence in learning the language, cognitive, and cultural processes. But it's also important to expand one's talents because doing so fosters intellectual and cognitive growth, inspires curiosity, and opens up new scientific and technological vistas. The young generation's use of video games is quite essential. They serve as a tool for recreation, education, and consciousness and benefit him in many facets of his social life (Alawash, 2007).

According to the characteristics of video games, they offer social fun and excitement, foster teamwork and collaboration, strengthen the gamer's academic abilities, boost his self-

confidence, improve his capacity for problem-solving, result in a noticeable improvement in coordination and speed, and activate memory, strength, and determination but the drawbacks of violent video games cannot be overlooked.

As far as Player Unknown's Battlegrounds (PUBG) game playing is concerned almost 400 million people use this game worldwide. The game is free, open to all players, and doesn't require any prior knowledge to play. A person can play this game with others and have real-time voice discussions. Because of the violent episodes, self-harm, and suicide events that have been reported while playing this game, it has received a significant amount of negative publicity (Khokher, 2021).

### **Aggressive behaviour**

Every human action has a purpose, and aggressive behaviour serves as a release or project for people experiencing severe emotional distress because they often act violently or aggressively toward others (Caruso, 2021). Recently, aggression has been seen as an idea with intensity levels ranging from low (such as punching and striking) to severe (e.g., shooting). The most extreme form of aggression is physical aggression which is violence that includes violent acts like murder and assault. All aggressive behaviours fall under the category of aggression, even though the majority of aggression is nonviolent (Anderson & Huesmann, 2003).

Due to some people being more involved with media than resting or doing other daily tasks, the amount of media violence that children and adolescents are exposed to and real-life incidents of violence have increased alarmingly (Lauricella et al., 2015). Media violence has been defined by so many scholars, but simply the media violence definition: as media in which characters deliberately harm other characters who would rather not be harmed (Anderson et al., 2007).

Although virtual reality and highly interactive video games have been made possible by recent breakthroughs in media technology, the majority of research on media violence exposure focuses on just inactive mediums i.e. television viewing which needs little attention rather than digital entertainment video gaming that requires a high level of participation of the user.

Since aggressive behaviour is so complicated, measuring it is one of the challenges faced by researchers that are interested in this behaviour. The conflicting theories that have attempted to explain aggressive behaviour make assessing it challenging (Murray et al., 2022). The approach taken by the researcher to quantify violent behaviour is inextricably linked to how he interprets it and what he thinks are its underlying causes.

According to Martorell (2021), there are different ways through which aggression can be measured. The most notable among these is close observation, to evaluate the outcome of such behaviour, self-reported data and assessment scale indicators etc.

### **Previous research**

Here is a list of some earlier investigations into the relationship between violent video games and aggressive behaviour. Berlin (2021) researched to analyse the influence of video games on Swedish youth resulting aggressive behaviour. Samples from the research ranged in age from (18-25) year-old. The method for the data collection was used through self-reported items linked to aggression, anger and violent traits. He used an aggression questionnaire which was revised as per the Swedish version. The findings showed that the effects of playing violent

video games were less significant than the effects of watching violent television. Adolescents' violent behaviour patterns are also indicative of the type of violence found in video games.

Verheijen et al., (2018) in their study were interested to know about adolescence, a developmental stage in which peer interactions on the consequences of gaming. He acknowledged that peer influence on the impacts of violent video games on adolescents has not received enough research. So his study looked at whether the hostility of both the participants and their friends a year later was predicted by their exposure to violent video games. He sampled 141 gaming teenage couples among the 705 participants based on reciprocated best friend nominations. He concluded that the study demonstrates the significance of peers in the relationship between aggressive behaviour and violent video games.

A study by Teng et al., (2019) examined the effect of violent video games on teenagers. The study was confined to only Chinese teenagers. The study used the important variable of moral disengagement as a potential mediating factor as violent video games encourage unethical activity (such as car theft and character murdering). Moreover, the study examines the claim that males are more likely than females to experience negative consequences from violent video games. Results of the study show the effects were stronger for early adolescents than for late adolescents however gender did not influence the consequences.

To better understand how rewards and punishments in video games affect the feelings and actions connected with violence, Klasen et al., (2020) undertook a study. This study set out to investigate whether aggressive behaviour on its own has a rewarding value. Functional magnetic resonance imaging (fMRI) tests of taken while playing the video game Carmageddon. Based on the violent and non-violent success and failure situations, neuroimaging data were evaluated. Relationships between brainbehaviour and effect were assessed through correlations with subjective gaming experience. The findings of the study showed that the reward system was involved in success differently depending on whether it involved violence or not. Virtual violence appears to support the reward system's selected responses and favourable in-game experiences.

Ashraf (2020) focused on determining the effect of aggressive behaviour that kids exhibit. He was specifically interested to know this scenario in the Pakistani setting as the majority of the data comes from Europe and America which suggests that playing violent video games can make players more aggressive in the realworld. In his study, he investigated if playing different types of violent-themed video games may predict aggressive behaviour in late childhood and whether playing violent-themed video games was connected with hostile behaviour. He used a sample of 100 kids and asked the respondents for self-reported data. The findings of his study showed a positive correlation between aggression and the amount of time spent playing violent video games. He concluded that youngsters who play violent video games for longer than thirty minutes a day may be more likely to pick up aggressive behaviour.

Another study by Shabbir et al., (2020) looked into the connection between young people's violence and gaming addiction. This study used a purposive sampling method and selected 160 individuals (80 men and 80 women) and adopted a method of cross-sectional, correlational study design. The findings showed that aggression, rage, and physical violence had significant but unfavourable relationships with gaming addiction, whereas verbal aggression and hostility do not. Moreover, males were shown to be more game-addicted than females, according to the analysis of gender differences, whereas violence and its variations

did not show any appreciable differences between the sexes. However, the study has several limitations and recommended that future research should focus on the specific game genres associated with aggression or compare the behaviour of different age groups to shed more light on the connection between game playing and aggression.

Masi (2021) conducted a study to determine the impact of video games on the aggressive behaviour of kids having attention deficit hyperactivity disorder (ADHD). He used the method to explore the effects on the kids having (ADHD) and non-having (ADHD). Moreover, he investigated ground-breaking findings about the impact of gender. A combination of gender and severe ADHD was found to explain the excessive usage of video games in a multiple regression study of children who had higher addiction ratings.

In addition to this Dickmeis & Roe (2019) were interested to investigate the video game genreaccount when examining the association between playing video games and physical aggression. The research sampled pre-testing 93 randomly selected participants who classified the game genres as aggressive and/or competitive. The findings of this study were consistent with the theory that competitive and violent video games enhance the likelihood of physical aggression.

Lee et al., (2021) researched the effects of violent video games and aggression. He critically examined alternative theories regarding the links between violent video games and aggressiveness using eight-wave panel data gathered. The sample of the study was 662 South Korean adolescents. He concluded that anger and hostility were not significantly affected by playing violent video games, but overall gaming time was.

Yousaf et al., (2021) examined how playing online video games affected kids' psychosocial growth. She used 300 people to make up the study's sample, with 175 boys and 125 girls between the ages of 8 and 14. Their study used a survey design with the Strengths and Difficulties Questionnaire (SDQ). The study found all of the SDQ's domains and both competitive and cooperative video games showed a strong link. The considerable effect of video games on the psychosocial growth of children who play online video games was predicted by linear regression analysis. The limitation of the study was that the data were gathered about only the soft games and neglected the hard games like PUBG, Free Fire etc.

Aresearch study conducted by Hussain et al., (2021) was based on exploring women's participation in e-sports. This study aimed to understand the motives and lived experiences of Muslim women e-sports participants from Gilgit-Baltistan, Pakistan. He collected data via observations of online video games and in-depth interviews. The study participants revealed that they use e-sports as a vehicle for an oppositional agency and personal freedom from the patriarchal system.

Shahbaz et al., (2019) conducted a study to comprehend the effect of video gaming on Pakistani Gamers. The study used a sample of respondents having ranged from 11 to 35. The study adopted Buss-Perry Aggression Questionnaire and the Video Game Usage Survey to measure aggression, attention span, and time of video gamers, respectively. Findings showed that time is strongly positively connected with aggression and negatively correlated with cognitive ability.

Khan et al., (2012) conducted a study to investigate the links between youth psychological outcomes, such as desensitisation, aggressive behaviour, sleep disturbance, anxiety, and exposure to violent media. The sample used a nationwide survey of colleges and



universities in Pakistan. The study concluded that there is no significant influence of respondents' age or gender in the relationships between exposure to violent media content and aggression however; results revealed that exposure to violence has a significant relationship with aggressive behaviour.

Abbas et al., (2021) investigated how media violence impacts the young generation. He used a strategy of using a survey Google form, and a random sample of 181 people from the online population ages 7 to 24 were gathered. Findings of the study indicate that lower quality of life in early childhood and youth is a real and evolving phenomenon. Programs for media content education should be tailored to each social environment to be appropriate. The researcher emphasised that the link between media content and young children's and adolescents' impact is a vast subject, so an in-depth investigation is required.

### **Position of the current study about earlier studies:**

By reference to the aforementioned past studies, it has been noticed the following:

Previous research on the impact of video games on aggressive behaviour includes Berlin (2021), Ashraf (2020), Shabbir et al., (2020), Dickneis & Roe (2019), Yousaf et al., (2021) and Abbas et al., (2021) having limited sample size. While other research Teng et al., (2019) and Masi (2021) focused on other aspects that how video games affect people generally and how to distinguish between their good and negative effects.

The instrument and software employed in earlier research analyses varied. Regarding the advantages of earlier research, the researcher believes that past studies provided a wealth of crucial knowledge that influenced decision-making for the current study's choice of problem, methodology, and proper procedures to meet its goals.

This field is being expanded by the current study, which is anticipated to improve upon the findings of earlier research. In terms of its goal and sample, the current study was distinct from earlier ones since it examined the connection between video game use and aggressive behaviour in Pakistani PUBG Players having a broader sample size including all the age categories.

## **METHODS**

The objective of this study was to determine the effect of video gaming on the aggressive behaviour of players.

### **The population of the Study**

Different age groups residing under the geographical boundary of Pakistan

### **Sample for the study**

To investigate the impact of PUBG on aggressive behaviour, we included a sample of 1000 Pakistani PUBG players for improved accuracy and in light of the country's increasing number of aggression cases. After receiving the players' responses, we divided them into difference gender and age groups.

### **Study tools**

Buss Perry Aggression Scale, a self-rating scale of aggression is one of the standard questionnaires for the measurement of aggressive behaviour (Gerevich et al., 2007). This tool was adopted and modified according to the study design.

### **Study variables**

The study included the following variables:

#### **First: Independent variables:**

- Sex
- Age
- PUBG Play duration

**Second: Dependent variables:**

- Aggressive Behaviour

**Data Collection**

A questionnaire with a five-point Likert scale was launched through the Google Form link and the method of snowball sampling was used to obtain the data. It was posted in Facebook PUBG Groups and requested to players share it with their other PUBG-using friends. Obtained data were analysed statistically by using SPSS 21.

**RESULTS AND DISCUSSION**

This part includes the results reached and discussed following the study questions.

**Results related to the answer of the Percentage of PUBG players using game**

**Table (1)**

**Distribution of sample subjects according to personal variables**

Table 4.1 Gender of the respondents

<b>Gender</b>		
	Frequency	Percent
Male	804	80.4
Female	128	12.8
Prefer not to say	68	6.8
Total	1000	100

The gender-specific traits are displayed in Table 4.1 in terms of frequency and percentage. The sample was made up of 804 men and 128 women, while 68 players preferred not to disclose their gender. In the gender category, men respondents outnumbered female respondents by an 80.4% to 12.8% margin. 6.8% of all respondents said they would rather remain anonymous.

**Results related to the answer of the Percentage of PUBG players (Age Wise)**

The age distribution of the study is presented in the table and graph below which is showing frequency and proportion of respondents.

Table 4.2 Age of the respondents

<b>Age</b>		
	Frequency	Percentage
Under 12 Years	135	13.5
12-17 Years old	425	42.5
18-24 Years old	324	32.4
25-34 Years old	94	9.4
35-44 Years old	21	2.1
45 Years & above	1	0.1
Total	1000	100

The majority of PUBG players who responded are between the ages of 12 and 17 (43%), while the next age group up is between 18 and 24 (32%). In the third category, 14% of the respondents are under the age of 12, which represents their age group. The bulk of PUBG players who took part in this study are between the ages of 12 and 17; this age range accounts for 43% of the responses.

### Playing PUBG (Daily Basis)

On daily basis, how much time do the respondents play the game? They were asked to tell about the time in a single day they are playing the PUBG game.

Figure 1.1 History sheet of Hourly Data of Playing PUBG (Daily Basis)

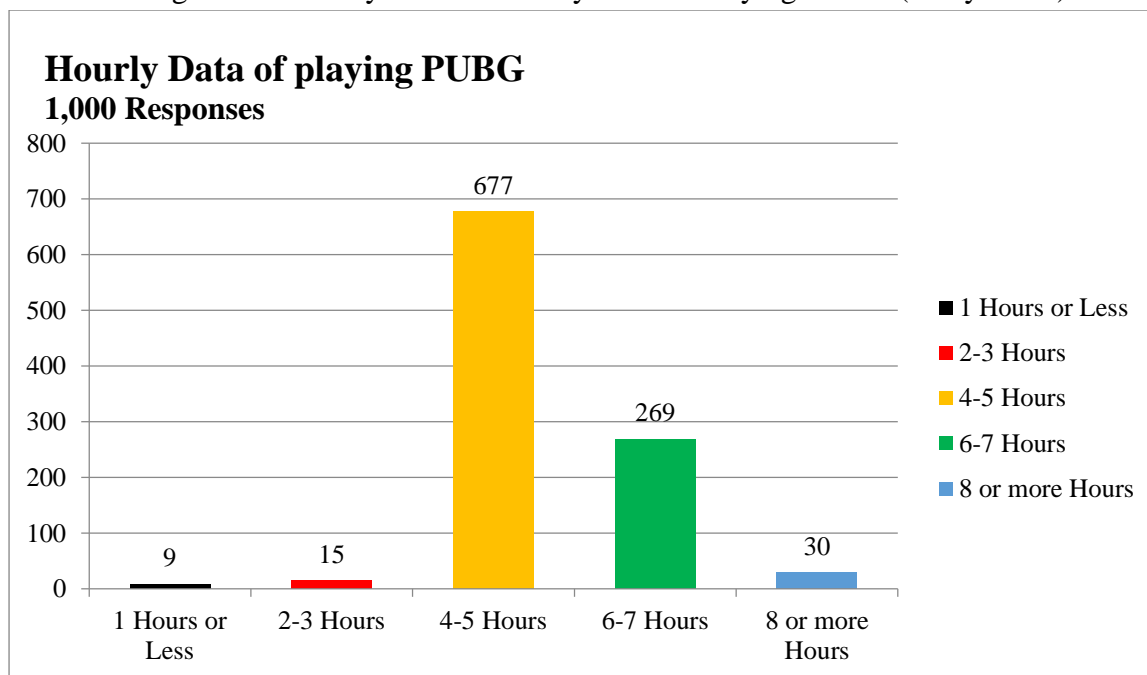


Figure 1.1 demonstrates the result of our responses that how much time in a day these players have been playing PUBG. Results explain that more than half population in our sample (68%) play the game for four to five hours a day whereas only (3%) were those who play the game for eight or more hours a day. Another striking number (27%) shows the players who use PUBG for six to seven hours a day. Only a small minority (2%) were among those who use the PUBG for two to three hours and (1%) were for an hour or less respectively. Results revealed that the majority of the users fall in the heavy users category from 4-7 hours per day.

### Duration of Playing PUBG and Aggressive Behaviour

Respondents were questioned about how much time they spent playing PUBG every day. The components in the table above were all displayed independently to count the hostility on an item-by-item basis, and they were all integrated into one model to monitor the total aggression during PUBG play. This table explains how playing time affects aggressive behaviour and whether there is a relationship between the two.

**Table 4.3 Linear Regression Analysis of (Duration of PUBG Playing and Aggression)**

Linear Regression Analysis (Time Play and Aggression)										
How many hours do you play PUBG each day?	Change Statistics									
	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1 hour or less	1	.206 <sup>a</sup>	.043	-.094	9.22335	.043	.312	1	7	.594
2-3 hours	1	.361 <sup>a</sup>	.131	.064	5.49144	.131	1.953	1	13	.186
4-5 hours	1	.147 <sup>a</sup>	.022	.020	5.92357	.022	14.986	1	675	.000
6-7 hours	1	.151 <sup>a</sup>	.023	.019	5.56518	.023	6.259	1	267	.013
8 or more hours	1	.169 <sup>a</sup>	.029	-.006	5.47348	.029	.822	1	28	.372

The impact of playing PUBG every day and acting aggressively is depicted in the above table. Respondents were classified into three categories based on how much time they spent playing games: light users (one hour or less), moderate users (two to three hours), and heavy users (4 hours to onward). Results showed that PUBG was being played everyday for a certain number of hours and that aggressive behaviour was emerging. Light users, the first category of PUBG players, were found to be non-significant after playing for an hour or less (.594). The results are likewise non-significant (.186) in our second group of players (moderate users), who played PUBG every day for two to three hours. R square analysis reveals that 13.1% of the change in the player's behaviour is accounted for by the amount of time he spends playing PUBG. From this point on, results of (heavy users) four to five hours are significant (.000) and the variation of change is .02.2%, with 677 users falling into this category. Results of six to seven hours are significant (.013) and have a variety of changes. 02.3% has 269 users. Users that spend eight hours or more playing games have results that are not statistically significant (.372) and only have 30 respondents. These findings demonstrate that the majority of respondents fell into the heavy user category, who spend more time playing PUBG and directly affect the violent behaviour of these players.

#### **Results related to the answer to the PUBG effect on gender question:**

Is there a significant relationship at ( $\alpha \leq 0.05$ ) between the use of video games and the aggressive behaviour of PUBG Players? To answer this question statistically, the data analysed and presented in Table 4.4:

**Table 4.4 Test Statistics of Gender, PUBG Playing and Aggression**

<b>Gender</b>		<b>PUBGPlaying</b>	<b>Aggression</b>
<b>Male</b>	Chi-Square	565.791 <sup>a</sup>	512.831 <sup>b</sup>
	df	15	28
	<b>Asymp. Sig.</b>	<b>.000</b>	<b>.000</b>
<b>Female</b>	Chi-Square	81.297 <sup>c</sup>	47.094 <sup>d</sup>
	df	14	25
	<b>Asymp. Sig.</b>	<b>.000</b>	<b>.005</b>
<b>Prefer not to say</b>	Chi-Square	34.118 <sup>e</sup>	31.000 <sup>f</sup>
	df	13	17
	<b>Asymp. Sig.</b>	<b>.001</b>	<b>.020</b>

The PUBG game and violence had distinct effects on different sexes, as shown in the table above. Three key data about the result are shown in tables. First off, the study demonstrates that aggression and PUBG playing are both significant in males with a p-value of 0.000. Aggression and PUBG playing by female players are significant at the levels of (Aggression p 0.005) and (PUBG Playing p 0.000), respectively. The final group of persons who would rather remain anonymous was similarly noteworthy (PUBG Playing, p 0.001, and Aggression, p 0.020). These findings demonstrate that playing PUBG and aggression have a major impact on all genders. In comparing playing and aggressive behaviour, there were no discernible differences in these groups.

It can be argued that the association between the use of video games and aggressive behaviour among PUBG increases with the level of their usage. This is because more exposure to violence in video games is linked to the mimic such behaviour. People belonging to age twelve to twenty-four are more attracted to and use the PUBG game. As they encourage aggressive thinking, these games started to have an impact on aggressive behaviour. Moreover, as in the study, there is no difference between playing PUBG and developing aggressive behaviour in both males and females. Overall, the impact on the human mind and behaviour is greater and more profound the longer these games are played for.

### **Recommendations**

All the stakeholders should join hands to make an effective policy regarding the limitation of the time spent in the game. An awareness program should be devised to inform the users, especially those aged 12-17 risk of developing aggressive behaviour associated with the gameplay.

### **Guideline for Future Researchers**

Keeping given some limitations of the study, it is suggested that an identical study to the current parameters may be applied in the laboratory experimental design to know a more accurate effect validating the current result.

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