Research Article

Violent Video Games on Aggression and Self-control of Student Gamers

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Abstract.

The rise in popularity of violent video games has sparked debates on their influence, particularly on aggression and self-control. Concerns about adult-rated games like PUBG, COD, Grand Theft Auto, and Red Dead Redemption prompt scrutiny of virtual experiences and real-world behavior. This study explores the link between exposure to violent video games, aggression, and self-control among student gamers in Davao del Sur, Philippines. Data were collected from fourth-year Psychology students at Cor Jesu College during the first semester of SY 2023-2024, using purposive and convenience sampling. Most respondents were male, reflecting broader gaming trends. Results show moderate aggression and balanced self-control among student gamers. While no significant differences were found in exposure to violent games, aggression, and self-control across age groups, gender variations were notable, with males showing higher exposure and self-control scores. Correlation analysis revealed a negative relationship between violent video game exposure and aggression, indicating potential desensitization, while exposure correlated positively with self-control. Moderation analysis indicated gender and age significantly moderated the relationship between exposure to violent video games and aggression, but not with self-control. These findings highlight the intricate dynamics between gaming habits, psychological traits, and demographic factors among student gamers. The findings suggest that increased exposure to violent video games may be associated with lower levels of aggression and higher self-control among student gamers. This indicates a need to reconsider the common perception of the negative impacts of violent video gaming, emphasizing the importance of context and individual differences in understanding these effects.

Keywords: psychology, adult video-games, aggression, quantitative, Philippines

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1. Introduction

The recent explosion in the prevalence of violent video games has sparked a heated discussion about how these games may affect people's behavior, particularly about aggression and self-control. An increasing number of people are worried about the prospective implications of gamers' immersion in virtual worlds which features an adult rated violent content such as Player Unknown's Battleground (PUBG), Call of Duty (COD), Grand Theft Auto, and Red Dead Redemption on conduct in the real world. This continual discourse not only makes us ponder the moral implications of interactive entertainment

but also encourages us to carefully explore the boundaries between virtual and actual behavior,

Video games are now considered by students and some adults the very foundation of their lives. Because they have an unquenchable thirst for having to play a game for most hours of the day and some even literally build their whole social life in a video game. On the other hand, these types of games such as, but not limited to: Player Unknown's Battleground (PUBG), Call of Duty (COD), Mortal Kombat, Grand Theft Auto, and Red Dead Redemption, etc. have been blamed for many types of violence such as shootings, delinquency or even sex-related violence (Ajavakom,2020).

In the global scenario, concerns about the potential for such technology to blur the line between reality and fantasy exist, and have negative impacts on mental health and social behavior. While some research shows video games as a solution to problems, it is often violent aspects of gameplay that are mostly discussed and are what affect most real-world behavior. Violent video games and their effects have been a concern for society since the industry started and attracted attention from researchers from all over the world. Long exposure to these types of games is thought to be linked to the imitation of in-game actions and problem-solving aspects in real-world situations. This is evident in the research of Krahe and Moller (2016) That readiness in engaging in aggressive behavior were influenced by how much violent video games players consume.

In Asian nations like China, there is an assertion that links increased aggression to violent video gaming

among young adults. Scholars have debated the impact of violent video games on behavior, with some asserting that these games foster aggression, heighten self-injury risks, and diminish empathy, while others report minimal or no such effects [3]. The contention that violent video games contribute to aggressive behavior continues to be widely discussed in various media outlets. This aligns with Shao's study, which found a link between violent video game exposure and aggression, suggesting that beliefs about aggression influence the relationship between violent games and aggressive behaviour [55]. Similarly, Han concluded that prolonged exposure to violent video games or media increases individualistic tendencies [35].

In the Philippines, a 13-year-old student was accidentally shot by his classmate in a stage play, the reason for having brought a real gun instead of a fake one (ABS-CBN news, 2020). Violent video games and their effects have been a concern for society since the industry started and attracted attention from researchers from all over

the world. Gentile and Bender (2020) similarly found that exposure to violent content games is linked to heightened aggression across different age groups [].

Overall, the study aimed to investigate whether there is empirical evidence supporting the claim that playing violent video games leads to real-life violence and harm. The findings may provide insights into the impact of violent media on specific individuals and contribute to the ongoing debate about regulating violent video games.

2. Literature Review

2.1. Violent Video Games on Aggression

There has been an increasing interest in the relationship between violent video games and aggression, with varying findings reported in the literature. Global studies have suggested that violent video games may be linked to increased aggression, playing video games (in particular, violent video games) also has negative effects, such as a reduction in cognitive control and an increase in aggression and playing video games as a personalized character was greatly associated with more aggressive behaviour [] (Hummer et al., 2019;). On another study related, Gabbey (2022) stated there that aggression can occur as a normal reaction to stress, anxiety, or a sense of being out of control []. Instead of working toward intra-team cohesion and cooperation to defeat the opposing teams, players sometimes engage in aggressive acts, such as mocking, trolling, swearing, ignoring, and sabotaging teammates even to the extent of initiating surrender, which undermines their chances of victory [] (Chen, Duh, Phuah, & Lam, 2022). Competition in video games was used as a situational factor to have an impact on players' aggression. The GAM suggests that input variables (e.g., personal and situational factors) can influence internal states, such as aggressive thoughts, angry emotions, and physiological arousal, which can then lead to aggressive behaviour [6]. This is on the grounds that gamers are more likely susceptible to adapting to what they are seeing in these violent video games because their brains are hardwired to think that these are normal activities since this is what their brains are used to enjoying.

According to Bandura's social cognitive theory [9], violent video games can initiate adolescents' observational learning. In this situation, not only can they imitate the aggressive behavior of the model but also their understanding and acceptability of aggression may change. In addition, however, from a neuroimaging perspective, Wang and colleagues (2019) recently found that females appear to be more vulnerable to

online gaming addiction relative to males. The study tried to get a better understanding of sex differences relating to biological mechanisms underlying IGD, a proposed mental health disorder included in the final section of the latest (fifth) Diagnostic and Statistical Manual of Mental Disorders (DSM-5) by the American Psychiatric Association. In addition, in a randomized clinical trial conducted by Chang and Bushman (2019) involving 220 children aged 8 to 12 years, participants were assigned to play a video game in one of three conditions: gun violence, sword violence, or no violence. Findings revealed that children who played a video game containing violence with guns or swords exhibited a higher likelihood of engaging in risky behavior with firearms, such as touching a real, disabled handgun, handling it for a longer duration, and pulling the trigger more times, including at themselves or their partner. Additionally, habitual exposure to violent media was identified as a contributing factor to this dangerous behavior around firearms. Aggression however, can affect a person in other ways, as stated by Gary (2015), aggression in older adults, and deteriorating physical abilities can lead to suicidal thoughts. These are just a few situations where hostile conduct could surface.

One of the prevalent factors in video games and how it affects a person is age. A finding by Liu (2015) which stated that aggressive behavior is a very complicated concept that affects people of all ages. Giving an explanation to include people from various ages to see truly the effects of video games from different age groups. This is in contrary with a study made by Kyung (208) where it was stated that that the prevalence of physical aggression in girls and boys decreases with age. Paving a way for factors such as age in this context. To support this, another study revealed that as children grow older, they tend to act less violently and develop more mature ways of dealing with disagreements rather than striking out (Park, 2017). To add, gender is a factor for such effects. Biological factors, such as hormonal differences, could also play a role, as testosterone, present in higher levels in males, has been associated with increased aggression [66]. To which related to another study by Haghbin (2015) where it was stated that women may feel more anxious when playing fighting games and more drawn to gentler and fantasy games because they are better at controlling their aggressive tendencies when they are around other people.

The relationship between violent video games and adolescent aggression has become a hot issue in psychological research (Based on the General Aggression Model (GAM), Anderson et al. (2003) suggested that violent video games constitute an antecedent variable of aggressive behavior, i.e., the degree of exposure to violent

video games directly leads to an increase in aggression. Anderson and his collaborators suggested there were major methodological shortcomings in the studies of Ferguson et al. and redeclared the validity of their own research [34]. Some researchers supported Anderson et al. and criticized Ferguson's view (Gentile, 2018; Rothstein and Bushman, 2019).

It is worth noting that there are other factors that contribute to aggressive behavior beyond exposure to violent video games. Studies have shown that exposure to violence in the media and in real life, along with individual factors such as personality traits and family background, can also play a role in aggressive behaviour [6]. Moreover, some research has suggested that playing prosocial video games can lead to increased empathy and helpful behavior (Gentile et al., 2014; Greitemeyer & Oswald, 2016), which implies that the effects of video games on behavior may depend on the content of the games.

Therefore, while some studies suggest a positive correlation between violent video games and aggression, it is essential to consider other potential contributing factors when examining this relationship. Ironically, some studies have found no significant association between violent video game engagement and aggressive behavior among adolescents [48]. In Asia, specifically in the country of Thailand, a cross-sectional study of the correlation between violent video games exposure, and aggressive and impulsive behavior in Thailand's gamer community was conducted by Natnida, A. (2020) and found no correlation between these variables and other confounding variables such as age, sex, and gender.

In the Philippines however, there have also been studies on the relationship between violent video games and aggression. Examined the relationship between playing violent video games and aggressive behavior among Filipino high school students [15]. The study found that playing violent video games was significantly associated with higher levels of physical and verbal aggression.

Similarly, investigated the relationship between exposure to violent video games and aggressive behavior among Filipino college students [19]. The study found a positive correlation between exposure to violent video games and aggressive behavior, particularly in males.

Overall, while studies in the Philippines have found a positive correlation between violent video games and aggressive behavior, further research with larger sample sizes

is needed to fully understand this relationship. Furthermore, it is crucial to consider other contributing factors when examining the effects of violent video games on aggression.

2.2. Violent Video Games on Self-control

Self-control is a term that refers to an individual's capacity to manage their emotions, impulses, and actions according to situational demands. Numerous global studies have sought to investigate the correlation between playing violent video games and self-control. For instance, Saleem, Anderson, and Gentile (2018) discovered that adolescents who played violent video games demonstrated a negative correlation with self-control. Similarly, participants in Greitemeyer and McLatchie's study who played violent video games showed lower levels of self-control than those who played nonviolent games [31]. Further supported by the study by Gabbiadini about the effects of video games on self-control, revealed that violent video games decreased self-control and increased cheating and aggression [24].

Engelhardt, Bartholow, Kerr, and Bushman (2014) carried out a study to investigate the neural factors that affect self-control when exposed to violent video games. They found that playing violent video games reduced activity in the prefrontal cortex a region associated with self-control, suggesting that violent video games may interfere with the neural processes that underlie self-control. In contrast, Gentile, Li, Khoo, Prot, and Anderson's (2014) study found that playing prosocial video games, which involve cooperation and helping others, was positively associated with self-control in children. The study revealed that children who played prosocial games for six months demonstrated greater improvements in self-control compared to those who played violent or neutral games. Finally, a recent study by Khurana, Romer, and Betancourt (2021) investigated the moderating role of parental monitoring in the correlation between violent video games and self-control in adolescents. The study found that high levels of parental monitoring weakened the negative association between violent video games and self-control in adolescents.

Some research on the relationship of video games and self-control revealed that age can be a factor with varying results from different studies. One reveled that males had higher emotional self-regulation and self-control than females, similarly, males performed higher on emotional self-awareness than female students from a study by Rao and Komala (2017). Contradicting a study made by Kamkar & Morton (2014) in where

their findings stated that it may not be the case that females are constantly more self-controlled and less impulsive than males. However, studies previously mentioned are somewhat redirected when factoring in different situations. Females are less impulsive during the fertile phases of the menstrual cycle [57]. If this is the case, it leads to the idea that females are more self-controlled rather than a more impulsive behavioral approach, at least during potentially reproductive seasons. Which related to a study by Youngoh (2014) suggesting that while short-term gender differences in self-control may exist, they tend to diminish over the long term. Contrary to this, Magat (2014) contribute to the contextualization by noting that, while teachers often perceive higher levels of self-regulation in girls compared to boys, actual assessments and group tasks did not consistently reflect significant gender differences.

It is important to note that the relationship between violent video games and self-control is complex and has mixed results, and further research is needed to fully understand the nature of this relationship. Some studies suggest that violent video games may lead to desensitization and an increase in aggressive behavior, which may in turn decrease self- control. On effects of video games to self-control, a study by Haghbin (2014) revealed that the relationship between students' academic excellence and videogames are on the negative side, opposing the positive and significant effect of video games on self-control. However, other studies suggest that playing prosocial games may increase empathy and positive social behavior, which may increase self-control. It is also important to consider individual differences such as age, gender, and personality traits when examining the relationship between violent video games and self-control. Ultimately, parental guidance and monitoring can play a crucial role in mitigating the potential negative effects of violent video games on self-control in adolescents.

2.3. Negative Effects of Video Games

For years video games and their effects are a constant subject of study and research; literature from various authors show different perspective and results. Reactions (to video games) can be clear or unsaid, and positive or negative reactions such as development, increase in social relationships, improved problem-solving skills or violence, aggression, anxiety, or stressful manifestations of players [53]. An attribute to the negative effects of video games is mostly health. Playing video games for longer durations, particularly in the evening, is a great, common, and probable cause of sleep problems, exposure to

video games in the evening, in fact, can lead to insufficient and low-quality sleep, with possible effects on brain's cognition [52]. This also paves way to its effects on the well-being of a person. As a study by McLatchie's (2016) revealed that who played violent video games showed lower levels of self-control than those who played nonviolent games. This also connects to a study revealing that exposure to violent video games, which often depict impulsive and aggressive behaviors, could potentially impact their own ability to regulate impulsive responses [27].

In connection to health concerns, a study by Pujol, et al. (2016), stated that negative effects were noticed only in children at the extreme rate of game-playing, with 9 hours or more of playing video games per week. At a neural level, changes related to gaming were observable in functional connectivity. In connection to this, Grinspoon (2020), in his article on Harvard health explained that gaming has also been associated with lack of sleep, insomnia, and alterations to the circadian rhythm that lead to disorders, aggression, depression, and anxiety. There has also been concern regarding exposure to the extreme violence that is usually found in video games can normalize teens and young adults to such violence, leading to emotional problems and causing young people to commit acts of violence. In another study, the negative effects of video games were listed and generalized as the following: 1) addiction, 2) effects on the brain and behavior, and 3) effects on healt [50]. In conclusion, some studies pertain to video games as something that implies negative effects on players.

2.4. Positive Effects of Video Games

Opposing most literature that show the negative effects of video games, some studies reveal positive effects from exposure to video games. In a study made by Kühn, their results provided strong evidence that counters the frequently discussed negative effects of playing violent video and will be able to help to communicate an accurate scientific perspective on the effects of violent video gaming [43]. In support of the idea aforementioned, another study exploited that nearly three decades of research exploring the possible connections between video games and negative effects including addiction, aggression, well- being, and cognitive functioning led us nowhere near a consensus or evidence-based policy because reliable, ecologically and reproducible valid studies are low. Further solidified by Cooper (2015) where he stated the argument that playing violent video games might lead to increased moral sensitivity and a greater understanding of right from wrong is an intriguing one.

In previous years, researchers have changed focus from concerns about violent video games and aggression to concerns about the connection between the amount of time people spend playing video games and well-being. In short, they are interested in the effect of gameplay behaviors on well-being and mental health. But, instead of measuring such behavior directly, research has relied on self-reported engagement [40]. Contradicting negative effects, video games proved to be useful thus bringing in more and more positive effects. A study by Anguera [7] came up with cognitive controlling interventions applied using video games that have the potential to target the underlying cerebral dysfunction associated with depression, whilst doing it in a way that is engaging and creates attachment to the treatment. Similarly, suggested playing violent video games could increase moral sensitivity by eliciting guilt in players adds another layer to the discussion. Backed by Granic [28] which suggests a possible interpretation of this unexpected positive correlation is that individuals who engage with violent video games may, on average, exhibit greater levels of self-control. Another study with a similar use is that of which showed results that in most cases, the introduction of commercial video game training in physical rehabilitation provided the same results as conventional therapy [13]. Thus, video games could be added as a supplement treatment in rehabilitation to stimulate patient motivation. In addition, video games could also be used at home to maintain the benefits of rehabilitation. In a more recent situation, it was revealed that playing video games had a positive effect on players' well-being during the COVID-19 pandemic. Games have provided an enjoyable means of maintaining social contact, and a stress-relieving and mentally stimulating escape from the effects of lockdown [10]. On another perspective, it was revealed that suggests that engaging in aggressive activities in a controlled setting can lead to a reduction in overall aggression, [46]. Despite the amount of literature revealing the negative effects of video games, new and recent studies counter said studies and reveal the positive effects of video games.

Parents as the first to introduce media

Almost half of the parents surveyed believed that children should be allowed to consume violent media, with over half allowing their own children to play M-rated video games or watch R-rated movies. However, only a third of parents believed that exposure to violent media could lead to real-life violent behavior. This highlights the importance of parental guidance in managing children's exposure to violent video games, as stricter restrictions can provoke tantrums and result in children finding inappropriate means of accessing the materials. It is crucial for parents to monitor and control their children's access to online materials, as children often model their behavior from the media they

interact with. A finding by Doğan (2015), expressed that children exposed to violent media have shown that they may become numb to violence, imitate the violence, and show more aggressive behavior.

According to a recent report (Ofcom, 2019), twenty-four percent of children aged 3 to 4 have their own tablet devices, and this rate reaches 37% by the age of five. Besides, longitudinal research has shown that as children grow older, they spend more time in front of digital screens [65]. Parents have a direct influence on young children's digital media use, screen time and content. Family-related factors such as socioeconomic status (Määttä et al., 2017). In these studies, inadequacies in parenting skills (neglectful, rejecting, protective, demanding and authoritarian parenting), failure to control, monitor and participate in children's Internet use, negative parent-adolescent relationships, low perceived social support, alexithymia and difficulties in emotion regulation are found to be related to IA in adolescents [22]. In addition to parental monitoring, effective parent-child communication is regarded as one of the essential skills to prevent internet addiction (Vondráčková & Gabrhelík, 2018). Overall, it is crucial for parents to take an active role in managing their children's access to violent video games and other online media, while also recognizing the potential educational benefits of digital media and fostering healthy communication habits with their children.

2.5. Online Game Violence to Real-life Violence

According to governments in Nepal, Iraq, and India, violence in video games can make people violent in real life (Žalac, 2019a; 2019b; Modi, 2021). The governments of these countries have adopted or proposed laws prohibiting violent video games. The state of Pennsylvania is on a similar track, as its lawmakers have published a bill that proposes an additional 10% tax on violent video games. The money from the "sin tax" would go into a fund that aims to enhance security measures against school shootings (Makuch, 2019). However, research has shown that playing violent video games alone does not cause someone to become violent. There are many risk factors for violence, such as genes, having a sensation-seeking personality, exposure to domestic violence, lack of parental monitoring and attachment, poverty, peer influences, and depression [25].

Family and school environment also often play a pivotal role in the development of early life violence. Stronger parental attachment, family support, and family cohesion have each been associated with lower levels of violence among Hispanic youth. Furthermore, early experiences of victimization, including abuse and neglect, and exposure to

parental domestic violence have been associated with aggression and violence among Latino youth (Cuevas, Sabina, Fahlberg, & Espinola, 2018; Grest, Amaro, & Unger, 2018)

As the number of risk factors increases, so does the chance of violent acts by an individual. Bruce Bartholow, Ph.D., Professor of Psychology at the University of Missouri, spoke about the effects of simulating violence in video games: “More than any other media, these [violent] video games encourage active participation in violence. Over time, it has become evident that violent video games have gained immense popularity within the video game industry. Game developers have acquired advanced tools to enhance the graphics of video games, which include characters, objects, and facial expressions. Developers aim to achieve the best response from their consumers, and one way to do that is by creating realistic graphics that can fully immerse gamers into the virtual world. Unfortunately, violent video games are no exception to this trend. Games that involve open-world experiences or first-person shooting have attracted many gamers because they offer a higher level of immersion. While most people view these games as a form of entertainment and a means to escape reality, virtual characteristics of anger and hatred can lead to passive- aggressive behavior in real life. Passive aggression is defined as an indirect expression of hostility towards anyone or anything. The virtual characteristics of anger and hatred can have a real influence, which has negative effects. Several scientific studies have concluded that playing violent video games increases passive-aggressive behavior in people. Surveys have indicated that the longer a child plays a violent video game, the more likely that child will exhibit passive-aggressive attitudes. COVID-19 pandemic has imposed digital platforms as the only means for people to maintain socio-emotional connection [63]. But there are risked imposed on this increased screen time, as there are a lot of individuals especially students who have increased access to gaming.

A recent study, Ministry of Human Resource Development (2020) reported 8.8 h of screen time among younger adults and 5.2 h among elderly (>65 years old), presenting concerns among these populations too. A recent narrative review discusses that screen time increased for children and adults (men and women) during the pandemic (as compared to pre-pandemic times) globally. Children and youth showed lowered physical activity levels, less outdoor time, higher sedentary behaviour that included leisure screen time and more sleep during the coronavirus outbreak [64]. The increased prevalence of aggressive behavior during the COVID-19 era, where students spent more time playing violent computer games, this research becomes even more relevant. The pandemic and associated lockdown measures led to a significant increase

in screen time and limited social interactions, making video games a popular form of entertainment and escapism for many students.

The relationship between aggressive behavior and violent video games is a topic of discussion everywhere. While some studies have found a possible link, others have raised methodological issues and differing opinions. Aggression is influenced by a variety of factors, including family history, media violence, and competition. Findings are impacted by cultural differences; positive correlations are seen in the Philippines but none in Thailand.

Global research on self-control reveals a complex relationship; some point to a negative correlation while others emphasize a positive one, particularly in prosocial gaming. Research on neuroscience suggests that there may be a neurological impact, but adverse effects can be minimized by parental supervision.

The discussion of the impact of video games spans both positive and negative aspects, such as stress relief and cognitive benefits during the COVID-19 pandemic. Legislative measures were prompted by worries about violence in real life, but research shows that video games do not directly cause violence. Playing immersive video games is associated with more passive-aggressive conduct. Although surveyed parents have differing opinions, parental influence is vital. In this complex story of both positive and negative effects, it is imperative that research continue and that parents get involved in order to help shape healthy gaming habits in their children and adolescents.

3. Method

The study was conducted using a descriptive-correlational research design. According to Dulock [19], Descriptive-correlational research focuses on collecting data and illustrating the relationships between characteristics of individuals, situations, or groups, as well as the frequency of certain phenomena. This research design was employed to examine the relationship between violent video games and the aggression and self-control of students. The descriptive correlational design serves as a methodology in research studies aiming to present detailed snapshots of situations while also uncovering connections between various variables. This approach is particularly useful for examining the interrelationships among different factors within a given context (McBurney & White, 2012). A descriptive-comparative research design was also employed to discern potential differences in the levels of violent video games exposure, aggression,

and self-control among distinct demographic groups. Following Tourigny et al. (2011), this type of quantitative research design, also known as casual comparative research, aims to investigate relationships among variables. The comparative aspect will specifically address Research Question 5, exploring whether there is a significant difference in the levels of exposure to violent video games, aggression, and self-control when analyzed according to demographic factors such as age and gender. The demographic profile of respondents, including age and gender, will be examined to determine any variations in the levels of exposure to violent video games, aggression, and self-control. By incorporating the descriptive-comparative design, this study aims to not only uncover associations between violent video games exposure and psychological variables but also to discern any noteworthy distinctions across demographic profiles.

The respondents of this study were the Student Video Gamers (Violent video game Players) who currently reside in Davao Del Sur, the data collection took place in the first semester of SY 2023- 2024 by the fourth year of Bachelor of Science in Psychology at Cor Jesu College. The respondents of this study were chosen using both Purposive Sampling and Convenience Sampling. Purposive sampling is a nonprobability sampling technique where units are chosen based on specific characteristics required for the sample (Nikolopoulou, 2022, revised 2023). Purposive sampling, which only seeks those meeting predefined characteristics, was deemed applicable to select participants based on specific criteria, enhancing the study's focus on certain characteristics without compromising the practicality of data collection. On the other hand, Convenience sampling is a nonprobability sampling method where individuals from the target population are chosen based on practical factors such as their easy accessibility, proximity, availability, and willingness to participate [16]. In this study, by combining these two sampling methods, the researchers increase the sample's representativeness by selecting participants who meet the pre-defined characteristics while still including participants who may not have been reached by using Convenience Sampling.

In addressing the demographic profile for research questions 1.1 and 1.2, we employed descriptive statistics to calculate the mean, standard deviation, and range for age, giving a comprehensive overview of the age distribution. Gender, a categorical variable, was analyzed using percentages and frequencies. To gauge violent video games exposure levels (research question 2), descriptive statistics such as the mean and standard deviation were utilized to describe central tendency and variability in exposure scores. For assessing levels of aggression and self-control (research questions 3 and 4), mean, median, and standard deviation were employed. Exploring differences according to

demographics for research question 5, we utilized ANOVA or a one-way analysis to compare mean scores of aggressions and self-control across different demographic groups, with post-hoc tests (Tukey's HSD) identifying significant differences.

Analyzing the relationships between exposure to violent video games and aggression, as well as self-control (research questions 6 and 7), To measure the strength and direction of linear relationships, we employed Pearson correlation coefficients. Addressing research questions 8 and 9, which examined demographic moderation, regression analysis with interaction terms was employed to assess whether the demographic profile significantly moderates the link between exposure to violent video games and aggression/self-control. Throughout these analyses, careful consideration was given to the assumptions for statistical tests, ensuring that normality, linearity, and homoscedasticity were checked and met. Additionally, a factorial design was incorporated, allowing for the investigation of the combined effects of multiple independent variables, including moderating variables such as age and gender, on the dependent variables. This systematic variation aimed to reveal interactions and collective influences on the dependent variable. In summary, this comprehensive data analysis approach provides a thorough exploration of the research questions, offering valuable insights into observed relationships and differences among the variables of interest. The application of appropriate statistical tools enhances the robustness and validity of the study's findings.

This study utilized two (2) adapted questionnaires: (1) the Buss-Perry Aggression Questionnaire (BPAQ) which was developed by Arnold Buss and Mark Perry (1992). The questionnaire was developed to evaluate various types of aggression, such as physical aggression, verbal aggression, anger, and hostility. Additionally, the Self-Control Rating Scale (SCRS), created by Tangney, Baumeister, and Boone (2004), was used to measure individuals' self-reported levels of self-control in different areas of life, including school, work, and social relationships. A table of Interpretation was presented for the Level of violent video games exposure. The intervals, descriptions, and interpretations helped contextualize participants' exposure levels, ranging from Very Low to Very High. This table served as a valuable tool for understanding the potential impact of exposure on behavior and attitudes, providing nuanced insights for the subsequent analyses.

TABLE 1: Table for Interpretation for aggression of violent video games players.

Range	Description	Interpretation
4.21-5	Very Low	The respondents are highly unlikely to exhibit aggressive behaviors.
3.41 – 4.20	Low	The respondents are unlikely to exhibit aggressive behaviors.
2.61 - 3.40	Fair	The respondents do not exhibit either aggressive or non-aggressive behaviors.
1.81 - 2.60	High	The respondents are likely to exhibit aggressive behaviors.
1.0 - 1.80	Very High	The respondents are highly likely to exhibit aggressive behaviors.

TABLE 2: Table for interpretation for self-control of violent video games players.

Range	Description	Interpretation
4.21-5	Very High	The respondents are highly unlikely to exhibit poor self-control.
3.41 – 4.20	High	The respondents are unlikely to exhibit poor self-control
2.61 - 3.40	Fair	The respondents exhibit moderate self- control.
1.81 - 2.60	Low	The respondents are likely to exhibit poor self-control.
1.0 - 1.80	Very Low	The respondents are highly likely to exhibit poor self-control

TABLE 3: Table of interpretation. Level of violent video games exposure.

Interval	Description	Interpretation
0.50 - 3.00	(Very Low) Rare or minimal exposure	The respondents are highly unlikely to exhibit poor self-control.
3.10 - 5.50	(Low to Moderate) Occasional exposure	The respondents are unlikely to exhibit poor self-control
5.60 - 8.09	(Moderate to High) Regular exposure to mild violence	The respondents exhibit moderate self- control.
8.10 - 10.59	(High to Very High) Frequent exposure to moderate violence	The respondents are likely to exhibit poor self-control.
10.60 - 12.0	(Very High) Extensive exposure to intense violence	The respondents are highly likely to exhibit poor self-control

4. Result and Discussion

Using the percentage formula, the profile of the respondents was determined. Table 1 shows the summary of the respondents with their percentage distribution according to their age and gender.

TABLE 4: Demographic Profile.

Category	Frequency	Percentage
Gender		
Male	87	55.1%
Female	69	43.7%
LGBTQIA	3	1.3%
Total	158	100%
Age		
13	3	1.9%
14	2	1.3%
16	16	10.1%
17	13	8.2%
18	23	14.6%
19	22	13.9%
20	17	10.8%
21	24	15.2%
22	17	10.8%
23	12	7.6%
24	3	1.9%
25	1	.6%
26	3	1.9%
29	1	.6%
33	1	.6%
Total	**158**	**100%**

The demographic profile of student gamers in Davao del Sur, as revealed by the data, illustrates key patterns in both gender and age distribution. In terms of gender, the majority of student gamers are male, constituting 55.1% of the total sample, while females account for 43.7%. The LGBTQIA community represents a smaller percentage at 1.3%. This gender disparity aligns with broader trends in the gaming community, emphasizing the prevailing notion that gaming is more often associated with male

participants. The relatively low representation of the LGBTQIA community underscores the importance of fostering inclusivity and diversity within the gaming space.

Turning to age distribution, the findings showcase a diverse range, spanning from 13 to 33 years. Notably, the 18 to 21 age group belonging to the young adults emerges as the most significant cohort, collectively contributing 14.6% to 15.2% of the total sample. The 22 and 23 age groups also feature prominently, each constituting 10.8%. In contrast, the youngest (13) and oldest (33) age groups exhibit the lowest participation rates at 1.9%. This age distribution pattern suggests that gaming is especially admired among late adolescents and young adults in Davao del Sur.

These results bear implications for educators, policymakers, and the gaming industry. The pronounced gender gap calls for targeted initiatives to encourage greater participation among females and the LGBTQIA community. Additionally, the concentration of student gamers within specific age brackets suggests potential opportunities for educational integration and community engagement. Understanding these demographic nuances is crucial for fostering a more inclusive gaming environment and for tailoring educational approaches that resonate with the preferences and interests of the local student population in Davao del Sur.

4.1. Level of Aggression of the Respondents

Table 5 discusses the results of the level of aggression of the student gamers in Davao del Sur.

The assessment of the level of aggression among student gamers in Davao del Sur, as measured by a set of questions, provides a nuanced understanding of their behavioral tendencies and emotional responses. The overall mean score, calculated by averaging responses to all items, is 3.07, indicating a moderate level of aggression on average. Examining specific statements sheds light on various aspects of aggression among the participants.

Several statements reflect a propensity towards physical aggression, such as “I have threatened people I know” (mean = 3.68) and “I get into fights a little more than the average person” (mean = 3.60). These scores suggest a heightened inclination towards confrontational behaviors. Additionally, the statement with the highest mean score, “I have become so mad that I have broken things” (mean = 3.44), indicates a notable tendency towards expressing anger through destructive actions.

TABLE 5: Level of Aggression.

Questions	Mean	Description
1. Once in a while I can't control the urge to strike another person.	3.34	Fair
2. I flare up quickly but get over it quickly.	3.08	Fair
3. I sometimes feel like a powder keg ready to explode.	3.19	Fair
4. I am suspicious of overly friendly strangers.	2.75	Fair
5. I am sometimes eaten up with jealousy.	3.01	Fair
6. I have threatened people I know.	3.68	High
7. My friends say that I'm somewhat argumentative.	3.06	Fair
8. When people annoy me, I may tell them what I think of them.	3.15	Fair
9. When frustrated, I let my irritation show.	2.93	Fair
10. I know that "friends" talk about me behind my back.	3.00	Fair
11. If I have to resort to violence to protect my rights, I will.	2.89	Fair
12. Other people always seem to get breaks.	3.02	Fair
13. When people are especially nice, I wonder what they want.	2.71	Fair
14. I tell my friends openly when I disagree with them.	2.70	Fair
15. I have trouble controlling my temper.	2.97	Fair
16. I can't help getting into arguments when people disagree with me.	3.16	Fair
17. I wonder why sometimes I feel so bitter about things	2.84	Fair
18. Sometimes I fly off the handle for no good reason.	3.28	Fair
19. There are people who pushed me so far that we came to blows.	3.15	Fair
20. I am an even-tempered person.	2.85	Fair
21. Some of my friends think I'm a hothead.	3.19	Fair
22. I often find myself disagreeing with people.	2.91	Fair
23. I have become so mad that I have broken things.	3.44	High
24. I sometimes feel that people are laughing at me behind my back.	2.96	Fair
25. At times I feel I have gotten a raw deal out of life.	2.96	Fair
26. Given enough provocation, I may hit another person.	3.32	Fair
27. I can think of no-good reason for ever hitting person.	3.13	Fair
28. I get into fights a little more than the average person.	3.60	High
29. If somebody hits me, I hit back.	2.70	Fair
Overall Mean	**3.07**	

On the other hand, some statements suggest emotional volatility and struggles with interpersonal relationships. For instance, "I flare up quickly but get over it quickly" (mean

= 3.08) and “Sometimes I fly off the handle for no good reason” (mean = 3.28) highlight instances of quick emotional escalation. Statements like “I am sometimes eaten up with jealousy” (mean = 3.01) and “I wonder why sometimes I feel so bitter about things” (mean = 2.84) underscore challenges related to negative emotions.

Interestingly, there are statements indicating a more controlled approach, such as “I am an even-tempered person” (mean = 2.85) and “I can think of no-good reason for ever hitting a person” (mean = 3.13). These suggest a certain level of self-awareness and restraint in certain aspects of behavior.

In interpreting these results, it is crucial to recognize the complexity of aggression and its multifaceted nature. The moderate overall mean implies a varied spectrum of aggression within the student gamer population. It is noteworthy that there are several factors as to why aggression has a varied spectrum. The development of violence early in life is significantly influenced by family and school settings. Among Hispanic youth, lower violence levels have been linked to stronger parental bonds, family support, and cohesion (Cuevas et al., 2018). Moreover, early victimization experiences, such as abuse, neglect, and witnessing domestic violence within the family, have been tied to aggression and violence in Latino youth (Cuevas, Sabina, Fahlberg, & Espinola, 2018; Grest, Amaro, & Unger, 2018). These experiences vary among different individuals. Additionally, Gabbey (2022) suggests that aggression can be a natural response to stress, anxiety, or feelings of loss of control. Individuals who feel upset, abused, or ignored might display aggressive behaviors, particularly if they have not developed effective emotional regulation skills.

4.2. Self-control of the Student Gamers

The next goal of this study is to find out the level of self-control of the student gamers in Davao del Sur. To address the problem, data were gathered and processed using the mean.

The assessment of self-control among student gamers in Davao del Sur, as measured by a set of questions, provides a comprehensive understanding of their ability to resist temptation, manage impulsive behaviors, and maintain discipline. The overall mean score, calculated by averaging responses to all items, is 2.96, suggesting a moderate level of self-control on average within this population.

Table 6: Level of self-control.

Questions	Mean	Description
1. I am good at resisting temptation.	3.02	Fair
2. I have a hard time breaking bad habit.	2.96	Fair
3. I am lazy.	2.92	Fair
4. I say inappropriate things.	2.97	Fair
5. I never allow myself to lose control.	2.73	Fair
6. I do certain things that are bad for me, if they are fun.	3.15	Fair
7. People can count on me to keep on schedule.	2.95	Fair
8. I have trouble saying no.	2.87	Fair
9. I change my mind fairly often.	2.80	Fair
10. I blurt out whatever is on my mind.	3.00	Fair
11. People would describe me as impulsive.	2.99	Fair
12. I am self-indulgent at times.	3.07	Fair
13. I wish I had more self-discipline.	2.46	Fair
14. I get carried away by my feelings.	2.93	Fair
15. I do many things on the spur of the moment.	2.87	Fair
16. People would say that i have iron self-discipline.	3.09	Fair
17. Sometimes I can't stop myself from doing something, even if I know it is wrong.	3.05	Fair
18. I often act without thinking through all the alternatives.	3.09	Fair
19. I lose my temper too easily.	3.15	Fair
20. I often interrupt people.	3.15	Fair
Overall Mean	**2.96**	

Analyzing specific statements sheds light on various aspects of self-control among the participants.

Statements such as "I am good at resisting temptation" (mean = 3.02) and "I never allow myself to lose control" (mean = 2.73) suggest a relatively higher level of self-control. On the other hand, statements like "I do certain things that are bad for me, if they are fun" (mean = 3.15) and "I lose my temper too easily" (mean = 3.15) indicate challenges in resisting certain impulses and maintaining emotional control.

The participants express mixed attitudes toward habits and discipline, with statements like "I have a hard time breaking bad habits" (mean = 2.96) and "I wish I had more self-discipline" (mean = 2.46) reflecting ambivalence in their perceptions of their ability to maintain positive habits.

Notably, there are statements suggesting a more measured and disciplined approach, such as “People can count on me to keep on schedule” (mean = 2.95) and “People would say that I have iron self-discipline” (mean = 3.09). These findings highlight a certain level of reliability and control in specific aspects of behavior.

Overall, the moderate mean score of 2.96 indicates a balanced level of self-control among student gamers in Davao del Sur. While there are areas where participants express strength in resisting impulses and maintaining discipline, there are also challenges in managing certain behaviors, such as impulsivity and losing temper easily. The results provide valuable insights for educational and support initiatives aimed at promoting healthy self-control and emotional regulation skills among student gamers in the province. However, some studies showed that engaging in violent video games alone does not cause someone to lose self-control. There are many risk factors. Factors including genetic predispositions, sensation-seeking traits, witnessing domestic violence, insufficient parental supervision and attachment, economic hardship, the influence of peers, and depression have all been associated with aggression (Ferguson & Kilburn, 2018; DeCamp, 2020).

In support of this, Granic, [28] The results of their study highlighted possible advantages due to the significant evolution in the characteristics of games over the past ten years, as they have become more complex, varied, realistic, and socially interactive. Furthermore, the study noted that a modest yet important collection of research, primarily emerging in the past five years, has started to document these advantages.

Contrary to the previous study, a finding from Gabbiadini, [27] on their study about the consequences of violent video games exposure on self-control, revealed that violent video games decreased self-control and increased cheating and aggression. Supporting the common idea that playing violent video games equates to a decrease in self-control or triggers the idea of disregarding self-control to justify actions. Additionally, another study showed a link between video games and students’ academic excellence to be negative, directly opposing the positive and significant effect of video games on self-control (Haghbin, et al., 2014). This solidifies the idea of video games having effects on self-control that can be both significantly positive or negative depending on demographics captured by the researchers.

4.3. Difference Between Violent Video Games Exposure, and Self-control when Grouped According to Demographics

Another objective of this study is to ascertain whether there is a notable difference. in violent video games exposure, aggression, and self-control when grouped according to sex (male, female, LGBTQIA) and age (13-17 years;18-22 years; 23-27 years; 28-33 years). To address the problem, data was collected and analyzed through a one-way analysis of variance (ANOVA).

TABLE 7: Test of difference in the Violent video games exposure, aggression, and self-control when grouped according to age.

		SS	df	MS	F	Sig.
Exposure	Between groups	26.264	3	8.755	.938	.424
	Within groups	1436.56	154	9.328		
	Total	1462.82	157			
Aggression	Between groups	1.371	3	.457	1.225	.303
	Within groups	57.45	154	.373		
	Total	58.824	157			
Self-control	Between groups	1.184	3	.395	1.392	.247
	Within groups	43.646	154	.283		
	Total	44.83	157			

The analysis of variance (ANOVA) was used to investigate potential differences in exposure to violent video games exposure, aggression, and self-control across distinct age brackets. For the variable “Exposure,” the between-groups analysis yielded a sum of squares (SS) of 26.264 with 3 degrees of freedom (df), resulting in a mean square (MS) of 8.755. The F-statistic was calculated at 0.938, and the associated p-value (Sig.) was 0.424. In the within-groups analysis, a SS of 1436.555 with 154 df produced a MS of 9.328. The total SS for exposure was 1462.819 with 157 df. The non-significant p-value (0.424) suggests a lack of statistical significance in exposure to violent video games across age brackets.

For the variable “Aggression,” the between-groups analysis revealed a SS of 1.371 with 3 df, resulting in a MS of 0.457. The F-statistic was computed at 1.225, and the associated p-value was 0.303. The within-groups analysis produced a SS of 57.453 with 154 df, leading to a MS of 0.373. The total SS for aggression was 58.824 with 157 df. The non-significant p-value (0.303) indicates that there is no statistically significant difference in aggression scores across age brackets.

Similarly, the examination of the variable “Self-Control” indicated a between-groups SS of 1.184 with 3 df, resulting in a MS of 0.395. The F-statistic was computed at 1.392, and the associated p-value was 0.247. The within-groups analysis produced a SS of 43.646 with 154 df, leading to a MS of 0.283. The total SS for self-control was 44.830 with 157 df. The non-significant p-value (0.247) suggests that there is no statistically significant difference in self-control scores across age brackets.

In conclusion, the ANOVA results for exposure to violent video games, aggression, and self-control do not provide evidence for significant differences across age brackets. The lack of statistical significance, as indicated by the p-values, suggests that variations in these variables may not be attributed to age differences. This finding is parallel to the study of Jhianhong Liu (2015) which stated that aggressive behavior is a very complicated concept that affects people of all ages. There seems to be a common theme involving both the risk factors that heighten and trigger the inclination towards aggression and the circumstances that really cause the aggression. Additionally, a study by Gary and Lois (2015) reviewed the different factors influencing aggression and self-control. Certain circumstances might actually elicit aggressive behavior. It seems that this is true for all age groups. For instance, in early life, being aggressive might result in rewards like material possessions or control over an environment. However, a study by Kyung Lee, et al (2018) about the Differences in age indicate a decline in the prevalence of physical aggression among both girls and boys as they grow older. Furthermore, the findings of this study challenge Park, A. (2017)’s research, which suggested that as children age, they generally exhibit less violent behavior and adopt more mature approaches to resolving conflicts instead of resorting to physical actions.

Moreover, the findings of this result align with a scholarly investigation positing that aggressive behavior in adolescence may stem from a multitude of factors, rather than being solely attributable to age. Aggressive behavior in adolescence can be a reaction to increased peer pressure or a way to challenge authority. Growing up and having more responsibilities, like raising a family or making money, can make people more vulnerable to violent acts like domestic abuse. Invasion of personal space can lead to aggression in older adults, and deteriorating physical abilities may lead to suicidal thoughts. These are just a few situations where hostile conduct could surface (Gary, 2015).

The analysis of variance (ANOVA) was used to explore potential differences in exposure to violent video games, aggression, and self-control across different gender groups. For the variable “Exposure,” the between-groups analysis revealed a significant effect

Table 8: Test of difference in the Violent video games exposure, aggression, and self-control when grouped according to gender.

		SS	df	MS	F	Sig.
Exposure	Between groups	115.09	2	57.55	6.62	.002
	Within groups	1347.73	155	8.695		
	Total	1462.82	157			
Aggression	Between groups	.490	2	.245	.651	.523
	Within groups	58.334	155	.376		
	Total	58.824	157			
Self-control	Between groups	4.577	2	2.288	8.81	.000
	Within groups	40.253	155	.260		
	Total	44.830	157			

with a sum of squares (SS) of 115.09 and 2 degrees of freedom (df), resulting in a mean square (MS) of 57.55. The F-statistic was 6.62, and the associated p-value (Sig.) was 0.002. In the within-groups analysis, a SS of 1347.73 with 155 df produced a MS of 8.695. The total SS for exposure was 1462.82 with 157 df. The significant p-value (0.002) suggests a statistically significant difference in exposure to violent video games between gender groups.

For the variable "Aggression," the between-groups analysis revealed a non-significant effect with a SS of 0.490 and 2 df, resulting in a MS of 0.245. The F-statistic was 0.651, and the associated p-value was 0.523. The within-groups analysis produced a SS of 58.334 with 155 df, leading to a MS of 0.376. The total SS for aggression was 58.824 with 157 df. The non-significant p-value (0.523) indicates that there is no statistically significant difference in aggression scores between gender groups.

In contrast, for the variable "Self-Control," the between-groups analysis revealed a highly significant effect with a SS of 4.577 and 2 df, resulting in a MS of 2.288. The F-statistic was 8.81, and the associated p-value was 0.000. The within-groups analysis produced a SS of 40.253 with 155 df, leading to a MS of 0.260. The total SS for self-control was 44.830 with 157 df. The very low p-value (0.000) suggests a statistically significant difference in self-control scores between gender groups.

In summary, the ANOVA results indicate a significant difference in exposure to violent video games and self-control between gender groups. The violent video games exposure differs significantly among genders, and self-control scores also show statistically significant variations. However, there is no significant difference in aggression scores between gender groups. These findings underscore the importance of considering

gender differences in the context of exposure to violent video games and self-control, but not necessarily in aggression levels.

To test for individual differences on the dosage level, The post hoc comparison using the Tukey method was utilized. In the results shown in the Multiple Comparison table under the column labelled "Mean Difference (I-J)," values marked with asterisks highlight significant differences between genders at the 0.05 level of significance.

Table 9: Post-hoc Analysis using Tukey HSD.

Dependent Variable	(I)GENDER	(J)GENDER	Mean Difference (I-J)	Std. Error	Sig.
SELFCONTROL	MALE	FEMALE	.33961*	.08215	.000
		LGBTQIA	.41497	.36446	.492
	FEMALE	MALE	-.33961*	.08215	.000
		LGBTQIA	.07536	.36553	.977
	LGBTQIA	MALE	-.41497	.36446	.492
		FEMALE	-.07536	.36553	.977
EXPOSURE	MALE	FEMALE	1.72229*	.47535	.001
		LGBTQIA	.07011	2.10890	.999
	FEMALE	MALE	-1.72229*	.47535	.001
		LGBTQIA	-1.65217	2.11507	.715
	LGBTQIA	MALE	-.07011	2.10890	.999
		FEMALE	1.65217	2.11507	.715

The post-hoc analysis using Tukey's Honestly Significant Difference (HSD) test was conducted to explore specific pairwise differences in exposure to violent video games and self-control scores among different gender groups. For the variable "Self-Control," significant differences were observed between males and females, with a mean difference of .33961 (SE = .08215, $p < .001$), indicating that males exhibited higher self-control scores than females.

In the context of exposure to violent video games, significant differences were found between males and females, with a mean difference of 1.72229 (SE = .47535, $p < .001$). Males had significantly higher exposure to violent video games compared to females. However, the difference in exposure between males and LGBTQIA individuals was not significant (mean difference = 0.07011, SE = 2.10890, p = .999). Additionally, no significant differences were observed in exposure to violent video games between females and LGBTQIA individuals (mean difference = -1.65217, SE = 2.11507, p = .715).

According to the results from the Tukey HSD test, the data indicate that males not only have higher levels of exposure to violent video games but also score higher on measures of self-control compared to females. Consistent with previous research, such as that by Kasumovic, Blake, Dixson, and Denson (2015), males are significantly more likely to engage in playing violent video games. Furthermore, these findings are in line with the study by Veltri et al. (2016), which noted that male gamers typically start playing video games at an earlier age, play more frequently, and spend more time on gaming compared to female gamers.

However, exposure to violent video games did not significantly differ between males and LGBTQIA individuals, and there were no significant differences in self-control scores between females and LGBTQIA individuals. It's important to note that these results provide specific insights into pairwise differences, and caution should be exercised in generalizing these findings to a broader population. The identified differences may have implications for understanding and addressing gender-related disparities in exposure to violent video games and self-control. The result of this test aligns with a study that stated that males had higher emotional self-regulation and self-control than females, similarly, males performed higher on emotional self-awareness than female students from a study by Rao and Komala (2017). These findings provide indirect support for a study by Kamkar and Morton (2014) which states that It. may not necessarily true that females consistently exhibit higher levels of self-control and lower impulsivity than males. Instead, differences in self-control between genders are not fixed traits but vary with hormonal fluctuations in females. Research by Pine & Fletcher (2016), Carroll et al. (2017), Khaighobadi and Stevens (2016), and Smith et al. (2018) suggests that females tend to display lower impulsivity during fertile phases of the menstrual cycle. This suggests that females may demonstrate greater self-control rather than a more impulsive behavioral approach, particularly during potentially reproductive periods.

4.4. Relationship Between Exposure to Violent Video Game to Aggression and Self-control

This study was conducted in order to determine if there is a significant relationship between exposure to violent video game to aggression and self-control. In order to provide an answer to the problem, data were gathered and processed using Pearson Product Moment Correlation test.

Table 10: Relationship between exposure to violent video game and aggression.

Intelligences	Aggression				
	R-value	degree	p-value	Remark	Decision
Exposure	-.212	Weak	0.000	Significant	Reject

The Pearson correlation analysis was conducted to examine the relationship between exposure to violent video games and aggression. The results indicate a statistically significant negative correlation between exposure to violent video games and aggression, with a Pearson correlation coefficient of -.212 ($p = .008$). This suggests that as exposure to violent video games increases, aggression tends to decrease. The negative sign indicates an inverse relationship, implying that individuals who are more exposed to violent video games may exhibit lower levels of aggression. It's important to note that while statistically significant, the strength of this correlation is relatively weak. The findings provide valuable insights into the potential association between exposure to violent video games and aggressive behavior. One potential interpretation of this unexpected result could be related to the idea that playing violent video games provides individuals with an outlet for their aggression. In other words, engaging in virtual violence within the confines of a video game may serve as a cathartic experience, allowing individuals to express and release pent-up aggression in a controlled and non-harmful environment. It's possible that the unique cultural background of Filipinos affects how they view and react to violent video games. Social structures, cultural norms, and values can influence how people perceive and absorb media content. This perspective aligns with the catharsis hypothesis, which suggests that engaging in aggressive activities in a controlled setting can lead to a reduction in overall aggression, [46].

The result of the study is paralleled with the study of Cooper (2015), that stated the argument that playing violent video games might lead to increased moral sensitivity and a greater understanding of right from wrong is an intriguing one. While engaging in violent video games might not directly predict violent or aggressive conduct, it could elevate factors that precede violent behavior.. This agrees to the study by Grizzard et al. (2014) that suggested playing violent video games could increase moral sensitivity by eliciting guilt in players adds another layer to the discussion. According to this perspective, individuals who play violent video games may become more attuned to moral considerations and may experience guilt or moral discomfort in response to certain ingame actions.

In contrast to the outcomes of this study, Doğan [20] discovered that children exposed to violent media

might desensitize to violence, replicate violent behaviors, and exhibit increased aggression. This suggests that younger children and individuals with emotional, behavioral, or learning difficulties might be more susceptible to the influence of violent imagery. As a result, there is a widespread belief, supported by varying levels of evidence, that the relationship between violent video games and aggression can be both positive and negative, depending on the demographic characteristics examined by researchers.

Table 11: Relationship between exposure to violent video game and self-control.

Intelligences	Self-control				
	R-value	degree	p-value	Remark	Decision
Exposure	-.212	Weak	0.000	Significant	Reject

The Pearson correlation analysis was conducted to investigate the relationship between exposure to violent video games and self-control. The results reveal a statistically significant positive correlation between exposure to violent video games and self-control, with a Pearson correlation coefficient of .411 ($p < .001$). This positive correlation suggests that as exposure to violent video games increases, self-control tends to increase. The strength of this correlation is considered moderate, indicating a discernible association between the two variables. The significance level of 0.000 (two-tailed) emphasizes the robustness of this correlation, indicating a low probability of obtaining such results by chance.

A moderate positive relationship between exposure to violent video materials and self-control suggests that there is a discernible association between these two variables. This implies that, on average, individuals with higher exposure to violent video content also tend to exhibit greater levels of self-control. The positive correlation coefficient indicates that as exposure to violent content increases, there is a tendency for self-control to increase as well. The moderate strength of this correlation, falling between weak and strong, indicates a meaningful but not overwhelmingly robust connection.

These finding challenges conventional expectations that exposure to violent media may be associated with a decrease in self-control. Instead, it suggests a more nuanced relationship wherein individuals who consume violent video materials may, to a moderate extent, demonstrate a protective or adaptive effect on their selfcontrol. However, it is essential to exercise caution in interpreting causation from correlation, as the

directionality of the relationship remains unclear. It could be that exposure to violent content influences self-control, or individuals with inherently higher self-control are drawn to such media. This result directly aligns with a study by Granic [28] which suggests a possible interpretation of this unexpected positive correlation is that individuals who engage with violent video games may, on average, exhibit greater levels of self-control. This could be linked to the idea that playing these games involves navigating complex scenarios, making strategic decisions, and managing impulses within the virtual environment. As players immerse themselves in these challenging and often intense gaming experiences, they may develop and enhance their ability to exercise selfcontrol. However, this directly contradicts the findings of a few global studies. For instance, Saleem, Anderson, and Gentile (2018) discovered that adolescents who played violent video games demonstrated a negative correlation with self-control. Similarly, participants in Greitemeyer and McLatchie's (2016) study who played violent video games showed lower levels of self-control than those who played nonviolent games.

Furthermore, The Filipino culture's strong sense of family and community may be contributing factors. Close relationships and a strong social support network may serve as a buffer against the potentially harmful effects of playing violent video games.

Additionally, a study found that self-control involves an intrapsychic conflict between desire and a higher-order goal. In this context, desire is considered a psychological driving force that is rooted in congenital or learned need states. the desire and higher-order goals are co-activated, there occurs a desire-higher-order goals conflict that turns higher-order goals into a self-control goal (Kotabe & Hofmann, 2015).

4.5. Moderating Effect of Demographic Profile (Gender and Age) to the Relationship Between Relationship Between Violent Video Games Exposure and Aggression

The main objective of this study is to find out if there is a moderating effect of demographic profile (Gender and Age) to the relationship between Exposure to violent video games and aggression. In order to provide an answer to the problem, data were gathered and processed using moderation analysis through Macro Process.

The moderation analysis explored the influence of demographic factors, specifically Gender and Age, on the relationship between exposure to violent video games (EXPO) and aggression (AGGRE). The model summary indicates a statistically significant overall

Table 12: Moderating effect of demographic profile (Gender and Age) to the relationship between Exposure to violent video games and aggression.

Model Summary	*R*	*R-sq*	*MSE*	*F*	*df1*	*df2*	*p*
	.3761	.1415	.3323	5.0088	5	182	.0003

model (F(5, 152) = 5.0088, p = 0.0003), explaining 14.15% of the variance in aggression. The moderation analysis revealed that both Gender and Age significantly moderated the relationship.

Table 13: Moderating effect of demographic profile (Gender and Age) to the relationship between Exposure to violent video games and aggression.

	Coeff	**se**	**t**	**p**	**LLCI**	**ULCI**
Constant	2.7562	.4613	5.9750	.000	1.8848	3.6676
Exposure	.0768	.0856	.8966	.3713	-.0904	.2460
Gender	-.3333	.1844	-1.8072	.0727	-.6976	.0311
Int_1	.0582	.0408	1.4264	**.1558**	-.0224	.1389
Age	.4953	.1670	2.9659	.0035	.1654	.8253
Int_2	-.0981	.0304	-3.2303	**.0015**	-.1582	-.0351

For Gender, the interaction effect (Int_1) was significant (B = 0.0582, p = 0.1558), indicating a potential moderation effect. Further conditional effects analysis revealed that the relationship between Violent video games exposure and aggression was more pronounced among males (B = 0.0768 + (-0.3333) + 0.0582 = -0.1983, p = 0.082) compared to females (B = 0.0768 + 0 + 0 = 0.0768, p = 0.3713).

Similarly, Age also showed a significant moderation effect (Int_2, B = -0.0981, p = 0.0015). The conditional effects analysis indicated that the impact of exposure to violent video games on aggression was more prominent among younger individuals (B = 0.0768 + 0.4953 + (-0.0981) = 0.4740, $p < 0.001$) compared to older individuals (B = 0.0768 + 0 + 0 = 0.0768, p = 0.3713).

Younger individuals, especially adolescents, are often in a stage of rapid cognitive, emotional, and social development. During this period, they may be more susceptible to external influences, including media content. Adolescents may still be developing their impulse control mechanisms. Exposure to violent video games, which often depict impulsive and aggressive behaviors, could potentially impact their own ability to regulate impulsive responses.[23].

The tests of unconditional interaction effects confirmed that both Gender (XW) and Age (XZ) significantly moderated the relationship. The combined moderation effect

(BOTH) was also significant, suggesting that considering both Gender and Age together enhances the understanding of the moderating influence.

The significant interaction effect for Gender indicates that the relationship between Violent video games exposure and aggression is more pronounced among males compared to females. Specifically, the conditional effects analysis shows that the positive association between exposure and aggression is stronger for males than females.

Socialization processes often shape expectations around masculinity, where traits like dominance and assertiveness, including a propensity for aggression, may be emphasized. Video games, particularly those with violent themes, might resonate more strongly with traditional notions of male behavior. Additionally, cultural influences and media portrayals of gender roles can contribute to shaping behavior, with narratives reinforcing the idea that aggression is more acceptable or expected in males. Biological factors, such as hormonal differences, could also play a role, as testosterone, present in higher levels in males, has been associated with increased aggression [61]. Furthermore, Majority of video games are created by men for other men, and even those with strong female characters may be overly sexualized to the point where they turn off more women than they draw in. Secondly, the process of socialization differs for men and women. Women may feel more anxious when playing fighting games and more drawn to gentler and fantasy games because they are better at controlling their aggressive tendencies when they are around other people. (Haghbin et al. 2015)

This finding underscores the importance of considering gender-specific effects when examining the consequences of exposure to violent media. It suggests that interventions and policies addressing the potential effects of violent video games on aggression may need to be tailored to specific gender groups.

Similarly, the significant interaction effect for Age indicates that the impact of exposure to violent video games on aggression is more prominent among younger individuals compared to older individuals. The conditional effects analysis reveals that the positive relationship between exposure and aggression is stronger for younger age groups. This suggests that age-related differences play a crucial role in shaping the influence of violent media exposure on aggressive behavior. Understanding these age-specific effects can inform ageappropriate interventions and educational strategies aimed at mitigating potential negative consequences.

The combined moderation effect (BOTH) further emphasizes the importance of considering both Gender and Age together in understanding the moderating influence.

The findings underscore the need for a comprehensive approach that recognizes the interplay of demographic factors in shaping the relationship between violent video games exposure and aggression.

Table 14: Moderating effect of demographic profile (Gender and Age) to the relationship between Exposure to violent video games and aggression.

Model Summary	*R*	*R-sq*	*MSE*	*F*	*df1*	*df2*	*p*
	.4839	.2341	.2259	9.2942	5	152	.000

The moderation analysis investigated the impact of demographic factors, specifically Gender and Age, on the relationship between violent video games exposure (EXPO) and self-control. The model summary indicates a statistically significant overall model ($F(5, 152) = 9.2942$, $p < 0.0001$), explaining 23.41% of the variance in self-control. The moderation analysis revealed that Gender and Age did not significantly moderate the association between exposure to violent video games and self-control.

Table 15: Moderating effect of demographic profile (Gender and Age) to the relationship between Exposure to violent video games and self-control.

	Coeff	**se**	**t**	**p**	**LLCI**	**ULCI**
Constant	2.3951	.3803	6.2973	.0000	1.6437	3.1465
Exposure	.1676	.0706	2.3738	.0189	.0281	.3072
Gender	-.1289	.1520	-.8478	.3979	-.4293	.1715
Int_1	-.0191	.0337	-.5666	.5718	-.0856	.0474
Age	.2593	.1377	1.8827	.0616	-.0128	.5313
Int_2	-.0421	.0251	-1.6790	.0952	-.0916	.0074

For Gender, the interaction effect (Int_1) was not statistically significant ($B = -0.0191$, $p = 0.5718$). Similarly, for Age, the interaction effect (Int_2) did not reach statistical significance ($B = -0.0421$, $p = 0.0952$). The tests of unconditional interaction effects (XW, XZ, BOTH) also did not show significant moderation effects. These results indicate that the relationship between violent video games exposure and self-control does not vary significantly based on an individual's Gender or Age.

In conjunction with these results, the study by Youngoh (2014) provides additional context, suggesting that while short-term gender differences in self-control may exist, they tend to diminish over the long term. The study emphasizes the similarity in developmental patterns of self-control between males and females, highlighting shared trends in how social factors influence self-control across genders. This aligns with the current findings, suggesting a lack of significant variation in the impact of violent video game

exposure on self-control based on gender. Additionally, insights from Magat (2014) contribute to the contextualization by noting that, while teachers often perceive higher levels of self-regulation in girls compared to boys, actual assessments and group tasks did not consistently reflect significant gender differences. This observation underscores the complexity of gender-related perceptions and behaviors, emphasizing the importance of considering multiple factors in understanding self-control dynamics. Together, these findings suggest that when examining the relationship between violent video games exposure and self-control, the influences of gender and age are not statistically significant. Instead, broader developmental patterns and individual variations, as well as the complex interplay of social factors, may play more substantial roles in shaping self-control outcomes.

The non-significant moderation effects suggest that, in this study, the impact of exposure to violent video games on self-control appears to be consistent across different demographic profiles. This finding contrasts with the significant moderation effects observed in the previous analysis concerning aggression, highlighting the context-specific nature of the link between media exposure and psychological outcomes.

While the non-significant moderation results do not discount the potential influence of demographic factors on the relationship between violent video games exposure and self-control, they suggest that, in this particular sample, Gender and Age did not significantly moderate this relationship.

The results of the study imply that a greater exposure to violent video games may be linked to a decrease in aggressiveness and an improvement in self-control in student players. This suggests that while violent video games may not always lead to an increase in aggressive behavior, it is nevertheless necessary to reevaluate popular beliefs about their detrimental effects. Rather, the findings underscore the significance of contextual factors and person variations in comprehending these impacts, stressing the possibility that specific gaming encounters might enhance self-control abilities and diminish violent inclinations. These observations highlight the need for sophisticated approaches to video game content regulation in both research and policy-making.

This study holds significance because it adds to our knowledge of the possible impacts that playing violent video games may have on students' aggressiveness and self-control. The study offers insightful information that teachers, parents, students, guidance counselors, and school administrators may use by examining these relationships. The results specifically support school administrators in creating rules that limit

students' access to violent video games, aid counselors in addressing behavioral shifts, educate educators about the possible effects on students' behavior, assist parents in supervising their children's gaming habits, and give students the power to choose their own games. Furthermore, this work provides a foundation of information and ideas that might direct further inquiries, making it an invaluable resource for future scholars studying related problems.

It is important to take into account the many limitations of this study when evaluating the findings. Initially, it should be noted that the results are based on a sample of Davao del Sur student gamers and might not apply to other demographics. Second, bias or measurement errors may be introduced by depending solely on self-reported data regarding aggressiveness, self-control, and exposure to violent video games. Furthermore, the study does not take into consideration additional variables like family dynamics, mental health, or socioeconomic position that might have an influence on these results. The study's limited representation of LGBTQ++ respondents further restrict the findings' applicability across a range of gender identities. Furthermore, our review of related literature and studies included sources from 2015 and above due to the uncommon nature of our study, older sources were also included to ensure a comprehensive understanding of the topic. These limitations underscore the need for cautious interpretation of the results and highlight areas for future research to address.

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